



Humboldt Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Draft Environmental Impact Report
State Clearinghouse #2024081319

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February 14, 2025

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Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of implementing the proposed Humboldt Regional Climate Action Plan (RCAP) and the Humboldt California Environmental Quality Act (CEQA) Greenhouse Gas (GHG) Emissions Thresholds (collectively referred to as proposed plan). This executive summary summarizes the characteristics of the proposed plan, alternatives to the proposed plan, and the environmental impacts and mitigation measures associated with implementation of the proposed plan.

Plan Synopsis

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Plan Description

This EIR has been prepared to examine the potential environmental effects of the proposed plan. The following is a summary of the full plan description, which can be found in Chapter 2, *Project Description*.

As part of an overarching planning process, Humboldt County (also referred to as “the County”) proposes to adopt a regional climate action plan (RCAP) that addresses greenhouse gas (GHG) emissions generated within Humboldt, including the unincorporated County and the seven incorporated cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. The RCAP establishes a goal to reduce GHG emissions 40 percent by 2030 in line with Statewide targets of Senate Bill 32 and provides measures and actions to achieve this goal. In addition, the RCAP establishes a longer-term goal of achieving carbon neutrality by 2045, consistent with the Statewide goals of Assembly Bill 1279. The County also proposes to adopt quantitative efficiency thresholds for use in evaluating whether a plan or project’s GHG emissions would result in a potentially significant environmental impact under CEQA for plans or projects with pre-2030 buildout or initial operation years.

Intended uses of this EIR by agencies with permitting and approval authority over the proposed plan, in addition to required permits and approvals, are also discussed in Chapter 2, *Project Description*.

Plan Objectives

The overall purpose of the RCAP and CEQA GHG Emissions Thresholds is to prepare, adopt, and implement a qualified GHG reduction plan that may be utilized for mitigating and tracking Countywide GHG emissions as well as for streamlining CEQA GHG analyses for future projects within the County that are required to undergo CEQA review.

The specific RCAP and CEQA GHG Emissions Thresholds objectives are as follows:

- Establish a coalition between jurisdictions and key organizations to guide a regional approach to climate-related challenges;
- Identify strategies, measures, actions, and tracking mechanisms to serve as a qualified GHG reduction plan and provide a foundation for sustainable development efforts in the region;
- Reduce communitywide GHG emissions by 40 percent below 1990 levels by 2030 (a maximum total annual emissions of 1,241,589 MT of CO₂e) in line with County and State targets;
- Reduce communitywide GHG emissions to net neutral by 2045, with at least 85 percent being via GHG emissions reductions, in line with County and State targets;
- Demonstrate a level of GHG emissions below which the County would have less-than-cumulatively-considerable GHG impacts for future environmental planning reviews and provide CEQA streamlining for projects via the Humboldt Regional CEQA GHG Checklist;
- Strengthen the growing regional green economy; and
- Improve Humboldt air quality and, thus, public health.

Alternatives

As required by CEQA, this EIR examines alternatives to the proposed plan. Studied alternatives include the following three alternatives.

- Alternative 1: “No Project”
- Alternative 2: Sustainable Communities Alternative
- Alternative 3: Enhanced Carbon Sequestration Alternative

Refer to Chapter 5.0, *EIR Alternatives*, for the complete EIR alternatives analysis.

Areas of Known Controversy

The EIR scoping process identified transportation (specifically vehicle miles traveled) and greenhouse gas (GHG) emissions (specifically whether the RCAP measures and actions would be sufficient to meet GHG reduction goals) as areas of known controversy for the proposed plan. Public comments received during the EIR scoping period as well as public comments received at the EIR scoping meeting held by the County are summarized in Chapter 1.0, *Introduction*.

Issues to be Resolved

There are no CEQA-related issues to be resolved at this time.

Issues Not Studied in Detail in the EIR

All environmental issue areas are analyzed in this EIR. Refer to Chapter 3.0, *Environmental Impact Analysis*, for a summary of environmental topical areas discussed in detail via individual sections as well as environmental topical areas discussed in an effects found not to be significant section.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts, mitigation measures, and residual impacts (the impact after application of mitigation, if required) associated with implementation of the proposed plan. Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the proposed plan is approved pursuant to Section 15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under Section 15091 of the CEQA Guidelines.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** The proposed plan would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

As further discussed in the individual Draft EIR chapters, the mitigation measures listed in Table ES-1 only apply to future discretionary, non-exempt RCAP-related projects where potentially significant impacts are identified on a project-level basis through initial project screening.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact Statement	Mitigation Measure(s)	Residual Impact
Aesthetics		
Impact AES-1. The RCAP would promote the development of sustainable infrastructure within Humboldt. Future RCAP-related projects would be required to adhere to existing ordinances and General Plan policies that protect scenic resources; however large-scale renewable energy and renewable fuel production projects facilitated by the RCAP could have an adverse effect on scenic vistas within Humboldt. Mitigation Measures AES-1 and AES-2 would limit these impacts, but impacts would remain significant and unavoidable.	AES-1: Implement Alternative Design Measures Projects facilitated by the RCAP that would obstruct scenic vistas and views from publicly accessible vantage points shall identify and seek to protect public views and significant landscape features or landforms visible from such views and shall implement project-specific mitigation as applicable. If it is determined that a project would obstruct scenic views, the reviewing agency (County or relevant city) shall consider alternative designs that seek to avoid and/or minimize these visual impacts. Project-specific design measures may include reduction in height or width of improvements to reduce obstruction of views or other adverse visual effects, alteration of improvement configuration, or relocation of improvements to reduce obstruction of views. The reviewing agency shall implement the following (or equivalent) design measures as applicable: ▪ require that the scale and massing of new development provide appropriate transitions in structure height and bulk that are sensitive to the physical and visual character of the affected area; ▪ ensure structure heights are stepped back to maintain appropriate transitions in scale and to protect scenic views; ▪ underground utilities; and ▪ avoid siting electric towers, solar power facilities, wind power facilities, hydrogen generation facilities, biofuel production facilities, and/or above-ground lines where they could obstruct views from public vantage points, such as riding, hiking, or multiuse trails, along scenic roadways and routes, or scenic vista points. AES-2: Implement Visual Screening To screen views of projects facilitated by the RCAP in locations where they would be visible from publicly accessible vantage points (such as scenic vistas) and affect visual character or quality, the reviewing agency (County or relevant city) shall require the construction of a berm, vegetative screening, or other form of visual barrier of sufficient height to provide visual screening from the ground level. The color of proposed facades, fenestration, equipment, and roofs shall be designed to visually blend in and minimize the potential for visual contrast between the project elements and their natural landscape surroundings. Bright or very light colors (including glossy white) shall be avoided unless such colors blend in with the surrounding landscape. Re-contouring and revegetation of temporarily disturbed graded areas shall be completed to provide a natural appearing landform upon completion of construction.	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact AES-2. There are no designated State scenic highways within Humboldt; however, there are eligible State scenic highways and locally designated scenic routes. Future RCAP-related projects would be required to adhere to existing ordinances and General Plan policies that protect scenic resources; however large-scale renewable energy and renewable fuel production projects facilitated by the RCAP could have an adverse effect on scenic routes within Humboldt. Mitigation Measures AES-1 and AES-2 would limit these impacts, but impacts would remain significant and unavoidable.	AES-1 and AES-2	Significant and Unavoidable
Impact AES-3. Implementation of the RCAP would promote sustainable infrastructure development within Humboldt. Future RCAP-related projects would be required to adhere to existing ordinances and General Plan policies that protect visual character; however large-scale renewable energy and renewable fuel production projects facilitated by the RCAP could have an adverse effect on public views within Humboldt. Mitigation Measures AES-1 and AES-2 would limit these impacts, but impacts would remain significant and unavoidable.	AES-1 and AES-2	Significant and Unavoidable
Impact AES-4. Implementation of the RCAP would result in new sustainable infrastructure within Humboldt that could create new sources of light or glare that could adversely affect daytime or nighttime views in the plan area. Mitigation Measure AES-3 would reduce the potential for new sources of substantial light and glare, and impacts would be less than significant with mitigation.	AES-3: Implement Light and Glare Reduction Design Measures To reduce potentially significant light and glare impacts of projects facilitated by the RCAP, the reviewing agency (County or relevant city) shall require the following light and glare measures to be incorporated into project design for projects that include exterior lighting: ▪ The design of exterior light fixtures shall incorporate shielding and be directed downward onto the site to prevent offsite light spillage and sky glow; ▪ Exterior lighting fixtures shall be kept to the minimum number and intensity needed to ensure public safety. These lights shall incorporate the use of motion activated sensors and be dimmed after 11 p.m. to the maximum extent practical without compromising public safety as determined by the reviewing agency; ▪ Outdoor lighting shall include non-glare fixtures; and ▪ Structure design shall include exterior finishes and materials that are minimally reflective or sited or oriented in such a way as to direct glare away from sensitive receptors.	Less than Significant with Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
	For projects involving solar panels, the following light and glare measures shall be incorporated into project design: ▪ All solar panels shall include an anti-reflective coating; and ▪ Solar projects one megawatt or greater in generation capacity shall conduct an analysis of solar glare and shall implement recommendations related to positioning and angling of solar panels, if warranted, to reduce offsite glare impacts.	
Air Quality		
Impact AQ-1. The RCAP includes measures that would reduce air pollutant emissions from the energy and transportation sectors and would be consistent with the applicable air quality plans. Impacts would be less than significant.	None required.	Less than Significant without Mitigation
Impact AQ-2. Implementation of the RCAP would result in the generation of air pollutants during construction of individual projects, which could affect local air quality even with mitigation. Implementation of the proposed plan would not result in a cumulatively considerable net increase of operational criteria pollutants. Impacts would be significant and unavoidable.	AQ-1: Implement Construction Fugitive Dust Measures For all project construction activities requiring daily usage of heavy duty offroad equipment, the reviewing agency (County or relevant city) shall incorporate the following construction measures that are consistent with NCUAQMD Rule 104 for fugitive dust: ▪ No person shall allow handling, transporting, or open storage of materials in such a manner that allows or may allow unnecessary amounts of particulate matter to become airborne. ▪ Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions: ▫ Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust. ▫ Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Containment methods can be employed during sandblasting and other similar operations. ▫ The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land. ▫ The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts. ▫ The paving of roadways and their maintenance in a clean condition.	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
	▫ The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means. AQ-2: Implement Construction Diesel Equipment Emissions Standards The reviewing agency (County or relevant City) shall ensure that, to the extent feasible, project diesel construction equipment rated 50 horsepower and above meet CARB Tier 4 emission standards for off-road heavy-duty diesel engines. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used, and engines shall be retrofitted with CARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if available for the equipment. These measures shall be noted on construction plans and contracts, and the reviewing agency shall perform periodic site inspections during construction phases.	
Impact AQ-3. Operation of projects facilitated by the RCAP is not expected to expose sensitive receptors to significant operational sources of TACs. During construction of future RCAP projects, emissions of TACs would be reduced through Mitigation Measure AQ-3, and impacts would be less than significant with mitigation.	AQ-3: Conduct Construction Health Risk Assessment and Implement DPM Emissions Reductions To identify and reduce potential risk exposure to nearby sensitive receivers during the construction of individual projects facilitated by the RCAP, the reviewing agency (County or relevant city) shall require that: ▪ For individual projects where construction activities would occur within 1,000 feet of sensitive receptors, would last longer than two months, and would not utilize equipment rated USEPA Tier 4 for equipment of 50 horsepower or more or construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more, and/or alternative fuel construction equipment, the project applicant shall conduct a construction health risk assessment (HRA) and implement relevant recommendations. If an HRA is to be performed, the HRA shall determine potential risk and compare the risk to the following CAPCOA thresholds: ▫ Increased cancer risk of > 10.0 in a million; and ▫ Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Even with the application of emissions controls, the reviewing agency may recommend an individual project conduct a quantitative construction health risk assessment. If risk exceeds the thresholds, additional measures such as requiring the use of Tier 4 engines, Level 3 Diesel Particulate Filters, and/or alternative fuel construction equipment shall be incorporated to reduce the risk to below the thresholds of significance	Less than Significant with Mitigation
Impact AQ-4. Projects under the RCAP would not create objectionable odors that could adversely affect a substantial number of people. Impacts related to odors would be less than significant.	No mitigation would be required.	Less than Significant without Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
Biological, Agriculture, and Forestry Resources		
Impact BIO-1. Infrastructure facilitated by the RCAP could result in direct or indirect impacts to special-status species or their associated habitats including impacts to migratory bird nest sites. Direct impacts to special status species would be less than significant with implementation of Mitigation Measures BIO-1 through BIO-4. However, indirect impacts due to the loss of common habitat would be significant and unavoidable.	BIO-1: Conduct Project- Level Biological Resources Assessment The reviewing agency (County or specific city) shall require biological resources to be analyzed on a project-specific level by a qualified biological consultant. Prior to or during the preparation of project-level environmental documents, and prior to the start of construction activities, a biological resources assessment shall be conducted to characterize the project site, if initial assessment indicates that special status species or sensitive habitat may be present. Suitable buffer areas surrounding the project site shall be included where native habitat is contiguous with off-site habitat areas. The assessment and analysis shall emphasize identifying endangered, threatened, rare, and other special-status species; regionally and locally unique species; and sensitive natural communities, jurisdictional waters, and oak woodlands, as applicable. Focused surveys shall be conducted as necessary to determine the presence of special-status species (e.g., focused sensitive plant or wildlife surveys). Focused surveys shall be conducted according to established CDFW or USFWS protocols, if available for the object species. Natural communities shall be mapped and identified according to floristic alliance- and/or association-based mapping protocols consistent with CDFW natural communities. A jurisdictional delineation may be required if there are signs of potentially regulated wetlands and non-wetland waters. A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze direct and indirect impacts on biological resources, and propose mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as those species with potential to occur on-site). If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report shall include a mitigation measure requiring pre-construction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. The mitigation measures shall also include consultation with and obtaining permits from USFWS, NMFS, or CDFW prior to construction, if required by FESA or CESA for listed endangered and threatened species. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocation of such species into areas of appropriate restored habitat would have the best chance of replacing/incrementing populations that are lost due to habitat converted to development. Relocation to restored habitat areas shall be the preferred goal of this measure. A qualified biologist shall be on site to conduct	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
	surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. BIO-2: Conduct Pre-construction Bird Surveys and Implement Avoidance and Minimization Measures For construction activities initiated during the bird nesting season (February 1–September 15) involving removal of vegetation that could potentially serve as habitat for special-status bird species or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot and shall include a buffer around the construction site at a distance determined by a qualified biologist. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in Humboldt (i.e., qualified biologist). If nests are found, an avoidance buffer shall be determined by a qualified biologist dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside the site. The buffer shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground-disturbing activities shall occur within the buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A report summarizing the pre-construction survey(s) shall be prepared by a qualified biologist and shall be submitted to the reviewing agency (County or specific city) prior to the commencement of construction activities. Future project site plans shall include a statement acknowledging compliance with the MBTA and California Fish and Game Code that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests, including checking for nests prior to construction activities during February 1 to September 15 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities. BIO-3: Conduct Pre-construction Roosting Bats Surveys and Implement Avoidance Measures Prior to Removal Prior to the removal or alteration of trees and structures that may serve as roosting habitat for special-status bat species, a qualified biologist shall conduct a focused survey of all trees and structures to be removed or impacted by construction activities to determine whether active roosts of special-status bats are present on site. Tree or structure removal shall be	

Impact Statement	Mitigation Measure(s)	Residual Impact
	planned for either the spring or the fall and timed to ensure both suitable conditions for the detection of bats and adequate time for tree and/or structure removal to occur during seasonal periods of bat activity exclusive of the breeding season, as described below. Trees and/or structures containing suitable potential bat roost habitat features shall be clearly marked or identified. If no bat roosts are found, the results of the survey will be documented and submitted to the reviewing agency, after which no further action will be required. If day roosts are present, the biologist shall prepare a site-specific roosting bat protection plan to be implemented by the contractor following the agency's approval. The plan shall incorporate the following guidance as appropriate: ▪ When possible, removal of trees/structures identified as suitable roosting habitat shall be conducted during seasonal periods of bat activity, including the following: a) Between September 1 and about October 15, or before evening temperatures fall below 45 degrees Fahrenheit and/or more than 0.5 inch of rainfall within 24 hours occurs b) Between March 1 and April 15, or after evening temperatures rise above 45 degrees Fahrenheit and/or no more than 0.5 inch of rainfall within 24 hours occurs ▪ If a tree/structure must be removed during the breeding season and is identified as potentially containing a colonial maternity roost, then a qualified biologist shall conduct acoustic emergence surveys or implement other appropriate methods to further evaluate if the roost is an active maternity roost. Under the biologist's guidance, the contractor shall implement measures that consist of (or exceed) the following: a) If it is determined that the roost is not an active maternity roost, then the roost may be removed in accordance with the other requirements of this measure. b) If it is found that an active maternity roost of a colonial roosting species is present, the roost shall not be disturbed during the breeding season (April 15 to August 31). ▪ Tree removal procedures shall be implemented using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on day one. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed to not return to the roost that night. The remainder of the tree is removed on day two. ▪ Prior to the demolition of vacant structures within the project site, a qualified biologist shall conduct a focused habitat assessment of all structures to be demolished. The habitat assessment shall be conducted enough in advance to ensure the commencement of building demolition can be scheduled during seasonal periods of bat	

Impact Statement	Mitigation Measure(s)	Residual Impact
	activity (see above), if required. If no signs of day roosting activity are observed, no further actions will be required. If bats or signs of day roosting by bats are observed, a qualified biologist will prepare specific recommendations such as partial dismantling to cause bats to abandon the roost, or humane eviction, both to be conducted during seasonal periods of bat activity, if required. ▪ If the qualified biologist determines a roost is used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultation with CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately. BIO-4: Develop a Marine Mammal Monitoring Plan and Implement Avoidance and Minimization Measures A Marine Mammal Monitoring Plan shall be prepared to avoid and minimize potential adverse impacts to these species. The plan shall implement general guidelines set forth in the MMPA. Vessels under power shall remain at least 100 yards (300 feet) away from whales and 50 yards (150 feet) from dolphins, porpoises, seals and sea lions. When encountering marine mammals, the vessel shall slow down, operate at no-wake speed and be put in neutral to let the individual/s pass. If construction activities occur from November 1 to April 30, vessel larger than 65 feet are restricted to 10 knots or less. No survey or construction activities (such as pile-driving) will be performed at night unless an alternative monitoring plan is provided by the reviewing agency. Additionally, a qualified biologist shall be on site (either observing from a dock or aboard a vessel) to monitor the construction activities and vicinity for the presence of marine mammals during all in-water activities.	
Impact BIO-2. Infrastructure facilitated by the RCAP could adversely impact riparian habitat, other sensitive natural communities, or protected wetlands in Humboldt. Implementation of Mitigation Measures BIO-5 through BIO-7 would reduce impacts to a less than significant level.	BIO-5: Prepare Aquatic Environment Documentation Prior to approval of individual projects, the reviewing agency (County or specific city) shall retain a qualified biologist to perform an assessment of the project area to identify wetlands, riparian, and other sensitive aquatic environments. If wetlands are present the qualified biologist shall perform a wetland delineation following the 1987 <i>Corps of Engineers Wetlands Delineation Manual</i> and any applicable regional supplements to the <i>Corps of Engineers Wetlands Delineation Manual</i>. The wetland delineation shall be submitted to the USACE for verification.	Less than Significant with Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
	BIO-6: Implement Aquatic Environment Avoidance and Minimization Measures If wetlands, riparian, or other sensitive aquatic environments are found within the project limits, the reviewing agency (County or specific city) shall design or modify the project to avoid direct and indirect impacts on these habitats, if feasible. Additionally, the reviewing agency shall minimize the loss of riparian vegetation by trimming rather than removal where feasible. Prior to construction, the reviewing agency shall install orange construction barrier fencing to identify buffer areas around the seasonal wetland (50 feet from edge), riparian area (100 feet from edge), perennial wetlands (150 feet from edge) and other aquatic habitats (250 feet from edge of vernal pool), or as defined by the agency with regulatory authority over the resource(s). No buffer shall be required for man-made wetlands except wetlands created for mitigation purposes. The location of the fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications: The Contractor’s attention is directed to the areas designated as “environmentally sensitive areas.” These areas are protected, and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the reviewing agency. The Contractor will take measures to ensure that Contractor’s forces do not enter or disturb these areas, including giving written notice to employees and subcontractors. Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. Immediately upon completion of construction activities the contractor shall stabilize exposed soil/slopes impacted within the aquatic habitat. On highly erodible soils/slopes, use a nonvegetative material that binds the soil initially and breaks down within a few years. If more aggressive erosion control treatments are needed, geotextile mats, excelsior blankets, or other soil stabilization products will be used. All stabilization efforts should include habitat restoration efforts. BIO-7: Compensate for Loss of Aquatic Environments If wetlands or riparian habitat are disturbed as part of an individual project, the reviewing agency shall compensate for the disturbance to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site-specific information and determined through coordination with State, federal, and local agencies as part of the permitting	

Impact Statement	Mitigation Measure(s)	Residual Impact
	process for the project. Unless determined otherwise by the regulatory/permitting agency, the compensation shall be at a minimum ratio of two acres restored, created, and/or preserved for every one acre disturbed. Compensation may comprise on-site restoration/creation, off-site restoration, preservation, or mitigation credits (or a combination of these elements). The reviewing agency shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created and monitored over a minimum period of time.	
Impact BIO-3. Infrastructure facilitated by the RCAP would result in impacts to wildlife movement corridors and wildlife nursery sites if they narrow or remove existing corridors or degrade or remove nursery sites. Implementation of Mitigation Measure BIO-8 would reduce potential impacts to the extent feasible. However, impacts would remain significant and unavoidable.	BIO-8: Incorporate Wildlife Corridor Measures into Design Prior to Construction Prior to design approval and construction of individual projects that traverse or interface with an existing wildlife corridor, the reviewing agency (County or relevant city) shall incorporate economically viable design measures, as applicable and necessary, to allow wildlife or fish to continue to move through an existing wildlife corridor, both during construction activities and post construction. If the project cannot be designed with these design measures (i.e., due to transportation corridor safety, etc.) the reviewing agency shall coordinate with the appropriate regulatory agencies (i.e., USFWS, NMFS, CDFW) to obtain regulatory permits and implement alternative project-specific mitigation prior to construction activities.	Significant and Unavoidable
Impact BIO-4. Infrastructure facilitated by the RCAP would be required to conform with applicable local policies and ordinances protecting biological resources. Impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation
Impact BIO-5. The RCAP would not conflict with an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Any future RCAP-related infrastructure projects occurring within an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan would be required to comply with the applicable plan's requirements. Impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact AG-1. Infrastructure facilitated by the RCAP has the potential to convert Farmland to non-agricultural use and conflict with existing zoning for agricultural use or a Williamson Act contract. Mitigation Measures AG-1 through AG-4 would be implemented to avoid conversion of actively farmed lands and reduce the potential for permanent loss of Farmland to the extent feasible. However, impacts would remain significant and unavoidable.	AG-1: Avoid Actively Farmed Lands If a project facilitated by the RCAP is proposed on actively farmed land, the reviewing agency (County or individual city) shall require the project sponsor to demonstrate their consideration of alternate sites not in agricultural use, such as sites that were formerly developed or contaminated lands located within the jurisdictional limits of the reviewing agency when such development is consistent with general plan and zoning requirements of the alternate sites. AG-2: Agricultural Management Plan If a project facilitated by the RCAP is proposed on actively farmed land, prior to the issuance of a building permit, the project sponsor shall submit to the reviewing agency (County or individual city) an Agricultural Management Plan (AMP) that provides for the ongoing agricultural productivity of the project site for the life of the project. Agricultural uses may include but are not limited to sheep grazing, the keeping of honeybees, or planting of row crops, on a rotational basis. During rotational periods, the AMP shall include planting and maintenance of locally appropriate native plants, focusing on species that provide the greatest value to bees, moths, butterflies, and other native pollinators. Some potential options include yarrow (<i>Achillea millefolium</i>), farewell to spring (<i>Clarkia amoena</i>), California poppy (<i>Eschscholzia californica</i>), riverbank lupine (<i>Lupinus rivularis</i>), California bee plant (<i>Scrophularia californica</i>), and rough hedgenettle (<i>Stachys rigida</i>). To maintain habitat value, mowing shall not occur during the bloom period, though targeted removal of invasive species is encouraged. The AMP shall summarize the types and duration of agricultural uses as well as operator information for the property. The reviewing agency reserves the right to reject or require revisions to the plan to ensure the effectiveness of the planned agricultural operations. AG-3: Prepare and Implement a Decommissioning and Soil Reclamation Plan Prior to the issuance of a building permit, the applicant shall submit, for review and approval by the reviewing agency (County or individual city), a Soil Reclamation Plan (Plan) for the restoration of the site at the end of the project's useful life. The Plan shall contain an analysis of general pre-construction conditions of the project site, and the site shall be photographically documented by the applicant prior to the start of construction. The Plan shall contain specific measures to restore the soil to approximate its pre-project condition, including (1) removal of all above-ground and below-ground project fixtures, equipment, and non-agricultural driveways, (2) tilling to restore the sub-grade material to a density and depth consistent with its pre-project condition, (3) revegetation using a seed mixture approved by the reviewing agency, consisting of native species and designed to maximize revegetation, shall be broadcast or drilled across the project site, and (4) application of weed-free mulch spread, as needed, to stabilize the soil until germination occurs and young	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
	plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions shall be assessed by implementing agency staff. Additional seedlings and applications of weed-free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (i.e., restored to pre-project conditions) until the entire project area has been restored to conditions equivalent to pre-construction conditions. All waste shall be recycled or disposed of in compliance with applicable law. The project sponsor shall submit documentation to the reviewing agency to verify the completion of reclamation within 18 months of expiration of the project use permit or vacation of the project site. AG-4: Provide Financial Assurance to Implement Soil Reclamation Plan If a Soil Reclamation Plan is required pursuant to Mitigation Measure AG-3, prior to the issuance of a building permit, the project sponsor shall post a performance or cash bond, submit a Certificate of Deposit, submit a letter of credit, or provide such other financial assurances acceptable to the reviewing agency (County or specific city), in an amount provided in an Engineer's Cost Estimate, approved by the reviewing agency, to ensure completion of the activities under the Soil Reclamation Plan. Every five years from the date of completion of construction of the project, the project sponsor shall submit an updated Engineer's Cost Estimate for financial assurances for the Soil Reclamation Plan, which will be reviewed every five years by the reviewing agency to determine if the amount of the assurances is sufficient to implement the Soil Reclamation Plan. The amount of the assurances must be adjusted if, during the five-year review, the amount is determined to be insufficient to implement the Soil Reclamation Plan.	
Impact AG-2. The RCAP includes measures that promote the conservation of Humboldt's forest land and timberland. Additionally, infrastructure facilitated by the RCAP would not be anticipated to result in the conversion of forest land nor conflict with existing zoning for forestry or timberland use. Impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation
Cultural and Tribal Cultural Resources		
Impact CR-1. Implementation of the RCAP could cause a substantial adverse change in the significance of an historical resource. Mitigation Measure CR-1 would reduce impacts to the extent feasible, but this impact would remain significant and unavoidable.	CR-1: Prepare Historical Resources Evaluation prior to Approval for Projects Involving Built Environment Resources 45 Years or Older and Implementation of Mitigation prior to and during Construction The reviewing agency (County or respective City) shall prepare a historical resources evaluation prior to approval of a RCAP project involving the demolition or substantial	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
	alteration of a building, structure, object, or other built environment feature that is 45 years of age or older, as described below: ▪ The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualifications Standards in architectural history or history (as defined in Code of Federal Regulations, Title 36, Part 61). The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation to identify potential historical resources within the proposed development site. All built environment resources 45 years of age or older shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the reviewing agency for review and concurrence. If the property is already listed in the NRHP, CRHR, or a local register, the historical resources evaluation described above shall not be required. ▪ If historical resources are identified within the site of a proposed development, efforts shall be made to the greatest extent feasible to ensure that the relocation, rehabilitation, or alteration of the resource is consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the Professional Qualification Standards. In conjunction with a development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features during construction activities shall be provided to the reviewing agency for review and concurrence. As applicable, the report shall demonstrate how a project complies with the Standards and be submitted to the City for review and approval prior to the issuance of permits. ▪ If significant historical resources are identified on a development site and compliance with the Standards and or avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures may include documentation of the historical resource in the form of a Historic American Building Survey (HABS) report, or equivalent. The report shall comply with the Secretary of the Interior’s Standards for Architectural and Engineering Documentation and shall generally follow the HABS Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Professional Qualification Standards and submitted to the reviewing	

Impact Statement	Mitigation Measure(s)	Residual Impact
	agency prior to issuance of any permits for demolition or alteration of the historical resource.	
Impact CR-2. The RCAP has the potential to result in significant impacts if projects carried out under the plan would cause a substantial adverse change in the significance of an archaeological resource, including those that qualify as historical resources. Mitigation Measure CR-2 would require archaeological resources assessments for future projects and measures to protect any resources identified. This impact would be less than significant with mitigation.	CR-2: Preparation of Archaeological Resources Assessment prior to Project Approval and Implementation of Mitigation prior to and during Construction Prior to approval of a project that involves ground disturbance activities, the reviewing agency (County or respective City) shall prepare an archaeological resources assessment under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualification Standards in either prehistoric or historic archaeology. - Assessments shall include a California Historical Resources Information System records search at the Northwest Information Center (NWIC) and a Sacred Lands File search maintained by the Native American Heritage Commission (NAHC). The records searches will characterize the results of previous cultural resource surveys and disclose any cultural resources that have been recorded and/or evaluated in and around a project site. A Phase I pedestrian survey shall be undertaken at a project site that is on previously undeveloped land in order to locate any surface cultural materials. By performing a records search, consultation with the NAHC, and a Phase I survey, a qualified archaeologist shall be able to classify a project site as having high, medium, or low sensitivity for archaeological resources. - If the Phase I archaeological survey identifies resources that may be affected by a project, the archaeological resources assessment shall also include Phase II testing and evaluation. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be identified in the Phase II evaluation. These measures shall include, but would not be limited to, a Phase III data recovery program, avoidance, or other appropriate actions to be determined by a qualified archaeologist in consultation with the reviewing agency and any interested Tribes. If significant archaeological resources cannot be avoided, impacts may be reduced to less-than-significant levels by filling on top of the sites rather than cutting into a cultural deposit. Alternatively, and/or in addition, a data collection program may be warranted, including mapping the location of artifacts, surface collection of artifacts, or excavation of the cultural deposit to characterize the nature of the buried portions of sites. Curation of the excavated artifacts or samples shall occur as specified by the archaeologist in consultation with the reviewing agency and any interested Tribes. The final disposition of artifacts not directly associated with Native American graves shall be negotiated during consultation with interested tribes. If Native American tribes do not accept the artifact, it shall be offered to an institution staffed by qualified professionals, as determined by the reviewing agency. Artifacts include material recovered from all phases of work, including the initial survey, testing, indexing, data recovery, and monitoring.	Less than Significant with Mitigation

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact CR-3. The discovery of human remains is always a possibility during ground-disturbing activities. Ground disturbance associated with development carried out under the RCAP may disturb or damage known or unknown human remains. This impact would be less than significant with adherence to existing regulations.	No mitigation is required.	Less than Significant without Mitigation
Impact CR-4. Implementation of the RCAP has the potential to impact unidentified Tribal cultural resources. Mitigation Measure CR-3 would require that construction is halted in the event that Tribal cultural resources are encountered and that an archaeologist and local Native American representative are consulted to assess the find and prepare a mitigation plan, if warranted. With implementation of Mitigation Measure CR-3, impacts would be less than significant.	CR-3: Suspend Work around Tribal Cultural Resources Identified during Construction In the event that cultural resources of Native American origin are identified during construction of a project implemented under the RCAP, the reviewing agency (County or respective city) shall temporarily suspend or redirect all earth-disturbing work within 100 feet of the find until an archaeologist has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted. If the reviewing agency, in consultation with local Native Americans, determines that the resource is a Tribal cultural resource and, thus, significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with local Native American group(s). The mitigation plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American Tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for Tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery.	Less than Significant with Mitigation
Greenhouse Gas Emissions and Energy		
Impact GHG-1. Implementation of the RCAP would not generate GHG emissions in a manner that would have a significant impact on the environment. The RCAP would support applicable plans, policies, and regulations intended to reduce emissions of GHGs. this impact would be less than significant.	No mitigation is required.	Less than Significant without Mitigation
Impact GHG-2. The RCAP would implement GHG reduction strategies that would also promote greater overall energy efficiency. Wasteful, inefficient, or unnecessary consumption of energy would not occur. impacts would be less than significant	No mitigation is required.	Less than Significant without Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact GHG-3. The RCAP would be consistent with applicable energy efficiency and renewable energy goals and regulations, including relevant provisions of California Energy Code Title 24 and CALGreen. Impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation
Land Use/Planning and Population/Housing		
Impact LU-1. Implementation of the RCAP would not physically divide an established community. No impacts would occur.	No mitigation is required.	No Impact
Impact LU-2. The RCAP would be consistent with applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation
Impact LU-3. Implementation of the RCAP would not result in substantial unplanned population growth in Humboldt or the displacement of people or housing. There would be no impact.	No mitigation is required.	Less than Significant without Mitigation
Noise		
Impact NOI-1. Construction and operational activities associated with projects and infrastructure under the RCAP would generate a substantial temporary and permanent increase in ambient noise levels in excess of standards. Mitigation Measures NOI-1 and NOI-2 would reduce construction and operational noise impacts to the extent feasible, but impacts would remain significant and unavoidable.	NOI-1: Implement Construction Noise Reduction Measures The reviewing agency (County or specific City) shall implement the following noise reduction measures, where applicable, for projects that result in construction noise impacts, and where feasible and necessary based on project and site-specific considerations. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions. To reduce construction noise levels to achieve applicable standards, the reviewing agency for a project under the RCAP shall implement the measures identified below, where feasible and necessary. The reviewing agency shall ensure that, where residences or other noise sensitive uses are located within 100 feet of construction sites that would use heavy-duty construction equipment, appropriate measures shall be implemented to ensure compliance with the FTA's daytime construction noise threshold for residential uses of 80 dBA $L_{eq}(8hr)$. Specific techniques may include but are not limited to: restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
	▪ Designate an on-site construction complaint and enforcement manager for projects within 300 feet of sensitive receptors. ▪ The reviewing agency shall post phone numbers for the on-site enforcement manager at construction sites along with complaint procedures and who to notify in the event of a problem. ▪ For projects that require pile driving within 600 feet of sensitive receptors, the implementing agencies shall implement caisson drilling or similar techniques as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review. ▪ The reviewing agency shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds. ▪ The reviewing agency shall ensure that impact equipment (e.g., jack hammers, pavement breakers and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. ▪ The following timing restrictions shall apply to RCAP project construction activities located within 1,000 feet of a dwelling unit, except where timing restrictions are already established in local codes or policies, or avoidance of these workhours is infeasible. ▫ Monday through Friday: 7 a.m. to 6 p.m. ▫ Saturday: 9 a.m. to 5 p.m. ▪ The reviewing agency shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled. NOI-2: Prepare Operational Noise Study and Implement Identified Measures For projects under the RCAP that install mechanical equipment and/or wind turbines, or that add new or increased transit service within the bus transit project screening distances listed in the FTA's <i>Transit Noise and Vibration Impact Assessment</i>, the reviewing agency (County or specific City) shall implement measures identified in a noise study, where applicable, for projects that result in operational noise impacts, and where feasible and necessary based on project and site-specific considerations. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions. The reviewing agency of a RCAP project that would install mechanical equipment, wind turbines, and/or new or increased transit service shall complete a detailed noise study based on project-specific details and location. Such a noise study shall identify the ambient	

Impact Statement	Mitigation Measure(s)	Residual Impact
	noise levels in the project area, characterize the nearest sensitive receptors, estimate the noise levels proximate receptors will experience during operation of the individual project, compare estimated noise levels to the County or specific city noise level standards, outline any measures that are necessary to reduce operational noise levels, and determine the amount of noise reduction that would occur with implementation of these measures. Noise reduction measures may include, but would not be limited to, alternative site design, alternative orientation of noise sources, and construction of permanent berms and/or barriers. Noise reduction measures shall be implemented to reduce noise levels to the noise level standards or below, as feasible.	
Impact NOI-2. Projects and infrastructure facilitated by the RCAP could generate groundborne vibration during construction, potentially affecting nearby land uses. Operation of future development would not result in substantial vibration. Impacts for construction vibration would be less than significant with mitigation.	NOI-3: Prepare and Implement Construction Vibration Control Plan Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); or a vibratory roller within 40 feet of fragile historical resources or 25 feet of any other structure, the reviewing agency (County or specific city) for projects under the RCAP shall prepare a groundborne vibration analysis to assess and mitigate potential vibration impacts related to these construction activities. This vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed FTA architectural damage thresholds (e.g., 0.12 in/sec PPV for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving or static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure FTA vibration thresholds are not exceeded.	Less than Significant with Mitigation
Impact NOI-3. Project and infrastructure facilitated by the RCAP may experience increased noise levels from nearby airports. Airports in the plan area have generally minor noise contours; in addition, construction contractors and maintenance employers would be required to comply with Cal OSHA noise regulations. Construction workers and maintenance employees would not be exposed to excessive noise levels from aircraft noise, and impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Impact Statement	Mitigation Measure(s)	Residual Impact
Transportation and Traffic		
Impact TRA-1. Implementation of the RCAP would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, bicycle, and pedestrian facilities. No impact would occur.	No mitigation is required.	No Impact
Impact TRA-2. Implementation of the RCAP would result in reduced VMT and, therefore, would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). There would be no impact.	No mitigation is required.	No Impact
Impact TRA-3. Implementation of the RCAP would not substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts would be less than significant.	No mitigation is required.	Less than Significant Without Mitigation
Impact TRA-4. Implementation of the RCAP would not result in inadequate emergency access. This impact would be less than significant.	No mitigation is required.	Less than Significant Without Mitigation
Utilities and Service Systems		
Impact UTL-1. Implementation of the plan is not anticipated to require the relocation or construction of new or expanded stormwater, natural gas, or telecommunication facilities, but may require the relocation or construction of new or expanded water supply, wastewater, and/or electric power infrastructure and facilities within Humboldt, which would involve ground disturbing activities that could result in significant environmental effects. mitigation Measures would limit these impacts, but electric power impacts would remain significant and unavoidable.	Implement Mitigation Measures AES-1 through AES-3, AQ-1 through AQ-3, BIO-1 to BIO-7, CR-1 to CR-3, and NOI-1 through NOI-3.	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact UTL-2. Implementation of the plan would not be anticipated to substantially increase population in Humboldt or the demand for water services during normal, dry, and multiple dry years. The RCAP would result in an overall reduction in water demand, and as such, there would be no impact.	No mitigation is required.	No Impact
Impact UTL-3. Implementation of the plan would not be anticipated to substantially increase wastewater treatment demand within Humboldt such that the respective wastewater treatment providers would not have sufficient capacity to serve the plan's projected demand in addition to the providers' existing commitments. Impacts would be less than significant.	No mitigation is required.	Less than Significant without Mitigation
Impact UTL-4. Implementation of the plan would not be anticipated to substantially increase solid waste generation such that state or local standards or capacity of local infrastructure would be exceeded, or otherwise impact the attainment of solid waste reduction goals. Additionally, there is no element of the plan that would result in noncompliance with federal, State, and local management and reduction statutes and regulations related to solid waste. Impacts would be less than significant	No mitigation is required.	Less than Significant without Mitigation
CAPCOA = California Air Pollution Control Officers Association; USEPA = U.S. Environmental Protection Agency; NCUAQMD = North Coast Unified Air Quality Management District; CARB = California Air Resources Board; DPM = diesel particulate matter; USFWS = U.S. Fish and Wildlife Service; NMFS = National Marine Fisheries Service; CDFW = California Department of Fish and Wildlife; HCP = habitat conservation plan; NCCP = natural community conservation plan; FESA = Federal Endangered Species Act; CESA = California Endangered Species Act; MBTA = Migratory Bird Treaty Act; MMPA = Marine Mammal Protection Act; USACE = U.S. Army Corps of Engineers; NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources; FTA = Federal Transit Administration; dBA = A-weighted decibels; in/sec = inches per second; PPV = peak particle velocity		

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1 Introduction

This document is a programmatic Environmental Impact Report (EIR) that assesses the potential environmental impacts associated with implementation of the RCAP and CEQA GHG Emissions Thresholds (collectively referred to as proposed plan). A programmatic EIR evaluates the effects of broad proposals or planning-level decisions such as the proposed plan with a level of detail sufficient to allow informed decisions among planning-level alternatives and to develop broad mitigation strategies.

This chapter discusses (1) the proposed plan and EIR background; (2) the legal basis for preparing an EIR; (3) the scope and content of the EIR; (4) the lead, responsible, and trustee agencies; and (5) the environmental review process required under the California Environmental Quality Act (CEQA). The proposed plan is described in detail in Chapter 2, *Project Description*.

1.1 EIR Purpose, Type, and Authority

1.1.1 Regulatory Purpose

The Humboldt Regional Climate Action Plan (RCAP) EIR requires the discretionary approval of the County's Board of Supervisors; therefore, the proposed plan is subject to the environmental review requirements of CEQA. In accordance with Section 15121 of the CEQA Guidelines (California Code of Regulations, Title 14), the purpose of an EIR is to serve as an informational document that:

“...will inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.”

As such, the regulatory purpose of this EIR is to disclose the environmental impacts, including any significant effects, of the proposed plan, identify ways to avoid or reduce environmental impacts through planning design or environmental mitigation measures, consider feasible alternatives to the proposed plan, and integrate public participation and input into the overall planning process.

1.1.2 EIR Type

This EIR has been prepared as a programmatic EIR pursuant to Section 15168 of the CEQA Guidelines. A programmatic EIR is appropriate for planning documents or other long-term programs. As stated in the CEQA Guidelines:

“A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- 1) Geographically,
- 2) As logical parts in the chain of contemplated actions;
- 3) In connections with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- 4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.”

This EIR is programmatic in nature with a broad comprehensive evaluation to cover the actions taken under the RCAP. Some future RCAP-related projects may require additional project-specific environmental review, given that this program EIR analysis is not parcel- or project-specific.

1.1.3 Legal Authority

This EIR is intended to serve as an informational document for the public and Humboldt County decision makers. The approval process will include public hearings to consider certification of a Final EIR and adoption of the proposed plan. Adoption of the proposed plan may not be considered until this EIR has first been considered by the decision makers and certified by the approving body, in this case the County’s Board of Supervisors.

1.2 Environmental Impact Report Background

1.2.1 Notice of Preparation

The County distributed a Notice of Preparation (NOP) of the EIR for a 30-day agency and public review period starting on August 30, 2024, and ending on September 30, 2024. The NOP is included in Appendix A of this EIR. In addition, the County held an EIR Scoping Meeting on September 17, 2024. The meeting was aimed at providing information about the proposed plan to members of public agencies, interested stakeholders, and residents/community members, and at receiving input on the scope of the environmental review. The meeting was held at the Ag Center at 5630 S. Broadway Eureka, CA 95503 and online via Zoom.

1.2.2 Scoping Comments Received

The County received written EIR scoping comment letters from one agency and ten organizations in response during the EIR public scoping period. The written EIR scoping comments that were received are included in Appendix A of this EIR. Many of the comments received pertained to the contents of the Draft RCAP itself, rather than the EIR and CEQA scope. Table 1-1 summarizes the content of the letters and verbal comments that are applicable to the EIR and describes where the issues raised are addressed in this EIR.

Table 1-1 EIR Scoping Comments and EIR Location Information

Commenter	Comment/Request	Where It Was Addressed
Humboldt County Association of Governments (HCAOG)	Clarify conditions under which an environmental impact assessment for GHG emissions from vehicle miles traveled (VMT) can be streamlined using the RCAP programmatic EIR.	The streamlining process for future project streamlining utilizing the CEQA GHG Emissions Thresholds is described under Section 2.0, <i>Project Description</i> .
	Define urban and rural areas in Humboldt County, specifying when, where, and how the 29 measures in the RCAP will contribute to achieving the Humboldt 2030 GHG emissions reduction target.	Urban and rural areas in Humboldt are defined in Section 2.0, <i>Project Description</i> . The RCAP measures apply to all areas of Humboldt, except for certain measures which specify if they are urban or rural. These measures are listed in Section 2.0, <i>Project Description</i> . The Draft RCAP and its supporting appendices include information on how the RCAP will contribute to achieving the Humboldt 2030 GHG emissions reduction target.

Commenter	Comment/Request	Where It Was Addressed
Coalition for Responsible Transportation Priorities (CRTP); 350 Humboldt; Climate 911; Environmental Protection Information Center (EPIC); Humboldt Coalition for Clean Energy; Humboldt Waterkeeper; Northcoast Environmental Center; Redwood Coalition for Climate & Environmental Responsibility (RCCER)	The commenter requests that the CEQA checklist be provided as soon as it becomes available.	The CEQA GHG checklist is being prepared and will be available for public review prior to EIR certification.
	The commenter expressed concern about the lack of clear guidelines and a Consistency Checklist in the RCAP. The commenter argues that this ambiguity makes it difficult to determine which projects might bypass public scrutiny of their greenhouse gas impacts. The commenter suggests that the EIR should adopt a conservative approach, considering the potential negative impacts of lenient tiering. They emphasize that the EIR must account for the environmental impacts if projects only adhere to the RCAP's exact wording, which often lacks firm policy commitments.	The EIR assesses potential environmental impacts on a programmatic level of the types of projects that may be implemented in accordance with the measures and actions contained in the RCAP, such as renewable energy and fuels, building decarbonization, microgrids, recycled water, organic waste, and active transportation projects and infrastructure. Impacts are addressed throughout Chapter 3.0, <i>Environmental Impact Analysis</i> .
	The commenter suggests that the RCAP would result in significant CEQA impacts due to conflicts with adopted local transportation plans, such as the HCAOG Regional Transportation Plan.	Consistency with transportation plans is addressed in Section 3.8, <i>Transportation</i> .
	The commenter suggests the RCAP would result in a significant VMT impact.	VMT impacts are addressed in Section 3.8, <i>Transportation</i> .

Commenter	Comment/Request	Where It Was Addressed
Wendy Ring	The commenter states the EIR should take a very conservative approach and include the impacts of overly permissive tiering, since that possibility can't be excluded. The EIR must include consideration of the greenhouse gas and other environmental impacts if projects only comply with the exact language of this CAP which frequently falls short of committing to policy adoption.	The RCAP is a policy document and this Draft EIR considers the potential GHG emissions and other environmental impacts of implementation of the RCAP on a programmatic scale throughout Chapter 3.0 of the document. Project-level proposals and details are not included as part of the RCAP. Future discretionary RCAP projects tiering from this EIR would still be required to comply with CEQA, document potential environmental impacts, and provide project-specific mitigation measures, as necessary. Future discretionary projects utilizing the RCAP to streamline CEQA GHG emissions analyses would be required to undergo project-specific CEQA analyses, document potential environmental impacts, and provide project-specific mitigation measures, as necessary.
	The commenter suggests that the RCAP's lack of commitment to zoning changes or other substantive action to promote infill would increase VMT, decrease road safety for non-vehicular users, destroy wildlife habitat, convert agricultural or timber lands, commit irretrievable public resources to the extension and maintenance of public infrastructure that could have been used for climate mitigation or resilience, and induce further development and concentration of residents and workers at urban margins.	The potential of the RCAP to result in impacts related to the transportation system are addressed in Section 3.8, <i>Transportation</i> . The potential of the RCAP to result in impacts to wildlife habitat and agricultural resources are addressed in Section 3.3, <i>Biological, Agricultural and Forestry Resources</i> . The potential for the RCAP to commit irretrievable resources or induce substantial unplanned growth is addressed in Section 3.6, <i>Land Use, Population, and Housing</i> , and Section 2.0, <i>Other CEQA Sections</i> .
	Scope should include conversion of forest, grassland, and marginal farmland in US and other countries.	The conversion of forestland and farmland is addressed in Section 3.3, <i>Biological, Agricultural, and Forestry Resources</i> , pursuant to the thresholds and requirements of CEQA Guidelines Appendix G.
	The commenter suggests that the GHG emissions reductions contained in the RCAP are questionable and that the EIR should address the impacts of GHG emissions that the RCAP will allow to happen.	GHG emissions impacts are addressed in Section 3.5, <i>Greenhouse Gas Emissions and Energy</i> .
	The commenter suggests including GHG and pollution emissions from the production and transportation of renewable diesel, assuming no local production. The commentor notes that while bio-oil could be produced locally, it would need to be transported to a distant refinery and then back to Humboldt for use, adding to emissions. The commenter also recommends including GHG emissions from hydrogen production using fossil gas.	The Draft EIR programmatic addresses the potential for GHG emissions impacts in Section 3.5, <i>Greenhouse Gas Emissions and Energy</i> .
	The commenter suggests that the RCAP would result in increased criteria air pollutant and air toxics emissions from increased energy demand and increased generation at the gas-fired Humboldt Bay Generating Station and Humboldt Sawmill Co's biomass plant.	Impacts to air quality are addressed in Section 4.2, <i>Air Quality</i> .

Commenter	Comment/Request	Where It Was Addressed
Gary Hughes (Biofuel Watch Organization)	The commenter states the EIR should include the effects of renewable diesel on land use change, deforestation, habitat degradation, commodity markets, and palm oil importation. It should also address food system and economic impacts, electrification policies, transportation impacts, fuel spill risks, and public health and safety from refining processes.	The potential environmental impacts related to biofuel production are addressed throughout Chapter 3.0 of the document, pursuant to the thresholds and requirements of CEQA Guidelines Appendix G.
	The commenter states the EIR must consider deforestation and land use changes in the RCAP, including the impacts of silviculture activities like logging, which contribute to GHG emissions, wildfire risk, and water shortages. Wildfire impacts should be included, and a robust estimate of GHG emissions from logging activities is necessary. Climate stressors exacerbated by logging and road building, such as heat waves, droughts, and biodiversity loss, should be examined.	The RCAP does not promote increased logging activities or associated roadbuilding. The potential for the RCAP to result in impacts pursuant to the thresholds and requirements of CEQA Guidelines Appendix G related to GHG emissions, wildfire risk, water supply issues, and biological resources are addressed in Section 3.5, <i>Greenhouse Gas Emissions and Energy</i> , Section 3.10, <i>Effects Found Not to be Significant</i> , and Section 3.3, <i>Biological, Agricultural, and Forestry Resources</i> , respectively.
	The commenter states the EIR must address or evaluate the uncertainties about whether biomass gasification can be deployed at scale in any commercially viable way and look at the economic realities of this proposal. Addressing uncertainties regarding non-homogenous feedstocks, production of those impurities and byproducts like flu ash, nitrous oxide, sulfur oxide and tar. The commenter suggests looking at the science around carbon trading. There are a lot of assumptions around the efficacy of carbon credits and a lot of economic issues and environmental justice issues around carbon trading.	The EIR addresses the potential environmental impacts of new hydrogen production activities in Humboldt on a programmatic level pursuant to the thresholds and requirements of CEQA Guidelines Appendix G. CEQA environmental impacts are addressed throughout Chapter 3.0 of the document.

1.3 Scope and Adequacy

1.3.1 Scope and Sources

This EIR addresses impacts related to Aesthetics, Air Quality, Biological, Agricultural and Forestry Resources, Cultural and Tribal Cultural Resources, Greenhouse Gas Emissions and Energy, Land Use, Population and Housing, Noise and Vibration, Transportation, and Utilities/Service Systems listed in the 2024 CEQA Guidelines Appendix G.

The alternatives chapter of this EIR (Chapter 5.0) was prepared in accordance with Section 15126.6 of the CEQA Guidelines and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. The alternatives evaluated include the CEQA-required “No Project” alternative and two alternatives to the RCAP. In addition, the alternatives chapter identifies the “environmentally superior” alternative among the alternatives assessed.

In preparing this EIR, information was used from pertinent County and City policies and guidelines, certified EIRs and adopted CEQA documents, and other plans and background documents. References are included as footnote citation references where relevant throughout this EIR document.

1.3.2 Content Adequacy

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. Section 15151 of the CEQA Guidelines provides the standard of adequacy on which this document is based. The CEQA Guidelines state:

“An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure.”

1.4 Lead, Responsible, and Trustee Agencies

1.4.1 Lead Agency

The CEQA Guidelines define lead, responsible and trustee agencies. Humboldt County (also referred to as “the County”) is the lead agency for the proposed plan because it holds principal responsibility for approving the proposed plan.

1.4.2 Responsible Agencies

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over a project or plan. The seven incorporated cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad plan to also adopt the RCAP and are responsible agencies.

1.4.3 Trustee Agencies

A trustee agency refers to a State agency having jurisdiction by law over natural resources affected by a project or plan. The CDFW is a trustee agency for the proposed plan.

1.5 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP).** After deciding that an EIR is required, the lead agency (Humboldt County) filed a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (CEQA Guidelines Section 15082; Public Resources Code Section 21092.2). The NOP for this EIR was posted in the Humboldt County Clerk's office for 30 days. In addition, the County held an EIR Scoping Meeting on September 17, 2024.
2. **Draft EIR.** This Draft EIR contains the following required components: a) table of contents or index; b) summary; c) project description; d) environmental setting as part of the various topical sections; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing, and unavoidable impacts) as part of the various topical sections; f) a discussion of alternatives; g) mitigation measures as part of the various topical sections; and h) discussion of irreversible change (CEQA Guidelines Sections 15120 through 15132).
3. **Notice of Completion (NOC).** The lead agency must file a NOC with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the NOC in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the NOC to anyone requesting it (CEQA Guidelines Section 15087). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site (not appropriate for citywide or plan-level efforts such as the proposed plan); and c) direct mailing to owners and occupants of contiguous properties (not appropriate for citywide or plan-level efforts such as the proposed plan). The lead agency must solicit input from other agencies and the public and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse approves a shorter period (Public Resources Code Section 21091). Given such requirements, this Draft EIR will be noticed via publication in a newspaper of general circulation and involve a 45-day public review and comment period.
4. **Final EIR.** A Final EIR must include the following components: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments (CEQA Guidelines Section 15132).
5. **Final EIR Certification.** Prior to making a decision on the proposed plan, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency (i.e., Humboldt County); and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving the proposed plan (CEQA Guidelines Section 15090).
6. **Lead Agency Plans Decision.** The lead agency may a) disapprove the proposed plan because of its significant environmental effects; b) require changes to the proposed plan to reduce or avoid

significant environmental effects; or c) approve the proposed plan despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (CEQA Guidelines Sections 15042 and 15043).

7. **Findings/Statement of Overriding Considerations.** For each significant impact of the proposed plan identified in the EIR, the lead agency must find, based on substantial evidence, that either:
a) the proposed plan has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the proposed plan are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or proposed plan alternatives infeasible (CEQA Guidelines Section 15091). If an agency approves a plan or project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects (CEQA Guidelines Section 15097).
9. **Notice of Determination (NOD).** The lead agency must file a NOD after deciding to approve a plan or project for which an EIR is prepared (CEQA Guidelines Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

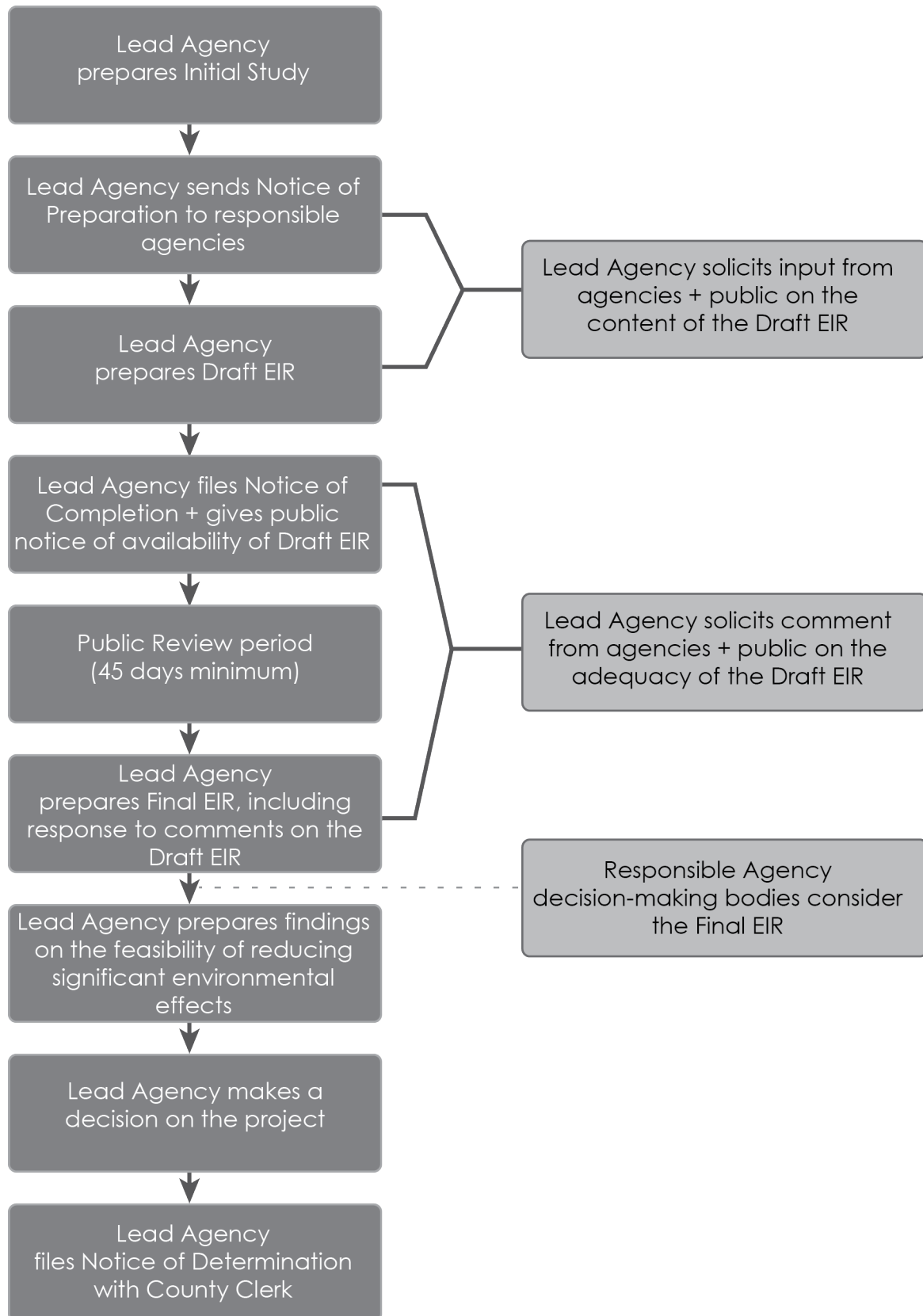
Figure 1-1 Environmental Review Process

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2 Project Description

As part of a regional climate planning process, Humboldt County (also referred to as “the County”) proposes to adopt a regional climate action plan (RCAP) that addresses greenhouse gas (GHG) emissions generated within Humboldt, including the unincorporated County and the seven incorporated cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad.¹ The RCAP includes a 2022 GHG emissions inventory, 2030, 2035, 2040, and 2045 GHG emissions forecasts, 2030 and 2045 GHG emissions targets, and GHG emissions reduction measures to achieve those targets. In addition, the County proposes to adopt California Environmental Quality Act (CEQA) GHG Emissions Thresholds for use in CEQA GHG analyses as part of future CEQA assessments of projects and plans within the County.

This chapter provides an overview of the plan area location and setting as well as the proposed plans’ objectives, components, and measures. Intended uses of this EIR by agencies with permitting and approval authority over the proposed plans, in addition to required permits and approvals, are also discussed.

2.1 Plan Location and Physical Setting

The RCAP and CEQA GHG Emissions Thresholds apply to all areas and plans/projects within Humboldt County limits (unincorporated and incorporated portions). Figure 2-1 shows the regional location, and Figure 2-2 shows the plan location. The plan location includes all of Humboldt County’s unincorporated and incorporated lands.

2.1.1 Regional Location and Setting

Humboldt covers an approximately 4,050 square-mile area within the northern California coastal area (see Figure 2-1), and the plan area involves all land within unincorporated and incorporated Humboldt County (see Figure 2-2). Humboldt is bound by Del Norte and Siskiyou Counties to the north, Trinity County to the east, and Mendocino County to the south. The Pacific Ocean is located to the west of Humboldt, forming a natural barrier to development. Principal regional transportation facilities serving Humboldt are Highway (Hwy) 101, State Route (SR) 36, SR 299, SR 96, and the Arcata/Eureka Airport. Regional bus service is also provided by the Humboldt Transit Authority, including the Southern Humboldt Intercity, Arcata and Mad River, Redwood Transit System, Eureka Transit Service, Willow Creek, Redwood Coast Express and Ride Humboldt Flex transit service routes.

2.1.2 Local Setting

Humboldt currently has a population of 133,100 according to the California Department of Finance estimates.² Eighty percent of the County’s 2.3 million acres are forested. Fifty percent of this acreage is private commercial timberland and 35 percent is State of California or federal public land, including Redwood National and State Parks, Six Rivers National Forest, the King Range National

¹ “Within this EIR, reference to “Humboldt” refers to the region made up by the unincorporated County and incorporated cities, collectively.

² California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2021-2024. <https://dof.ca.gov/forecasting/Demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/> (accessed August 2024).

Conservation Area, and Humboldt Redwoods State Park. The County also contains several areas of Tribal lands, including the approximately 89,400-acre Hoopa Valley Reservation, 56,370-acre Yurok Reservation, and 76-acre Blue Lake Rancheria. Approximately one-quarter of Humboldt (634,000 acres) remains agricultural.³ The remaining twenty percent of the County's land consists of a mix of residential, commercial, and industrial uses.

³ Humboldt, County of. 2017. Humboldt County General Plan. <https://humboldt.gov.org/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed April 2023)

Figure 2-1 Regional Location

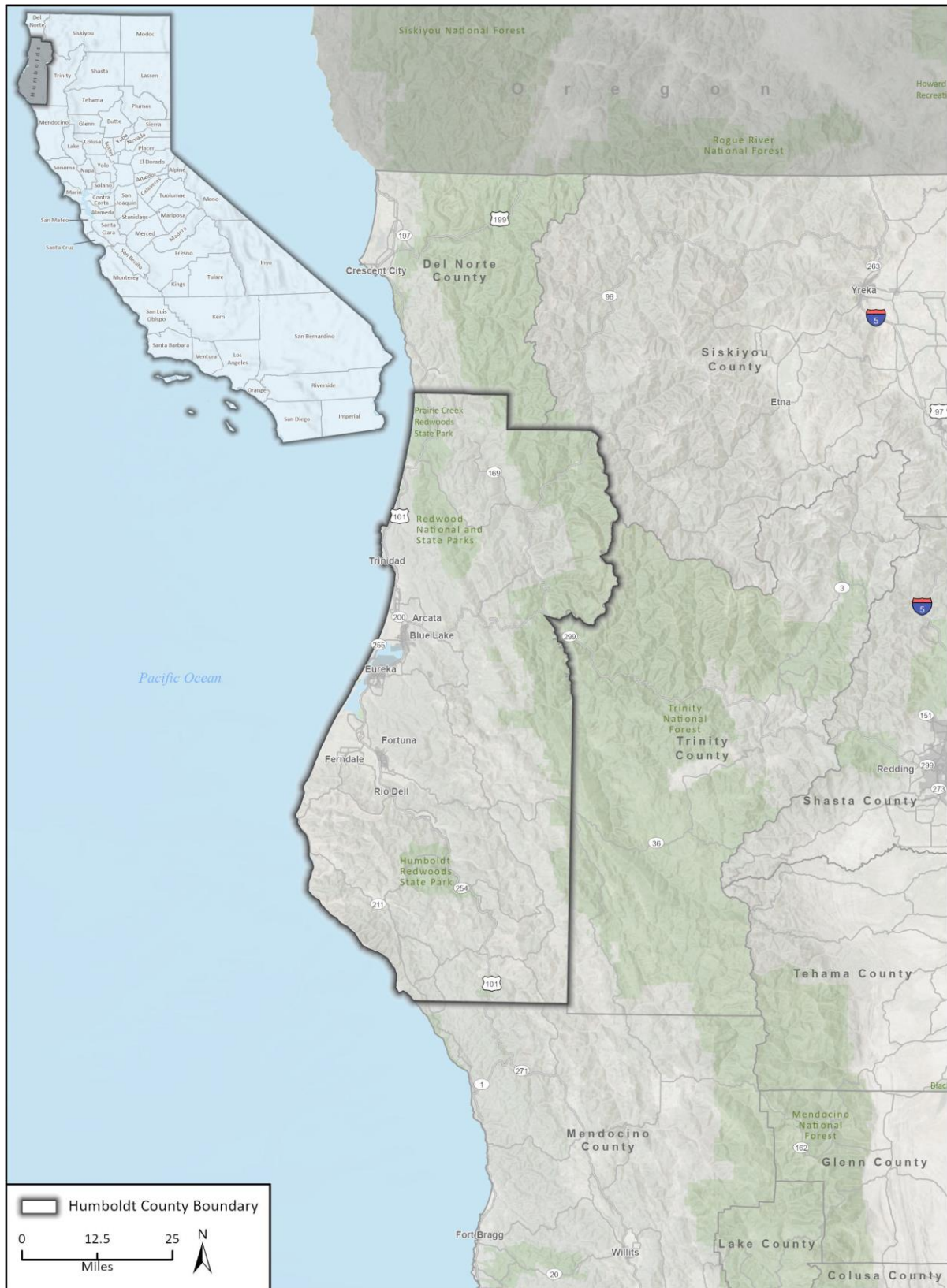
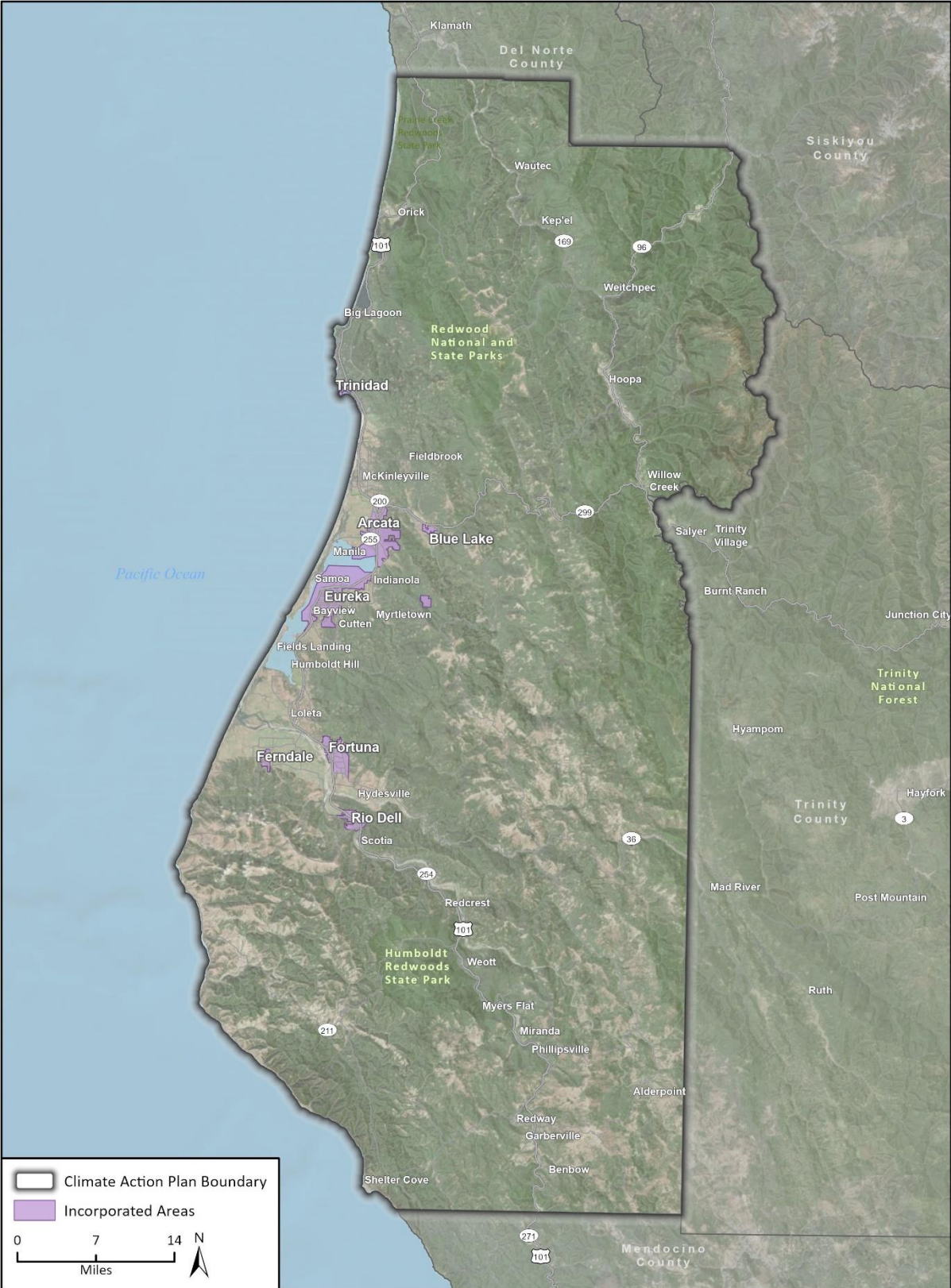


Figure 2-2 Plan Area Location



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22-13470 EPS EIR Project Description
Fig 2.2 Plan Location

2.2 Existing Sustainability Setting

2.2.1 Humboldt Sustainability and GHG Emissions Reduction Efforts

The County has actively implemented a variety of environmental programs since 2003 contributing to GHG emissions reductions. The following is a listing of the County's primary sustainable and climate protection programs:

- Participates in North Coast Resource Partnership sustainability programs (2004)
- Arcata Community GHG Reduction Plan (2006)
- Cal Poly Humboldt University Climate Action Plan adopted (2016)
- Redwood Coast Energy Authority (RCEA) community choice aggregator RePower Humboldt Plan (2019)
- Humboldt County Association of Governments (HCAOG) VMT reduction programs (2023)
- Humboldt Transit Authority zero-emissions fleet transitioning
- RCEA North Coast Medium-Duty and Heavy -Duty Zero-Emission Vehicle (ZEV) Blueprint Plan (2023)

2.2.2 Regional Sustainability and GHG Emissions Reduction Efforts

In coordination with the State of California and the federal government, Humboldt has committed to implementing regional and State policies related to GHG emissions reduction. As follows is a summary of the regional GHG emissions reduction efforts, which the RCAP is intended to be consistent with or exceed.

Humboldt County Regional Transportation Plan – VROOM 2022 - 2042

In 2022, the Humboldt County Association of Governments (HCAOG) adopted the Regional Transportation Plan (RTP) to provide the County with a long-range plan for establishing the vision and priorities for transportation over a 20-year planning horizon. The policies in the RTP serve to guide the development of a sustainable transportation landscape in which people can safely, comfortably, and reliably get to the places they want to go. The RTP is intended to identify and document specific actions to address the region's needs for connectivity, mobility, equity, and accessibility for the next 20 years, and for addressing climate change.⁴

Redwood Coast Energy Authority

RCEA is a local not for profit government agency that procures electricity for the Humboldt region as a community choice aggregator. RCEA is implementing several initiatives to reduce GHG emissions through the energy sector. RePower Humboldt⁵, RCEA's Comprehensive Action Plan for Energy in the region, lays out a strategy to provide 100 percent clean and renewable energy by 2025. Based

⁴ Humboldt County Association of Governments. 2023. Regional Transportation Plan – VROOM 2022-2042. https://www.hcaog.net/sites/default/files/vroom_2022-2042_full_report_0.pdf (accessed April 2023).

⁵ Redwood Coast Energy Authority (RCEA) (2019). *RePower Humboldt*. <https://redwoodenergy.org/wp-content/uploads/2020/06/RePower-2019-Update-FINAL-.pdf> (accessed August 2024).

on community input, the final report outlines policies and goals to lower utility rates and offer clean energy from local sources. RCEA's long-term energy portfolio aims to be 100 percent renewable produced by local resources by 2030. RCEA's power mix in 2022 was 51 percent renewable, 45 percent carbon free, and 5 percent from other sources. In addition, RCEA offers several energy efficiencies, fuel switching, and clean transportation programs to convert household and vehicle energy use from fossil fuels to renewable (low-carbon) sources.

State Sustainability and GHG Emissions Reduction Efforts

As follows is a summary of the State GHG emissions reduction efforts, which the RCAP is intended to be consistent with or exceed.

California Executive Order S-3-05

In 2005, the California governor issued Executive Order (EO) S-3-05, which identifies Statewide GHG emissions reduction targets to achieve long-term climate stabilization as follows:

- Reduce GHG emissions to 1990 levels by 2020
- Reduce GHG emissions to 80 percent below 1990 levels by 2050

In response to EO S-3-05, California Environmental Protection Agency (CalEPA) created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report"). The *2006 CAT Report* identified a recommended list of strategies that the State could pursue to reduce GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the State agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, among others.

California Assembly Bill 32, California Global Warming Pollution Solutions Act

In 2006, the California legislature signed Assembly Bill (AB) 32 – the Global Warming Solutions Act – into law, requiring a reduction in Statewide GHG emissions to 1990 levels by 2020 and California Air Resources Board (CARB) preparation of a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 required CARB to adopt regulations to require reporting and verification of Statewide GHG emissions. Based on this guidance, CARB approved a 1990 Statewide GHG level and 2020 limit of 427 metric tons (MT) of carbon dioxide equivalent (CO₂e).

California Senate Bill 375, Sustainable Communities and Climate Protection Act

In 2008, Senate Bill (SB) 375 enhanced the State's ability to reach AB 32 targets by CARB to develop regional GHG emissions reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPO) to prepare a sustainable community's strategy (SCS) that contains a growth strategy to meet such regional GHG emissions reduction targets for inclusion in the respective regional transportation plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing

GHG emissions from 2005 levels by 2020 and 2035. HCAOG is not one of the 18 MPOs required to implement an SCS and was not assigned GHG emissions reductions targets by CARB.

California Climate Change Scoping Plan (2008)

In 2008, CARB approved the original California Climate Change Scoping Plan, which included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted and implemented since approval of the Scoping Plan.

California Climate Change Scoping Plan Update (2013)

In 2013, CARB approved the first update to the California Climate Change Scoping Plan. The 2013 Scoping Plan Update defined CARB climate change priorities for the next five years and set the groundwork to reach post-2020 Statewide GHG emissions reduction goals. The 2013 Scoping Plan Update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use.

California Executive Order B-30-15

In 2015, the California governor issued Executive Order B-30-15, which established a Statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030.

California Senate Bill 32, California Global Warming Pollution Solutions Act Update

In 2016, the California legislature signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring further reduction in Statewide GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below).

California Climate Change Scoping Plan Update (2017)

In 2017, CARB approved the second update to the California Climate Change Scoping Plan. The 2017 Scoping Plan put an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan Update does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with Statewide per-capita goals of 6 MT of CO₂e by 2030 and 2 MT of CO₂e by 2050. As stated in the 2017 Scoping Plan Update, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects, because they include all GHG emissions sectors in the State.⁶

⁶ California Air Resources Board (CARB). 2017. California's 2017 Climate Change Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf (accessed August 2024).

Assembly Bill 1279

In September 2022, AB 1279 was approved, which established a legally binding requirement for California to achieve and maintain carbon neutrality no later than 2045. Assembly Bill 1279 also established the requirement to achieve a Statewide reduction in GHG emissions of 85 percent below 1990 levels by 2045. This indicates that the remaining 15 percent to achieve carbon neutrality can be achieved via carbon sequestration and other non-direct-GHG-emissions-reductions techniques.

California Climate Change Scoping Plan Update (2022)

In response to the passage of AB 1279 and the identification of the 2045 GHG reduction target, CARB adopted the Final 2022 Climate Change Scoping Plan in November 2022. The 2022 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Update includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action in natural working lands to reduce emissions and sequester carbon, and the capture and storage of carbon. The 2022 Update assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan, addresses recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans, and implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, as well as taking an additional step of adding carbon neutrality as a science-based guide for California's climate work.⁷

California Executive Order B-55-18

In 2018, the California governor issued Executive Order B-55-18, which established a new Statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing Statewide GHG reduction targets established by SB 32.

For more information on the Senate and Assembly Bills, Executive Orders, and Scoping Plans discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Assembly Bill 1493, Pavley Bill Vehicle Efficiency Standards

In 2002, the California State Legislature enacted Assembly Bill 1493 (aka "the Pavley Bill"), which directs the CARB to adopt standards that will achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles," taking into account environmental, social, technological, and economic factors. In September 2009, CARB adopted amendments to the "Pavley" regulations to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The Pavley Bill is considered to be the national model for vehicle emissions standards. In January of 2012, CARB approved a new emissions control program for vehicle model years 2017 through 2025. The program combines the control of smog, soot, and GHGs and the requirement for greater numbers of zero emission vehicles into a single package of standards called Advanced Clean Cars.

⁷ CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf> (accessed August 2024).

California Energy Efficiency Strategic Plan of 2008

In September 2008, the California Public Utilities Commission (CPUC) adopted California's first Long Term Energy Efficiency Strategic Plan, presenting a single roadmap to achieve maximum energy savings across all major groups and sectors in California. The Strategic Plan was subsequently updated in January 2011 to include a lighting chapter. The Strategic Plan sets goals of all new residential construction and all new commercial construction in California to be zero net energy (ZNE) by 2020 and 2030, respectively. In 2018, the California Energy Commission voted to adopt a policy requiring all new homes in California to incorporate rooftop solar. This change went into effect in January 2020 with the adoption of the 2019 California Code of Regulations (CCR) Title 24 Code and is a step towards the State achieving its goal of all residential new construction being ZNE by 2020. Additionally, the Strategic Plan sets goals of 50 percent of existing commercial building to be retrofit to ZNE by 2030 and all new State buildings and major renovations to be ZNE by 2025.

California Code of Regulations Title 24 (California Building Code)

Updated every three years through a rigorous stakeholder process, Title 24 of the CCR requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code). The California Building Code is applicable to all development in California. (Health and Safety Code §§ 17950 and 18938(b).)

The regulations receive input from members of industry, as well as the public, with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (Pub. Res. Code § 25402.) These regulations are carefully scrutinized and analyzed for technological and economic feasibility (Pub. Res. Code § 25402(d)) and cost effectiveness (Pub. Res. Code § 25402(b)(2) and (b)(3)). The 2022 Title 24 standards went into effect on January 1, 2023.

Part 6 – Building Energy Efficiency Standards

CCR Title 24 Part 6 is the Building Energy Efficiency Standards. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. The Building Energy Efficiency Standards is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New construction and major renovations must demonstrate their compliance with the current Building Energy Efficiency Standards through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission.

Part 11 – California Green Building Standards

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective on January 1, 2011 (as part of the 2010 California Building Standards Code). The 2022 CALGreen includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures. It also includes voluntary tiers with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local

jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The mandatory standards applicable to air quality require:

- Minimum 20 percent reduction in indoor water use relative to specified baseline levels;⁸
- Waste Reduction:
 - Minimum 65 percent non-hazardous construction/demolition waste diverted from landfills;
 - Non-residential and multi-family dwellings with five or more units: Provide readily accessible areas identified for the depositing, storage and collection of nonhazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastic, organic waste, and metals; and/or
 - Non-residential: Reuse and/or recycling of 100 percent of trees, stumps, rocks, and associated vegetation soils resulting from primary land clearing;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards; and
- EV Charging for New Construction:⁹
 - One- and two-family dwellings and town houses with attached private garages: Dedicated circuitry to facilitate installation of electric vehicle (EV) charging;
 - Multi-family dwellings and hotels/motels with less than 20 units/rooms: Designation of at least 10 percent of the total number of parking spaces shall be EV capable and at least 25 percent of the total number of parking spaces shall be EV-ready;
 - Multi-family dwellings and hotels/motels with greater than 20 units/rooms: Designation of at least 10 percent of the total number of parking spaces shall be EV capable, at least 25 percent of the total number of parking spaces shall be EV-ready, and at least 5 percent of the total number of parking spaces shall be equipped with a Level 2 charging station;
 - Non-residential land uses shall comply with the following EV charging requirements based on the number of passenger vehicle parking spaces:
 - 0-9: no EV capable spaces or charging stations required;
 - 10-25: 4 EV capable spaces but no charging stations required;
 - 26-50: 8 EV capable spaces of which 2 must be equipped with charging stations;
 - 51-75: 13 EV capable spaces of which 3 must be equipped with charging stations;
 - 76-100: 17 EV capable spaces of which 4 must be equipped with charging stations;
 - 101-150: 25 EV capable spaces of which 6 must be equipped with charging stations;
 - 151-200: 35 EV capable spaces of which 9 must be equipped with charging stations; and
 - More than 200: 20 percent of the total available parking spaces of which 25 percent must be equipped with charging stations;

⁸ Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

⁹ EV Capable = a vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways to support EV charging; EV-ready = a vehicle space which is provided with a branch circuit and any necessary raceways to accommodate EV charging stations, including a receptacle for future installation of a charger (see 2022 California Green Building Standard Code, Title 24 Part 11 for full explanation of mandatory measures, including exceptions).

- Non-residential land uses shall comply with the following EV charging requirements for medium- and heavy-duty vehicles: warehouses, grocery stores, and retail stores with planned off-street loading spaces shall install EV supply and distribution equipment, spare raceway(s) or busway(s) and adequate capacity for transformer(s), service panel(s), or subpanel(s) at the time of construction based on the number of off-street loading spaces as indicated in Table 5.106.5.4.1 of the California Green Building Standards;
- **Bicycle Parking:**
 - Non-residential short-term bicycle parking for projects anticipated to generate visitor traffic: permanently anchored bicycle racks within 200 feet of visitor entrance for 5 percent of new visitor motorized vehicle parking spaces with a minimum of one 2-bike capacity rack; and/or
 - Non-residential buildings with tenant spaces of 10 or more employees/tenant-occupants: secure bicycle parking for 5 percent of the employee/tenant-occupant vehicle parking spaces with a minimum of one bicycle parking facility.
- **Shade Trees (Non-Residential):**
 - Surface parking: minimum No. 10 container size or equal shall be installed to provide shade over 50 percent of the parking within 15 years (unless parking area covered by appropriate shade structures and/or solar);
 - Landscape areas: minimum No. 10 container size or equal shall be installed to provide shade of 20 percent of the landscape area within 15 years; and/or
 - Hardscape areas: minimum No. 10 container size or equal shall be installed to provide shade of 20 percent of the landscape area within 15 years (unless covered by applicable shade structures and/or solar or the marked area is for organized sports activities).

Senate Bill 97, CEQA Guidelines for Addressing GHG Emissions

CEQA requires public agencies to review the environmental impacts of proposed projects, including General Plans, Specific Plans, and specific kinds of development projects. In February 2010, the California Office of Administrative Law approved the recommended amendments to the State CEQA Guidelines for addressing GHG emissions. The amendments were developed to provide guidance to public agencies regarding the analysis, mitigation, and effects of GHG emissions in draft CEQA documents.

Assembly Bill 117, Community Choice Aggregation

Assembly Bill 117 establishes the creation of Community Choice Aggregation (CCA) that fosters clean and renewable energy markets. CCA allows cities and counties to aggregate the buying power of individual jurisdictions. The California CCA markets were created as an answer to the brownouts and energy shortages of the early 2000's. AB 117 was passed in 2002 as an answer to California's increased energy independency by incorporating more alternative and renewable energy sources into its energy portfolio. With AB 117, municipalities can provide alternative energy choices to their local carrier (e.g., the Pacific Gas and Electric Company, PG&E). Marin Clean Energy was the first CCA in the State of California to go online with a 50 percent to 100 percent clean energy portfolio in 2010. In 2003, RCEA began supplying communities in Humboldt with renewable energy-sourced electricity. CCAs are governed by the California Public Utilities Commission (CPUC). SB 790 further ensures fair and transparent competition by creating a code of conduct and guiding principles for entrants into the CCA field.

Senate Bill 1275, Charge Ahead Initiative

In 2014, Senate Bill 1275 established a State goal of one million zero-emissions and near-zero-emissions vehicles in service by 2020 and directed CARB to develop a long-term funding plan to meet this goal. SB 1275 also established the Charge Ahead California Initiative requiring planning and reporting on vehicle incentive programs and increasing access to and benefits from zero-emissions vehicles for disadvantaged, low- and moderate-income communities and consumers.

Senate Bill 350, Clean Energy and Pollution Reduction Act of 2015

In 2015, SB 350 established new clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 codified Governor Brown's aggressive clean energy goals and established the State 2030 GHG reduction target of 40 percent below 1990 levels. To achieve this goal, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 (legislation originally enacted in 2002) to 50 percent by 2030. Renewable resources include wind, solar, geothermal, wave, and small hydroelectric power. In addition, SB 350 requires the State to double State-wide energy efficiency savings in electricity and natural gas end uses by 2030 from a base year of 2015.

Assembly Bill 197, State Air Resources Board GHGs Regulations

In 2016, AB 197, a bill linked to SB 32, increased legislature oversight over CARB and directs CARB to both prioritize disadvantaged communities in its climate change regulations and evaluate the cost-effectiveness of measures it considers. AB 197 requires CARB to protect the State's most impacted and disadvantaged communities [and] consider the social costs of the emissions of GHGs when developing climate change programs. The bill also adds two new legislatively appointed non-voting members to CARB, increasing the Legislature's role in CARB's decisions.

Senate Bill 100, The 100 Percent Clean Energy Act of 2018

In September 2018, Governor Brown signed SB 100, requiring that the State's load serving entities (including energy utilities and community choice energy programs) must procure energy generated 100 percent from Renewables Portfolio Standard for eligible renewable resources by 2045.

Senate Bill 1020, Clean Energy, Jobs, and Affordability Act of 2022

Established in 2002 under SB 1078, and accelerated by SB 107 (2006), SB X 1-2 (2011), SB 100 (2018), and SB 1020, California's Renewable Portfolio Standard (RPS) obligates investor-owned utilities, energy service providers, and community choice aggregators to transition the electricity supply to renewable resources. The RPS requires energy service providers to supply renewable energy as follows: 90 percent of retail sale electricity and 100 percent of electricity procured to serve State agencies by 2035, 95 percent by 2040, and 100 percent by 2045. The CPUC and the CEC are jointly responsible for implementing the program.

2.3 General Plan Designation and Zoning

The RCAP and CEQA GHG Emissions Thresholds would be implemented throughout Humboldt and would occur in all relevant County and Cities General Plan designations and zoning designations. The RCAP and CEQA GHG Emissions Thresholds would not alter any existing land use or zoning designations.

2.4 Plan Purpose and Objectives

The overall purpose of the RCAP and CEQA GHG Emissions Thresholds is to prepare, adopt, and implement a qualified GHG reduction plan that may be utilized for mitigating and tracking Countywide GHG emissions as well as for streamlining CEQA GHG analyses for future projects within the County that are required to undergo CEQA review. A qualified GHG reduction plan must meet CEQA Guidelines §15183.5 plan elements criteria A through F, as shown in Table 2-1, and be consistent with State GHG reduction laws, including Senate Bill 32 (40 percent below 1990 levels by 2030 target) as well as Assembly Bill 1279 (carbon neutrality by 2045 target).

Table 2-1 CEQA Guidelines Section 15183.5(b) Criteria Addressed in RCAP

CEQA Criteria	RCAP Chapter Addressing Criteria
1. Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area	Chapter 3 Appendix B
2. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable	Chapter 3
3. Identify and analyze sector specific GHG emissions from specific actions or categories of actions anticipated within the geographic area	Chapter 3 Appendix C
4. Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level	Chapters 4 Appendix C
5. Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels	Chapter 5
6. Adopt in a public process following environmental review	Pending Adoption after Certification of this EIR

The RCAP would meet CEQA Guidelines §15183.5 plan elements criteria A through E related to quantification of existing and projected GHG emissions by sector (i.e., category); establishment of a level (i.e., target) below which GHG emissions contribution would not be cumulative considerable; identification and analysis of measures and actions (in this case, measures and actions) that would achieve the target; and establishment of a mechanism to monitor the progress toward achieving the target and adjust as needed to achieve the target. The RCAP would meet CEQA Guidelines §15183.5 plan elements criterion F related to environmental review and adoption via a public process via this RCAP EIR. The RCAP would also be consistent with SB 32 and AB 1279 established State targets. The RCAP would serve as the overarching implementation plan through the 2045 target year and is expected to be reevaluated on a bi-annual basis. Updates to the RCAP would be made regularly to reflect new advances and technologies in GHG emissions reduction strategies.

The specific RCAP and CEQA GHG Emissions Thresholds objectives are as follows:

- Establish a coalition between jurisdictions and key organizations to guide a regional approach to climate-related challenges
- Identify strategies, measures, actions, and tracking mechanisms to serve as a qualified GHG reduction plan and provide a foundation for sustainable development efforts in the region
- Reduce communitywide GHG emissions by 40 percent below 1990 levels by 2030 (a maximum total annual emissions of 1,241,589 MT of CO₂e) in line with County and State targets

- Reduce communitywide GHG emissions to net neutral by 2045, with at least 85 percent being via GHG emissions reductions, in line with County and State targets
- Demonstrate a level of GHG emissions below which the County would have less-than-cumulatively-considerable GHG impacts for future environmental planning reviews and provide CEQA streamlining for projects via the Humboldt Regional CEQA GHG Checklist
- Strengthen the growing regional green economy
- Improve Humboldt air quality and, thus, public health

2.5 Proposed Plan Components

2.5.1 Regional CAP

As described above, the primary objectives of the RCAP are to reduce GHG emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045, as well as to grow the green economy and improve public health in the County. To achieve these objectives, the RCAP incorporates the many sustainability programs that the region has in place (noted above under noted Section 2.2, *Existing Sustainability Setting*), as well as new programs and policies to further reduce GHG emissions and enhance sustainability. The RCAP includes the following key components that are described further in the below subsections:

- 2022 GHG emissions inventory
- GHG emissions forecasts through 2045
- GHG emissions targets for 2030 and 2045
- GHG emissions reduction strategies, measures, and actions
- Implementation strategy

2022 GHG Emissions Inventory

The 2022 GHG emissions inventory serves as the GHG emissions baseline for the RCAP. Approximately 1,531,167 MT of CO₂e was emitted in Humboldt in 2022. GHG emissions in the inventory are categorized based on sectors. These sectors include residential and commercial energy use, on- and off-road transportation, water, wastewater, and landfilled waste. The residential and commercial energy sector represents emissions that result from electricity and natural gas used in both private and public sector buildings and facilities, as well as emissions from wood and propane use in residential buildings. The transportation sector includes emissions from on-road passenger and commercial vehicles within the County, as well as off-road vehicles and equipment. Water sector emissions, arising from electricity use in water delivery and treatment, are accounted for under electricity sector emissions as the entirety of water supplied to Humboldt community members occurs within the County's geographic and jurisdictional boundaries.¹⁰ Table 2-2 provides the Humboldt GHG emissions in 2022 by sector as well as each sector's percentage of Humboldt communitywide emissions.

¹⁰ Water sector operation information is based on feedback provided by the County and water districts that supply water to the regional Humboldt community.

Table 2-2 Humboldt 2022 GHG Emissions Inventory (Baseline) Summary

GHG Emissions Sector/Source	CO ₂ e (MT)	Percent of Total Emissions
Energy and Water	248,116	16
Transportation	1,235,883	81
Solid Waste	37,538	2
Wastewater	9,630	1
Total	1,531,167	100

CO₂e = carbon dioxide equivalent; MT = Metric Tons

Source: Rincon Consultants, Inc. 2024. Humboldt Regional Climate Action Plan GHG Inventory, Forecast, and Targets Report. March 2024.

As shown in Table 2-2, the largest sectors of GHG emissions in Humboldt are transportation (on-road transportation) and building energy use (specifically natural gas use).

2030 through 2045 GHG Emissions Forecasts

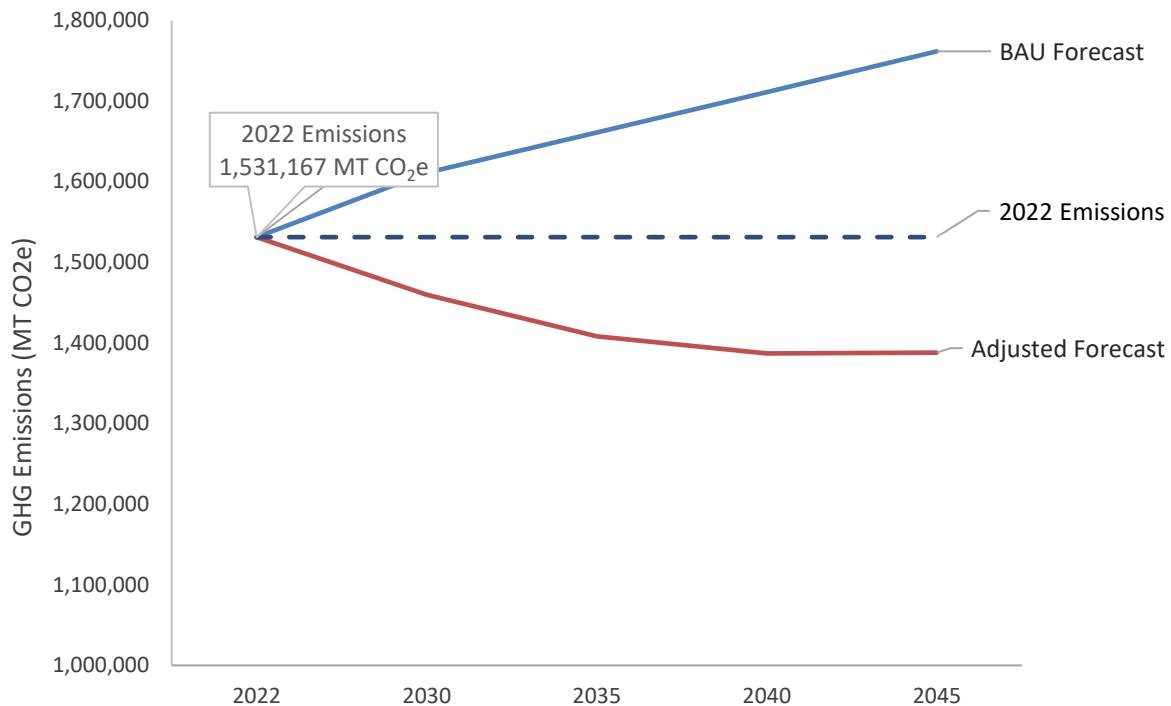
The RCAP includes a business-as-usual (BAU) scenario and a legislative adjusted BAU (ABAU) scenario to forecast GHG emissions. The BAU scenario provides a forecast of how future GHG emissions would change if consumption trends continued as they did in 2022 baseline GHG emissions year and projected changes in population, housing, employment, and transportation activity over time (through 2045) occur consistent with planned growth within Humboldt boundaries. The ABAU scenario provides a forecast of how currently adopted State legislation would reduce GHG emissions from the BAU scenario. Table 2-3 and Figure 2-3 present the BAU and ABAU forecasts.

Table 2-3 Humboldt 2030 through 2045 GHG Emissions Forecasts

GHG Emissions Scenario	2022	2030	2035	2040	2045
BAU Forecast	1,531,167	1,610,994	1,660,990	1,711,160	1,761,644
ABAU Forecast	1,531,167	1,459,598	1,408,160	1,386,924	1,387,943

Notes: All values are presented in annual total metric tons of carbon dioxide equivalent (MT of CO₂e)

Figure 2-3 Humboldt GHG Emissions Forecasts Compared to Baseline



2030 and 2045 GHG Emissions Targets

California has established Statewide GHG reduction goals for 2030 and 2045. The State has encouraged communities to adopt their own plans consistent with these goals in the CARB 2022 Scoping Plan.¹¹ Thus, local agencies are recommended to establish at a minimum, equivalent reduction targets at the local level by establishing community wide GHG reduction goals for climate action that will help California achieve its 2030 and 2045 GHG emissions goals. The purpose of target setting is to develop the trajectory toward achieving the State 2030 goal (SB 32) and prepare for the deep decarbonization needed by 2045 in a cost-effective manner by setting an incremental path toward achieving AB 1279 targets. CARB guidance is for jurisdictions to first strive to exceed the SB 32 target of reducing GHG emissions 40 percent below 1990 levels, while establishing a policy framework to achieve the long-term target of carbon neutrality by 2045.

The RCAP includes a 1990 GHG emissions levels calculation for reference in determining the needed reduction amounts to achieve State goals. The 1990 GHG emissions total was calculated to be 2,069,316 MT of CO₂e.

This RCAP establishes a mass emissions target of 40 percent reduction in GHG emissions below 1990 levels by 2030 in alignment with SB 32, for a maximum annual GHG emissions of 1,241,589 MT of CO₂e by 2030. Table 2-4 and Figure 2-4 show the target pathway to meet the SB 32 and AB 1279 emissions targets and the GHG emissions reductions from ABAU levels Humboldt will be required to achieve in order to meet those targets.

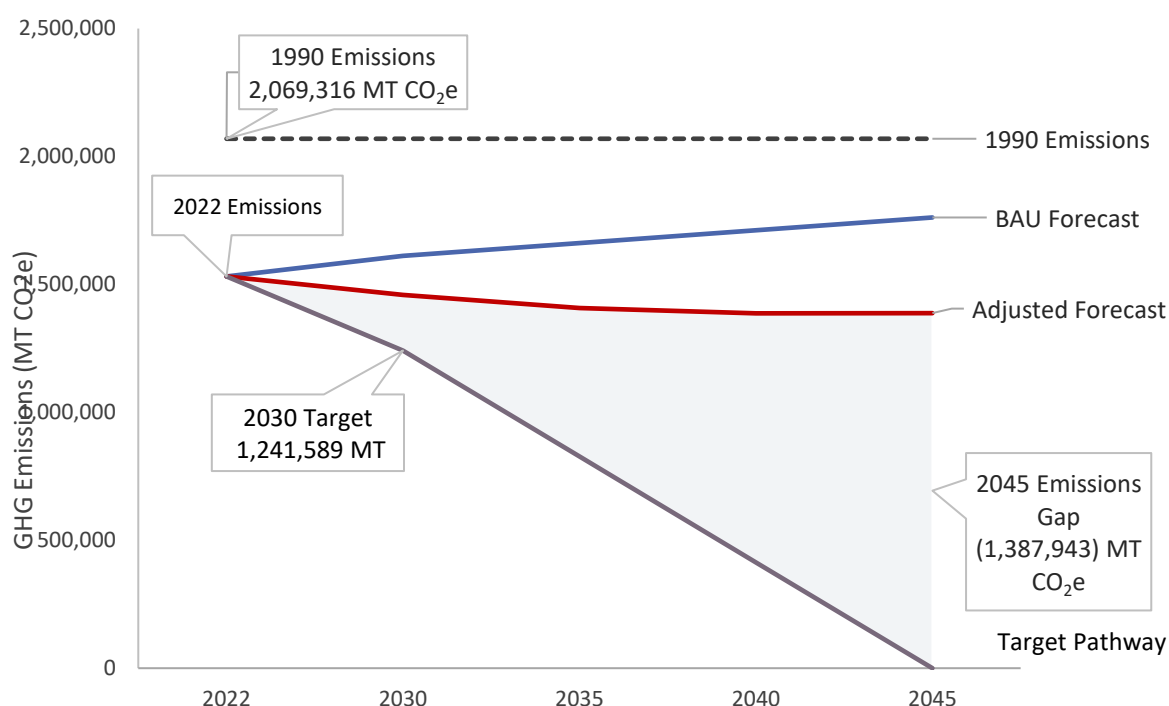
¹¹ California Air Resources Board (CARB). 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf> (accessed August 2024).

Table 2-4 Humboldt GHG Emissions Reduction Target Pathway Compared to Forecasts

GHG Emissions Scenario	2022	2030	2035	2040	2045
BAU Forecast	1,531,167	1,610,994	1,660,990	1,711,160	1,761,644
ABAU Forecast	1,531,167	1,459,598	1,408,160	1,386,924	1,387,943
SB 32 and AB 1279 Mass Emissions Target Pathway ¹	–	1,241,589	827,726	413,863	0
Remaining Emissions Gap from ABAU	–	218,008	580,434	973,061	1,387,943

Notes: All values are presented in annual total metric tons of carbon dioxide equivalent (MT of CO₂e)

¹ The target pathway is calculated by reducing 1990 mass emissions by 40 percent in 2030 and to 0 in 2045. This target pathway is consistent with both SB 32 and a trajectory set forth to achieve AB 1279.

Figure 2-4 Humboldt GHG Emissions Reduction Targets Compared to Forecasts

GHG Emissions Reduction Strategies, Measures, and Actions

Emission reductions would be achieved by implementing specific policies and programs at the local level. These activities are referred to as “measures” and “actions” and should be clear, attainable, measurable, and equitable to help achieve the desired emission reductions. The RCAP includes strategies, measures, and actions to achieve, or make substantial progress towards achieving, Humboldt’s 2030 target and 2045 goal. The RCAP includes 11 strategies to reduce GHG emissions, each with measures and actions to support the strategies. The structure of the strategies, measures, and actions are as follows:

- **Strategies.** Strategies describe an overall approach for reducing GHG emissions within a given sector

- **Measures.** Measures are long-range policies that the Humboldt region has established to ultimately reduce GHG emissions in line with the State. Some Measures may be further disaggregated to set goals for “urban” or “rural” regions, defined as follows:
 - **Urban:** Urban areas in Humboldt are more densely developed areas in the region with greater access to energy and transportation infrastructure.
 - **Rural:** Rural areas in Humboldt represent the dispersed communities in the region with limited access to energy and transportation infrastructure. This includes the unincorporated County as well as some incorporated cities that have similar constraints.
- **Actions:** Actions identify the programs, policies, funding pathways, and other specific commitments that will be implemented within the region. Each measure contains a suite of actions, which together have been designed to accomplish the measure goal and metrics.

The RCAP measures and actions can be either quantitative (e.g., result in direct and measurable GHG emissions reductions) or supportive (e.g., do not contribute directly to GHG emissions reductions). Table 2-5 includes a complete list of the RCAP strategies and descriptions of respective supporting measures and actions, as well as anticipated annual GHG emissions reductions in 2030 and 2045. Key among these, the RCAP includes strategies, measures, and actions to increase the use of carbon-free electricity, decarbonize new and existing buildings, and increase the amount of renewable energy and battery storage in Humboldt. It recommends increasing EV charging stations to encourage greater EV adoption in the community, and development programs and land use patterns that encourage walking, biking, carpooling, and public transit use. It also offers ways to reduce water use and divert organic and inorganic waste that would otherwise go to landfills. In addition, the RCAP includes strategies, measures, and actions to increase urban greenspace and trees for carbon sequestration and to provide community education and outreach regarding RCAP and local sustainability efforts.

Table 2-5 Humboldt RCAP Strategies, Measures, and Actions

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Strategy 1: Development of a regional climate coalition			
Measure C-1: Establish a Regional Climate Committee comprised of representatives from each jurisdiction, HTA, HCAOG, HWMA, and RCEA to be administered by the County.			
C-1a	Pursue and obtain funding to create a Climate Program Manager position to lead the coordination efforts of the Regional Climate Committee. The Regional Climate Committee will be responsible for implementing RCAP measures and actions. The Climate Program Manager will facilitate the work of the Regional Climate Committee made up of responsible parties from each of the region’s jurisdictions and agencies. The Manager will work with the Committee to utilize the RCAP as a strategic plan outlining the goals of the Coalition. The Manager will coordinate with staff of the participating jurisdictions and agencies to undertake the work directed by the Committee. Finally, the Manager will develop an annual progress report on RCAP implementation annually to City Councils and County Supervisors to measure progress and establish accountability in achieving RCAP emissions reduction goals.	Phase 1 - ongoing	Supportive
C-1b	The Program Manager represents a larger staff need to fulfill the mission of the Regional Climate Committee and will obtain funding to support several staff in implementing and tracking the RCAP.	Phase 1 - ongoing	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
C-1c	The Regional Climate Committee will develop and provide models, pilot programs, and template policies or ordinances that enable each jurisdiction in the region to implement uniform changes and facilitating local communities in making the necessary structural adjustments to reduce GHG emissions. This will reduce inefficiencies and duplication of effort while ensuring a coordinated regional approach.	Phase 1 - ongoing	
C-1d	Develop and distribute promotional materials and programs across the region to inform the community, gain buy-in, and promote awareness of new and existing programs and opportunities. Leveraging the Regional Climate Committee to prepare such materials will allow for limited resources in the region to be pooled on such efforts thereby reducing strain on jurisdictional staff. This engagement effort should include strategies to plan and address differences in opinions/understanding regarding climate change and should relay the message that all community members (whether in urban or rural areas) need to participate in local efforts.	Phase 1 - ongoing	
C-1e	Leverage regional programs to engage and support frontline communities that may experience secondary impacts or not benefit directly from the measures' objectives. Ensure these communities can access regional resources or funding opportunities to mitigate identified impacts and benefit the entire community. The Regional Climate Committee will be charged with engaging with regional programs and identifying appropriate community-based organizations to lead and guide such engagement efforts to ensure voices of vulnerable communities are involved in RCAP implementation and planning.	Phase 1 - ongoing	
C-1f	Utilize regional resources to conduct efficient regional studies, avoiding redundancy, that provide a clear understanding of the details, obstacles, and feasibility of proposed programs. This includes necessary analyses to identify the best path forward or the feasibility of implementing specific measures. The Regional Climate Committee will aid in identifying the regional expertise and coordinating studies across the region to limit duplication of efforts.	Phase 1 - ongoing	
C-1g	Collaborate regionally to identify and pursue relevant and impactful grants and financial backing to facilitate RCAP implementation across the region. Ensure resources and efforts are directed towards securing funds that can be distributed across the region, such as grants or rebates to support measure implementation and adequate program staffing. Direct the Regional Climate Committee to pursue 3-5 grants for regional efforts to meet RCAP goals per year.	Phase 1 - ongoing	
C-1h	Use the collaborative network of local jurisdictions, agencies, and community-based organizations (CBOs) to attract additional internal and external support and expertise. This includes engaging community organizations that are well-positioned to consistently and sustainably advance specific measures. Leverage the Regional Climate Committee to identify and provide assistance to local jurisdictions' high priority project pursuits which support the RCAP.	Phase 1 - ongoing	
C-1i	Work with the school districts in incorporated cities and unincorporated Humboldt to create a school outreach program or curriculum to educate children from a young age on the RCAP and climate change.	Phase 1 – ongoing	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Strategy 2: Increase carbon-free electricity			
Measure BE-1: By 2030, source 90% of grid-supplied electricity from renewable and carbon-free sources.			
BE-1a	Coordinate and support Redwood Coast Energy Authority (RCEA) in developing an effective energy strategy. Strategy should include conducting an assessment to identify the potential obstacles and detail the steps to providing provide renewable and carbon-free power and decarbonization programs outlined in the RePower Humboldt plan such as: ▪ Future Capacity constraints ▪ Customer solar installations ▪ Customer electrification support ▪ EV charging infrastructure buildout ▪ Building electrification ▪ Advanced biofuel infrastructure Evaluate enrollment rates in RCEA programs annually to understand why residents and businesses opt out or opt to procure standard grid electricity. Use results to adjust strategy for increasing enrollment accordingly	Phase 1	2030: 15,403 2045: 0
BE-1b	Through the Regional Climate Committee develop a template policy or ordinance for regional jurisdictions to use to require new commercial and industrial developments to acquire electricity from renewable and carbon-free energy sources such as enrolling with RCEA, incorporating on-site renewable generation, or enrolling in PG&E's 100 percent renewable rate. For each jurisdiction, adapt the templated policy or ordinance as necessary and adopt by 2026.	Phase 1	
BE-1c	Collaborate across the region with interested parties including tribes, labor unions, workforce development boards, State agencies, colleges, universities, industries, and community organizations to increase local energy workforce development. Partner with RCEA, Humboldt State University, and College of the Redwoods to actively develop education and certifications for electrical and construction trades by 2027 to ensure develop a skilled workforce ready to meet the region's energy needs.	Phase 1 – 2	
BE-1d	Leverage the Regional Climate Committee to work with RCEA to reduce opt-down rate for new customers to no more than 2 percent. Develop promotional educational materials to inform community members on available incentives and benefits of clean energy and energy efficiency.	Phase 1 - ongoing	
BE-1e	Engage with the community and partner with community organizations to facilitate increased communication, technical assistance, and access to energy incentives through the California Alternative Rates for Energy (CARE), Family Electric Rate Assistance (FERA), and Low-Income Home Energy Assistance Program (HEAP) programs for low/moderate income households.	Phase 1 - ongoing	
BE-1f	Work with RCEA to expand and advertise regional energy funding programs as described in the RePower Humboldt plan. Facilitate Humboldt residents and businesses in utilizing energy finance programs such as, but not limited to, the Property Assessed Clean Energy (PACE) program. Conduct targeted outreach to public entities, such as public schools, that are eligible for State and Federal Program loans.	Phase 1 - ongoing	
BE-1g	Coordinate through the Regional Climate Committee to establish and administer a multi-jurisdictional staff position dedicated to identifying and pursuing funding opportunities to support County-wide educational programs, assisting in equitable energy workforce expansion outreach, and providing RCEA with additional funds to expand incentives or	Phase 1	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	subsidies for the community to increase community enrollment. If establishing a dedicated staff position is not feasible, work with the Regional Climate Committee and regional partners to identify resource sharing opportunities for pursuing funding opportunities such as rotating the responsibility across designated agency employees.		
Measure BE-2: Increase the development of micro-grids and energy storage across the region to support RCEA's RePower Humboldt goals of enhancing grid capacity and facilitating the electrification of buildings and transportation.			
BE-2a	Develop permit streamlining programs that can be adopted by local jurisdictions to facilitate the streamlined implementation of renewable energy projects as identified in regional energy feasibility study and RCEA RePower Humboldt goals such as energy storage projects, residential and commercial solar installation, and microgrid development.	Phase 1 - ongoing	Supportive
BE-2b	Direct the Regional Climate Committee to work with RCEA to develop a plan for leveraging CPUC's recently passed Limited Generation Profile option to maximize solar installation developments in alignment with RCEA's RePower Humboldt goals throughout the region.	Phase 1 - ongoing	
BE-2c	Engage with the local community, key interested parties, and local-based community organizations representing disadvantaged and vulnerable communities to raise awareness about alternative renewable energy and nano-grid opportunities available through RCEA. Emphasize the increased accessibility to electrification as well as the economic and environmental advantages of electrification while addressing concerns related to emergency response to minimize exceptions. Publicize the connection between RCEA nano-grid efforts and the increased ability to electrify leading to cost savings, funding opportunities, environmental benefits, and flexibility of electrification through jurisdiction websites and permit counters.	Phase 2	
BE-2d	As part of Regional Climate Committee responsibilities identified in Measure C-1, engage with RCEA to track progress toward targets set in RCEA's RePower Humboldt plan and identify additional opportunities for local jurisdictions to alleviate barriers to goals set in RCEA's RePower Humboldt plan.	Phase 1 - ongoing	
BE-2e	As part of Regional Climate Committee responsibilities work with RCEA and the Schatz Energy Research Center to identify locations throughout the county that are priority for utility-scale, nano-grid, and micro-grid solar, hydropower, and/or wind energy generation based on aspects such as land availability and suitability, infrastructure needs, resilience, and energy access equity. Coordinate with PG&E on interconnection needs and identify strategies with PG&E of how to best support capacity building on the grid related to micro-grid projects.	Phase 2- ongoing	
BE-2f	Conduct an equity assessment across the region that includes the identification of potential cost barriers to residential solar development, particularly for low income and rural communities at the end of PG&E distribution infrastructure and identify feasible sites for solar and battery installation and potential funding sources.	Phase 1	
BE-2g	Identify facilities that are suitable to operate as regional resilience hubs to protect people from climate related issues. Create a priority list of these facilities with particular focus on servicing disadvantaged and vulnerable communities and work with RCEA to prioritize implementation of on-site microgrid and energy storage on identified.	Phase 1	
BE-2h	Regional Climate Committee will work with RCEA to pursue regional funding opportunities that can be used to develop resilient microgrids and incentivize new housing developers to install solar and on-site batteries,	Phase 1	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	particularly for affordable housing developments. Aim to pursue 3 grant or funding opportunities annually focused on microgrids and/or energy storage expansion.		
Measure BE-8: Advocate for Off-shore Wind developers and PG&E to build electrical infrastructure to supply Humboldt with energy produced by the future off-shore wind project which will increase regional supply and resilience.			
BE-8a	Dedicate Regional Climate Committee staff time to work with local organizations (e.g. 350Humboldt, Redwood Region Climate & Community Resilience Hub, COREHub) to petition the CEC and Humboldt Bay Off-shore Wind developers to include electricity transmission and distribution to the Humboldt region as a legally enforceable community benefit as stipulated in the Community Benefit Program to be completed as part of the Nationally Significant Multimodal Freight & Highway Projects (INFRA) grant program.	Phase 2	Supportive
BE-8b	Have the Regional Climate Committee advocate to the CEC and State to allow for an equitable rate tiering law to provide affordable rates for LIDAC communities in Humboldt County.	Phase 2 - 3	
BE-8c	Leverage the Regional Climate Committee to work with California Independent System Operator (ISO), California Public Utilities Commission (CPUC), the California Energy Commission (CEC), the Humboldt Bay Offshore Wind project and PG&E to identify pathways to establish equitable regional access to electricity produced by the off-shore wind project. This may include supporting permitting and development processes necessary for the proposed new Humboldt 500 kV substation as well as advocating to include distribution capacities at the substation for Humboldt County.	Phase 2 - 3	
BE-8d	Direct the Regional Climate Committee to evaluate and pursue opportunities for the Environmental and Climate Justice Community Change Grant through the Inflation Reduction Act or other available programs to advance clean energy from the wind-farm projects. Aim to apply for at least 3 grants annually.	Phase 2	
BE-8e	Lobby PG&E, the California Public Utilities Commission (CPUC), and other related agencies to fund and build enhanced energy transmission infrastructure throughout Humboldt County to ensure that renewable energy produced by the offshore wind projects can be distributed throughout the County. Also lobby offshore wind developers to contribute to the funding of such transmission upgrades.	Phase 2 - 3	
Strategy 3: Decarbonization of existing construction			
Measure BE-3: Urban: Reduce existing residential building natural gas consumption by 4% by 2030 and 74% by 2045.			
BE-3a Urban	Leverage the Regional Climate Committee to lead the development of a decarbonization plan for urban areas that assesses the feasibility and cost for electrification retrofitting for residential buildings as well as identifies potential equity concerns/impacts. The plan should identify strategies and/or specific projects to decarbonize 4 percent of existing residential and multi-family buildings by 2030 and strategies for increasing infrastructure readiness to electrify through 2045. The plan should give consideration for increased electricity capacity needs and RCEA's RePower Humboldt goals to meet increased capacity need. The plan should also identify a variety of equitable decarbonization solutions and potential projects such as partial electrification and increased energy efficiency options for mixed-fuel residences that face barriers to full electrification. The study should also identify the funding and financing requirements necessary to support the community in this transition.	Phase 1	2030: 2,603 2045: 55,866

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
BE-3b Urban	As part of Regional Climate Committee responsibilities identified in Measure C-1, petition PG&E to help identify priority areas for electric grid expansion projects to increase regional electric grid capacity and islanding capabilities to allow for increased building electrification capacity.	Phase 1 - 3	
BE-3c Urban	Develop a home energy advisory service administered by the Regional Climate Committee that assists existing homeowners to better understand the cost of building decarbonization options including partial and full home electrification, identifies service providers, and provides support for homeowners to access electrification incentives from the Energy Smart Homes program.	Phase 2 - ongoing	
BE-3d Urban	Work with the Regional Climate Committee to identify and pursue funds through CARB, the Inflation Reduction Act, and the Infrastructure Investment and Jobs Act including: - DOE block grants - On Bill financing through Utility Bills - Green bonds - Grant Anticipation Notes or Short-Term Loans - Tax exempt lease purchases - Energy as a service - Energy Performance Contracting from Energy Service Companies (ESCOs)	Phase 1 - ongoing	
BE-3e Urban	Work with the Regional Climate Committee to develop and manage educational/promotional materials that each jurisdiction can use to educate the community on ways to finance home decarbonization. Materials should include information and links to existing available rebates for Heat Pumps, Weatherization, Smart Thermostats, Appliances, and Pool Pumps as well as other rebates offered through RCEA of the local jurisdiction if applicable.	Phase 1	
BE-3f Urban	Work with the local contractors, realtors, homeowner associations, landlords, and labor unions to develop a comprehensive training program, including hosting workforce development trainings discussing the benefits and technical requirements of electrification as well as addressing interested party concerns regarding electrification.	Phase 2 - ongoing	
BE-3g Urban	Develop a fund for low income and affordable housing electrification pilot projects in collaboration with affordable housing owners, utilities, and the community. Work with RCEA to develop a program to offset cost for occupants using financing and through the sourcing of grant funds to subsidize cost.	Phase 2 - ongoing	
Measure BE-3: Rural: Reduce existing residential fossil-fuel consumption in households not connected to natural gas infrastructure by 2% by 2030.			
BE-3a Rural	Regional Climate Committee to conduct a feasibility study to establish local low-carbon fuel alternative, such as renewable propane, sourced from local resources such as forest biomass waste which can be used as direct substitutes for propane or diesel building fuel. The feasibility study should consider procurement and cost considerations with a focus on equity for low-income households, and map communities with significant propane and wood fuel use to identify accessibility strategy for acquiring alternative fuels (e.g. renewable propane, sustainably harvested wood products, renewable diesel) and/or undergoing home electrification.	Phase 1	Supportive

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
BE-3b Rural	As part of Regional Climate Committee responsibilities identified in Measure C-1, petition PG&E to help identify priority areas for rural electric grid expansion projects to increase regional electric grid capacity and islanding capabilities to allow for increased building electrification capacity.	Phase 1- 3	
BE-3c Rural	Promote existing available rebates to rural communities for Heat Pumps, Weatherization, Smart Thermostats, Appliances, and Pool Pumps to educate the community on ways to finance electrification or otherwise decarbonize their residences. Provide assistance to rural homeowners in assessing the viability and permitting of installing off-grid solar and battery alternative energy sources on their homes and finance options.	Phase 1 - ongoing	
BE-3d Rural	For viable alternative fuel sources identified in a feasibility study, establish procurement and distribution supply centers within easy access of rural communities.	Phase 2	
BE-3e Rural	The Regional Climate Committee will lead the effort to identify, access, and provide funding assistance for the procurement of alternative fuels, such as biomethane, in alignment with SB 1383 procurement requirements. Advocate to the California Public Utilities Commission (CPUC) for inclusion of alternative low-carbon fuels substitution, such as renewable propane, to be allowed in ratepayer funded programs including energy efficiency programs.	Phase 2 - 3	
Measure BE-4: Reduce existing nonresidential building natural gas consumption by 5% by 2030 and 79% by 2045.			
BE-4a	As part of the development of the decarbonization plan led by the Regional Climate Committee referenced in Measure BE-3 Urban, identify nonresidential building electrification barriers and develop a nonresidential building decarbonization strategy with analysis supporting future adoption of a nonresidential building decarbonization ordinance. The plan should give consideration for increased electricity capacity needs and for other decarbonization strategies that would be needed to reduce nonresidential natural gas consumption by at least 5 percent. As part of strategy development, conduct outreach to small businesses to understand potential equity impacts of a decarbonization policy. The plan should also assess ordinance parameters for including large scale renovation as part of the new commercial building ordinance requirements established for each organization (Measure BE-6).	Phase 1	2030: 3,821 2045: 42,887
BE-4b	Work with the Regional Climate Committee to develop a template Commercial Energy Performance Assessment and Disclosure Ordinance for commercial and multi-family buildings to be adopted within each jurisdiction by 2027. The ordinance should require energy use disclosure consistent with State law (AB 1103) and the use of the ENERGY STAR Portfolio Manager benchmarking tool. Include regulatory mechanism (e.g., permitting and approval requirements, building codes and standards modification) that limits expansion of natural gas infrastructure and incentivizes appliance replacement.	Phase 2	
BE-4c	Establish streamlined permitting in each jurisdiction for energy efficiency technologies, onsite renewable energy, and battery storage in buildings and critical facilities that require power during emergencies or power outages. Incorporate equity considerations into permitting process for all other building battery storage including prioritization, rebates, and outreach.	Phase 2	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
BE-4d	As part of Regional Climate Committee responsibilities identified in Measure C-1, develop an outreach campaign to promote building decarbonization and include items in the program such as: - Conduct engagement efforts for the commercial and industrial sector to identify ways jurisdictions and the Regional Climate Committee can support commercial energy storage installations and neighborhood scale microgrid opportunities - Facilitate funding opportunities for commercial business electrification by identifying and supporting grant opportunities available to the community, prioritizing small and frontline community owned businesses - Use feedback provided during the community outreach process for small businesses to mitigate potential equity impacts of a future building performance program - Distribute utility bill inserts to advertise the incentive programs or grants available and the cost benefits of electric appliances - Target outreach to businesses, builders, developers, local contractors, and property managers with information describing the financial benefits of replacing natural gas appliances with all electric appliance when they apply for permits - Provide informational webinars and an updated website to advertise and promote All-Electric Building Initiative rebates and incentives - Promote the use of the Energy Star Portfolio Manager program and energy benchmarking training programs for nonresidential building owners	Phase 2 - ongoing	
Measure BE-7: Decarbonize 30% municipal buildings and facilities by 2030.			
BE-7a	Regional Climate Committee to develop a template resolution for each jurisdiction to decarbonize 30 percent of municipal buildings and facilities by 2030 and 100 percent by 2045 by retrofitting natural gas appliances with electric alternatives, conversion of streetlights to solar or LED, and install on-site electricity generation and storage capacity. Include in the resolution an 'electric first' purchasing policy for any equipment or appliances in need of replacement.	Phase 1	Supportive
BE-7b	Coordinate with the Regional Climate Committee and RCEA to conduct energy audits of municipal buildings to establish a baselines of current energy consumption and identify the largest energy users or municipal buildings with the greatest natural gas consumption. Utilize audit results to prioritize municipal buildings to decarbonize. Conduct follow-up energy audits every 3 years to track progress. Leverage data from buildings reporting to the Building Energy Benchmarking Program established under AB 802 ¹² where possible to reduce labor.	Phase 1 - ongoing	
BE-7c	Develop a study through the Regional Climate Committee which estimates renewable energy generation on County and local jurisdiction facilities, identifies a priority list of sites which may serve as regional resilience hubs, and a proposed schedule for implementing the prioritized energy projects. The study should also seek to understand barriers to installing additional distributed energy resources such as solar and battery storage, or other renewable energy generation infrastructure, at municipal facilities.	Phase 2	

¹² Assembly Bill (AB) 802 became effective in 2016 and established California's energy benchmarking program requiring that both commercial and multi-family buildings over 50,000 square feet submit an energy benchmark report to the California Energy Commissions annually by June 1st.

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
BE-7d	Identify and pursue funding sources and partnerships needed for successful implementation as well as plan for directing resources through each jurisdiction for funding.	Phase 1	
Strategy 4: Decarbonization of new construction			
Measure BE-5: Decarbonize 95% of new residential building construction by 2027.			
BE-5a	Regional Climate Committee to develop an energy performance ordinance, EDR, reach code, or zero NO_x threshold for new residential construction that can be modified by each jurisdiction as necessary to conserve staff resources. Adopt the ordinances within each jurisdiction to decarbonize 95 percent of new residential buildings by 2027 and update every 3 years thereafter if not included within State building codes. As part of building decarbonization ordinance development and subsequent updates, consider the following: - Minimize the exemptions associated with the ordinance, while allowing for health and safety exemptions as necessary and exploring potential exemptions for specific use cases determined to have substantial economic development or business impacts - Require the submittal of an infeasibility waiver to review specific end uses where electrification is technologically infeasible - Require that any end-use deemed infeasible for electrification exceeds existing Title 24 energy efficiency standards and be electric ready for future electrification - Specify that affordable housing developments will be all-electric to ensure no stranded assets - Establish substantial remodel and improvement definitions to be included in the ordinance - Track and enforce requirement compliance through a permitting compliance program managed by each jurisdiction - Revise ordinance during update cycle as necessary to meet 95 percent goal	Phase 2	2030: 2,252 2045: 13,907
BE-5b	Conduct feasibility study(s) to identify local decarbonization barriers for new residential developments and develop a residential building decarbonization strategy with analysis. The feasibility study should include developing a new residential building decarbonization plan that assesses the grid feasibility and cost for electrification at certain legislative threshold requirements in consideration of leveraging RCEA residential nano-grid and battery storage options. The feasibility study should assess the potential cost impacts to multifamily and affordable housing new developments and identify potential strategies for mitigating negative impacts for equitable electrification.	Phase 1	
BE-5c	Leverage the Regional Climate Committee to lead engagement efforts with affordable housing developers to leverage incentives for new all-electric and efficient low-income residential buildings through the California Energy Commission Building Initiative for Low-Emissions Development (BUILD) Program, the Affordable Housing and Sustainable Communities (AHSC) Program, and the California Electric Homes Program (CalEHP). Regularly investigate and leverage other incentive programs available for electrification of new buildings.	Phase 2 - ongoing	
BE-5d	Through the Regional Climate Committee, work with local contractors, realtors, homeowner associations, landlords, and labor unions to develop a comprehensive training program, including hosting workforce development trainings discussing the benefits and technical requirements of local municipality building decarbonization legislation and the most	Phase 2 - ongoing	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	effective pathways to achieving requirements. Include information on load calculations to avoid service upgrade requirements.		
BE-5e	Partner with RCEA and PG&E to circumvent or mitigate electric utility infrastructure capacity constraints.	Phase 2 - ongoing	
BE-5f	Collaborate with RCEA to develop and fund locally implemented programs to help customers in accessing financing options for energy projects and rebates for cleaner, energy efficient technology.	Phase 2 - ongoing	
Measure BE-6: Decarbonize 95% of new nonresidential building construction by 2027.			
BE-6a	Adopt within each jurisdiction an energy performance ordinance, energy design rating (EDR), reach code, or zero NO_x threshold to decarbonize 95 percent of new nonresidential buildings by 2027 and update every 3 years thereafter if not included within State building codes. As part of building decarbonization legislation development and subsequent updates, consider the following: ▪ Direct the Regional Climate Committee to develop a template ordinance that can be modified by each jurisdiction as necessary to conserve staff resources ▪ Minimize the exemptions associated with the ordinance, while allowing for health and safety exemptions as necessary and exploring potential exemptions for specific use cases determined to have substantial economic development or business impacts ▪ Require the submittal of an infeasibility waiver to review specific end uses where electrification is technologically infeasible ▪ Require that any end-use deemed infeasible for electrification exceeds existing Title 24 energy efficiency standards and be electric ready for future electrification ▪ Establish substantial remodel and improvement definitions to be included in the ordinance ▪ Enforce requirement compliance through the same permitting compliance program as for residential building decarbonization ▪ Establish EDR requirements for new non-residential buildings that incentivize electrification and, in a case, where electrification is infeasible, requires higher energy efficient and low emissions equipment to meet the EDR ▪ Track effectiveness of ordinance through permitting compliance program and revise ordinance during update cycle as necessary to meet 95 percent goal	Phase 2	2030: 1,374 2045: 8,492
BE-6b	Conduct feasibility study(s) to identify decarbonization barriers for commercial buildings and develop a commercial building decarbonization strategy with analysis supporting future adoption of commercial decarbonization legislation. The feasibility study should include a comprehensive nonresidential building electrification plan that assesses the grid feasibility and cost for electrification and opportunities to mitigate grid and cost barriers by leveraging RCEA microgrid and battery storage options. The feasibility study should assess potential decarbonization legislation exemptions for commercial and industrial operations that are significantly restricted by available technology for electrification.	Phase 1	
BE-6c	Connect developers with RCEA to identify applicable incentive programs in line with RCEA RePower goals that could benefit new building developments such as microgrids which can aid businesses in overcoming restrictions to electrification or decarbonization of processes.	Phase 1 - ongoing	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
BE-6d	Through the Regional Climate Committee, work with local contractors, realtors, homeowner associations, landlords, and labor unions to develop a comprehensive training program, including hosting workforce development trainings to discuss the benefits and technical requirements of decarbonization.	Phase 2	
BE-6e	Partner with RCEA and PG&E to establish a clear path for electrification of new nonresidential buildings which meet EDR requirements and circumvent or mitigate electric utility infrastructure capacity.	Phase 2	
Strategy 5: Shift driving to walking and biking			
Measure T-1 Urban: Implement programs, such as those identified in HCAOG's RTP, to increase the mode share of active transportation in urbanized areas from 9% to 12% by 2030, thereby achieving a regional active transportation mode share of 8%.			
T-1a Urban	Regional Climate Committee to aid the urbanized areas of Humboldt by partnering with HCAOG and HTA to identify and pursue grant opportunities such as the Active Transportation Program, AARP Community Challenge, CalEPA's Environmental Justice Action Grants, and Caltrans Sustainable Transportation Planning Grants, etc., to fund active transportation projects identified in the Regional Transportation Plan. Aim to apply for at least 3 grants annually.	Phase 1 - ongoing	2030: 1,147 2045: 2,594
T-1b Urban	In urbanized areas with high alternative transit expansion potential work with the Regional Climate Committee to facilitate community outreach on transportation alternatives and promote infrastructure improvements and expansion identified in HCAOG's Regional Transportation Plan. Continually improve methods for engaging the community, gathering input, and utilizing it to prioritize projects.	Phase 1 - ongoing	
T-1c Urban	Leverage the Regional Climate Committee to pursue and access funding to develop and maintain regional webpage and app showing pedestrian and bike trails, bike lanes and bus times and routes. Distribute active transportation maps and promotional materials to hotels and tourism centers to increase visitor use of active transportation. Advertise and promote Humboldt Bikeshare program managed by the City of Arcata, Cal Poly Humboldt, and Tandem Mobility.	Phase 2 - ongoing	
T-1d Urban	Identify equity barriers to safe bike and pedestrian infrastructure through community outreach and use of big data driven analysis as well as targeted community outreach to better understand nuanced barriers. Include prompts in outreach around ways to improve social and modal equity the active transportation systems and programs. Develop a priority list of active transportation projects from HCAOG's Regional Transportation Plan based on level of impact, expansion of inter-jurisdictional connectivity, and historically under-invested communities.	Phase 1	
T-1e Urban	Increase inter-connectivity across the region working with HCAOG and the Regional Climate Committee representatives to: ▪ Evaluate and prioritize land use projects and active transportation projects for their impact on increased regional connectivity ▪ Identify hurdles limiting connectivity and use, such as last-mile commute limitations ▪ Facilitate coordination across jurisdictions and rural and urban areas to plan development in a coordinated and most strategic manner ▪ Apply for regional funding opportunities focused on increased inter-connection and VMT reduction ▪ Apply for regional funding opportunities for maintenance needs for non-motorized transportation routes	Phase 2 – Phase 3	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	Implement the VMT mitigation measures associated with VMT thresholds		
T-1f Urban	The Regional Climate Committee will work with the local jurisdictions to develop road-related policies that require installation of multimodal transportation features where feasible.	Phase 2 – Phase 3	
Measure T-1 Rural: Implement programs, such as those identified in HCAOG's RTP, that increase access to safe active transportation, to increase the mode share of active transportation in rural areas from 5% to 6% by 2030 thereby achieving a regional active transportation mode share of 9%.			
T-1a Rural	Regional Climate Committee to conduct a feasibility study evaluating existing bike parking facilities in rural areas and what improvements can be made to increase supply, reduce theft, and increase rider attraction. Include in the study an analysis of current and future land use trends and identify active transportation facility development which would result in high inter- connectivity impact. The study should focus on needs to better connect rural communities to city centers, job centers, and amenities.	Phase 1	2030: 1,080 2045: 4,405
T-1b Rural	Develop a priority list of active transportation projects from HCAOG's Regional Transportation Plan based on level of impact, expansion of inter-connectivity, and historically under-invested communities where there is currently no, or limited pedestrian and bicycle infrastructure as informed by feasibility study.	Phase 1	
T-1c Rural	The Regional Climate Committee will work with the regions jurisdictions, HCAOG, and CalTrans to obtain funding for the construction of bikeway and pedestrian systems to improve interconnection within Humboldt County. Focus areas will be projects that connect rural communities to high employment areas such as City of Eureka, Arcata, and Fortuna as well as nearby counties, State, and federal infrastructure through integration of bicycle facilities as part of other roadway construction projects (e.g. CalTrans mobility hub and highway projects).	Phase 2 - ongoing	
T-1d Rural	Partner with California Department of Transportation (CalTrans) District 1 Pedestrian and Bicycle Advisory Committee (PBAC) to track progress on implementation of bicycle and pedestrian projects in the region, ensure that projects being planned are consistent with the District Active Transportation Plan, and to represent the regions rural jurisdictions needs to the PBAC.	Phase 2 - ongoing	
T-1e Rural	Regional Climate Committee to work with jurisdictions in rural regions that have planned land use development to establish standards for when and how new residential subdivisions, multi-family, and mixed-use developments shall provide inter- connected bicycle and pedestrian facilities and amend local codes accordingly.	Phase 2 - 3	
T-1f Rural	Increase community awareness of active transportation infrastructure projects occurring and those completed. Work with HCAOG to continue to fund, develop, and maintain regional webpages and apps showing pedestrian and bike trails, bike lanes, and bus times and routes. Distribute active transportation maps and promotional materials to hotels and tourism centers to increase visitor use of active transportation.	Phase 1 - ongoing	
T-1g Rural	Partner with the tourism and business sectors of larger tourism and employment regions of the county to identify pathways to increase active transportation from tourists and employees.	Phase 2	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
T-1h Rural	Regional Climate Committee to identify and apply for grant opportunities such as the Active Transportation Program, AARP Community Challenge, CalEPA's Environmental Justice Action Grants, and Caltrans Sustainable Transportation Planning Grants, etc., to fund rural active transportation projects identified in the Regional Transportation Plan.	Phase 1 - ongoing	
T-1i Rural	Leverage the Regional Climate Committee to fund the development of local subsidies for low-income residents across the region for bicycles, helmets, pumps, and other bicycle equipment. Continue to offer e-bike rebates with increased rebate opportunities for low-income customers. Implement an income-qualified coupon for the e-bike share program, in addition to the available 50 percent discounted e-bike share rate.	Phase 2	
Strategy 6: Shift driving to public transit or car-share			
Measure T-2 Urban: Expand the public transit network in support of HCAOG's Regional Transportation Plan to increase public transit mode share from 2% to 20% public transit mode share in urbanized areas to achieve a regional 13% public transit mode share by 2030.			
T-2a Urban	Regional Climate Committee to work with Humboldt Transit Authority (HTA) and HCAOG to support implementation of measures to increase use of public transportation services in the region as specified in HCAOG's Regional Transportation Plan, and work toward a 10-minute headway in urban areas. This should include, but is not limited to: - Improving passenger transfer among local routes and between local and intercity routes (e.g., North State Express and Amtrak) - Improving shelters at bus stops - Electronic signage and/or real-time updates of wait time until next bus	Phase 2	2030: 18,055 2045: 26,482
T-2b Urban	For areas with significant tourism industry, conduct a feasibility study to inform the development of a tourism-based mobility plan aimed at decreasing tourism-based single passenger vehicle use. In this study: - Identify community boundary locations for tourism designated parking and optimal route connectivity - Identify opportunities for town shuttle services and park-and-ride locations for residents and tourists - Gauge potential of partnerships with big tourism destinations and local businesses to implement direct public transit routes between park and ride and the relevant tourist destinations - Identify opportunities for dogs to be included in a shuttle service to locations that allow dogs	Phase 1	
T-2c Urban	Leverage the Regional Climate Committee to conduct local transportation surveys to better understand the community's needs and motivation for traveling by car versus other alternatives such as the bus. Use survey results to inform policy development and outreach campaigns that are transit focused. Develop marketing materials and provide them to the local jurisdictions to publicize public transportation improvements as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use and success of improvement.	Phase 1	
T-2d Urban	Work with HTA to plan facility upgrades that include design improvements of seating and weather protection at bus stops and along transportation routes. Implementation should also include consideration of climate change impacts and increasing micro-transit access to the improved public transit network facility. Incorporate design changes throughout infrastructure modifications, including real-time updates of bus arrival.	Phase 1 – Phase 2	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
T-2e Urban	Work with HTA to prioritize public transportation access and improvements in low-income areas of the region and at major destinations. This could include surveying existing transportation routes, schedules, and facilities throughout each jurisdiction as part of HCAOG's Sustainable Transportation Planning Grant Program and improving public transportation facilities and expand access to transit (i.e., first and last-mile access).	Phase 2	
T-2f Urban	Regional Climate Committee to collaborate with HTA and HCAOG in obtaining grant funding for service expansion and improvements particularly in underserved and marginalized areas. Also include assistance for working with the appropriate State agencies to petition for updates to the farebox ratio to allow HTA greater access to using funds for self- advertisement.	Phase 1 - ongoing	
T-1g Urban	The Regional Climate Committee will work with local jurisdictions to prioritize spending of transit-specific funding for transit needs first.	Phase 1 - ongoing	
Measure T-2 Rural: Develop a robust public transit network in support of HCAOG's Regional Transportation Plan to increase public transit mode share from 1% to 10% in rural areas and achieve a regional 13% public transit mode share by 2030.			
T-2a Rural	Regional Climate Committee to work with HTA and HCAOG to support implementation of measures to increase use of public transportation services in the region as specified in HCAOG's Regional Transportation Plan and work toward a 30-minute headway in rural areas. This should include, but is not limited to: - Improving passenger transfer among local routes and between local and intercity routes (e.g., North State Express and Amtrak) - Improving shelters at bus stops - Prioritizing infrastructure improvements in existing communities that enable people better access and use of public transit - Electronic signage and/or real-time updates of wait time until next bus	Phase 1 - ongoing	2030: 20,180 2045: 29,703
T-2b Rural	For areas with significant tourism industry, conduct a feasibility study to inform the development of a tourism-based mobility plan aimed at decreasing tourism-based single passenger vehicle use. In this study: - Identify community boundary locations for tourism designated parking and optimal route connectivity - Identify opportunities for town shuttle services and park-and-ride locations for residents and tourists - Gauge potential of private partnerships with big tourism destinations and local businesses to implement direct public transit routes between park and ride and the relevant tourist destinations	Phase 1	
T-2c Rural	Work with HCAOG and HTA to conduct a feasibility study to explore alternative forms of public transit, such as micro transit including on-demand shuttles, car share programs, bike share programs, and scooter share programs. Micro transit is a type of on-demand, shared transportation service that typically operates with smaller vehicles, such as vans or mini-buses, and offers flexible routes and schedules. The analysis should include identification of potential funding sources (e.g., grants, local taxes, local business sponsorship, discretionary funds, etc.) and identification of barriers and opportunities for how such a micro-mobility program may enhance active transportation or public transit use. Evaluate the effectiveness of the micro transit pilot program in McKinleyville to determine opportunities for implementing a similar program in other rural locations of the county.	Phase 1	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
T-2d Rural	Based on the findings of the feasibility study, work with the Regional Climate Committee to develop a template micro-mobility policy that establishes a deployment protocol and permitting process, identifies any restrictions for use for safety reasons, and promotes equitable access through requirements for consistent placement of micro-mobility devices (e-scooters, e-bikes, etc.) in underserved areas or reductions in usage fees for lower-income users.	Phase 2	
T-2e Rural	Require large nonresidential and mixed-use developments to participate in Transportation Demand Management strategies, including providing shuttle services between employment centers and key transit centers, offering telecommuting, and encouraging use of pre-tax commute benefits.	Phase 2	
T-2f Rural	Market and publicize public transportation improvements as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use.	Phase 2 - ongoing	
T-2g Rural	Work with HTA in the implementation of facility improvements to rural transportation stops to include design improvements of seating and weather protection. Implementation should also include consideration of increasing access to the improved public transit network facility.	Phase 1 - ongoing	
T-2h Rural	The Regional Climate Committee will work with local jurisdictions to prioritize spending of transit-specific funding for transit needs first.	Phase 1 – ongoing	
T-2i Rural	The Regional Climate Committee will collaborate with the County, cities, HTA and HCAOG in order to identify roads, project types, and project locations in the rural areas that would increase the accessibility and use of public transit. The Committee will research and obtain potential funding opportunities for these road improvements, such as through Senate Bill 1 funding programs.	Phase 1 – 3	
Measure T-4: Develop and implement regional mobility hubs and ZEV car-share programs to support mode shift from single occupancy vehicles.			
T-4a	Regional Climate Committee to work with HCAOG on the Sustainable Transportation Planning Grant Program efforts to assess regional transportation characteristics and work with regional agencies to identify multimodal land use opportunities throughout the county. As part of this program, conduct a background review of options for purchasing, operating, and maintaining shared mobility assets such as ZEVs, electric bikes, and electric scooters. The program should include identification of potential funding sources (e.g., grants, local taxes, local business sponsorship, discretionary funds, etc.) and identification of barriers and opportunities for how expanding mobility hub facilities beyond state highways access may enhance active transportation or public transit use. Also include in the feasibility study an assessment of alternative powering options in partnership with RCEA (e.g. microgrids) to support ZEV car-share infrastructure with the mobility hubs.	Phase 1	Supportive
T-4b	In areas where Caltrans plans to implement mobility hubs along the state highway, local jurisdictions with support from the Regional Climate Committee will work with Caltrans to facilitate successful implementation and use the project to inform decisions on expanding mobility hub options throughout the region that will expand jurisdictional interconnectivity and provide public EV charging to the communities.	Phase 1 – Phase 2	
T-4c	Regional Climate Committee will develop guidance for jurisdictions to implement mobility hub policies that establishes a deployment protocol and permitting process, identifies any restrictions for use for safety reasons, and promotes equitable access through requirements for	Phase 1	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	consistent placement of mobility hub facilities in underserved areas or reductions in usage fees for lower income users. The guidance is to be developed based on the regional feasibility study above.		
T-4d	The Regional Climate Committee will coordinate with the City of Arcata in their efforts to bring in commercial autonomous EVs for car-share programs in association with regional mobility hubs.	Phase 1 – Phase 2	
T-4e	Dedicate staff time or leverage the Regional Climate Committee to work with work with HCAOG on the Sustainable Transportation Planning Grant Program and Caltrans in identifying and pursuing funding opportunities identified in the feasibility study with focus on linking mobility hub programs with the current Caltrans project to facilitate greater community interconnectivity and adoption of mobility services provided.	Phase 2 - ongoing	
Strategy 7: Shift land use to reduce VMT			
Measure T-3: Reduce regional VMT by increasing mixed-use development in infill priority areas in alignment with HCAOG's baseline connectivity score included in the RTP.			
T-3a	Work with the Regional Climate Committee to develop template land use and development policy to enable and encourage infill development and streamline zoning changes that allow for higher density housing development. Work with urban areas to rezone for higher residential density and mixed use, reduced parking requirements, and expedited planning and permitting processes in the downtown core, along transit corridors, and within future planned development areas that is compact, pedestrian friendly, and transit oriented where applicable.	Phase 1 – Phase 2	Supportive
T-3b	Leverage feasibility studies conducted by HCAOG to identify opportunities for mixed-use and infill development, map current and future planned transit networks, and establish a priority list of development that encourages regional growth to be in alignment with HCAOG and HTA transit goals. If not already included in previously conducted HCAOG studies, assess equity considerations with regards to location and distribution of developments, and potential transit access equity impacts.	Phase 1	
T-3c	Work with HCAOG, HTA, RCEA and CBOs to plan prospective mixed-use and infill projects so that they include design considerations with regards to alternative energy access/generation, EV charging infrastructure, and local public transit facilities. Promote development that increases walkability and is bikeable in neighborhoods.	Phase 2 - 3	
T-3d	Direct the Regional Climate Committees to develop promotional materials and manage a central webpage on local jurisdiction's websites for planned projects detailing the benefits of mixed-use and/or infill developments.	Phase 1- ongoing	
T-3e	Dedicate staff time or create multi-jurisdictional staff position to be administered by the Regional Climate Committee to identify and pursue funding opportunities to support mixed-use and infill developments.	Phase 1 - ongoing	
T-3f	Study potential of establishing infill and transit-oriented development (TOD) overlay zones with minimum density requirements for as-of-right ministerial approval, streamlined permitting and reduced fees.	Phase 1 - 2	
T-3g	Pass ordinances prohibiting redesignation and rezoning of land for lower intensity land uses in transit-oriented development areas (areas within walking distance of basic services and transit).	Phase 1 - 2	
T-3h	Further streamline permitting and reduce fees for construction of ADUs and affordable housing in targeted areas.	Phase 1	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Measure T-5: Require commercial and industrial employers with 25 employees or more to develop a Transportation Demand Management Plan.			
T-5a	Across all jurisdictions, and particularly in high employment cities, require employers to develop a Transportation Demand Management (TDM) Plan through a new ordinance and/or as a requirement to obtain a business license. TDM plans should include money-based incentives for employees to bike, walk, carpool, take the bus to work, or remote work where suitable. Require large employers (more than 25 employees) to subsidize biking, walking, or bus travel. The TDM should also include a ride-sharing program and membership within a transportation management association. The ride-sharing program will consist of designated parking spaces for ridesharing vehicles, passenger loading, unloading, and waiting zones; and a website, message board, or app for coordinating ridesharing. The program will include a provision to allow employees to work remotely 2 days per week when feasible and should include consideration for increasing broadband internet access to provide adequate service for those working remote.	Phase 2	Supportive
T-5b	Leverage the Regional Climate Committee and partnership with HCAOG to conduct local transportation surveys within each jurisdiction to better understand the community's needs and motivation for traveling by car versus other alternatives such as the bus. Use survey results to inform policy development and outreach campaigns that are transit focused.	Phase 1	
T-5c	Have the Regional Climate Committee prepare marketing materials that each jurisdiction may modify and use to market and publicize public and active transportation improvements to local businesses as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use and success of improvement.	Phase 1 - ongoing	
T-5e	Work with local businesses to understand employee engagement with alternative transportation methods and barriers to entry and provide workshops to local businesses to address questions or concerns in developing TDM plans.	Phase 2	
T-5f	Through the Regional Climate Committee, employ a multi-jurisdictional representative to support HTA and local jurisdictions in pursuing grants such as the Sustainable Communities Competitive, Caltrans Sustainable Transportation Planning Grant Program, State Transportation Improvement Program, etc., to expand public and active transit services and infrastructure.	Phase 2	
Strategy 8: Increase zero-emission vehicle adoption			
Measure T-6: Decarbonize 15% of passenger vehicle miles traveled by 2030 and 100% by 2045 through increased adoption of low and zero-emission vehicles and development of a regional electric vehicle charging and hydrogen fueling network.			
T-6a	Through the Regional Climate Committee partner with local organizations and community groups throughout the county to distribute outreach and promotional materials to residents and local businesses on the financial, environmental, and health and safety benefits of ZEVs and alternative fueling options. Provide information on available funding opportunities.	Phase 1 - ongoing	2030: 55,726 2045: 590,124
T-6b	Regional Climate Committee will identify jurisdictions or land-use zones, such as the Coastal Zone, that may benefit from a streamlined public and private EV infrastructure permitting process or Categorical Exemption and draft an ordinance in accordance with AB 1236. The Regional Climate Committee will develop the program as a template to be distributed to applicable jurisdictions for a coordinated approach and relieve individual jurisdiction workload on program development.	Phase 2	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
T-6c	The Regional Climate Committee will work with local jurisdictions to amend the Municipal Code to promote EV chargers in new development, redevelopment, and existing parking spaces. This may include requiring: ▪ Multifamily – CalGreen Tier 2 provisions ▪ Non-Residential – CalGreen Tier 2 provisions ▪ Designate 10 percent of parking spaces in urbanized areas as EV charging spaces ▪ Require that employers with over 25 employees designate preferred parking spaces for zero emission vehicles or hybrids only ▪ Require that new private parking lots grant ZEVs access to preferred parking spaces. ▪ Require that existing parking in downtown areas grant ZEV access to preferred parking spaces. ▪ Require larger residential rental building owners (more than 15 tenants) and large commercial building owners (more than 10,000 square feet) to install working electric vehicle chargers in 10 percent of parking spaces for new and existing buildings at time of renovation if projects are valued at \$1,000,000 or greater	Phase 2	
T-6d	Support ZEV car share companies in coming to the region. In jurisdictions with prevalent or planned development of multifamily housing, identify private sector partnerships and develop affordable, zero-emission vehicle car share programs with a priority to target vulnerable communities across all jurisdictions, promoting an accessible ZEV network.	Phase 1 - ongoing	
T-6e	For high employment areas, work with interested parties to develop new public access charging stations. Work with RCEA to develop partnerships with other charging companies (e.g. Go Station) as needed to accommodate charging station needs. Apply for Federal Charging and Fueling Infrastructure (CFI) grant to install electric vehicle chargers at community centers and in high employment areas.	Phase 2	
T-6f	Partner with RCEA to provide an EV Monthly Bill Discount Program with increased discount opportunities for low-income customers in each jurisdiction. Promote affordable EV charging rates at jurisdiction-owned EV charging stations and adjust rates as necessary to cover program costs. Explore methods for charging different rates for different user groups or other programs to offset charging costs at public stations for low-income residents.	Phase 2	
T-6g	Regional Climate Committee will work with interested parties and RCEA to expand home and public fueling/charging station ZEV infrastructure in alignment with RCEA RePower Plan goals and address barriers to ZEV adoption which are not related to electric grid capacity limitations as outlined in the “North Coast and Upstate FCEV Readiness Plan.” Evaluate opportunities for curbside street level II chargers in urbanized residential areas where off-street parking is limited to provide equitable access to at home chargers.	Phase 2 - 3	
T-6h	Regional Climate Committee, in partnership HCAOG, to lead the development of a Hydrogen Vehicle Infrastructure Implementation Plan for public access hydrogen facilities by 2030 which includes the following: ▪ Evaluate a list of prioritized locations for hydrogen fueling stations across the county ▪ Consideration of procurement needs and potential sourcing from appropriate hydrogen facilities ▪ Identifies grant funding opportunities	Phase 1 - 2	

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T-6i	Based on the results of the Hydrogen Vehicle Implementation Plan, applicable jurisdictions with opportunities identified as high priority hydrogen fueling station locations will evaluate and promote public access hydrogen fuel station development. Leverage the Regional Climate Committee and other regional partnerships to explore funding opportunities for hydrogen fueling infrastructure through the LCFS or PG&E EV Fast Charge Program as well as develop public-private partnerships to attract private developers to the region to build out ZEV infrastructure.	Phase 2 - 3	
T-6j	Identify and promote incentives and financing options for residential EV charger installations such as applying for Inflation Reduction Act (IRA) funding.	Phase 1 - ongoing	
Measure T-7: Increase commercial zero-emission vehicle use and adoption to 10% by 2030 and 100% by 2045 through a regional charging network and development of hydrogen hubs.			
T-7a	Through the Regional Climate Committee work with RCEA and the Schatz Energy Research Center (SERC) to refine and implement the North Coast Medium-Duty/Heavy-Duty Zero Emission Vehicle Readiness Blueprint for Humboldt County. As part of the refinement: - Conduct in depth study of physical siting opportunities and prioritize locations and a schedule to follow - Identify opportunities for local jurisdiction-supported accelerated fleet ZEV adoption and establish a strategy to promote ZEV/EV adoption within business fleets - For high priority fleets, establish a strategy and protocol to collaborate with PG&E - For high priority fleets, conduct a grid planning study to identify necessary infrastructure upgrades to support a fully built-out fleet and coordinate with PG&E regarding needs	Phase 1 – Phase 3	2030: 17,441 2045: 279,775
T-7b	Work with the Regional Climate Committee and RCEA to secure funding from state and utility programs (such as the California Air Resources Board's Clean Vehicle Rebate Project, the Truck and Bus Voucher Incentive Program, LCFS, and the PG&E EV Fast Charge Program) and federal sources to increase procurement of EV or ZEV cars, trucks, and other vehicles and installation of EV/ZEV charging/fueling infrastructure. Additionally, provide information to businesses on state and federal programs to help businesses pursue conversion of fleets to ZEVs.	Phase 1 - ongoing	
T-7c	Conduct an inventory of business vehicle fleets in each jurisdiction and identify and engage with employers and businesses subject to the Advanced Clean Fleets rule as well as those to target for accelerating ZEV/EV adoption. As part of the study, identify private trucking company or manufacturer partnership opportunities for piloting new ZEV technology in the region.	Phase 1 - 2	
T-7d	Direct the Regional Climate Committee to partner with RCEA and SERC to work with local fleet operators, vehicle operators, and fleet maintenance staff to develop a comprehensive training program, including hosting workforce development trainings to discussing the benefits and technical requirements of ZEV fleets and supporting infrastructure. In addition to retraining the existing workforce, advertise and promote opportunities in the area to attract additional workforce support such as ZEV technicians and mechanics, and charging and fueling technicians.	Phase 2	
T-7e	The Program Manager will research and obtain funding and work with HTA to identify locations and expand hydrogen fueling infrastructure.	Phase 2 - 3	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Measure T-8: Electrify or otherwise decarbonize 12% of applicable small off-road engines (SOREs) off-road equipment by 2030 and 100% by 2045 and replace fossil diesel consumption with renewable diesel in 55% of applicable large diesel in alignment with EO N-79-20 by 2030.			
T-8a	Align with AB 1346 and develop and circulate educational materials regarding CARB's Small-Off Road Engines regulations requiring most newly manufactured small off-road engines such as those found in leaf blowers, lawn mowers, and other equipment to be zero emission starting in Model Year 2024. Phase 2 of the regulations will be implemented in Model Year 2028, when the emission standards for generators and large pressure washers will be zero. In addition, work with Humboldt Chamber of Commerce to disseminate information regarding the regulation to impacted businesses (e.g., lawn equipment dealers, commercial landscapers, construction companies) and promote transition of equipment sales and equipment use to electric alternatives.	Phase 1 - ongoing	2030: 49,143 2045: 139,645
T-8b	Regional Climate Committee to identify pathways to enforce CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation and the Commercial Harbor Craft Regulation requiring that diesel vehicles over 25 horsepower to procure and only use R99 or R100 renewable diesel. This should include establishing a means to track compliance and developing partnerships with fuel suppliers in the region to promote and support the increased procurement of renewable diesel in the region.	Phase 1	
T-8c	Work with the Regional Climate Committee to develop and implement a plan to replace all jurisdiction owned end-of-life off-road equipment with zero-emission equipment as feasible. Procure renewable diesel for applicable jurisdiction owned diesel equipment that doesn't have available replacement equipment. Plan should include evaluation of current jurisdiction-owned equipment, alternative low or zero-emission options, prioritize equipment to replace first (e.g., largest GHG emission reduction potential), and a timeline for replacements that align with goals and feasibility of replacement.	Phase 2	
T-8d	The Regional Climate Committee will develop and manage an Off-road Equipment Replacement Program and Outreach Campaign that provides information to contractors, residents, and fleet operators in the region regarding alternatives to fossil-fueled off-road equipment, local fuel suppliers with renewable diesel for sale, public health and safety benefits of alternative equipment technology, and funding opportunities available (i.e., Clean Off-Road Equipment Voucher Incentive Program), Zero-Emission Landscaping Equipment Incentive Programs).	Phase 1 – 2	
T-8e	Through the Regional Climate Committee, Partner with North Coast Unified Air Quality Management District to identify funding opportunities to encourage residents to replace gas-powered landscaping equipment and off-road engines with zero emission equipment. This could include a rebate and incentive program for upgrading off-road equipment and switching to renewable diesel, or the development of an off-road zero emission landscaping equipment rental share program for county residents and businesses.	Phase 1	
T-8f	Leverage the Regional Climate Committee to source State and Federal funding to decarbonize off-road equipment as a result of Executive Order N-79-20.	Phase 2	

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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Measure T-9: Establish Humboldt as a pilot program for the decarbonization of the transportation sector to help drive State and philanthropic investment throughout Humboldt.			
T-9a	The Regional Climate Committee will develop and promote a vision and strategy for the regional community foundation to serve as a first mover/pilot in the State in the decarbonization of America's rural transportation systems.	Phase 2	Supportive
T-9b	As a first mover in rural America, the Regional Climate Committee will pursue investment on behalf of the jurisdictions from philanthropy, the State, private businesses, etc. to fund the development of a Humboldt decarbonized rural transportation system.	Phase 2 - 3	
T-9c	With the support of the Regional Climate Committee, jurisdictions will directly engage members of disadvantaged and vulnerable communities in the development of the vision and strategy that aims to benefit all members of rural communities.	Phase 2	
Measure T-10: Work with the State and renewable fuel industry to establish a renewable fuel network within Humboldt thereby funding new green industry and job growth to support the decarbonization of the transportation sector.			
T-10a	The Regional Climate Committee will lead establishing a memorandum of understanding with RCEA, PG&E, CARB, CAL FIRE, the California Department of Agriculture, forest owners, and waste management companies to establish a plan to manage biomass and organic waste through the development of biofuel infrastructure in the region to position Humboldt as a first mover in active forest management to support a carbon-free future for California.	Phase 1	Supportive
T-10b	The Regional Climate Committee will work jurisdiction to identify and help zone and entitle opportunity locations and specific areas throughout the region for streamlined development of renewable generation facilities where applicable. As part of effort, develop guidelines for evaluating renewable opportunities that meet sustainability criteria such as those set in the Natural Resources Defense Council's "Biofuel Sustainability Performance Guidelines" to limit environmental impacts related to renewable production.	Phase 1	
T-10c	The Regional Climate Committee will work with RCEA, PG&E, and State agencies to explore funding opportunities including grants and green bonds to help fund the development of renewable fuel infrastructure in the region and explore revenue options through the Low Carbon Fuel Standard.	Phase 1	
T-10d	Establish Humboldt as a hydrogen hub by: - Promoting the pending The U.S. Department of Energy funded HTA hydrogen fueling station to attract additional hydrogen fueling station developers to the region - Partner with RCEA, SERC, and CalTrans, where applicable, to identify sites for hydrogen fueling stations that build off the North Coast and Upstate Regional Hydrogen Infrastructure Plan - Pursue partnerships with private developers to develop additional hydrogen fueling stations in the region - Pursue funding opportunities for hydrogen fueling infrastructure, such as through LCSF, AB 8 program, and the CEC Clean Transportation Program	Phase 2 - 3	
T-10e	The Regional Climate Committee, in partnership with applicable incorporated cities will work with local utilities and State agencies to pursue grants earmarked for biofuel infrastructure from the Inflation Reduction Act.	Phase 2	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
T-10f	The Regional Climate Committee will establish partnerships with organic waste haulers to establish a consistent feedstock of waste biomass from forests and biowaste from residential and agricultural sources and forest service businesses/property owners.	Phase 2 - 3	
T-10g	Partner with the forestry services and waste haulers to host an Outreach Campaign informing the community on the economic and wildfire risk benefits of active forest management for bioenergy. Establish a working group/committee to involve local community members and businesses in the planning processes related to biomass and biowaste management locally.	Phase 1	
T-10h	Leverage the Regional Climate Committee to create a region-wide workforce development programs to train the local workforce for biofuel jobs. Specifically target training towards members of disadvantaged communities and establish criteria in the planning process that prioritizes/requires the employment of local residents and businesses in the industry.	Phase 2 - 3	
Measure T-11: Lead by example and electrify or otherwise decarbonize 50% of municipal fleets by 2030 in alignment with the State's Advanced Clean Fleet Rule.			
T-11a	Regional Climate Committee will develop a Zero-emission Fleet Conversion and Purchase Policy to be adopted by each jurisdiction that requires new, and replacement of, municipal fleet vehicle purchases to be EVs or ZEVs. The policy will also include a schedule for replacement of fleet vehicles to comply with the State's Advanced Clean Fleet rule requiring 50 percent of medium and heavy-duty vehicle purchases be zero-emissions beginning in 2024 and 100 percent beginning in 2027. Report annually to CARB on fleet status as required per the Advanced Clean Fleets Regulation.	Phase 1	Supportive
T-11b	Leverage the Regional Climate Committee conduct a feasibility and cost assessment to determine the number of EV/ZEV chargers and funds needed to support the fleet transition to 50 percent EV/ZEV by 2030.	Phase 1	
T-11c	The Regional Climate Committee will secure funding from programs such as the California Air Resources Board's Clean Vehicle Rebate Project and the Clean Truck and Bus Voucher Incentive Program to increase procurement of EV or ZEV cars, trucks, and other vehicles and installation of EV/ZEV charging/fueling infrastructure at municipal facilities. Evaluate credit generation opportunities within the LCFS program or other potential programs for ZEV/EV fueling and charging stations for the municipal fleet to offset cost of infrastructure development needed to support transition.	Phase 1 - ongoing	
T-11d	Install additional ZEV chargers/fueling stations in municipal parking lots for fleet, employees, and public use to meet projected demand in alignment with feasibility study.	Phase 1 - 2	
T-11e	Leverage the Regional Climate Committee to develop a resolution in alignment with Measure T-8a, to replace jurisdiction-owned end-of-life small off-road equipment with electric equipment (e.g., lawn equipment and leaf blowers) at time of replacement and to procure renewable diesel for all applicable jurisdiction owned equipment. Each jurisdiction will need to adopt the resolution while the Regional Climate Committee will support implementation.	Phase 1	

Humboldt County
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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Strategy 8: Reduce organic waste			
Measure SW-1: Establish a local waste separation facility and organics management to be able to reduce waste sent to landfills by 75% by 2030. Reduce GHG emissions by limiting truck trips required to ship waste out of the county and import compost from out of the county.			
SW-1a	Regional Climate Committee to work with Humboldt Waste Management Authority (HWMA) and Recology to develop a SB 1383 waste management plan which assesses county-wide waste diversion needs, current capacity, and land-use opportunities for developing organic waste processing facilities within Humboldt County that will meet regional requirements. The assessment should also include an analysis of green bond funding opportunities, applicable green bond programs, and a strategic plan for pursuing funding through green bond programs.	Phase 1	2030: 29,689 2045: 32,568
SW-1b	The Regional Climate Committee will work with HWMA and an underwriter at a desired green bond program identified in the feasibility study to develop a green bond focused on providing funding for HWMA to construct a regional organics processing facility that will be used to meet SB 1383 diversion and procurement requirements.	Phase 1 - 2	
SW-1c	Through the Regional Climate Committee, partner with Recology and/or HWMA to pursue funding, such as the Organics Grant Program from CalRecycle or for projects through California Climate Investment, to reduce generated organic waste from multi-family homes and expand waste diversions programs within the county.	Phase 1	
SW-1d	Meet the requirements of SB 1383 to reduce organics in the waste stream by 75 percent below 2014 levels by 2030 and work towards 90 percent solid waste diversion by 2040 in applicable jurisdictions by leveraging the Regional Climate Committee to provide implementation support. Include activities such as: ▪ Implement enforcement and fee for incorrectly sorted materials with sensitivity to shared collection. Utilize funding to implement programs and efforts to increase communitywide organic waste diversion ▪ Assure adequate bin signage across commercial and residential areas of acceptable landfill, recyclable, and compostable materials ▪ Identify public areas for adding organics collection and recycling bins where needed ▪ Work with Recology and HWMA to conduct free food scrap collection pail giveaways and promote curbside organics collection service offered in applicable communities ▪ Evaluate opportunities to have community compost hubs throughout the county that is easily accessible for community members. Partner with regional community gardens to increase community wide access to local compost bins ▪ Identify long-term and alternate solutions for the community's wastewater bio-solids to avoid long hauling distances and develop local, beneficial reuse	Phase 1 - ongoing	
SW-1e	Leverage Regional Climate Committee to draft a templated edible food recovery ordinance for individual jurisdictions to modify and adopt as needed. Alternatively utilize the County's adopted ordinance, HCC 521-13 as a template or guide for drafting ordinances in individual jurisdictions that do not currently have such an ordinance. The ordinance will target edible food generators, food recovery services, or organizations that are required to comply with SB 1383. Ordinance requires all residential and commercial customers to subscribe to an organic waste collection program and/or report self-hauling or backhauling of organics. To support implementation of the ordinance, include the following activities:	Phase 2	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	- Work with community food pantries, food suppliers, HWMA, and Recology to identify infrastructure needs to ensure edible food reuse infrastructure in Humboldt is sufficient to accept capacity needed to recover 20 percent of edible food disposed of within Humboldt - Regional Climate Committee to work with jurisdictions to establish an edible food recovery program where they are not currently present to minimize food waste. Expand food rescue programs by increasing cold storage capacity, include education and outreach efforts, and incorporate collection/distribution network among businesses, local institutions and grocery stores. - Leverage CalRecycle funding opportunities to support projects that prevent food waste, increase cold storage capacity or rescue edible food - Partner with existing food pantries that are locally appropriate for each jurisdiction to identify and advertise locations for surplus food to be taken in the community		
SW-1f	The Regional Climate Committee will work with HWMA, Recology and individual jurisdictions to implement structural changes listed above and increase service to jurisdictions without organics collection. This is applicable to both jurisdictions subject to SB 1383 and SB 1383 exempt jurisdictions to prepare for future needs to comply with SB 1383.	Phase 2	
SW-1g	The Regional Climate Committee will coordinate between HWMA and regional wastewater treatment facilities to evaluate the opportunities to process/co-digest food waste at the wastewater treatment plants. Study should include evaluating existing infrastructure and ability to process food waste, an evaluation of necessary infrastructure upgrades needed to process food waste that would comply with SB 1383 standards for recovered organic products, and a return-on-investment evaluation. Study should also include recommendations of viable opportunities and identification of funding opportunities to support implementation and facility upgrades as necessary.	Phase 2 - 3	
SW-1h	The Regional Climate Committee in partnership with Recology and HWMA, will develop and conduct a Bring Your Own (BYO) education and outreach training for each jurisdiction community on reusables and implementing more sustainable packaging into daily use. The Regional Climate Committee will develop and provide information resources on HWMA and jurisdiction's websites. Partner with libraries and other existing facilities to market campaigns about waste reductions, reuse and repair.	Phase 1	
SW-1i	Leverage the Regional Climate Committee to provide technical and outreach support to jurisdictions with organics and/or recycling services, by establishing relationships with multi-family property owners/managers to develop signage for their properties and to go door-to-door at each multi-family unit yearly to provide supplies and promote proper sorting.	Phase 1 - 3	
SW-1j	HWMA to add extra bulky-item pick up service in all jurisdictions to low- and medium-income residents at a subsidized cost to help minimize illegal dumping.	Phase 2	
SW-1k	The Regional Climate Committee will facilitate conducting waste characterization studies every 3 years to inform programs and policies. Leverage study to understand the waste stream and create a plan to increase diversion and reduce contamination. Work with contracted waste haulers and HWMA to develop and implement a comprehensive monitoring and quality control program with a focus on consumer	Phase 1 - 3	

Humboldt County
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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	behavior change. This should include tracking of weight or volume of waste produced; consider including information on billing to inform customers of their waste production and including incentives for reduction. Explore reducing frequency of service for residential and commercial waste to least often possible pick up to reduce truck miles/trips.		
SW-1l	Through the Regional Climate Committee create a multi-lingual training/outreach program that can be used in all jurisdictions that is free and accessible to all residents and employees to learn about circular economy practices and diversion strategies and effects of overconsumption. Conduct targeted, multi-lingual, culturally appropriate, and geographically diverse circular economy educational and technical assistance campaigns based on outcomes of waste characterization studies and comprehensive monitoring and quality control program. Topics could include reuse, prolonging the life of common materials and items, and sustainable purchasing. Focus outreach campaign on food waste not going to landfill.	Phase 1	
SW-1m	Utilize the Regional Climate Committee to partner with schools, retirement communities, and other large institutions throughout the county to create waste diversion and prevention program/procedure/plan.	Phase 2 - 3	
SW-1n	The Program Manager will work with regional partners to develop and implement packaging bans to reduce the use of single-use plastics and excess waste proliferation in the waste stream.	Phase 2 - 3	
Strategy 9: Conserve water and reduce wastewater emissions			
Measure WW-1: Expand regional opportunities for implementation of wastewater decarbonization technologies such as anaerobic digesters to reduce GHG and produce renewable fuel sources.			
WW-1a	Regional Climate Committee to conduct a feasibility study(s) in jurisdictions with wastewater processing facilities or community primary reliance on septic systems identifying improved wastewater technologies which could be used to mitigate wastewater processing emissions and generate renewable fuel such as RNG or offset on-site process energy use via electricity generated with an anaerobic digester, particularly in relation to septic system improvements. The study should include an in-depth analysis of the current wastewater treatment methods utilized throughout the region, identification of upgrade opportunities and potential co-benefits to the community, and technological restrictions based on regional water quality and discharge requirements. The study should also specifically consider expanding wastewater treatment capabilities to process food waste that would otherwise go to landfill.	Phase 2	Supportive
WW-1b	The Regional Climate Committee will partner with regional wastewater service providers to understand current methods, areas for improvement, and whether there is interest in upgrading their wastewater treatment processes.	Phase 2	
WW-1c	The Regional Climate Committee, with input from the wastewater treatment providers, will research and pursue grants to wastewater facility upgrades or home septic system improvements (where applicable), such as applying to the California State Water Board for Clean Water State Revolving Fund grants, or the Community Development Block Grant Program.	Phase 3	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Measure WW-2: Reduce per capita potable water consumption by 15% by 2030.			
WW-2a	The Regional Climate Committee will work with regional water providers to update their Urban Water Management Plan every 5 years, as required by the State, and implement the identified demand reduction actions to ensure compliance with the State's Making Water Conservation a Way of Life regulations. Include new actions in the UWMPs as needed to achieve State regulations, which may include: ▪ Develop or amend Water Shortage Contingency Plans in the region to develop water waste restrictions for households, businesses, industries, and public infrastructure ▪ Work with large water users and other stakeholders to develop an On-Site Water Reuse Plan to maximize utilization of local water supplies decreasing energy intensity of distribution ▪ Revisit and update the Model Water Efficient Landscape Ordinance as needed. Engage, through regional partnerships, with builders and developers to provide information on the requirements for development projects ▪ Develop an ordinance for installation of dual-plumbing water systems that utilize greywater or recycled water for irrigation at new residential and commercial construction ▪ Increase engagement with the community, specifically low-to-moderate income residents, to understand available incentives or rebates, options, and programs to reduce per capita water use. Leverage regional programs and partnerships with local organizations to expand water conservation outreach ▪ Revise water and wastewater rates as necessary to ensure cost of service is covered	Phase 1 - 2	Supportive
WW-2b	Through the Regional Climate Committee work with the Humboldt County Resource Conservation District (HCRCD) to develop water conservation promotional materials, programs and outreach efforts are in multiple languages and accessible for low-income or disadvantaged and vulnerable communities. Continue to offer and expand water conservation programs to the community including educational programs like water education program for schools and water wise landscape classes as well as incentives like free water conserving devices, and rebates for rainwater collection systems and turf replacement.	Phase 1	
WW-2c	The Regional Climate Committee will work with the local water and wastewater providers in the region to develop a Recycled Water Master Plan to assess the feasibility of expanding the recycled water system in the region and establish a roadmap for a recycled water expansion program. The plan will identify locations available for recycled water use and establish a schedule for potable water replacement with recycled water in appropriate applications residentially, commercially, and municipally, and determine recycled water user fees.	Phase 2 - 3	

Humboldt County
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Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
Strategy 10: Increase Carbon Sequestration			
Measure CS-1: Research and implement feasible carbon sequestration technology opportunities to support growth and expansion of green jobs industry within the region.			
CS-1a	Conduct a carbon sequestration feasibility study facilitated by the Regional Climate Committee to identify emergent technology for carbon sequestration and regional viability of implementation, including consideration of identified carbon sequestration technology facilities (e.g. ocean carbon capture, agriculture methane capture, forest biomass waste to biochar soil amendment, biochar wastewater filtration, forest biomass as green hydrogen fuel, etc.).	Phase 2	Supportive
CS-1b	As part of Regional Climate Committee responsibilities established in Measure C-1, work with RCEA, HWMA, wastewater facilities, local tribes, businesses, public and private landowners and other applicable interested parties as appropriate to address potential carbon sequestration technologies available to the region, understand limitations and barriers, and develop solution pathways to implementation.	Phase 2	
CS-1c	Based on feasibility study, leverage the Regional Climate Committee to explore partnerships with technology providers and regional research laboratories (e.g. Cal Poly) for viable carbon sequestration technologies to deploy carbon sequestration pilot projects in the region.	Phase 3	
CS-1d	The Regional Climate Committee shall dedicate staff time or a representative for researching emergent carbon sequestration technologies and potential grant funding sources. This will include researching the potential for wetland conservation and exploring regional mitigation banking.	Phase 2	
Measure CS-2: Offset fossil-based emissions and increase carbon sequestration in the community by achieving SB 1383 procurement requirements (0.08 tons recovered organic waste per person) by 2030.			
CS-2a	Leverage the Regional Climate Committee to support jurisdictions in enforcing compliance with SB 1383 and aim to exceed the baseline requirement by establishing a minimum level of compost application per year on applicable/appropriate land throughout the region. Maintain procurement policies to comply with SB 1383 requirements for jurisdictions to purchase recovered organic waste products.	Phase 1 - ongoing	2030: 1,532 2045: 1,681
CS-2b	Regional Climate Committee to facilitate the establishment of a compost broker program primarily in rural jurisdictions central to agricultural industries which provides agricultural communities with incentives such as subsidies or community shared compost application equipment to aid in the procurement and distribution of high-quality compost.	Phase 1	
CS-2c	The Regional Climate Committee will work with Recology to provide residents, businesses, and developers with promotional material on where compost can be taken and how it can be used (i.e., landscaping).	Phase 1	
CS-2d	The Regional Climate Committee will work with Recology, HWMA, and community-based organizations to provide free compost procurement services to low-income households and small businesses in all jurisdictions.	Phase 2	
CS-2e	The Regional Climate Committee will facilitate a soil assessment study to identify applicable locations and quantity of compost that can be applied within each jurisdiction to help meet the procurement requirements of SB 1383 and provide household incentives for small-scale implementation. As	Phase 1- 2	

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
	part of study, evaluate other carbon sequestration opportunities associated with soil amendments such as biochar. ¹³		
CS-2f	Leverage the Regional Climate Committee to identify viable alternative opportunities for achieving SB 1383 compliance based on activities which are already occurring within the region (e.g. diversion of wastewater biosolids from landfill for agricultural application), or activities which provide co-benefits to the community (e.g. sourcing RNG to replace natural gas consumption, diversion of lumber or yard waste from landfill to be used to produce green hydrogen).	Phase 2	
CS-2g	The Regional Climate Committee will dedicate staff time for researching alternative pathways for achieving SB 1383 compliance and obtaining grant funding for procurement and distribution incentive programs across all jurisdictions.	Phase 2	
CS-2h	Through the Regional Climate Committee collaborate with local schools, Public Works, and Parks and Recreation to identify opportunities to apply compost to landscaping, potentially in addition to open space land conservation efforts.	Phase 2	
CS-2i	In jurisdictions currently subject to SB 1383 requirements, utilize the Regional Climate Committee to work with regional organic waste haulers (Recology) and local small-scale commercial composters (e.g. The Local Worm Guy) to identify opportunities for a regional compost procurement program to help meet and exceed the organics procurement provisions of SB 1383 as well as streamline hauler routes through regional collaboration.	Phase 1 - 2	
Measure CS-3: Develop a County-wide Natural and Working Lands GHG Inventory baseline by 2027 to better understand the existing and future GHG sequestration and help obtain resources to protect and increase natural carbon sequestration occurring in the region as well as promote biodiverse forests and wetlands resistant to wildfire.			
CS-3a	The County will partner with the North Coast Resource Partnership and other interested parties to develop an updated, Humboldt specific natural and working lands GHG Inventory which builds off of the 2017 northern California regional study conducted by the North Coast Resource Partnership. Development of the GHG Inventory should include consideration of requirements specified by prospective grant programs the region would like to pursue.	Phase 1	Supportive
CS-3b	The Regional Climate Committee will apply for at least one grant (e.g. Sustainable Agricultural Lands Conservation Program) every three years for obtaining grant funding for restoration and preservation activities with a focus on projects that have been unable to be fully completed due to funding constraints.	Phase 1 - 3	
CS-3c	The Regional Climate Committee will work with interested parties, local tribes, and agricultural communities to identify opportunities for expanding wetland conservation areas in a manner that equitably addresses tribal and agricultural interests.	Phase 2	
CS-3d	The Regional Climate Committee and County will work with CalFire and Humboldt County Resource Conservation District to increase necessary equipment and infrastructure resources to better maintain public and private forested area with focus on understory clearing to prevent wildfire.	Phase 2	

¹³ Note that biochar is not considered SB 1383 recovered waste product; however, biochar is a known soil amendment opportunity with enhanced carbon sequestration which is why it should also be considered as part of the soil amendment study.

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Action ID #	Strategies, Measures, and Respective Actions	Implementation Phase	Anticipated GHG Emissions Reduction (MT of CO ₂ e)
CS-3e	The Regional Climate Committee and the County will work with Humboldt County Resource Conservation District and interested parties to identify challenges and barriers for private sector landowners to implement forest best management practices as identified by CalFire and the Humboldt County Resource Conservation District.	Phase 1 - 2	
CS-3f	The Regional Climate Committee will support rural communities with the development of a community-based volunteer program supporting restoration project activity to create a maintained restoration process. This may involve partnering with local community organizations to communicate sequestration opportunities and facilitate volunteer maintenance projects.	Phase 2 - 3	
CS-3g	Through County efforts, facilitate annual reporting as part of the restoration plan mapping the existing restoration projects and open space lands to gauge progress in restoration activities over time as well as identify any gaps in maintenance activities related to ongoing projects. Incorporate GHG calculations into this monitoring plan to report on the region's contribution as a GHG source or sink.	Phase 2 - 3	
CS-3h	Engage with third-party to audit the Natural and Working Lands inventory and monitoring reports. Update County-wide inventory to include GHG emissions and sinks from Natural and Working lands in the region. Leverage this data to pursue State funding to protect the region's resource as a GHG sink for the State.	Phase 2	

Strategy 11: Explore Reduction in Harmful Refrigerant Release

Measure R-1: Prepare a baseline analysis of the volume of HFCs released into the atmosphere and evaluate whether these releases are being adequately addressed by CARB or whether the County should supplement the work of CARB.

R-1a	Regional Climate Committee to initiate a study of the information available relative to emissions of refrigerants with a high global warming potential in Humboldt County. This study is intended to develop a baseline of emissions for harmful refrigerants. Once this baseline is established the study will coordinate with CARB to determine how the emissions are being tracked and being reduced. The study will then identify areas where emissions of refrigerants are not being addressed and identify potential methods in which the emission of refrigerants may be minimized. Prior to the report being provided to the Regional Climate Committee it shall be provided to CARB for review and comment and shall be provided to interested parties who use refrigerants for their review and Comment. The comments from CARB and interested parties shall be reflected in the final report provided to the Regional Climate Committee.	Phase 2	
R-1b	The Regional Climate Committee will partner with CARB to understand the existing regulatory context and coordinate with refrigerant users to understand the processes and technology availability and cost.	Phase 2	
R-1c	The Regional Climate Committee, will pursue grants to cover the cost of this work.	Phase 1 - 2	

Note: MT of CO₂e = metric tons of carbon dioxide equivalent

Source: Compiled by Rincon based on information contained in the Draft Humboldt RCAP.

Meeting the GHG Reduction Targets

The strategies, measures, and actions included in the RCAP (shown above in Table 2-5), combined with Statewide legislation, would enable Humboldt to meet its GHG emissions reduction target pathway, a linear pathway to achieving a 40 percent reduction in GHG emissions from 1990 levels

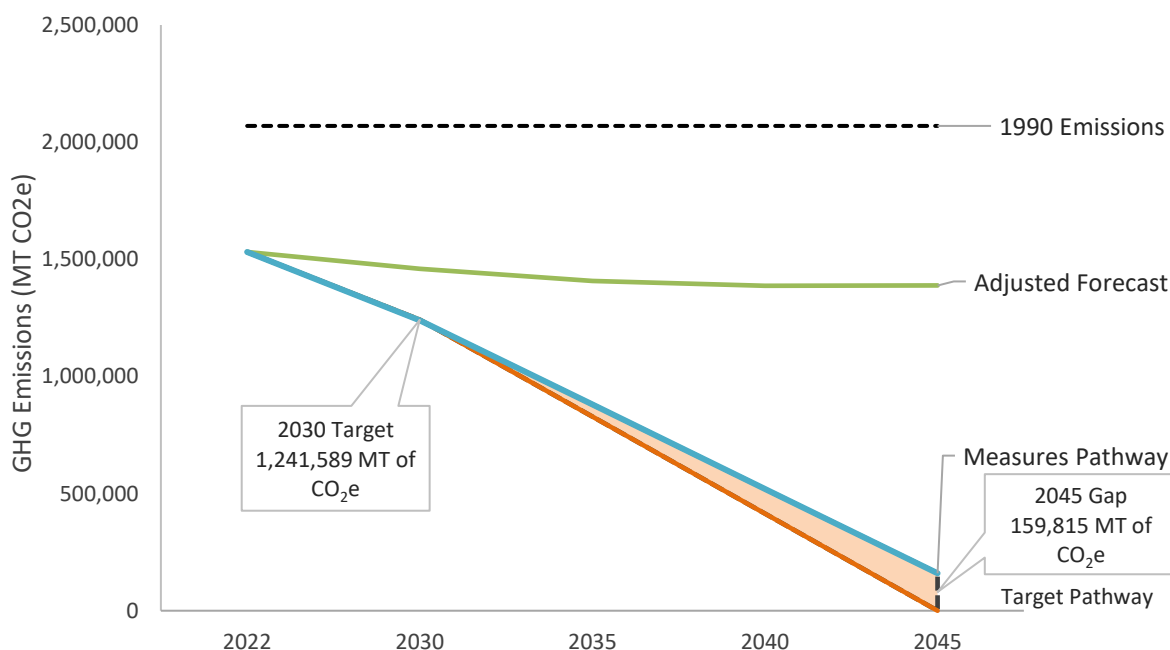
by 2030. Table 2-6 shows the contribution of the Statewide initiatives in conjunction with RCAP strategies and actions to reduce Humboldt's projected total GHG emissions in 2030.

Table 2-6 Humboldt 2030 GHG Emissions Reductions from 2030 BAU levels

State Initiative	Sector	GHG Emissions Reduction (MT of CO ₂ e)
Transportation (Pavley, Innovative Clean Transit, etc.)	On-road Transportation	146,596
Renewable Portfolio Standard	All Electricity	3,955
Title 24	Residential Energy	845
A. Total State Initiative Emissions Reductions		151,396
B. Total CAP Emissions Reductions		219,446
C. Total Expected Emissions Reductions (A+B)		370,842
D. Humboldt Emissions Reduction Requirement per SB 32 (State Goal)		369,405
E. Meets/exceeds State Goal? (C > D)		Yes
MT of CO ₂ e = metric tons of carbon dioxide equivalent		

Figure 2-5 depicts 2030 and 2045 GHG emissions and targets for Humboldt, including the expected emissions once the strategies, measures, and actions listed in Table 2-5 are implemented. Figure 2-5 illustrates the forecasted ABAU emissions (in green), the emissions target/goal pathway trajectory (in orange), and the emissions reductions trajectory with RCAP implementation (in blue).

Figure 2-5 Humboldt GHG Emissions Projections and Targets



Implementation Strategy

The RCAP takes a phased approach to implementation beginning with Phase 1, which would occur in the short-term over the next two years (2024-2026). Phase 2 would include implementation of mid-term measures that should begin no later than 2026, while Phase 3 would include implementation

of longer-term measures that should begin no later than 2028, that are anticipated to occur after feasibility studies are complete and initial measures are implemented. The RCAP identifies the Phase in which to begin implementation of a specific action. Additionally, actions already in progress are denoted as such and actions that would be ongoing, such as an education program, are also denoted. Table 2-5 includes a column that outlines the implementation timeframe (e.g., phase) of each RCAP action.

The County would conduct ongoing implementation and monitoring of the RCAP GHG emissions reduction measures and report on this progress to City Councils, the County Board of Supervisors, and the public on a bi-annual basis beginning in 2026. A comprehensive RCAP update for GHG emissions reduction targets beyond 2030 would also be required. In 2029, it is expected that the County would commence the process to review and update the RCAP to augment or develop new measures and actions to meet the 2045 GHG emissions reduction target. As new technologies and State guidelines are made available and State regulations are adopted, the County would need to augment the RCAP to facilitate further GHG emissions reduction and meet the 2045 carbon neutrality goal.

If, prior to 2029, the County is not making satisfactory advancements toward its 2030 GHG emissions reduction targets, it may be necessary to revise the RCAP. This update would set new or stronger goals for emissions reduction, aiming to increase the reduction efforts and maintain its status as a CEQA-qualified GHG emissions reduction plan. Updating the RCAP could require additional implementation of the existing actions and/or additional actions such as shifting incentive and educational programs to mandatory requirements for the latter phases of Implementation.

2.5.2 Regional CEQA GHG Emissions Thresholds

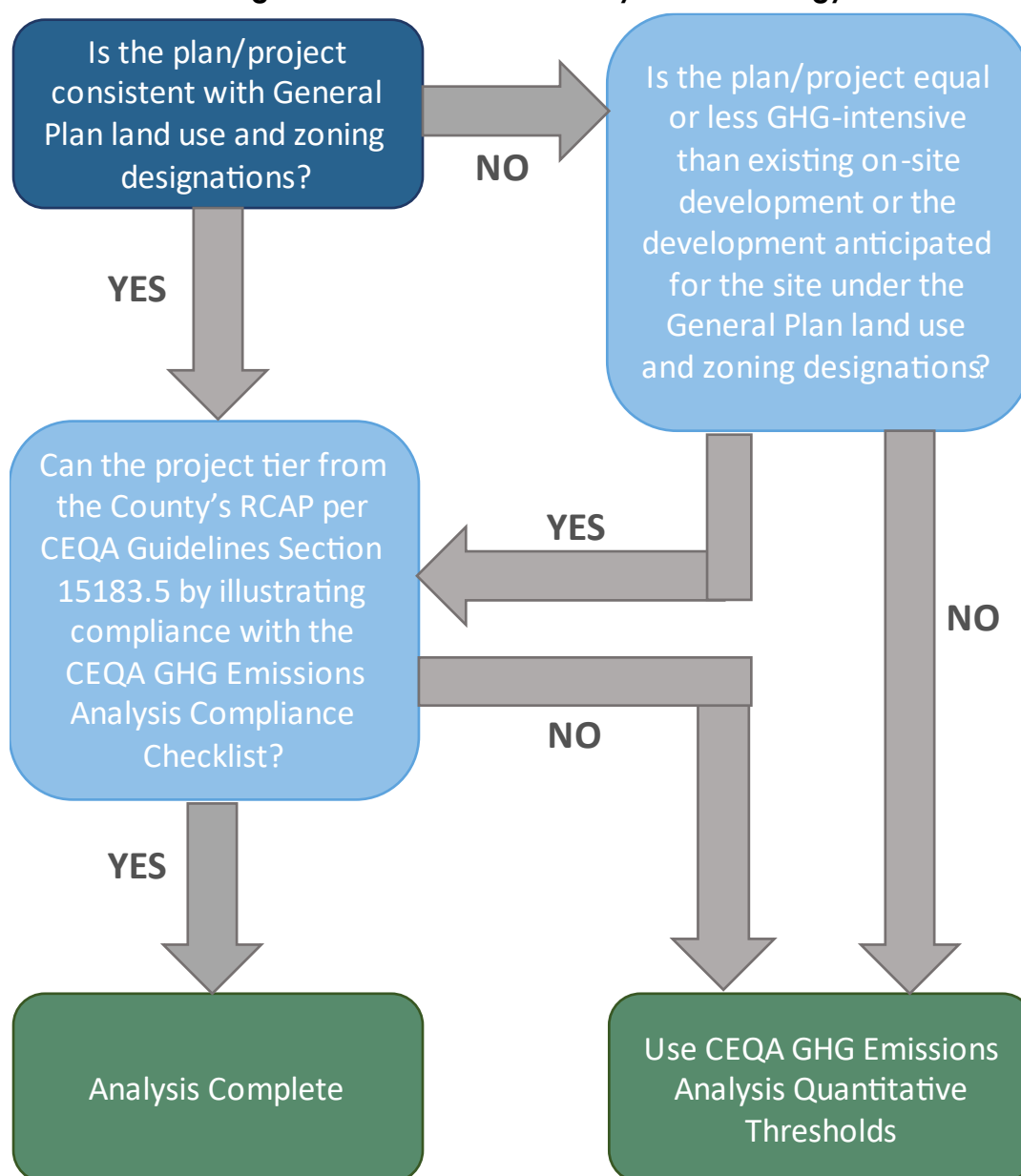
In 2007, SB 97 acknowledged that climate change is an environmental issue that requires analysis in CEQA documents, and in 2010 the California Natural Resources Agency adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines gave lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. Specifically, California Code of Regulations Title 14 Section 15183.5(b)(1)a-g was amended to state that a qualified GHG reduction plan may be used for tiering and streamlining the analysis of GHG emissions in subsequent CEQA evaluation, provided that the relevant GHG reduction plan does the following:

- Quantifies GHG emissions both existing and projected over a specific period of time, resulting from activities within a defined geographical area
- Establishes a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable
- Identifies and analyzes the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area
- Specifies measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level
- Establishes a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels
- Be adopted in a public process following environmental review.

Therefore, the County proposes to also adopt quantitative efficiency thresholds for use in evaluating whether a plan or project's GHG emissions would result in a potentially significant environmental impact under CEQA for plans or projects with pre-2030 buildout or initial operation years. The CEQA GHG emissions thresholds would be applied to plans or projects that cannot tier from the environmental analysis for the RCAP (as contained in this EIR) due to one of the following circumstances, which are illustrated in Figure 2-6:

- The plan/project would not be consistent with the respective General Plan land use and zoning designations for the project site and would result in greater GHG emissions than existing on-site development; or
- The plan/project would not be consistent with the Humboldt Regional CEQA GHG Emissions Checklist.

Figure 2-6 Determining CEQA GHG Emissions Analysis Methodology



These thresholds are set at the level of GHG emissions that new development would need to achieve to be consistent with the RCAP communitywide emissions target of 1,241,589 MT of CO₂e by 2030.

To align with the RCAP, separate GHG emissions thresholds for urban and rural areas have been developed. The RCAP disaggregates some measures between urban and rural regions to set goals that align with each region’s specific characteristics and capacity constraints. Urban areas in Humboldt are more densely developed areas in the region with greater access to energy and transportation infrastructure. Urban areas in Humboldt include Fortuna, Arcata, and Eureka. Rural areas in Humboldt represent the dispersed communities in the region with limited access to energy and transportation infrastructure. These areas include the unincorporated County as well as Blue Lake, Ferndale, Rio Dell, Trinidad which have similar constraints. The GHG emissions thresholds follow this disaggregation between urban and rural areas to align with the RCAP and each areas’ capacity constraints. The efficiency thresholds, shown in Table 2-7, are expressed in terms of MT of CO₂e per service person¹⁴ and are applicable to plans or projects proposed within Humboldt with pre-2030 buildout or initial operational years:

Table 2-7 Humboldt Locally Applicable Plan/Project CEQA Urban and Rural GHG Emissions Thresholds

	2030 New Development		
	New Residential	New Non-Residential	New Mixed-Use ¹
Urban²			
GHG Efficiency Threshold (MT CO ₂ e per demographic metric per year)	1.81 per resident	4.06 per employee	2.60 service person ³
Rural⁴			
GHG Efficiency Threshold (MT CO ₂ e per demographic metric per year)	1.83 per resident	4.08 per employee	2.54 service person

Notes: MT CO₂e = metric tons of carbon dioxide equivalent

¹ GHG emissions from new mixed-use development would count against the total remaining GHG emissions budget for both new residential and new non-residential development rather than as a function of the number of new service people expected in 2030. This avoids double counting.

² Urban areas in Humboldt include Fortuna, Arcata, and Eureka.

³ The service population is equal to the residential population plus the number of employees.

⁴ Rural areas in Humboldt include Blue Lake, Ferndale, Rio Dell, Trinidad, and unincorporated Humboldt County.

Source: Humboldt County. 2024. Draft California Environmental Quality Act Greenhouse Gas Emissions Thresholds and Guidance.

GHG emissions efficiency thresholds for beyond 2030 would need to be established later in conjunction with subsequent RCAP updates.

Plans or projects that would generate GHG emissions in excess of the Humboldt CEQA GHG Emissions Thresholds would result in a potentially significant impact on the environment related to GHG emissions and climate change. Mitigation measures would be required to reduce potentially significant impacts resulting from such plans or projects. Plans or projects that are unable to reduce GHG emissions below these thresholds through implementation of identified mitigation measures would result in a significant and unavoidable environmental impact. The Humboldt CEQA GHG Emissions Thresholds provide guidance during CEQA review and do not propose development or

¹⁴ The service population is equal to the residential population plus half the number of jobs.

changes to land use and zoning. Thus, implementation of the GHG Emissions Thresholds would not have direct construction or operational impacts.

2.6 Environmental Review Context

Implementation of RCAP strategies and actions listed in Table 2-5 could result in physical changes to the environment that could potentially have an impact on the environment. While individual projects resulting from these actions have not been identified for the purposes of this document, the types of actions that could result from realization of RCAP strategies are taken into account in considering potential environmental impacts that could occur through implementation of the RCAP. For example, projects or actions requiring ministerial or discretionary approval, such as installation of EV charging stations and supporting infrastructure, offshore wind energy production facilities and connecting infrastructure, as well as new transit, bicycle, or pedestrian facilities, would introduce physical changes related to the temporary presence and operation of construction vehicles and equipment during installation of required facilities and the long-term presence of new facilities such as solar arrays and wind turbines or transit, bicycle, and pedestrian infrastructure that could alter pedestrian and vehicular transportation patterns. Future plans or projects requiring discretionary approval would be subject to environmental review under CEQA, and individual impact analyses will identify required plan- or project-specific mitigation measures where applicable.

2.7 Required Actions and Approvals

Implementation of the proposed plan would require the following County approvals:

- RCAP and CEQA GHG Emissions Thresholds EIR Certification
- Adoption of the RCAP
- Adoption of the CEQA GHG Emissions Thresholds

Although individual plans or projects may be implemented later under the umbrella of RCAP, each individual plan or project would be subject to separate environmental review and approval under CEQA.

In addition, each incorporated city would be required to formally adopt the RCAP and CEQA GHG Emissions Thresholds.

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3 Environmental Impact Analysis

This chapter sets forth the physical and regulatory environmental setting and addresses the environmental impacts of the Regional Climate Action Plan (RCAP) with respect to California Environmental Quality Act (CEQA) Guidelines Appendix G environmental resource areas. The discussions of the environmental setting in this section of this Environmental Impact Report (EIR) describe the present physical conditions, or baseline conditions, in the plan area. The baseline used for the analysis of environmental impacts under CEQA and CEQA Guidelines reflects the conditions present at the time the Notice of Preparation (NOP) for this EIR, published on August 30, 2024. The potential impacts of the RCAP are compared against the existing baseline conditions for each environmental resource.

Environmental Topics Addressed in this EIR

The RCAP is analyzed in this EIR from the perspective of the following environmental topics:

- Aesthetics
- Air Quality
- Biological, Agriculture, and Forestry Resources
- Cultural and Tribal Cultural Resources
- Greenhouse Gas Emissions and Energy
- Land Use, Population, and Housing
- Noise
- Transportation
- Utilities and Service Systems

The RCAP would not have significant environmental effects with regard to the following topics, and no programmatic mitigation is proposed. As such, these topics are addressed in a combined Effects Found Not to Be Significant section following the aforementioned topical sections.

- Geology, Soils, and Mineral Resources
- Hazards, Hazardous Materials, and Wildfire
- Hydrology/Water Quality
- Public Services and Recreation

Format of the Environmental Analysis

Environmental resource areas that are analyzed in individual sections include the subsections summarized below.

Introduction

This subsection summarizes what will be discussed in the respective environmental topic section, states what informational documents are used as the basis for the section, and indicates what related comments, if any, were received during the EIR public scoping period.

Environmental Setting

This subsection describes the existing, baseline physical conditions of the plan area and surroundings (e.g., existing land uses, transportation conditions, noise environment) with respect to the resource topics at the time the NOP was issued. Conditions are described in sufficient detail and breadth to allow a general understanding of the environmental impacts associated with implementation of the RCAP.

Regulatory Framework

This subsection describes the relevant federal, California, regional, and local regulatory requirements that are directly applicable to the environmental topic being analyzed.

Impacts and Mitigation Measures

This subsection evaluates the potential for the implementation of the RCAP to result in direct and indirect adverse impacts on the existing physical environment, with consideration of both construction and operation impacts. The significance criteria for environmental impact determinations are listed at the beginning of this subsection, followed by discussion of the approach to the analysis and specific thresholds of significance that have been applied to evaluate the impacts of the RCAP.

Indirect impacts are discussed only for those resources for which they have the potential to occur (e.g., cultural resources, air quality, and biological resources). Both plan-level and cumulative-level impacts are analyzed. Plan-level impacts could result from actions related to implementation of the RCAP. Cumulative-level impacts could result from implementation of the RCAP in combination with other identified cumulative projects. As discussed in “Cumulative Scenario Setting” below, anticipated cumulative growth listed in Table 3-1 below, in conjunction with the RCAP, are considered the cumulative scenario for the analysis of cumulative impacts.

Impacts are analyzed and the respective assessment and findings are provided, applying the following levels of significance:

- **No Impact.** A determination of No Impact is reached if no potential exists for impacts or if the environmental resource does not occur in the plan area or the area of potential impacts.
- **Less Than Significant Impact.** This determination applies if the impact does not exceed the defined significance criteria or would be eliminated or reduced to a less than significant level through compliance with existing local, state, and federal laws and regulations. No mitigation is required for impacts determined to be less than significant.
- **Less Than Significant Impact with Mitigation.** This determination applies if the RCAP would result in a significant impact, exceeding the established significance criteria, but feasible mitigation is available that would reduce the impact to a less than significant level.
- **Significant and Unavoidable Impact.** This determination applies if the RCAP would result in an adverse impact that exceeds the established significance criteria, and no feasible mitigation is available to reduce the impact to a less than significant level. Therefore, the residual impact would be significant and unavoidable.

Impacts are defined in terms of their context and intensity. Context is related to the uniqueness of a resource; intensity refers to the severity of the impact. Where applicable, best management practices or improvement measures, or both, are incorporated into the RCAP to limit the potential for a significant impact. Where necessary, programmatic mitigation measures are identified for significant impacts to limit the degree or lower the magnitude of the impact; rectify the impact by repairing, rehabilitating, or restoring the affected environment; or compensate for the impact by replacing or providing substitute resources or environments. These impacts conclude with a finding of Less than Significant Impact with Mitigation. Where no mitigation measures are necessary, relevant impacts are concluded to be Less than Significant or to have No Impact.

As part of the impact analysis, mitigation measures are identified, where feasible, for impacts considered significant or potentially significant consistent with CEQA Guidelines Section 15126.4,

which states that an EIR “shall describe feasible measures which could minimize significant adverse impacts.” CEQA requires that mitigation measures have an essential nexus and be roughly proportional to the significant impact identified in the EIR. The future project sponsors are required to implement all identified mitigation measures identified in the Final EIR, and the lead agency (in this case, Humboldt County) is responsible for overseeing implementation of such mitigation measures.

Impacts are numbered and shown in bold type. The corresponding mitigation measures, where identified, are numbered and indented, and follow the impact statements. Impacts and mitigation measures are numbered consecutively within each topic and include an abbreviated reference to the impact section (e.g., “LU” for Land Use and Planning). The following abbreviations are used for individual topics:

- Aesthetics (AES)
- Air Quality (AQ)
- Biological, Agriculture, and Forestry Resources (BIO)
- Cultural and Tribal Cultural Resources (CR)
- Greenhouse Gas Emissions and Energy (GHG)
- Land Use Planning, Population, and Housing (LU)
- Noise (NOI)
- Transportation (TRA)
- Utilities and Service Systems (UTL)
- Geology, Soils, and Mineral Resources (GEO)
- Hazards, Hazardous Materials, and Wildfire (HAZ)
- Hydrology and Water Quality (HYD)
- Public Services and Recreation (PS)

Cumulative Impacts

This subsection evaluates the potential for the RCAP in conjunction with identified Countywide cumulative growth (see Table 3-1) to result in cumulative impacts. The goal of this analysis is to determine whether the overall long-term impacts of such cumulative growth would be cumulatively significant, and to determine whether the RCAP on its own would cause a “cumulatively considerable” incremental contribution to any such cumulatively significant impacts. To determine whether the overall long-term impacts of such cumulative growth would be cumulatively significant, the analysis generally considers the following:

- The area in which impacts of the RCAP would be experienced;
- The impacts of the RCAP that are expected in the area;
- Other past, proposed, and reasonably foreseeable growth that has had or are expected to have impacts in the same area;
- The impacts or expected impacts of the cumulative growth; and
- The overall impact that can be expected if the individual impacts related to the cumulative growth are allowed to accumulate.

“Cumulative impacts” refers to two or more individual impacts that, when considered together, are considerable, or that compound or increase other environmental impacts (CEQA Guidelines Section

15355). Cumulative impacts can result from individually minor but collectively significant impacts taking place over time. If the analysis determines that the potential exists for the RCAP, taken together with other past, present, and reasonably foreseeable future growth, to result in a significant or adverse cumulative impact, the analysis then determines whether the RCAP's incremental contribution to any significant cumulative impact is itself significant (i.e., "cumulatively considerable"). The cumulative impact analysis for each individual resource topic is presented in each resource section of this chapter immediately after the description of the direct impacts and identified programmatic mitigation measures.

Cumulative Scenario Setting

For purposes of CEQA cumulative impacts analysis of RCAP, the cumulative projects scenario is the population, employment, service population and households growth projected for Humboldt County through 2030. As shown in Table 3-1, the RCAP projects a population of 143,556 persons and a service population of 214,038 persons, with 70,482 employees and 57,467 households by 2030.¹

Table 3-1 Humboldt Countywide Cumulative Scenario

Metric	Data Source	2022	2030
Population	Multiple ¹	136,132	143,556
Employment	Multiple ²	66,837	70,482
Service Population	Calculated ³	202,969	214,038
Households	Multiple ⁴	54,495	57,467
Off-road gasoline usage (gallons)	CARB OFFROAD2021	2,975,135	3,202,801
Off-road diesel usage (gallons)	CARB OFFROAD2021	9,101,978	9,348,454
Off-road natural gas usage (gallons)	CARB OFFROAD2021	410,588	418,808

Notes:

¹ Population forecast estimated based on the 2022 proportion of people per household and the forecasted number of households from 2030-2045.

² Employment forecast estimated based on the 2022 proportion of jobs per person and the forecasted population from 2030-2045.

³ Service population reflects the sum of population and employment in the region.

⁴ Household forecast estimated based on a 0.68% household growth rate compared to baseline year as determined by Humboldt's 6th cycle RHNA and using U.S. Census 2022 household data as the baseline year. More information regarding Humboldt's 6th cycle RHNA is available at: https://www.hcd.ca.gov/community-development/housing-element/docs/Humboldt_County_Regional_Housing_Need_Determination_and_Plan_for_the_Sixth_Housing_Element_Update_1.pdf

¹ Humboldt, County of. 2024. Humboldt Regional CAP Greenhouse Gas Inventory, Forecast, and Targets Report. March 2024.

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3.1 Aesthetics

This section describes existing conditions related to visual character, scenic resources, views, and light and glare in Humboldt County (both unincorporated and incorporated areas) as well as the relevant regulatory framework. This section also evaluates potential impacts related to aesthetics that could result from implementation of the RCAP and CEQA GHG Emissions Thresholds.

3.1.1 Environmental Setting

Visual Character

Visual character in the California Environmental Quality Act (CEQA) context is an impartial description of the defining physical features, landscape patterns, and distinctive physical qualities within a landscape. Visual character is informed by the composition of land, vegetation, water, and structure and their relationship (or dominance) to one another, and by prominent elements of form, line, color, and texture that combine to define the composition of views. Visual character-defining resources and features within a landscape may derive from notable landforms, vegetation, land uses, building design and façade treatments, transportation facilities, overhead utility structures and lighting, historic structures or districts, or panoramic open space.

Unincorporated Humboldt County

Unincorporated Humboldt County is rural in nature with 80 percent of land being forested. Douglas Fir trees are the most predominant forest type.¹ Humboldt also includes agricultural land uses with approximately 634,000 acres of land in agricultural production. Humboldt contains several State and National Parks including Redwood State and National Parks and 100 miles of coastline, as well as Humboldt Bay. The Coast Range Mountains cover a large portion of inland Humboldt and include the Eel, Van Duzen, Mattole, and Mad River drainages in the central and southern areas, and the Redwood Creek drainage in the northwest. In northeastern Humboldt the Klamath Mountains feed into the Klamath and Trinity Rivers.² The majority of the population, and therefore the residential and commercial development, in Humboldt is concentrated in the incorporated cities, discussed below.

Incorporated Cities

The incorporated cities within Humboldt include Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. These cities are all located within five miles of Highway 101, that stretches along the western side of Humboldt. The incorporated cities within Humboldt all have similar visual character as they are the main residential and commercial hubs in the area. The incorporated cities are built on a traditional grid pattern of streets broken up by gulch greenways, have many historic homes, and contain several walkable mixed-use commercial districts. They are made up of mostly single-family homes and small commercial corridors. Generally, the incorporated cities are surrounded by unincorporated land containing some residential development, and lands designated as agricultural land, timberland, or open space which serve as “community separators” that enhance the sense of individual community identity.¹ Arcata and Eureka are adjacent to Humboldt

¹ Humboldt County. 2017. Humboldt County General Plan Land Use Element. <https://humboldt.gov/DocumentCenter/View/61996/Chapter-4-Land-Use-Element-PDF> (accessed October 2024).

² Humboldt County. 2017. Humboldt County General Plan Introduction. <https://humboldt.gov/DocumentCenter/View/61993/Chapter-1-Introduction-PDF> (accessed November 2024).

Bay, while Fortuna, Ferndale, and Rio Dell are adjacent to or near the Eel River. The City of Blue Lake was established along the Mad River and Trinidad is adjacent to the Pacific Ocean.

Scenic Resources

Scenic Resources are important visual assets that contribute to community identity. These resources can include landforms, trees, water features, and the built environment insofar as they enhance and define the visual character of a landscape. Scenic resources include natural and open spaces, as well as the built environment, particularly if certain architecture is of historic or artistic value. Designated scenic resources within Humboldt are described below.

Unincorporated Humboldt County

WILD AND SCENIC RIVERS

Portions of the Eel, Klamath, Trinity, and Van Duzen Rivers are designated as “wild”, “scenic”, or “recreational” as part of the National and/or California Wild and Scenic River Systems.³ An example photograph of a Humboldt wild and scenic river, the Klamath River, is provided in Figure 3.1-1.

COASTLINES

Humboldt County has an extensive coastline that constitutes a scenic resource. The scenic qualities of these areas are protected by land use designations that encourage open space, require permit review under the Humboldt County Local Coastal Program (LCP), and design review requirements that minimize visual impacts of new development. Example photographs of the Humboldt coastline are provided in Figure 3.1-1.

AGRICULTURAL, TIMBERLAND, AND OPEN SPACE AREAS

Existing agricultural land, timberland, and open space areas within public lands throughout Humboldt are considered scenic natural features.³ The Humboldt County General Plan also specifically discusses Shelter Cove and the Avenue of the Giants as areas within Humboldt that have scenic resources protected by design review requirements. An example photograph of Humboldt timberland is provided in Figure 3.1-1.

Incorporated Cities

ARCATA

The Open Space Element of the Arcata General Plan designates the forested lands on the western slopes of Fickle Hill and agricultural lands in the Arcata Bottoms as scenic resources that should be preserved.⁴ Additionally, the Plaza, Humboldt Bay and Pacific Ocean are scenic resources.⁵

³ Humboldt County. 2017. Humboldt County General Plan Conservation and Open Space Elements. <https://humboldt.gov/DocumentCenter/View/61986/Chapter-10-Conservation-and-Open-Space-Elements-PDF> (accessed October 2024).

⁴ City of Arcata. 2024. Arcata General Plan Open Space Element. https://www.cityofarcata.org/DocumentCenter/View/14702/41_Open-Space (accessed October 2024).

⁵ City of Arcata. 2024. Arcata General Plan Design Element. https://www.cityofarcata.org/DocumentCenter/View/14690/51_Design (accessed October 2024).

Figure 3.1-1 Humboldt Scenic Resources Example Photos



Photography credit: Kelsey Bennett

BLUE LAKE

The Land Use Element of the Blue Lake General Plan designates Powers Creek, the Mad River, and other wetland areas within the City of Blue Lake as scenic resources.⁶

FERNDALE

The City of Ferndale General Plan Land Use Element does not designate any specific scenic resources.⁷ In 1975 the City of Ferndale was designated as a State Historical Landmark, and in 1994. Ferndale's Main Street/State Route 211 from Shaw Avenue to Eugene Street was designated as a Historic District by the National Park Service and placed on the National Register of Historic Places. The Ferndale General Plan identifies the historic district stretching from Shaw Avenue to Eugene Street as contributing to the charm of the City. In addition, expansive agricultural and open lands that surround the City contribute to its rural ambiance.⁸

FORTUNA

The City of Fortuna General Plan designates views of the Eel River and Van Duzen Rivers, forested hillsides and agricultural land surrounding the City, the Rohnerville Plateau and Bluffs, and long-range views of coastal ranges to the west of the City as scenic resources.

RIO DELL

The Open Space and Conservation Element of the Rio Dell General Plan designates the bluffs on the east side of the City and the expansive vistas of the Eel River Valley as scenic resources within the City.⁹

TRINIDAD

The Trinidad General Plan designates the beaches, coastal bluffs behind the beaches, and Trinidad Bay and the islands within it as scenic resources.¹⁰

EUREKA

The City of Eureka General Plan includes discussion of prominent visual resources such as Humboldt Bay, the waterfront, landmark buildings, gulches and greenways, and surrounding agricultural and timberland.¹¹

⁶ City of Blue Lake. 2021. Blue Lake General Plan Land Use Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed October 2024).

⁷ City of Ferndale. 2023. Draft Land Use Element. https://www.dropbox.com/scl/fi/x8b8zlmnwbzso4rg92tuw/Ferndale-LUE_draft-7.27.23-CLEAN.pdf?rlkey=74c49rw2hdg5czh6d9gavoaj8&e=1&st=82oyvi1o&dl=0. accessed November 20, 2024.

⁸ City of Ferndale. 2024. Land Use Element and Safety Element Draft Program Environmental Impact Report. https://www.dropbox.com/scl/fi/r750t1h0e93y7usngx6si/DRAFT_PEIR_LUE-SE_compressed_for_publishing.pdf?rlkey=ulwsg9v9nteuu1c1hqvgwtbno&e=1&st=api92u6p&dl=0. accessed November 20, 2024.

⁹ City of Rio Dell. 2013. Rio Dell General Plan Open Space and Conservation Element. https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/rio_dell_conservation_and_open_space_element_august_2013_0.pdf (accessed October 2024).

¹⁰ City of Trinidad. 2021. Trinidad General Plan. <https://www.trinidad.ca.gov/media/5491> (accessed October 2024).

¹¹ City of Eureka 2018. Eureka General Plan. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed October 2024).

Views and Scenic Vistas

Views may be generally described as panoramic views of a large geographic area for which the field of view can be wide and extend into the distance. Associated vantage points provide orientation from publicly accessible locations. Examples of distinctive views include urban skylines, valleys, mountain ranges, or large bodies of water. Viewshed is a term used to describe a range of resources and their context that relate to what people can see in the foreground, middle ground, and background distances.

The term “scenic vista” generally refers to visual access to, or the visibility of, a particular sight from a given publicly accessible vantage point or corridor. The subjects of valued or recognized views may be focal (meaning of specific individual resources), or panoramic (meaning broad geographic area). The nature of a view may be unique, such as a view from an elevated vantage point or particular angle. Existing views may be focused on a single feature, such as a building or garden, or panoramic encompassing a broad field of view, such as ocean/coastal views, distant mountain range, or hilltop ridgelines. Designated scenic vistas within Humboldt are described below.

Unincorporated Humboldt County

Scenic vistas within unincorporated Humboldt County are of coastlines, forested areas, scenic rivers, agricultural areas, hills and ridgelines, and open space areas. Scenic vistas in Humboldt County are available from publicly accessible roads, highways, beaches, coastal access points, and local, State, and federal parks. Examples of major roads and highways throughout Humboldt County that provide scenic vistas of these resources, include State Route 101, which provides extensive views of the coastline, and State Route 96, which provides views of the Klamath River, forested and open space areas, and agricultural lands. Additionally, parks such as Redwood National Park, Six Rivers National Forest, Redwoods State Park, and Kings Range National Conservation Area provide scenic vistas of forested and open space areas.

Incorporated Cities

Scenic vistas within Eureka, Arcata, and Trinidad are of Humboldt Bay and the Pacific Ocean and associated coastline areas as seen from publicly accessible roads, highways, trails, and public parks and plazas. Scenic views of the coastlines, including Humboldt Bay, from Eureka, Arcata, and Trinidad are primarily available from State Route 101 and public parks, beaches, and trails such as the Eureka Waterfront Trail, Trinidad State Beach, and Arcata Marsh and Wildlife Sanctuary. Additionally, the following scenic view corridors are designated in the Eureka General Plan:

- Views of the waterfront looking north along G Street
- Views of Carson Mansion looking east along Second Street

Scenic vistas within Ferndale, Fortuna, Rio Dell, and Blue Lake include views of scenic rivers and surrounding agriculture, forested, and open space lands as seen from publicly accessible roads, highways, trails, and public parks and plazas. The Wildcat Hills to the south of Ferndale provide a vantage point for scenic vistas of the City and surrounding agricultural and open lands.¹² The Fortuna General Plan identifies the Riverwalk Pathway, a one-mile pedestrian and bicycle path

¹² City of Ferndale. 2024. Land Use Element and Safety Element Draft Program Environmental Impact Report. https://www.dropbox.com/scl/fi/r750t1h0e93y7usngx6si/DRAFT_PEIR_LUE-SE_compressed_for_publishing.pdf?rlkey=ulwsg9v9nteuu1c1hqvgwtbno&e=1&st=api92u6p&dl=0 (accessed November 20, 2024).

located along the Eel River levee, as an important scenic vista.¹³ Scenic views of the Eel river in Rio Dell are primarily available from State Route 101. Scenic views of the Mad River and Powers Creek in Blue Lake are available from the Blue Lake Levee Trail and local roadways.

Scenic Highways

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

Unincorporated Humboldt County

The Humboldt County General Plan discusses the following roadways as eligible for California State Scenic Highway designation within Humboldt:

- Route 36 from Route 101 near Fortuna to the Trinity County line
- Route 96 from Route 299 at Willow Creek north to Siskiyou County
- Route 101 for its entire length in Humboldt County
- Route 254 in the Avenue of the Giants Community Plan Area
- Route 299 from Arcata to Willow Creek

There are no officially designated State scenic highways within Humboldt County.¹⁴

Incorporated Cities

Route 101, which is eligible for State Scenic Highway designation, passes through the incorporated Cities of Rio Dell, Fortuna, Eureka, Trinidad, and Arcata. The portion of Route 299 that is eligible for State Scenic Highway designation passes through the incorporated City of Blue Lake. There are no designated or eligible State scenic highways that pass through or near Ferndale.

Additionally, the following local routes are designated as scenic by the respective city general plans:

ARCATA

The Open Space Element of the Arcata General Plan designates State Route 255, Samoa Boulevard, as a scenic route.⁴

BLUE LAKE

The Scenic Highway Element of the Blue Lake General Plan indicates that there are no local scenic routes within the City of Blue Lake.¹⁵

¹³ City of Fortuna. 2010. City of Fortuna General Plan.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed October 2024).

¹⁴ California Department of Transportation (Caltrans) 2018. California State Scenic Highway System Map.

<https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca> (accessed October 2024).

¹⁵ City of Blue Lake 1975. Scenic Highway Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/BL-General-Plan_Public-Safety-Noise-Scenic-Hwy-Elements_1975.pdf (accessed November 2024).

FERNDALE

The Scenic Highway Element of the Ferndale General Plan includes a discussion of the following local scenic routes within the City of Ferndale:

- The drive into the City up to Main Street and looping back on Berding Street
- The drive west from Ferndale to Ocean Beach
- The drive south to Petrolia and Bull Creek Redwoods State Park on Wildcat Road
- The drive east on Grizzly Bluff-Blue Slide Road to Rio Dell

While these routes are scenic, they were not officially designated as such in the 1978 Ferndale Scenic Highway Element.¹⁶

FORTUNA

There are no locally designated scenic routes within the City of Fortuna.¹⁷

RIO DELL

The City of Rio Dell General Plan does not designate any local scenic routes within the City of Rio Dell.^{18,19}

TRINIDAD

The following local routes are designated as scenic routes within the City of Trinidad:

- Scenic Drive
- Stagecoach Road and Patrick's Point Drive north of the intersection with Stagecoach Road
- Edwards Street²⁰

EUREKA

The City of Eureka General Plan identifies G Street and 2nd Street as local roads providing important view corridors to the waterfront and Carson Mansion, respectively.²¹

Light and Glare

In the context of the CEQA Guidelines, light is nighttime illumination that stimulates sight and makes things visible; glare is difficulty seeing in the presence of bright light such as direct or reflected sunlight.

¹⁶ City of Ferndale. 1978. Scenic Highway Element. <https://ci.ferndale.ca.us/wp/general-plan/Scenic%20Hwy%20Element%201978.PDF> (accessed November 2024).

¹⁷ City of Fortuna. 2010. General Plan Programmatic Environmental Impact Report. [https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20documents/Vol%201%20-%20DPEIR%20\(whole%20doc\).pdf](https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20documents/Vol%201%20-%20DPEIR%20(whole%20doc).pdf) (accessed November 2024).

¹⁸ City of Rio Dell. 2013. General Plan Circulation Element. https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/rio_dell_circulation_element_january_2013.pdf (accessed November 2024).

¹⁹ City of Rio Dell. 2013. General Plan Open Space and Conservation Element. https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/rio_dell_circulation_element_january_2013.pdf (accessed November 2024).

²⁰ City of Trinidad 2021. Scenic Highway Element. <https://www.trinidad.ca.gov/media/5616> (accessed January 2025).

²¹ City of Eureka. 2018. 2040 General Plan. <https://www.eureka.ca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed November 2024).

Sources of artificial light may include streetlights, illuminated signage, vehicle headlights, and other point sources. Uses, such as residences and hotels, are considered light-sensitive since they are typically occupied by persons who have an expectation of darkness and privacy during evening hours and who can be disturbed by bright light sources.

Glare is caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass or reflective materials, and, to a lesser degree, from broad expanses of light-colored surfaces. Activities, such as driving, and land uses, such as parks and residences, are considered glare sensitive as the presence of glare could interfere with vision and/or result in an irritant to these activities/uses.

Unincorporated Humboldt County

Current light and glare levels within unincorporated Humboldt County are mainly consistent with rural areas. There is minimal light throughout the unincorporated rural areas of Humboldt, with most of the light source being automobile headlights along the major highways or temporary lighting needed for nighttime agricultural and/or timberland activities. There is also minimal glare throughout the unincorporated rural areas, with existing sources of glare limited to glass windows and vehicle windshields.

Other areas of unincorporated Humboldt County, (McKinleyville, Myrtletown, Cutten, King Salmon and Fields Landing) have existing light and glare conditions that are more consistent with urban development. Nighttime light is primarily created by streetlights, exterior building lighting, and lighted signs. Automobile headlights can also create temporary sources of light as they exit parking areas and drive along major highways and arterial streets within these urban areas of unincorporated Humboldt County. Primary sources of glare include sunlight reflected in the windows of buildings, including glass façades, and the windshields of parked cars.

Incorporated Cities

Existing light and glare conditions within the incorporated cities are consistent with urban development. Nighttime light is primarily created by streetlights, exterior building lighting, and lighted signs. Automobile headlights can also create temporary sources of light as they exit parking areas and drive along major highways and arterial streets within the incorporated cities. Primary sources of glare include sunlight reflected in the windows of buildings, including glass façades, and the windshields of parked cars.

3.1.2 Regulatory Framework

Federal Regulations

No federal plans, policies, regulations, or laws related to aesthetics are applicable.

State Regulations

California Scenic Highway Program

The State Legislature created the California Scenic Highway Program, maintained by Caltrans, in 1963. The purpose of the State Scenic Highway Program is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code,

Sections 260 through 263. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The status of a proposed State Scenic Highway changes officially from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

California Coastal Act

State Legislature passed the Coastal Act in 1976, which made the Coastal Commission a permanent agency with broad authority to regulate coastal development. The Coastal Act guides how the land along the coast of California is developed, or protected from development. It emphasizes the importance of the public being able to access the coast, and the preservation of sensitive coastal and marine habitat and biodiversity. It dictates that development be clustered in areas to preserve open space, and that coastal agricultural lands be preserved. It prioritizes coastal recreation as well as commercial and industrial uses that need a waterfront location. Coastal Act Section 30251 states the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance.

California Code of Regulations Title 24 - Building Lighting Characteristics

The California Building Code (California Code of Regulations [CCR], Title 24)—including Title 24, Part 6—includes Section 140.7 of the Building Energy Efficiency Standards, which regulates outdoor lighting characteristics (i.e., maximum power/brightness, shielding, light sensor controls). Different lighting standards are set by classifying areas by lighting zone. The classification is based on 2010 Census population figures. Areas can be designated as LZ0 (Very Low), LZ1 (Low), LZ2 (Moderate), or LZ3 (Moderately High), and LZ4 (High). Lighting requirements for very low and low areas are stricter in order to protect the areas from new sources of light pollution and light trespass. The majority of the unincorporated county falls under the “very low” and “low” standard while the incorporated cities fall under the “moderate” standard.²²

Regional and Local Regulations

Humboldt County General Plan, Conservation and Open Space Element

The Conservation and Open Space Element of the Humboldt County General Plan contains the following goals, policies, and standards related to aesthetics:

- **SR-G1 Conservation of Scenic Resources:** Protect high-value scenic forest, agriculture, river, and coastal areas that contribute to the enjoyment of Humboldt County’s beauty and abundant natural resources.
- **SR-P1 Working Landscapes:** Recognize the scenic value of resource production lands.
- **SR-P2 Development in Mapped Scenic Areas:** In mapped scenic areas, new discretionary and ministerial development shall be consistent with and subordinate to natural contours, hilltops, tree lines, bluffs and rock outcroppings. Visible disturbance and interruption of natural features shall be minimized to the extent feasible.

²² State of California. 2022. 2022 Building Energy Efficiency Standards for Residential and Non Residential Buildings. https://www.energy.ca.gov/sites/default/files/2022-12/CEC-400-2022-010_CMF.pdf (accessed January 2025).

- **SR-P3 Scenic Highway Protection:** Protect the scenic quality of designated Scenic Highways for the enjoyment of natural and scenic resources, coastal views, landmarks, or points of historic and cultural interest.
- **SR-S1 Development in Mapped Scenic Areas:** Discretionary and ministerial development shall avoid visual disturbance of natural contours, hilltops, tree lines, forest landscapes, bluffs and rock outcroppings, to the maximum extent feasible. Roads and public utility corridors shall be as narrow as feasible and follow natural contours. Natural features disturbed for construction purposes shall be restored to as close to natural condition as feasible. The construction of new off-premise billboards is prohibited.
- **SR-S2 Scenic Highway Standards:** The following standards apply to mapped Scenic Highways:
 - **A. Visual Buffer Width.** The width of the visual buffer along the road shall not exceed 200 feet from the edge of the traveled roadway.
 - **B. Permitted Uses.** Permitted uses shall be allowed except the construction of new off premise billboards is prohibited. Permitted uses that are within the visual buffer area measures may be required to protect scenic qualities of the site.
 - **C. Site Development.** Buildings and landscaping within the visual buffer shall be designed and located on the site to create a harmonious visual relationship with surrounding development and the natural terrain and vegetation.
 - 1. Existing topography, vegetation, and scenic features of the site shall be retained to the maximum extent possible and incorporated into the proposed development.
 - 2. Structures and signs shall be limited in height, bulk, and siting to be visually compatible with, and subordinate to, the character of surrounding areas.
 - **D. Consideration of Views.** Structures, signs, and plant materials within the visual buffer shall be constructed, installed, and planted to complement, enhance, and retain scenic views. Vegetative screening shall be used where needed to prevent significant intrusion or degradation of public views.
 - **E. Location and Screening of Unsightly Features.** Potentially unsightly features within the visual buffer area, such as parking lots etc., shall be located in areas not visible from the scenic highway. Where it is not feasible to locate such features out of view, features shall be screened from view by planting and/or fences, walls, or berms. Screening shall utilize primarily natural materials rather than solid fencing, preferably vegetation, in conjunction with low-earth berms.
 - **F. Site Grading.** Grading or earth-moving operations within the visual buffer area shall be planned and executed in such a manner that final contours appear to be consistent with the existing terrain both on, and adjacent to, the site.
 - 1. Vegetative cover shall be provided within a reasonable time after grading is completed to prevent visible scars remaining on the land from such operations.
 - 2. Contours altered by grading shall be restored by means of land sculpturing and a cover of topsoil in such a manner as to minimize runoff and erosion and prevent ponding of water.
 - 3. Finished contours shall be planted with native vegetation, so as to require minimum care and to be visually compatible with the existing landscaping.
 - **G. Access Roads.** The location and design of access roads within the visual buffer area shall not detract from the scenic quality of the road.

- **H. Utilities.** New, relocated, or existing utility distribution lines within the visual buffer area shall be placed underground whenever feasible. When it is not feasible to place lines underground, they shall be located so as to be inconspicuous from the scenic route wherever feasible. Combined or adjacent rights-of-way and common poles shall be used wherever feasible.
- **I. Railroads and Public Facilities.** Visual buffers shall exclude railroad rights of-way and public facilities.
- **SR-S4 Light and Glare:** New outdoor lighting shall be compatible with the existing setting. Exterior lighting fixtures and street standards (both for residential and commercial areas) shall be fully shielded, and designed and installed to minimize off-site lighting and direct light within the property boundaries.

Humboldt County Code

Title 3– Land Use and Development

Humboldt County Code (HCC) Title 3, Division 1, Section A specifies development and design standards, including lighting, density, height, parking, and setback requirements for residential, commercial, industrial, agricultural, and public uses within unincorporated Humboldt County. Specifically, this section of the code sets lighting requirements for new development including the requirement that new development within the Mixed-Use zoning districts that would make significant parking lot improvements or add new exterior lighting submit a lighting plan consistent with the HCC. This section of the code also prohibits glare that causes a nuisance or hazard beyond the property line.

Arcata General Plan, Open Space Element

The Open Space Element of the Arcata General Plan⁴ includes the following policies related to aesthetic resources:

- **OS-1f Designation of Lands with Scenic, Aesthetic, Historic, and Cultural Value:** The City has scenic routes, including Highway 101 and State Route 255, Samoa Boulevard; vistas, including the forested slopes of Fickle Hill and the Arcata Bottoms; and areas of historic and cultural value, such as the Plaza. The open and natural characteristics of these areas shall be maintained.

The Design Element of the Arcata General Plan⁵ includes the following goals and policies related to aesthetic resources:

- **D-3a Design Policy for Projects Affecting Scenic Highways** The following standards shall apply to any development which affects scenic routes, as well as views from U.S. Highway 101 (U.S. 101), State Route 255, and State Route 299:
 - 1. Billboards or other off-premises signs are prohibited.
 - 2. Landscape planting along State Route 101 shall not interrupt scenic views to the bay or eastward across agricultural lands.
 - 3. New development or redevelopment in the industrial area of South "G" Street shall provide dense landscape screens along all perimeter lot lines visible from State Route 101.
 - 4. The City shall work jointly with the County of Humboldt, Caltrans, and the Coastal Commission to enhance scenic views along scenic highways, particularly State Route 101 and 255 corridors.

- **D-3c Arcata Bay- Open Waters, Shoreline, and Tidal Marshes:** Proposed land uses and development shall not significantly alter the natural appearance or landforms of the waters, shoreline, and tidal marshes of Arcata Bay, which are designated in the natural resource land-use category. Where these resources are visually degraded, developments shall be required to restore or enhance their appearance. Development within the area bounded by Samoa Blvd., Butcher's Slough and Gannon Slough shall include local native plant landscaping, screenings and other measures to ensure compatibility with scenic coastal resources and with the educational, recreational, wildlife and other uses of the Humboldt Bay National Wildlife Refuge and the Arcata Marsh and Wildlife Sanctuary.
- **D-3d: Bay and Ocean Views:** Views of Arcata Bay and the Pacific Ocean from vantage points along public streets in hillside areas of Arcata shall not be blocked by development. Any impairment or partial obstruction of these ocean views from new development shall be the minimum necessary to allow reasonable development.
- **D-3e Wooded Hillside:** Views of wooded hillsides forming the City's eastern edge from vantage points along public streets west of the U.S. 101 should not be blocked by development to the extent practicable, balancing development rights in these areas. Any impairment or partial obstruction of these ocean views from new development shall be the minimum necessary for allowable development. The City shall encourage Cal Poly Humboldt to avoid blocking views in its new development.
- **D-3f Farmlands and Open Countryside:** Views of farmlands and open countryside — in the Arcata Bottom, along the State Route 101 south of Samoa Boulevard, north of Giuntoli Lane, and along State Route 255 west of the City, should be protected to the extent practicable, balancing development rights in these areas. Any impairment or partial obstruction of these views from new development shall be the minimum necessary for allowable development.
- **D-3g Streamside Riparian Areas:** Creeks or drainage channels and any associated riparian vegetation shall be retained in a natural state and incorporated into site design as a visual asset to development that adjoin them. Design codes should encourage “daylighting” streams on City and private property, and restoration of riparian ecology and function.

Arcata Land Use Code, Article 3

Article 3 of the Arcata Land Use Code establishes development and design standards, including lighting, density, height, parking, and setback requirements for all development and land uses within the City. This includes regulations on lighting and glare within the City.

Blue Lake General Plan, Land Use Element

The Land Use Element of the Blue Lake General Plan²³ includes the following policies related to aesthetic resources:

- **Performance Standards and Site Design Policy 1:** Development should not adversely affect the healthy and scenic rural environment of Blue Lake.
- **Powers Creek Management Policy 1:** Powers Creek shall be managed to maintain the creek as a scenic and natural resource, and to protect adjacent properties and structures to the greatest degree possible.

²³ City of Blue Lake. 2021. Blue Lake General Plan Land Use Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed October 2024).

- **Powers Creek Management Policy 7:** The various wetland areas throughout the City shall be maintained as a scenic and habitat resource, and to prevent flooding impacts due to the modification of existing hydrology.

Blue Lake Municipal Code, Title 17

Title 17 of the Blue Lake Municipal Code includes development standards, height limitations, lighting standards, and landscaping standards for new development within the City.

Ferndale General Plan

There are no policies related to aesthetic resources in the Ferndale General Plan.

Ferndale Zoning Ordinance

The Ferndale Zoning Ordinance includes development standards, height limitations, lighting standards, and landscaping standards for new development within the City of Ferndale. In Ferndale's designated historic district and nearby neighborhoods, the appearance and design of buildings and structures is further regulated by a design control overlay zone.

Fortuna General Plan, Parks, Recreation, and Open Space Element

The Parks, Recreation, and Open Space Element of the Fortuna General Plan²⁴ includes the following policies related to aesthetic resources:

- **PROS-3.2 Open Space Dedication:** The City shall require developers to protect riparian vegetation and foothill scenic resources of the City through dedication of land for open space.

Fortuna Municipal Code, Title 17

Title 17 of the Fortuna Municipal Code includes development standards, height limitations, lighting standards, and landscaping standards for new development within the City.

Rio Dell General Plan, Land Use Element

The Land Use Element of the Rio Dell General Plan²⁵ includes the following goals related to aesthetic resources:

- **G1.2-3:** To preserve river, stream, and drainage channels that collect run-off, provide natural habitat, and serve as scenic open space.
- **G1.3.1-8:** To retain the scenic character of U.S. 101 through Rio Dell.

Rio Dell Municipal Code, Title 17

Title 17 of the Rio Dell Municipal Code includes development standards, height limitations, lighting standards, and landscaping standards for new development within the City.

²⁴ City of Fortuna. 2010. City of Fortuna General Plan.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed October 2024).

²⁵ City of Rio Dell. 2015. 2015 General Plan.

https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf (accessed January 2025).

Trinidad General Plan, Community Design Element

The Community Design Element of the Trinidad General Plan²⁶ includes the following policies related to aesthetic resources:

- **Policy 72.** The beaches and sea cliffs which border the southern and western sides of the city (identified as Open Space) shall be preserved from further development and allowed to remain in their present, essentially natural, state.
- **Policy 73.** Trinidad Bay and the bay bordering Trinidad on the west, including all their islands, shall be preserved in their present state. These marine areas offer two of the most uniquely beautiful views, combining - ocean, islands, bay and rugged, timber shorelines, that can be found anywhere along the California coast. The islands provide habitats for marine organizations and serve as refuges or rookeries for birds and marine mammals, including sea lions and harbor seals. A breakwater, mooring expansion, or other harbor development should be visually compatible with the bay vista.
- **Policy 74.** The lands designated as open space lying seaward of Edwards and Van Wycke Streets shall remain entirely undeveloped and preserved in their present state. It is from these lands that the unparalleled view to the south is obtained.

Trinidad Municipal Code, Title 17

Title 17 of the Trinidad Municipal Code includes development standards, height limitations, and landscaping standards for new development within the City, as well as design review and view preservation requirements for new development. The City does not have an ordinance that regulates light or glare associated with new development, but because the City is almost entirely within the coastal zone, Coastal Act standards that require downcast and shielded lighting for new development are applicable.

Eureka General Plan

The Eureka General Plan²⁷ includes the following goals and policies related to aesthetic resources:

- **Policy E-7.6 US 101 through Eureka.** Work with Caltrans to beautify and enhance the physical infrastructure of Broadway, 4th Street, and 5th Street, to create gateways and corridors that create a sense of place that matches Eureka's brand, and work with property owners and businesses to create attractive buildings and storefronts on these same streets in order to make these primary thoroughfares more vibrant and visually appealing to tourists and visitors.
- **Policy LU-1.12 Attractive Design.** Preserve Eureka's unique charm and character by applying design guidance that promotes attractive and well maintained development that carefully integrates the new with the best of the old.
- **Policy LU-1.13 Lighting.** Minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare.
- **Policy LU-1.16 Public Access.** Maintain and improve physical linkages from the community to the coastline, gulches, forests and Eureka's other distinct recreational resources where feasible

²⁶ City of Trinidad. 2021. General Plan. <https://www.trinidad.ca.gov/media/5491> (accessed January 2025).

²⁷ City of Eureka. 2018. 2040 General Plan. <https://www.eureka.ca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed November 2024).

by creating/preserving view corridors, enhancing trail and roadway connections, and providing signage and other wayfinding cues.

- **Policy PR-1.13 Resource Areas.** Where possible, improve public lands and work with private landowners to provide additional accessibility and views within the gulches and greenways system, forests, coastline and Eureka's other distinct visual and natural resource areas.
- **Goal NR-4:** Preservation of significant visual resources that serve as scenic amenities and contribute to Eureka's character.
 - **Policy NR-4.1 View Corridors:** Preserve view corridors on public streets that lead to prominent visual resources, such as Humboldt Bay, the waterfront, landmark buildings, gulches and greenways, and surrounding agricultural and timberlands. Such views include the views of the waterfront while looking north along G Street and the views of the Carson Mansion while looking east along 2nd Street. Properly maintained street trees are not considered to obscure view corridors.
 - **Policy NR-4.2 Lighting:** Require new lighting be designed and configured to minimize light pollution, glare, and spillage.

Eureka Municipal Code, Chapter 155

Chapter 155 of the Eureka Municipal Code includes a variety of development standards to implement the aesthetic-resource-related policies of the 2040 General Plan, including but not limited to standards for the design of street-facing building facades, screening of waste/recyclable material storage, fences and walls, signs, parking, and landscaping. Additionally, the City has outdoor lighting standards (Section 155.308.050) which require all new exterior lighting to be directed downward and require light fixtures to be shielded or recessed and to meet the International Dark Sky Association's requirements for reducing waste of ambient light ("dark sky compliant").

3.1.3 Impacts and Mitigation Measures

Significance Criteria

The County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Aesthetics.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Have a substantial adverse effect on a scenic vista?
- b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- c) In non-urbanized areas, substantially degrade existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Approach to Analysis

Aesthetic impact assessments involve qualitative analysis that is subjective but informed by the basic guidelines provided above. Reactions to the same aesthetic conditions vary according to

viewer taste and interests. Since the proposed RCAP and CEQA GHG Emissions Thresholds are not a specific development proposal, the analysis focuses on a general discussion of the potential aesthetic impacts from RCAP implementation within Humboldt, in terms of the arrangement of built space to open space, potential loss of scenic resources, degradation of visual character, density and intensity of development, and visual fit with landscape characteristics.

Scenic Vistas

For the purposes of analysis, a scenic vista is a view from a public place (roadway, designated scenic viewing spot, etc.) that is considered by Humboldt County and/or the incorporated cities to be important, as identified in the Section 3.1.1, *Environmental Setting*, above. An adverse effect would occur if implementation of the RCAP would block or otherwise damage a scenic vista upon implementation.

Scenic Resources within Scenic Highways

The analysis of impacts to State scenic highways focuses on the impacts of implementation of the proposed RCAP near an eligible or designated State scenic highway or locally designated scenic route as identified by Caltrans and in the Humboldt County or incorporated cities' General Plans.

Visual Character and Quality of Public Views

The impacts on visual character or quality attributable to implementation of the RCAP were evaluated relative to visual conditions, as estimated by existing experiences from public viewpoints in Humboldt. The RCAP could result in the implementation of infrastructure projects throughout the unincorporated County and the incorporated cities. However, according to the CEQA Guidelines, the proposed RCAP would facilitate future projects in non-urbanized areas.²⁸ As such, the impact discussion of visual character and views is focused on whether the proposed RCAP would substantially degrade the existing visual character or quality of public views of a site and its surroundings.

Light and Glare

The analysis of light and glare impacts focuses on the nature and magnitude of changes in light and glare conditions associated with implementation of the proposed RCAP on unincorporated and incorporated Humboldt County and surroundings. If the light and glare conditions of the proposed RCAP and the existing environment are similar, then the visual compatibility would be high. If the light and glare conditions of the proposed RCAP strongly contrast with the existing light and glare or applicable policies and guidelines, then light and glare compatibility would be low and significant impacts may result.

EIR Scoping Comments Consideration

No EIR scoping comments relevant to aesthetics were received.

²⁸ Humboldt County and the incorporated cities within the County are not urbanized areas pursuant to CEQA Guidelines Section 21071, which states that an incorporated city is urbanized if it has either (1) a population of at least 100,000 persons or (2) has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons. Since all the incorporated cities within the County have populations of less than 100,000 persons and are not contiguous with cities with a combined population of 100,000 persons, for the purposes of the CEQA Aesthetics analysis, the entire Humboldt region is considered non-urbanized.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to aesthetics. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to aesthetics in Humboldt.

Specific Thresholds of Significance

Humboldt County has not adopted quantitative thresholds for the evaluation of aesthetics. The following qualitative thresholds are applied to evaluate the significance of aesthetics impacts resulting from development.

- Block existing views from a scenic route, highway, corridor, or other public areas toward a visual/scenic resource
- Be inconsistent with the character of the plan area or existing development in the surrounding area or would substantially alter existing natural topography
- Increase existing nighttime light or daytime glare sources in the plan area or vicinity in a manner that would substantially affect nighttime or daytime views

Impact Evaluation

Scenic Vistas

Significance Criterion a: Would the proposed plan have a substantial adverse effect on a scenic vista?

Impact AES-1 THE RCAP WOULD PROMOTE THE DEVELOPMENT OF SUSTAINABLE INFRASTRUCTURE WITHIN HUMBOLDT. FUTURE RCAP-RELATED PROJECTS WOULD BE REQUIRED TO ADHERE TO EXISTING ORDINANCES AND GENERAL PLAN POLICIES THAT PROTECT SCENIC RESOURCES; HOWEVER LARGE-SCALE ORGANIC WASTE PROCESSING FACILITY, RENEWABLE ENERGY, AND RENEWABLE FUEL PRODUCTION PROJECTS FACILITATED BY THE RCAP COULD HAVE AN ADVERSE EFFECT ON SCENIC VISTAS WITHIN HUMBOLDT. **MITIGATION MEASURES AES-1 AND AES-2 WOULD LIMIT THESE IMPACTS, BUT IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.**

Construction

Impacts related to substantial adverse effects on a scenic vista are limited to operational impacts, because construction impacts would be temporary. No substantial adverse effects on scenic vistas from infrastructure construction would result from implementation of the proposed plan.

Operation

Scenic vistas and views within Humboldt are discussed in Section 3.1.1, *Environmental Setting, Views and Scenic Vistas*. While the proposed RCAP does not include site-specific project proposals that would directly affect scenic vistas and views, it does include GHG reduction measures that may promote infrastructure development and other physical changes through actions that could affect the scenic views within Humboldt. Specifically, it includes measures that would encourage the streamlining and maximization of small-scale battery energy storage and solar panel installation (Measures BE-1, BE-2, BE-4, and BE-7), the identification of sites that are suitable for utility scale

renewable energy generation (Action BE-2f), the development of a regional organic waste processing facility (Measure SW-1), the addition of new recycled water infrastructure (Measure WW-2), mixed-use and infill development patterns (Measure T-3), the addition of new bicycle, pedestrian and public transit infrastructure (e.g., Measures T-1 Urban and Rural and T-2 Urban and Rural), and the addition of EV/ZEV chargers and fueling stations (e.g., Measures T-6 and T-7). In accordance with these measures, under the proposed RCAP, future projects would be required to implement renewable energy technologies such as solar panels, microgrids, and battery energy storage. In addition, infill development within existing population centers would be prioritized, with urban sprawl limited. The RCAP also promotes habitat restoration and preservation activities for carbon sequestration (Measure CS-1 through CS-3), which would provide aesthetic benefits.

Small-scale renewable energy projects facilitated by the RCAP within developed areas would not result in significant impacts to visual resources, because the addition of renewable energy technology such as rooftop solar panels would blend in with existing development. Likewise, the emphasis on infill development facilitated by the RCAP would not result in significant impacts to scenic vistas, as infill projects would blend with existing development. Rather, the prevention of urban sprawl would assist with the conservation of open space and rural scenic resources such as the agricultural and forested areas identified in the County and City General Plans as contributing to the scenic quality of Humboldt. Therefore, the majority of measures and actions identified in the RCAP would result in less than significant impacts related to scenic vistas.

However, large-scale projects, such as a regional organic waste processing facility facilitated by RCAP Action SW-1b, utility-scale solar and wind projects facilitated by RCAP Action BE-2f, and hydrogen and renewable fuel generation facilities facilitated by RCAP Measure T-10, could occur in rural areas of Humboldt and alter scenic views. The types of infrastructure and facilities that would likely accompany large-scale solar renewable energy systems include the following:

- PV arrays or concentrated solar on ground-mounted posts, or systems that track the sun;
- A collector substation site, including concrete pad and switchgear, and battery storage;
- A direct-current underground collection system and an overhead and underground transmission system that steps up the voltage to alternating current, linked to the substation;
- An operations and maintenance site (unless remotely monitored), including concrete pad with building(s);
- Transmission lines;
- Water tanks;
- Internal and external access roads; and
- Security and open space fencing.

Large-scale wind energy systems generally include the following components:

- Wind turbines ranging in height from approximately 200 to 330 feet to the wind turbine hub, and approximately 300 feet to 500 feet to the topmost blade tip;
- An overhead and underground collector cable system linking the wind turbines to the collector substation;
- A collector substation site and an operations and maintenance building (unless remotely monitored) with battery storage;
- Several permanent meteorological towers and one sonic detecting and ranging unit or one light detecting and ranging unit;

- An overhead transmission line running from the collector substation to the nearest substation;
- Water tanks;
- Internal and external access roads; and
- Security and open space fencing.

Large-scale organic waste processing facilities generally include the following components:

- Large composting piles, rows, bins or holding sites;
- Heavy machinery such as excavators, large-scale grinders conveyor belts or other heavy equipment;
- An operations and maintenance building;
- Water tanks;
- Internal and external access roads; and
- Security and open space fencing.

Hydrogen and renewable fuel generation facilities generally include large industrial-style buildings to house equipment for processing fuel, as well as storage tanks to store fuel and distribution infrastructure such as pipelines or truck loading stations. Hydrogen facilities include electrolysis units for hydrogen production, high-pressure storage tanks for compressed hydrogen and/or cryogenic storage for liquefied hydrogen, and distribution infrastructure; however, the exact design can vary depending on the scale of production and the specific hydrogen generation method used. Biofuel facilities include areas for biomass delivery and storage, biomass processing machinery, fuel storage tanks, and truck loading stations. Hydrogen and biofuel production facilities can be sited near renewable energy sources like solar or wind farms to provide a clean source of electricity to power the production and storage processes.

Impacts could include long-term scenic vista effects due to the addition of infrastructure that have height, forms, or colors that contrast with existing conditions. The degree of visual interruption from future utility-scale and renewable fuel production projects would vary depending on the location and size of the project, height and width of infrastructure, and the degree of reflectivity that accompanies the solar systems. Future utility-scale renewable energy and renewable fuel production projects would require discretionary permit approvals and project-level CEQA review.

Existing regulations in the HCC and each city's municipal code include development standards that would limit the allowable locations of utility-scale renewable energy and renewable fuel production projects, as well as design aspects such as height, massing, and setbacks. Additionally, General Plan policies protecting scenic resources, including Humboldt County General Plan Policies SR-G1, SR-P2, and SR-S1, would apply to future projects facilitated by the RCAP in the unincorporated areas. Future development within the incorporated cities would be required to adhere to applicable city general plan policies protecting scenic resources including Arcata General Plan Policies D-3c, D-3d, D-3e, D-3f, and D-3g, Blue Lake Performance and Design Standards and Site Design Policy 1, and Powers Creek Management Policy 1 and 7, Rio Dell General Plan Policy G1.2-3, Trinidad General Plan Policies COS-8.1 and CONS-8.5, and Eureka General Plan Policy NR-4.1. While these existing policies and regulations would require new projects to conserve and protect unique and sensitive visual features and the scenic quality of the environment, the size and magnitude of project features associated with utility scale renewable energy generation systems and renewable fuel production facilities may make it infeasible for future individual projects to fully reduce impacts related to scenic vistas to a less than significant level.

In summary, implementation of the RCAP would result in less than significant impacts related to scenic vistas with the exception of Actions SW-1b and BE-2f and Measure T-10 that would result in the potential development of large-scale renewable energy and renewable fuel production projects, and an organics processing facility. Although future projects would be required to adhere to existing General Plan, HCC, and County/city's municipal code standards to preserve visual resources and conduct project-level CEQA review, there is still the potential for significant impacts related to scenic vistas. Mitigation Measures AES-1 and AES-2 would reduce individual project impacts related to scenic vistas by requiring design features and visual screening measures to be implemented. However, because the siting and design of future projects facilitated by the RCAP is unknown at this time, the feasibility and effectiveness of these mitigation measures is unknown. Therefore, RCAP operational impacts related to scenic vistas would remain significant and unavoidable.

Mitigation Measures

The following mitigation measures would apply if a future RCAP-related project would potentially have a substantial adverse effect on a scenic vista:

MITIGATION MEASURE AES-1: IMPLEMENT ALTERNATIVE DESIGN MEASURES

Projects facilitated by the RCAP that would obstruct scenic vistas and views from publicly accessible vantage points shall identify and seek to protect public views and significant landscape features or landforms visible from such views and shall implement project-specific mitigation as applicable. If it is determined that a project would obstruct scenic views, the reviewing agency (County or relevant city) shall consider alternative designs that seek to avoid and/or minimize these visual impacts. Project-specific design measures may include reduction in height or width of improvements to reduce obstruction of views or other adverse visual effects, alteration of improvement configuration, or relocation of improvements to reduce obstruction of views. The reviewing agency shall implement the following (or equivalent) design measures as applicable:

- require that the scale and massing of new development provide appropriate transitions in structure height and bulk that are sensitive to the physical and visual character of the affected area;
- ensure structure heights are stepped back to maintain appropriate transitions in scale and to protect scenic views;
- underground utilities; and
- avoid siting electric towers, solar power facilities, wind power facilities, hydrogen generation facilities, biofuel production facilities, and/or above-ground lines where they could obstruct views from public vantage points, such as riding, hiking, or multiuse trails, along scenic roadways and routes, or scenic vista points.

MITIGATION MEASURE AES-2: IMPLEMENT VISUAL SCREENING

To screen views of projects facilitated by the RCAP in locations where they would be visible from publicly accessible vantage points (such as scenic vistas) and affect visual character or quality, the reviewing agency (County or relevant city) shall require the construction of a berm, vegetative screening, or other form of visual barrier of sufficient height to provide visual screening from the ground level. The color of proposed facades, fenestration, equipment, and roofs shall be designed to visually blend in and minimize the potential for visual contrast between the project elements and their natural landscape surroundings. Bright or very light colors (including glossy white) shall be avoided unless such colors blend in with the surrounding landscape. Re-contouring and revegetation

of temporarily disturbed graded areas shall be completed to provide a natural appearing landform upon completion of construction.

Level of Significance

Significant and Unavoidable

Scenic Resources within State Scenic Highways

Significance Criterion b: Would the proposed plan substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Impact AES-2 THERE ARE NO DESIGNATED STATE SCENIC HIGHWAYS WITHIN HUMBOLDT; HOWEVER, THERE ARE ELIGIBLE STATE SCENIC HIGHWAYS AND LOCALLY DESIGNATED SCENIC ROUTES. FUTURE RCAP-RELATED PROJECTS WOULD BE REQUIRED TO ADHERE TO EXISTING ORDINANCES AND GENERAL PLAN POLICIES THAT PROTECT SCENIC RESOURCES; HOWEVER LARGE-SCALE ORGANIC WASTE PROCESSING FACILITY, RENEWABLE ENERGY, AND RENEWABLE FUEL PRODUCTION PROJECTS FACILITATED BY THE RCAP COULD HAVE AN ADVERSE EFFECT ON SCENIC ROUTES WITHIN HUMBOLDT. MITIGATION MEASURES AES-1 AND AES-2 WOULD LIMIT THESE IMPACTS, BUT IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

Impacts related to substantial damage to scenic resources are limited to operational impacts due to the temporary nature of construction activities. No respective construction impacts would occur with infrastructure facilitated by the proposed plan.

Operation

As discussed in Section 3.1.1, *Environmental Setting*, above, there are no officially designated State scenic highways within Humboldt; however, there are several eligible State scenic highways within unincorporated Humboldt County, and locally designated scenic routes within the incorporated cities of Humboldt. While the proposed RCAP does not include specific project proposals, it does include GHG reduction measures that may promote infrastructure development and other physical changes through policies and programs that could change existing visual conditions within scenic roadways within Humboldt. These projects could occur near eligible State scenic highways and could, depending on the location and design of the projects, result in changes to scenic resources visible along a scenic highway such as trees, rock outcroppings, or historic buildings.

Most actions facilitated by the RCAP would occur on infill sites within developed areas and would involve minor changes such as energy retrofits to existing buildings (e.g., Measures BE-3 Urban and Rural, BE-4, and BE-7), the addition of solar panels to rooftops (e.g., Measure BE-1 and Actions BE-2b and BE-2h), the addition of new bicycle, pedestrian and public transit infrastructure (e.g., Measures T-1 Urban and Rural and T-2 Urban and Rural), and the addition of EV/ZEV chargers and fueling stations (e.g., Measures T-6 and T-7). These types of small-scale projects would be unlikely to damage scenic resources. In addition, Measure T-3 would encourage mixed-use and infill development patterns, thereby reducing urban encroachment into the scenic, open space areas of Humboldt. The prevention of urban sprawl would assist with the conservation of open space and rural scenic resources such as the agricultural and forested areas identified in the County and City General Plans as resources contributing to the scenic quality of Humboldt.

While implementation of the majority of RCAP measures would not be anticipated to substantially damage scenic resources within eligible State scenic highways or locally designated scenic routes, RCAP Action BE-2f would encourage the development of utility-scale renewable energy projects to provide clean energy sources and enhance grid reliability, RCAP Action SW-1b would provide for a new organic waste processing facility within Humboldt, and RCAP Measure T-10 may result in the development of new hydrogen and biofuel production facilities. These large-scale projects could be sited near scenic roadways within Humboldt and could damage existing scenic resources and, in turn, affect existing views from these roadways. As described under Impact AES-1, impacts could include long-term effects due to the addition of infrastructure that have height, forms, or colors that contrast with existing conditions. The degree of visual interruption from future utility-scale and renewable fuel production projects would vary depending on the location and size of the project, height and width of infrastructure, and the degree of reflectivity that accompanies the solar systems. Future utility-scale renewable energy and renewable fuel production projects would require discretionary permit approvals and project-level CEQA review.

Existing regulations in the HCC and each city's municipal code include development standards that would limit the allowable locations of utility-scale renewable energy and renewable fuel production projects, as well as design aspects such as height, massing, and setbacks. Future development would also be required to adhere to existing General Plan policies that protect State scenic highways and locally designated scenic routes within Humboldt. Specifically, within unincorporated areas of Humboldt, development would be required to comply with General Plan policies SR-P3 and SR-S2, which require the protection of scenic highways and establish design standards for projects occurring within scenic highways. In incorporated areas of Humboldt, future development would be required to comply with Arcata General Plan Policy D-3a and Eureka General Plan policy NR-4.1, which require the preservation of view corridors and establish design policies for projects affecting scenic roadways. In addition, the General Plan policies listed under Section 3.1.2, *Regulatory Framework*, that protect scenic resources and quality in general would also apply to future projects occurring under the RCAP. However, due to their size and the nature of work associated with utility-scale renewable energy developments and renewable fuel production facilities, permanent alterations to scenic resources may occur through tree removal, blasting required for the construction of access roads or power line tower footings, and maintenance of power line clearance zones. Therefore, these types of projects could result in significant impacts related to scenic resources within State scenic highways and locally designated scenic roadways, even with adherence to existing regulations.

In summary, implementation of the RCAP would result in less than significant impacts related to scenic resources within scenic roadways with the exception of Action BE-2f and Measure T-10, which would result in the potential development of large-scale renewable energy projects. Although future utility-scale and renewable fuel production projects would be required to adhere to existing General Plan, HCC, and city municipal code standards to preserve visual resources within scenic roadways and conduct project-level CEQA review, there is still the potential for significant impacts related to scenic resources with designated scenic corridors. Mitigation Measures AES-1 and AES-2 would reduce individual project impacts related to scenic resources within State scenic highways and locally designated scenic routes by requiring design features and visual screening measures to be implemented. However, because the siting and design of future projects facilitated by the RCAP is unknown at this time, the feasibility and effectiveness of these mitigation measures is unknown. Therefore, RCAP operational impacts related to scenic resources within a State scenic highway would remain significant and unavoidable.

Mitigation Measures

Mitigation Measures AES-1 and AES-2 would apply.

Level of Significance

Significant and Unavoidable

Visual Character or Quality of Public Views

Significance Criterion c: Would the proposed plan, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the proposed plan is in an urbanized area, would the plan conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-3 IMPLEMENTATION OF THE RCAP WOULD PROMOTE SUSTAINABLE INFRASTRUCTURE DEVELOPMENT WITHIN HUMBOLDT. FUTURE RCAP-RELATED PROJECTS WOULD BE REQUIRED TO ADHERE TO EXISTING ORDINANCES AND GENERAL PLAN POLICIES THAT PROTECT VISUAL CHARACTER; HOWEVER LARGE-SCALE ORGANIC WASTE PROCESSING FACILITY, RENEWABLE ENERGY, AND RENEWABLE FUEL PRODUCTION PROJECTS FACILITATED BY THE RCAP COULD HAVE AN ADVERSE EFFECT ON PUBLIC VIEWS WITHIN HUMBOLDT. MITIGATION MEASURES AES-1 AND AES-2 WOULD LIMIT THESE IMPACTS, BUT IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

Impacts related to substantial degrading of visual character or quality of public views are limited to operational impacts, as construction activities are temporary in nature.

Operation

As discussed in Section 3.1.3, *Approach to Analysis*, above, Humboldt is classified as non-urbanized pursuant to CEQA Guidelines Section 21071. Therefore, this analysis focuses on the potential for the RCAP to substantially degrade the existing visual character or quality of public views of a site and its surroundings. As described under Section 3.1.1, *Environmental Setting, Visual Character*, Humboldt is characterized by large areas of forested, open space, and agricultural uses, with development concentrated around the incorporated cities and unincorporated communities such as McKinleyville. The developed areas of Humboldt are generally of low to medium density, featuring single-family residential neighborhoods and small commercial corridors and main streets surrounded by agricultural land, timberland, and open space areas.

While the RCAP does not include specific project proposals, it does include GHG reduction measures that may promote infrastructure development and other physical changes through policies and programs that could affect visual character or quality of public views. For example, the RCAP includes measures that would encourage the streamlining and maximization of small-scale battery energy storage and solar panel installation (Measures BE-1, BE-2, BE-4, and BE-7), the identification of sites that are suitable for utility scale renewable energy generation (Action BE-2f), mixed use and infill development patterns (Measure T-3), the addition of new bicycle, pedestrian and public transit infrastructure (e.g., Measures T-1 Urban and Rural and T-2 Urban and Rural), and the addition of EV/ZEV chargers and fueling stations (e.g., Measures T-6 and T-7). In accordance with these

measures, under the proposed RCAP, future projects would be required to implement renewable energy technologies such as solar panels, microgrids, and battery energy storage. In addition, infill development within existing population centers would be prioritized, thereby limiting urban sprawl.

Most actions facilitated by the RCAP would occur on infill sites and would involve minor changes such as energy retrofits to existing buildings (e.g., Measures BE-3 Urban and Rural, BE-4, and BE-7), the addition of solar panels to rooftops (e.g., Measure BE-1 and Actions BE-2b and BE-2h), the addition of new bicycle, pedestrian and public transit infrastructure (e.g., Measures T-1 Urban and Rural and T-2 Urban and Rural), and the addition of EV/ZEV chargers and fueling stations (e.g., Measures T-6 and T-7). These types of small-scale projects would generally occur within the existing developed areas of Humboldt and would not substantially alter existing visual character or quality. For example, the addition of small-scale renewable energy technology such as rooftop solar panels would blend in with existing development. Likewise, the emphasis on infill development facilitated by the RCAP would not result in significant impacts to visual character or quality of public views, as infill projects would generally be consistent with surrounding urban development. In addition, Measure T-3 would encourage mixed-use and infill development patterns, thereby reducing urban encroachment into the scenic, open space areas of Humboldt. The prevention of urban sprawl would assist with the conservation of visual character and quality of public views in the scenic open space and agricultural areas of Humboldt.

While implementation of the majority of RCAP measures would not be anticipated to substantially degrade the existing visual character or quality of public views, RCAP Action BE-2f would encourage the development of utility-scale renewable energy projects to provide clean energy sources and enhance grid reliability and RCAP Measure T-10 may result in the development of new hydrogen and biofuel production facilities. Additionally, RCAP Action SW-1b would facilitate the development of a regional organics processing facility to reduce waste sent to landfills. These large-scale projects could be sited in undeveloped areas and contrast starkly with the existing visual character and quality of Humboldt. As described under Impact AES-1, impacts could include long-term effects due to the addition of solar panels, wind turbines, and industrial buildings that have height, forms, or colors that contrast with existing conditions. The degree of visual interruption from future large-scale organic processing facilities, and utility-scale and renewable fuel production projects would vary depending on the location and size of the project, height and width of infrastructure, and the degree of reflectivity that accompanies the solar systems. Future utility-scale renewable energy, renewable fuel production and organics processing facility projects would require discretionary permit approvals and project-level CEQA review.

Existing regulations in the HCC and each City's municipal code include development standards that would limit the allowable locations of large-scale organic waste processing, utility-scale renewable energy, and renewable fuel production projects, as well as design aspects such as height, massing, and setbacks. Additionally, General Plan policies protecting visual character and quality, including Humboldt County General Plan Policies SR-G1, SR-P2, and SR-S1, would apply to future development facilitated by the RCAP in the unincorporated areas. Future development within the incorporated cities would be required to adhere to the applicable City's General Plan policies protecting scenic resources including Arcata General Plan Policies D-3c, D-3d, D-3e, D-3f, and D-3g, Blue Lake Performance and Design Standards and Site Design Policy 1, and Powers Creek Management Policy 1 and 7, Rio Dell General Plan Policy G1.2-3, Trinidad General Plan Policies COS-8.1 and CONS-8.5, and Eureka General Plan Policy NR-4.1. While these existing policies and regulations would require new projects to conserve and protect unique and sensitive visual features and the visual quality of the environment, due to their size and the nature of work associated with large-scale organic waste

processing, utility-scale renewable energy, and renewable fuel production developments, these types of projects could have significant impacts related to visual character and quality of public views, even with adherence to existing regulations.

In summary, implementation of the RCAP would result in less than significant impacts to existing visual character or quality of public views with the exception of Actions BE-2f and SW-1b and Measure T-10, which would result in the potential development of large-scale renewable energy, organic waste processing facility, and renewable fuel projects. Although future projects would be required to adhere to existing General Plan, HCC, and city municipal code standards to preserve visual quality and conduct project-level CEQA review, there is still the potential for significant impacts. Mitigation Measures AES-1 and AES-2 would reduce individual project impacts related to existing visual character or quality of public views by requiring design features and visual screening measures to be implemented. However, because the siting and design of future development facilitated by the RCAP is unknown at this time, the feasibility and effectiveness of these mitigation measures is unknown. Therefore, RCAP operational impacts related to visual character and quality of public views would remain significant and unavoidable.

Mitigation Measures

Mitigation Measures AES-1 and AES-2 would apply.

Level of Significance

Significant and Unavoidable

New Source of Light or Glare

Significance Criterion d: Would the proposed plan create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-4 IMPLEMENTATION OF THE RCAP WOULD RESULT IN NEW SUSTAINABLE INFRASTRUCTURE WITHIN HUMBOLDT THAT COULD CREATE NEW SOURCES OF LIGHT OR GLARE THAT COULD ADVERSELY AFFECT DAYTIME OR NIGHTTIME VIEWS IN THE PLAN AREA. MITIGATION MEASURE AES-3 WOULD REDUCE THE POTENTIAL FOR NEW SOURCES OF SUBSTANTIAL LIGHT AND GLARE, AND IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Impacts related to the creation of new sources of light and glare that could adversely affect daytime and nighttime views in the area are typically limited to operational impacts. In addition, most construction facilitated by the proposed RCAP would occur during the daytime, limiting potential for construction-related, temporary nighttime lighting impacts. Construction-related nighttime lighting would be used at future project construction sites only for safety and security purposes and would be directed downward to limit light spillover to adjacent areas, consistent with the HCC and city municipal code requirements. Therefore, RCAP construction impacts related to potential new sources of light and glare would be less than significant.

Operation

As discussed in Section 3.1.1, *Environmental Setting*, unincorporated Humboldt is primarily rural with limited existing sources of light and glare, with the exception of areas such as McKinleyville and

the unincorporated areas surrounding Eureka, where there is denser development. Within the incorporated cities and more densely developed portions of unincorporated Humboldt County, there is a higher concentration of existing sources of light and glare associated with urban development, such as streetlights, exterior building lighting, lighted signs, glass façades, and the windshields of parked cars. While the RCAP does not include specific project proposals, it does include GHG reduction measures that may promote infrastructure development and other physical changes through policies and programs. Specifically, Measures BE-1, BE-2, BE-4, BE-7, and T-3, that encourage installation of both small-scale and utility-scale solar PV and other renewable energy systems, microgrid projects, and battery energy storage systems, have the potential to result in new sources of light and glare if not thoughtfully designed and located. Measures T-10, SW-1, WW-2 may involve the future development of renewable fuel generation, organic waste processing, and recycled water facilities that may introduce new sources of light and glare within Humboldt. In addition, RCAP Measure T-3 would promote higher density, mixed-use development in infill priority areas, which could result in new sources of light and glare in the urban areas of Humboldt.

Light

New sources of nighttime lighting facilitated by the RCAP would be limited to lighting from infill and mixed-use projects promoted by RCAP Measure T-3 or safety lighting necessary on larger-scale project sites, such as water recycling, waste treatment, or energy generation facilities. Improperly installed building lighting could result in a significant impact to those with a direct line of sight to a project area from a publicly accessible vantage point and could be perceived as a slight glow on the horizon (or sky glow) for others who cannot see the facilities directly. Projects facilitated by the RCAP would be required to comply with State and local lighting requirements summarized under Section 3.1.2, *Regulatory Framework*. Compliance with applicable requirements for nighttime lighting, including Humboldt County General Plan Policy SR-S4, Eureka General Plan Policy NR-4.2, and the lighting regulations of the HCC and City Municipal Codes would minimize impacts related to existing nighttime lighting conditions. However, as the County and incorporated cities have differing levels of regulation related to lighting (for example, the Trinidad General Plan and Municipal Code do not contain specific policies or regulations to reduce lighting impacts from various types of development), there is still the potential for significant impacts related to new source of lighting to occur.

Glare

Anything that scatters light between its source and a person's eye can cause glare. Rain, snow, fog, or smoke can scatter sunlight, for example, and cracked, dirty, or frosty windshields can scatter light from streetlamps or headlights. Glare can be caused by reflective surfaces, such as glass and glossy finishes on vehicles or structures. RCAP measures and actions could facilitate projects that cause glare, including new infrastructure and facilities construction, rooftop and ground-mounted solar projects, or other infrastructure projects that include components that reflect light. New structures could cause glare if they have glossy or bright finishes (e.g., glossy white paint, light-colored concrete, etc.) or large areas of exterior glass or reflective metal. Should these structures be built in developed areas, within heavily trafficked flight paths, or adjacent to frequently traveled roadways, they could result in significant impacts related to glare.

New structures facilitated by the RCAP, such as infill development and renewable energy and battery storage, recycled water, organic waste processing, and renewable fuel generation facilities could result in new sources of glare from exterior building materials. Even if non-reflective, non-glare finishes are used on all structures for projects facilitated by the RCAP, some glare associated

with glass or metal of new buildings could occur on sunny days. In addition, solar panels can result in glare depending on the time of day, the angle of the sun, cloud cover, and other factors. Glare from solar panels can present a potential hazard or distraction for motorists on nearby roadways and for pilots and air-traffic control. Solar panels are designed to absorb as much light as possible, rather than to reflect it, and the glare created by photovoltaic panels is generally considered to be less than that created by water or common building materials such as metal, glass, and Portland white cement concrete.^{29, 30, 31} Nonetheless, new solar projects facilitated by the RCAP could still generate glare, and depending on site-specific contexts, could create hazards. These potentially significant impacts would be limited to larger-scale, ground mounted solar panels, for example, those associated with utility-scale renewable energy projects, as small-scale rooftop solar panels encouraged by the RCAP would generally be unnoticeable from ground level, where most viewers would be located, and would not create substantial sources of glare.

Projects facilitated by the RCAP would be required to comply with the local policies related to glare summarized above under Section 3.1.2, *Regulatory Framework*. Compliance with applicable requirements for reducing glare, including Humboldt County General Plan Policy SR-S4, Eureka General Plan Policy NR-4.2, and design regulations of the HCC and city municipal codes would minimize impacts related to glare. However, as the County and incorporated cities all have differing levels of regulation related to glare, there is still the potential for significant impacts related to glare from infrastructure materials and utility-scale solar projects.

Overall

Mitigation Measures AES-3 would reduce potential light and glare impacts by requiring non-glare light fixtures, minimally reflective exterior finishes, and solar project design considerations. This mitigation measure would apply only if specific projects would have potentially significant light and/or glare impacts. With implementation of existing regulations and Mitigation Measure AES-3, RCAP operational impacts related to potential new sources of light and glare would be less than significant.

Mitigation Measures

MITIGATION MEASURE AES-3: IMPLEMENT LIGHT AND GLARE REDUCTION DESIGN MEASURES

To reduce potentially significant light and glare impacts of projects facilitated by the RCAP, the reviewing agency (County or relevant city) shall require the following light and glare measures to be incorporated into project design for projects that include exterior lighting:

- The design of exterior light fixtures shall incorporate shielding and be directed downward onto the site to prevent offsite light spillage and sky glow;
- Exterior lighting fixtures shall be kept to the minimum number and intensity needed to ensure public safety. These lights shall incorporate the use of motion activated sensors and be dimmed

²⁹ Shields, M. 2010. PV Systems: Low Levels of Glare and Reflectance vs. Surrounding Environment. <https://www.cityofpasadena.net/planning/wp-content/uploads/sites/30/Sunpower-Corporation.-PV-Systems-Low-Levels-of-Glare-and-Reflectance-vs.-Surrounding-Environment-.pdf> (accessed November 2024).

³⁰ Riley, E. and Olson, S. 2011. A Study of the Hazardous Glare Potential to Aviators from Utility-Scale Flat-Plate Photovoltaic Systems. <https://doi.org/10.5402/2011/651857> (accessed November 2024).

³¹ National Renewable Energy Laboratory. 2018. Research and Analysis Demonstrate the Lack of Impacts of Glare from Photovoltaic Modules. <https://www.nrel.gov/state-local-tribal/blog/posts/research-and-analysis-demonstrate-the-lack-of-impacts-of-glare-from-photovoltaic-modules.html> (accessed November 2024).

after 11 p.m. to the maximum extent practical without compromising public safety as determined by the reviewing agency;

- Outdoor lighting shall include non-glare fixtures; and
- Structure design shall include exterior finishes and materials that are minimally reflective or sited or oriented in such a way as to direct glare away from sensitive receptors.

For projects involving solar panels, the following light and glare measures shall be incorporated into project design:

- All solar panels shall include an anti-reflective coating; and
- Solar projects one megawatt or greater in generation capacity shall conduct an analysis of solar glare and shall implement recommendations related to positioning and angling of solar panels, if warranted, to reduce offsite glare impacts.

Level of Significance

Less Than Significant with Mitigation

3.1.4 Cumulative Impacts

The cumulative projects scenario is the population, employment, and housing forecasts projected for Humboldt through 2030. Construction and operational activities and conditions for past, present, and reasonably foreseeable future projects, including projects implemented to accommodate the projected growth within the region, would combine with the incremental impacts of the RCAP to cause or contribute to cumulative aesthetic conditions within Humboldt.

Scenic Vistas

Scenic vistas are varied and dispersed throughout Humboldt. In locations where scenic vistas are of high quality, such as near the coast or in the rural, agricultural, and forested areas of Humboldt, cumulative projects would be more likely to cause or make a cumulatively considerable contribution to a significant cumulative impact on scenic vistas, in particular if the cumulative projects were located in close proximity to scenic vistas available from publicly accessible vantage points. By contrast, in locations where the quality of scenic vistas is of lesser quality, such as within the urbanized areas of Humboldt, there is a decreased likelihood that cumulative projects would result in significant impacts to scenic vistas, especially because development in these areas would likely be infill and, thus, consistent with neighboring existing development.

In particular, a regional organic waste processing facility, utility-scale renewable energy projects and renewable fuel production facilities facilitated by the RCAP could be located in rural, scenic areas of Humboldt and have the potential to result in substantial visual contrast. Consistency with the County and city general plans, HCC, and city municipal codes intended to protect scenic vistas would minimize potential impacts; however, the incremental impacts of the RCAP, together with the incremental impacts of past, present, and reasonably foreseeable future projects would result in a significant cumulative impact. The implementation of Mitigation Measures AES-1 and AES-2 would reduce the severity of the RCAP's incremental contribution to cumulative impacts but would not ensure that the RCAP's contribution would be less than cumulatively considerable. Therefore, cumulative impacts related to scenic vistas would be significant and unavoidable.

Scenic Resources within State Scenic Highways

Eligible scenic highways and locally designated scenic routes run throughout Humboldt. If sited near an eligible State scenic highway or scenic route, cumulative projects could result in a cumulatively considerable impact if located near other cumulative projects that have a significant impact on scenic resources within State scenic highways or locally designated scenic routes. Projects facilitated by the RCAP located on infill sites would have a decreased likelihood of resulting in significant impacts within a State scenic highway or locally designated scenic route; however, large-scale organic waste processing, renewable energy and renewable fuel production projects occurring in more rural areas of Humboldt could result in a cumulatively considerable impact. Consistency with existing General Plan policies, HCC, and city municipal codes, along with implementation of Mitigation Measures AES-1 and AES-2 would reduce the RCAP's contribution to cumulative impacts. However, cumulative impacts related to scenic resources within State scenic highways would remain significant and unavoidable.

Public Views and Visual Character

Implementation of the RCAP measures and actions could result in a cumulative impact on visual character and public views if future projects were to be located near other cumulative projects that change or affect the overall defining character of Humboldt. Projects facilitated by the RCAP, in combination with past, present, and future development in Humboldt, could degrade public views and visual character by transforming existing rural and undeveloped landscapes into developed land. This would be especially likely to have cumulatively considerable impacts in rural areas of Humboldt and where large-scale utility and renewable fuel production projects may be sited. Implementation of Mitigation Measures AES-1 and AES-2 would reduce the RCAP's incremental contribution to cumulative impacts but would not ensure that the contribution would not be cumulatively considerable. Accordingly, even with the implementation of these mitigation measures, cumulative impacts related to public views and visual character would remain significant and unavoidable.

Light and Glare

The incremental contribution of projects facilitated by the RCAP could result in a cumulative impact related to light or glare if one or more of the future projects were to be located near other closely related past, present, and reasonably foreseeable future cumulative projects that are significant sources of light or glare, especially in more rural areas of Humboldt where existing light and glare conditions are typically minimal. As discussed under Impact AES-4, most development associated with the RCAP would be on infill sites where light and glare from the project would be similar to surrounding uses. However, large-scale utility and renewable fuel production projects could be sited outside of developed areas and could introduce new light and glare sources in rural parts of Humboldt. All future development would be required to adhere to the General Plan policies, HCC, and city municipal code light and glare policies and requirements to reduce the potential for light and glare impacts. Therefore, Mitigation Measure AES-4 would reduce the RCAP's incremental contribution to cumulative impacts by further reducing light and glare associated with new projects facilitated by the RCAP. With adherence to existing regulations and implementation of Mitigation Measure AES-4, cumulative impacts related to light and glare would be less than significant with mitigation incorporated.

Overall Level of Cumulative Significance

Significant and Unavoidable

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None.

3.2 Air Quality

3.2.1 Introduction

This section describes existing air quality conditions regionally and within Humboldt County as well as the relevant regulatory framework. This section also analyzes the possible impacts related to air quality (specifically with regard to emissions of criteria pollutants and toxic air contaminants) that could result from implementation of the RCAP and CEQA GHG Emissions Thresholds.

3.2.2 Environmental Setting

Humboldt is located in the North Coast Air Basin (NCAB). The NCAB includes Humboldt County, Mendocino County, and Northern Sonoma County. The North Coast Unified Air Quality Management District (NCUAQMD) regulates air pollutant point sources in the NCAB and is responsible for maintaining air quality in the NCAB. The quantity of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions affect the ambient concentrations of air pollutants in the region. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

Regional Climate and Meteorology

The climate of northern coastal California is generally characterized by cool summers and mild winters with frequent fog and significant amounts of rain. The ocean moderates temperatures year-round in the coastal areas. Further inland, the summers are hotter and drier, and the winters are colder and snowier. At higher elevations in inland areas, it is cooler in the summers and snowier in the winter. The average annual rainfall in Humboldt County ranges from 38 inches in Eureka to 141 inches in Honeydew. Approximately 90 percent of the annual precipitation falls between October and April. Higher rainfall in winter often influences high river levels. Winter snowfall is common at higher elevations. The dry season is between May and September. Average temperatures on the coast in Eureka range from the low 60s in the summer to the low 40s during the winter. Inland average temperatures, such as in Hoopa or Willow Creek, range from the 90s to the 30s. On the coast, summer fog is common when inland temperatures rise.

Atmospheric conditions such as wind speed and direction and air temperature gradients interact with the physical features of the landscape to drive the movement and dispersal of air pollutants. Winds control the rate and dispersion of local pollutant emissions. In the NCAB, dominant winds exhibit a seasonal pattern, especially in coastal areas. Summer months observe strong north to northwesterly winds while in winter, storms from the South Pacific increase the percentage of days with winds from southerly quadrants. Wind direction often assumes a daily pattern in the river canyons that empty into the Pacific. During the morning hours, cooler air from higher elevations flows down the valleys whereas later in the day, as the lower elevation air heats up, this pattern is reversed and the airflow heads up the canyon. These airflows are frequently very strong. Off-shore and on-shore flows are also common along the coast and are associated with pressure systems in the area. On-shore flows yields foggy cool weather to the coast, while off-shore flows often pushes fog away from the coast and produces warm, sunny days.

A primary factor in air quality is the mixing depth and extent of the air columns available for dilution of contaminant emissions. There are two types of inversions commonly experienced in Humboldt County, vertical and horizontal, that affect the vertical depth of the atmosphere through which pollutants can be mixed. Vertical air movement is important in dispersing air pollutants through a thicker layer of air; horizontal movement is important in dispersing pollutants over a wider area. Upward dispersion of pollutants is limited wherever the atmosphere is stable (i.e., where warm air lies above cooler air below).

The region's topography and coastal air movements results in common inversion conditions throughout the NCAB. These inversions occur when warm air traps cool air near the ground surface and prevents vertical air dispersion. Valleys, geographic basins, and coastal areas surrounded by higher elevations are the most common areas for inversions to occur. Inversions are less prominent during summer when vertical dispersion of the air is good. However, during the cooler months between late fall and early spring, inversions last longer and are more geographically extensive. During these inversion events, vertical dispersion is poor, and pollution may be trapped near the ground for several consecutive days.

Radiation inversion, a type of vertical inversion, occurs when the air layer near the ground surface cools and may extend upward several hundred feet. This type of event occurs in Humboldt County during the night and early mornings almost daily but is more common from late fall to early spring when there is less sunlight and it is cooler. Radiation inversion tends to last later into the morning during the winter months compared to summer months.

Subsidence inversion, a type of vertical inversion, occurs from downward moving air aloft, which is common in the area of high pressure along and nearby the coast. The air warms at a rate of approximately 5.5 degrees Fahrenheit (°F) per 1,000 feet as it descends. The downward moving air arrives at the lower height warmer than the air just below and limits the vertical mixing of air. Subsidence inversion often affects a large area of the County and is more common during the summer months. This inversion, which usually occurs from late spring through the early fall, can be very strong and shallow from the cooling of the lower layers due to the cool ocean water.

Air quality is predominantly influenced in the NCAB by the climatic regimes of the Pacific Ocean. In summer, warm ground surfaces draw cool air in from the coast, creating frequent thick fogs near the coastline and making northwesterly winds common. In winter, precipitation is high and surface wind directions are highly variable, and weather is more affected by oceanic storm patterns.¹

Air Pollutant Types, Sources, and Effects

Criteria Air Pollutants

Concentrations of criteria air pollutants are used as indicators of air quality conditions. Air pollutants are termed criteria air pollutants if they are regulated by developing specific public health and welfare-based criteria as the basis for setting permissible levels. According to the United States Environmental Protection Agency (USEPA), criteria air pollutants are ozone, particulate matter equal to or less than 10 microns in diameter (PM₁₀), PM equal to or less than 2.5 microns in diameter (PM_{2.5}), nitrogen dioxide (NO₂), carbon monoxide (CO), lead, and sulfur dioxide (SO₂). Criteria air pollutants are defined in more detail under Section 3.2.3, Regulatory Framework. Table 3.2-1

¹ North Coast Unified Air Quality Management District (NCUAQMD). 1995. Particulate Matter (PM₁₀) Attainment Plan. Pages II-1 to II-3. <https://ncuaqmd.specialdistrict.org/files/6f1ad639b/NCUAQMD+Attainment+Plan+5-95.pdf> (accessed October 2024).

provides a summary of the types, sources, and effects of these criteria air pollutants of national and California concern.

Table 3.2-1 Description of Criteria Air Pollutants of National and California Concern

Criteria Air Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Ozone	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrous oxides (NO _x), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO _x) are mobile sources (on-road and off-road vehicle exhaust).	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.
Particulate matter (PM ₁₀) Particulate matter (PM _{2.5})	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter, (one micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.	- Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. - Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.
Nitrogen dioxide (NO ₂)	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO _x (NO, NO ₂ , NO ₃ , N ₂ O, N ₂ O ₃ , N ₂ O ₄ , and N ₂ O ₅). NO _x is a precursor to ozone, PM ₁₀ , and PM _{2.5} formation. NO _x can react with compounds to form nitric acid and related small particles and result in PM related health effects.	NO _x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NO _x emissions. NO ₂ concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration; increased visits to hospital for respiratory illnesses.

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Criteria Air Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Carbon monoxide (CO)	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.
Sulfur dioxide (SO ₂)	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO _x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM ₁₀ .	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethyl sulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.
Lead	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.
Sources: California Environmental Protection Agency (Cal/EPA) 2002; California Air Resources Board (CARB); United States Environmental Protection Agency (USEPA); National Toxicology Program			

Toxic Air Contaminants

Concentrations of toxic air contaminants (TACs) are also used as indicators of air quality conditions. TACs are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at very low concentrations. TACs can cause long-term health effects (such as cancer, birth defects,

neurological damage, asthma, bronchitis, or genetic damage) or short-term acute effects (such as eye watering, respiratory irritation, runny nose, throat pain, or headaches). For those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which some adverse health impacts are not expected to occur. This contrasts with the criteria pollutants such as NO₂ and carbon dioxide (CO₂) for which acceptable levels of exposure can be determined and for which the State and federal governments have set ambient air quality standards.

TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to a particular TAC. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk is typically expressed as excess cancer cases per million exposed individuals, typically over a lifetime exposure or other prolonged duration. For noncarcinogenic substances, there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels may vary depending on the specific pollutant. Acute and chronic exposure to noncarcinogens is expressed as a hazard index (HI), which is the ratio of expected exposure levels to an acceptable reference exposure levels.

To date, the California Air Resources Board (CARB) has designated nearly 200 compounds as TACs. CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the most important being diesel particulate matter (DPM) from diesel-fueled engines. Common TACs of national and California concern include: DPM, volatile organic compounds (VOCs), benzene, asbestos, hydrogen sulfide, sulfates, visibility-reducing particulates, vinyl chloride, and lead. Table 3.2-2 provides a summary of these types, sources, and effects of TACs of national and California concern.

Table 3.2-2 Description of Toxic Air Contaminants of National and California Concern

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Diesel Particulate Matter (DPM)	Diesel PM is a source of PM _{2.5} —diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.	Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Volatile Organic Compounds (VOCs)	Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding CO, CO ₂ , carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM ₁₀ and lower visibility.	Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.
Benzene	Benzene is a VOC. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a “Group A” carcinogen.	Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. Benzene occurs naturally in gasoline at one to two percent by volume. The primary route of human exposure is through inhalation.	Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.
Asbestos	Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite.	Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States.	Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.
Hydrogen Sulfide	Hydrogen sulfide is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Sulfates	The sulfate ion is a polyatomic anion with the empirical formula SO ₄ . Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.
Visibility-reducing Particles	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter (1 micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal; and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.	- Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravates existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. - Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.
Vinyl Chloride	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, CARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.
Lead	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Lead gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.
Sources: California Environmental Protection Agency (Cal/EPA); California Air Resources Board (CARB); United States Environmental Protection Agency (USEPA); National Toxicology Program			

Air Quality

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed, wind direction, and air temperature inversions interact with the physical features of the landscape to determine the movement and dispersal of air pollutant emissions and, consequently, their effect on air quality.

Regional Air Quality

The NCUAQMD is the primary agency responsible for planning to meet the National and California Ambient Air Quality Standards (NAAQS and CAAQS) in the NCAB, primarily the Humboldt, Del Norte, and Trinity Counties' portions of the basin.

AIR POLLUTANT STANDARDS

Air pollutant standards have been identified by USEPA and CARB for the following six criteria air pollutants that affect ambient air quality: ozone, NO₂, CO, SO₂, lead, PM₁₀, and PM_{2.5}. These air pollutants are called "criteria air pollutants," because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. California has also established standards for toxic air contaminants such as visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Table 3.2-3 presents the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for these aforementioned air pollutants. California air quality standards are identical to or stricter than federal standards for all criteria pollutants. It should be noted that there are no State or federal air quality standards for VOCs, benzene, or DPM.

Ambient air pollutant concentrations in the NCAB are measured at air quality monitoring stations operated by CARB and NCUAQMD. Air quality monitoring stations measure pollutant ground-level concentrations. In general, the NCAB experiences low concentrations of most pollutants compared to federal or State standards.

AIR POLLUTANT ATTAINMENT DESIGNATIONS

Both USEPA and CARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. "Attainment" status refers to those regions that are meeting federal and/or State standards for a specified criteria pollutant. "Nonattainment" refers to regions that do not meet federal and/or State standards for a specified criteria pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status for a specified criteria air pollutant. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

The current attainment designations for the NCAB are also shown in Table 3.2-3. The NCAB is designated as unclassified or attainment for all pollutants, with the exception of PM₁₀, which exceeds the California standard.

Table 3.2-3 Federal and State Air Quality Standards and NCAB Attainment Status

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8 Hour	0.070 ppm	A	0.070 ppm	U/A
	1 Hour	0.09 ppm	A		
Carbon Monoxide	8 Hour	9.0 ppm	A	9 ppm	U/A
	1 Hour	20 ppm	A	35 ppm	U/A
Nitrogen Dioxide	1 Hour	0.18 ppm	A	0.100 ppm	U/A
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	U/A
Sulfur Dioxide	24 Hour	0.04 ppm	A	0.14 ppm	U/A
	1 Hour	0.25 ppm	A	0.075 ppm	U/A
	Annual Arithmetic Mean			0.030 ppm	U/A
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	A		
	24 Hour	50 µg/m ³	N	150 µg/m ³	U
Particulate Matter - Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	A	9 µg/m ³	U/A
	24 Hour			35 µg/m ³	U/A
Sulfates	24 Hour	25 µg/m ³	A		
Lead	Calendar Quarter			1.5 µg/m ³	U/A
	Rolling 3 Month Average			0.15 µg/m ³	U/A
	30 Day Average	1.5 µg/m ³	A		U/A
Hydrogen Sulfide	1 Hour	0.03 ppm	A		
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm	No information available		
Visibility Reducing particles	8 Hour (10:00 to 18:00 PST)		U		

A=Attainment N=Nonattainment U=Unclassified; mg/m³=milligrams per cubic meter ppm=parts per million, µg/m³=micrograms per cubic meter

Source: CARB. 2024. Maps of State and Federal Area Designations. Available at: <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations> (accessed October 2024).

Local control in air quality management is provided by CARB through county-level or regional (multi-county) air districts. CARB establishes Statewide air quality standards and is responsible for control of mobile emission sources, while the local air districts are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins Statewide. Humboldt is located in the NCAB and under the jurisdiction of the NCUAQMD.

Existing Humboldt Air Quality

The NCAB has been conducting air quality monitoring since 1982 when the NCUAQMD was formed. The NCUAQMD operates four air monitoring stations, two of which, the Eureka-Jacobs Station and the Eureka-Humboldt Hill Station, are in Humboldt County and represent the project. Monitoring results have shown that the principal pollutant in Humboldt is PM₁₀. As discussed above, the NCUAQMD is classified as “attainment” for the criteria pollutants of ozone and PM_{2.5}, attainment for the federal PM₁₀ standard, and in “nonattainment” for the State 24-hour particulate (PM₁₀) standard.

Table 3.2-4 summarizes the representative annual air quality data for the RCAP area over the years 2021 through 2023 from the NCAB monitoring stations as provided by CARB.² As shown in Table 3.2-4, the State PM₁₀ standards were exceeded in 2021-2023. No other air quality standards were exceeded.

Table 3.2-4 Ambient Air Quality Monitoring Data

Pollutant	2021	2022	2023
Ozone (ppm), Worst 1-Hour ¹	0.073	0.059	0.071
Number of days of State exceedances (>0.09 ppm)	0	0	0
Ozone (ppm), 8-Hour Average ¹	0.064	0.052	0.066
Number of days of State exceedances (>0.07 ppm)	0	0	0
Number of days of Federal exceedances (>0.07 ppm)	0	0	0
Nitrogen Dioxide, Worst 1-Hour	0.0202	.0273	.0181
Number of days above NAAQS (>0.100 ppm)	0	0	0
Number of days above CAAQS (>0.180 ppm)	0	0	0
Particulate Matter <10 microns, µg/m ³ , Worst 24 Hours ¹	61.5	59.4	68.4
Number of days above State standard (>50 µg/m ³)	2	2	4
Number of days above Federal standard (>150 µg/m ³)	0	0	0
Particulate Matter <2.5 microns, µg/m ³ , Worst 24 Hours ¹	16.2	21.2	24.5
Number of days above Federal standard (>35 µg/m ³)	0	0	0
ppm = parts per million; µg/m ³ = micrograms per cubic meter			
¹ Measurements taken from the Eureka-Humboldt Hill station for ozone and nitrogen dioxide. Measurements taken from Eureka-Jacobs station for particulate matter.			
Source: CARB 2024. iADAM: Air Quality Data Statistics. Summarized by Air Basin. Years 2021-2023. Available at: https://www.arb.ca.gov/adam/topfour/topfour1.php (accessed September 2024).			

MOBILE EMISSIONS

The primary source of mobile air pollutants (both criteria air pollutant and TACs) within the RCAP area is motor-related vehicle trips associated with the local residential, commercial, institutional, and recreational uses.

STATIONARY EMISSIONS

The primary source of stationary air pollutants (both criteria air pollutant and TACs) within the RCAP area is building-related energy use associated with the local residential, commercial, office, industrial, school, and semi-public and institutional uses. Other sources of stationary emissions include landscape maintenance, and consumer products from residential, institutional, agricultural and commercial uses.

² CARB 2024. iADAM: Air Quality Data Statistics. Summarized by Air Basin. Years 2021-2023. <https://www.arb.ca.gov/adam/topfour/topfour1.php> (accessed September 2024).

Air Pollution Sensitive Receptors

Sensitive Receptor Types

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects related to air pollutants exposure than others. Land uses such as residences, schools, day care centers, hospitals, nursing and convalescent homes, and parks are considered to be the most sensitive to poor air quality, because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than that for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years. California Air Pollution Control Officers Association (CAPCOA) defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, day care centers, hospitals, and senior-care facilities.

Sensitive Receptors in RCAP Area

Air pollution sensitive receptors in the RCAP area include single- and multi-family residential land uses, schools, daycares, senior care facilities, and public parks. The commercial and office land uses throughout the RCAP area are not considered air pollution sensitive receptors.

3.2.3 Regulatory Framework

Federal Regulations

Clean Air Act and National Ambient Air Quality Standards

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970 and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground-level ozone, CO, sulfur oxides, nitrogen oxides, and lead. USEPA calls these pollutants criteria air pollutants, because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards. The federal standards are called NAAQS. The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards.

The federal standards were set to protect public health, including that of sensitive individuals; thus, USEPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

The CAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies.

USEPA Emission Standards for New Off-road Equipment

Before 1994, there were no standards to limit the amount of emissions from off-road equipment. In 1994, USEPA established emission standards for hydrocarbons, NO_x, CO, and PM to regulate new pieces of off-road equipment. These emission standards came to be known as Tier 1. Since that time, increasingly more stringent Tier 2, Tier 3, and Tier 4 (interim and final) standards were adopted by US EPA, as well as by CARB. Each adopted emission standard was phased in over time. New engines built in and after 2015 across all horsepower sizes must meet Tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for Tier 4 final emissions standards.

State Regulations

California Air Quality Control Plan (State Implementation Plan)

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The SIP for California is administered by CARB, which has overall responsibility for Statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan, which is sent to CARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Areas designated nonattainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards.

California Clean Air Act and California Ambient Air Quality Standards

The California CAA, signed into law in 1988, requires all areas of the State to make incremental progress toward the achievement of the California Ambient Air Quality Standards (CAAQS). CARB is the State air pollution control agency and is a part of CalEPA. CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California, and for implementing the requirements of the California CAA. CARB oversees local district compliance with federal and California laws, approves local air quality plans, submits the State implementation plans to the USEPA, monitors air quality, determines and updates State area designations and maps, and sets emissions standards for new mobile sources and off-road vehicles pursuant to California waiver and authorization requests, consumer products, small utility engines, and fuels.

The California CAA requires CARB to establish ambient air quality standards for California, known as CAAQS. Similar to the NAAQS, CAAQS have been established for criteria pollutants and standards are established for vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In general, the CAAQS are more stringent than the NAAQS on criteria pollutants. The California CAA requires all local air districts to endeavor to make incremental progress toward attaining the CAAQS. The California CAA specifies that local air districts focus attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources as long as the regulations do not infringe on local land use authority.

In 2017, CARB released a technical advisory on reducing air pollution exposure from near high-volume roadways that is a technical supplement to CARB's air quality and Land Use Handbook: A Community Health Perspective. Since the publication of the handbook, research has demonstrated the public health, climate, financial and other benefits of compact, infill development along transportation corridors, and that exposures can be reduced with new strategies. As described in the technical advisory, California has implemented various measures to improve air quality and reduce exposure to roadway vehicle emissions. These include the Diesel Risk Reduction Plan, which aims to reduce particulate matter emissions from diesel vehicles. The continued electrification of California's vehicle fleet would also reduce PM_{2.5} levels, and ongoing efforts to reduce emissions from cars and trucks and to move vehicles towards "zero emission" alternatives will continue to drive down roadway vehicle pollution.

California Health and Safety Code Section 39655 and California Code of Regulations Title 17 Section 93000 (Substances Identified as Toxic Air Contaminants)

CARB identifies substances as TACs as defined in Health and Safety Code Section 39655 and listed in Title 17, Section 93000 of the California Code of Regulations, "Substances Identified as Toxic Air Contaminants." A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, there are thresholds set by regulatory agencies below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards. According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs for the State of California can be attributed to relatively few compounds, the most important of which is DPM from diesel-fueled engines.

California Low-emission Vehicle Program

CARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, CARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) emissions for new passenger vehicles.

California On-Road Heavy-duty Vehicle Program

CARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. CARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.

California Airborne Toxics Control Measure for Asbestos

CARB has adopted Airborne Toxics Control Measures for sources that emit a particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions. In July 2001, CARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a “Dust Mitigation Plan” and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present. There are locations in Humboldt County with ultramafic rock and serpentine soils that may contain naturally occurring asbestos.

Verified Diesel Emission Control Strategies

USEPA and CARB tiered off-road emission standards only apply to new engines and off-road equipment can last several years. CARB has developed Verified Diesel Emission Control Strategies (VDECS), which are devices, systems, or strategies used to achieve the highest level of pollution control from existing off-road vehicles, to help reduce emissions from existing engines. VDECS are designed primarily for the reduction of diesel PM emissions and have been verified by CARB. There are three levels of VDECS, the most effective of which is the Level 3 VDECS. Tier 4 engines are not required to install VDECS because they already meet the emissions standards for lower tiered equipment with installed controls.

California Diesel Risk Reduction Plan

CARB Diesel Risk Reduction Plan led to the adoption of state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), also known as the Hot Spots

Act. To date, CARB has identified more than 21 TACs and has adopted the USEPA list of hazardous air pollutants as TACs.

Carl Moyer Memorial Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program), a partnership between CARB and local air districts, issues grants to replace or retrofit older engines and equipment with engines and equipment that exceed current regulatory requirements to reduce air pollution. Money collected through the Carl Moyer Program complements California's regulatory program by providing incentives to effect early or extra emission reductions, especially from emission sources in environmental justice communities and areas disproportionately affected by air pollution. The program has established guidelines and criteria for the funding of emissions reduction projects. Within the NCAB, the NCUAQMD administers the Carl Moyer Program. The program establishes cost-effectiveness criteria for funding emission reductions projects.

Regional and Local Regulations

NCUAQMD Rule 104 (Criteria Air Pollutants)

NCUAQMD is the primary agency responsible for planning to meet the National and California Ambient Air Quality Standards (NAAQS and CAAQS) in the NCAB, primarily the Humboldt, Del Norte, and Trinity Counties' portions of the basin. NCUAQMD objectives are to maintain the NAAQS for all criteria air pollutants and attain the CAAQS for particulate matter with a diameter of 10 microns (PM₁₀). The 24-hour PM₁₀ CAAQS is only exceeded in Humboldt County. The NCAB has been designated as nonattainment with respect to the for PM₁₀ since the 1980s.³ NCUAQMD Rule 104, Prohibitions, includes requirements to help reduce particulate matter and fugitive dust emissions.⁴

NCUAQMD has developed limited guidance for use by lead agencies when preparing environmental documents. The NCUAQMD has not formally adopted significance thresholds, but instead recommends using the BACT emission rates for stationary sources as defined and listed in the NCUAQMD Rule 110, New Source Review and Prevention of Significant Deterioration, Section 5.1 - BACT.⁵ These significance thresholds are presented in Table 3.2-5, below. After the air quality impacts of a project have been assessed, the lead agency's analysis undergoes a review by NCUAQMD. NCUAQMD submits comments and suggestions to the lead agency for incorporation into the environmental document.

NCUAQMD Regulation III (Toxic Air Pollutants)

NCUAQMD recommends the use of the latest version of the CAPCOA Health Risk Assessments for Proposed Land Use Project to evaluate and reduce air pollution impacts from new development.⁶ NCUAQMD Regulation III enforces CARB's control measures for TACs requiring all sources that possess the potential to emit TACs to obtain permits from NCUAQMD. Permits may be granted to

³ NCUAQMD. 1995. Particulate Matter (PM₁₀) Attainment Plan. Pages III-1.

<https://ncuaqmd.specialdistrict.org/files/6f1ad639b/NCUAQMD+Attainment+Plan+5-95.pdf> (accessed October 2024).

⁴ NCUAQMD. 2015. Regulation I Rule 104 – Prohibitions. <https://www.ncuaqmd.org/files/70b9a2edd/Rule+104.pdf> (accessed October 2024).

⁵ NCUAQMD. 2015. Regulation I Rule 110 – New Source Review (NSR) And Prevention of Significant Deterioration (PSD). <https://ncuaqmd.specialdistrict.org/files/397b4b794/Rule+110.pdf> (accessed October 2024).

⁶ California Air Pollution Control Officers Association (CAPCOA). 2009. Health Risk Assessments for Proposed Land Use Projects. https://www2.valleyair.org/media/glsdpx3/capcoa_hra_lu_guidelines_8-6-09.pdf (accessed October 2024).

these sources if they are constructed and operated in accordance with applicable regulations, including air toxics control measures.

Naturally Occurring Asbestos

Pursuant to NCUAQMD regulations, all construction, grading, quarrying, and surface mining operations must notify the Air District. These activities must comply with CARB's Airborne Toxic Control Measures for naturally-occurring asbestos (NOA), as well as NCUAQMD's Rule 401, "Asbestos Fee," which covers the cost of implementing NOA-control programs.⁷

Particulate Matter (PM₁₀) Attainment Plan

In an effort to achieve the state air quality standard, an understanding of the causes of high PM₁₀ levels was deemed necessary by the NCUAQMD. As a result, they adopted the PM₁₀ Attainment Plan adopted in 1995. Humboldt County's air quality has violated the CAAQS for PM₁₀ and the district has been classified as a PM₁₀ nonattainment area. PM₁₀ emissions in Humboldt County and the surrounding unincorporated areas are generated by a variety of sources but are primarily from on-road vehicles (engine exhaust and dust from paved and unpaved roads), open burning of vegetation (both residential and commercial), residential wood stoves, and stationary industrial sources (factories). The PM₁₀ Attainment Plan includes control strategies that are intended to achieve attainment of the CAAQS. These control strategies include transportation control measures, like encouraging the usage of public transit, replacing the diesel-fueled bus fleet with natural gas-fueled models, recommending car-pooling and bicycle commuting, removing or repairing vehicles with inefficient emission control systems, and improving traffic flow to reduce idling and vehicle miles traveled (VMT). Additional land use control measures encourage mixed-use or more dense development to reduce sources of PM₁₀ emissions. The PM₁₀ Attainment Plan also includes measures that limit residential burning as well as multiple measures to encourage the installation of EPA-certified woodstoves.

Variety in Rural Options of Mobility 2022-2042

The Variety in Rural Options of Mobility 2022-2042 (VROOM 2022-2042) is a regional transportation plan implemented by the Humboldt County Association of Governments (HCAOG), a Joint Powers Agency comprised of Humboldt County and the seven incorporated Cities within Humboldt. HCAOG is required to adopt and submit an updated regional transportation plan every four years. VROOM 2022-2042 sets forth long-range transportation planning goals describing how the region will meet its transportation needs for the 20-year period from 2022 to 2042. VROOM 2022-2042 incorporates existing and future land use patterns and forecasted job growth to identify and prioritize transportation projects throughout Humboldt.⁸ More information is provided in Section 3.8, *Transportation*.

Humboldt County General Plan, Air Quality Element

The 2017 Humboldt County General Plan includes policies applicable to air quality or GHG emissions. The policies identified are intended to support the goals of improving air quality,

⁷ NCUAQMD. 2024. Asbestos NESHAP & NOA Regulations. <https://www.ncuaqmd.org/asbestos-neshap-noa-regulations> (accessed October 2024)

⁸ Humboldt County Association of Governments (HCAOG). 2022. Variety in Rural Options of Mobility (VROOM) 2022. https://www.hcaog.net/sites/default/files/vroom_2022-2042_full_report_0.pdf (accessed October 2024).

reducing emissions of PM₁₀ and other criteria pollutants, and reducing greenhouse gas emissions. The policies include:⁹

- **AQ-P1 Reduce Length and Frequency of Vehicle Trips.** Reduce the length and frequency of vehicle trips through land use and transportation policies by encouraging mixed-use development, compact development patterns in areas served by public transit, and active modes of travel.
- **AQ-P2 Reduce Localized Concentrated Air Pollution.** Reduce or minimize the creation of "hot spots" or localized places of concentrated automobile emissions.
- **AQ-P3 Fireplace and Woodstove PM₁₀ Emissions.** Support incentives to minimize emissions from fireplaces and woodstoves.
- **AQ-P4 Construction and Grading Dust Control.** Dust control practices on construction and grading sites shall achieve compliance with NCAQMD fugitive dust emission standards.
- **AQ-P5 Air Quality Impacts from New Development.** During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCAQMD.
- **AQ-P6 Buffering Land Uses.** During environmental review of discretionary commercial and industrial projects, consider the use of buffers between new sources of emissions and adjacent land uses to minimize exposure to air pollution.
- **AQ-P7 Interagency Coordination.** Coordinate with the NCAQMD early in the permit review process to identify expected regulatory outcomes and minimize delays for projects involving:
 - CEQA environmental review;
 - Building demolition projects that may involve removal of asbestos-containing material subject to National Emission Standards for Hazardous Air Pollutants (NESHAP); and
 - Grading and mining operations subject to State Airborne Toxic Control Measures (ATCM) for naturally occurring asbestos.
 - Rely on the air quality standards, permitting processes, and enforcement capacity of the NCAQMD to define thresholds of significance and set adequate mitigations under CEQA to the maximum extent allowable.
- **AQ-P8 Reduce Air Quality Impacts from Wildfires.** Support and encourage fire suppression of wildfires that may have an acute air quality health impact on local population centers.
- **AQ-P9 County Climate Action Plan.** Through public input and review, develop and implement a multi-jurisdictional Climate Action Plan to achieve reductions in greenhouse gas emissions consistent with the state Global Warming Solutions Act and subsequent implementing legislation and regulations.
- **AQ-P13 Forest Sequestration and Biomass Energy.** Provide incentives for increased carbon sequestration on forest lands and encourage the reduction of smoke production through the utilization of excess forest biomass for sustainable energy generation and other uses.
- **AQ-P14 Solar Electric System Capacity.** Encourage and provide incentives to increase solar-electric capacity in residential, commercial, and industrial sectors.

⁹ Humboldt County. 2017. General Plan, Chapter 15 Air Quality Element.
<https://humboldt.gov.org/DocumentCenter/View/61991/Chapter-15-Air-Quality-Element-PDF> (accessed October 2024).

- **AQ-P15 Energy Efficient Building Design.** Encourage and provide incentives for construction of buildings and energy saving measures beyond Title 24 requirements for residential and commercial projects.
- **AQ-P16 Electric Vehicle Accommodations.** Encourage and provide incentives for commercial and residential design that supports the charging of electric vehicles.

City of Arcata General Plan, Air Quality Element

The City of Arcata General Plan includes guiding principles and goals to promote clean air. The Air Quality Element includes policies to reduce air pollution from stationary sources, multiple objectives to reduce mobile source emissions, and the implementation measure for the adoption of a Climate Action Plan to collaborate regionally. The specific policies are as follows:¹⁰

- **AQ-1a Reduce emissions from stationary point sources: commercial and industrial.** Coordinate with energy providers to develop incentive programs encouraging the use of less polluting, energy efficient designs and equipment in commercial and manufacturing uses. Encourage commercial and industrial uses to self-enforce emissions reductions by maintaining and repairing equipment, correcting leaks, installing control devices, and minimizing accidental releases. Coordinate with the District to establish buffer zones between point sources and the public, particularly sensitive receptors such as schools, hospitals, and convalescent facilities.
- **AQ-1b Reduce emissions from stationary area sources: residential, commercial, and industrial.** Prohibit installation of wood burning appliances, including remodel, addition, or new construction. New construction retrofits must comply with energy efficient construction codes to reduce energy consumption including high-efficiency windows, water heaters, and furnaces. Encourage electric heat pump appliances.
- **AQ-1d Review of development projects for emissions reductions.** Evaluate new construction plans to reduce point and area sources of pollution. Consult with the District during the environmental review process.
- **AQ-2a Implement land use measures to reduce vehicle trips, miles traveled, and air pollutant emissions.** Implement or encourage the land use and development measures which reduce motor vehicle travel as outlined in the Transportation Element. These measures are also effective in reducing mobile sources of air pollutants.
- **AQ-2b Implement transportation measures to reduce vehicle trips, miles traveled, and air pollutant emissions.** Implement or encourage the following measures to reduce vehicle miles traveled and provide alternatives to the single occupant motor vehicle, as outlined in the Circulation & Mobility Element.
- **AQ-2c Reduce or minimize the creation of “hot spots” or localized places of concentrated automobile emissions.** Implement or encourage the following measures to reduce hot spots, which occur where groups of vehicles are required to idle (e.g., at congested intersections, driveways and drive-through facilities).
- **AQ-2d Design Arcata’s highest traveled arterials to minimize vehicle miles traveled.** Recognize that automobiles are most efficient and less polluting when driven less. Designing roads prioritized for alternative and non-motorized modes results in fewer vehicle miles traveled considering the full scope of all travel modes.

¹⁰ Arcata, City of. 2024. Arcata General Plan 2045, Air Quality Element. Adopted July 17, 2024.
https://www.cityofarcata.org/DocumentCenter/View/14362/General-Plan-204520240717_CI_WEB (accessed October 2024)

- **AQ-2e Recognize that poor air quality is caused by the combination of high pollutant emissions and meteorological conditions that do not allow for dispersal of pollutants.** The City shall coordinate a joint effort with the District to minimize the impact of high pollutant incidents and notify the public about meteorological conditions that contribute to poor air quality.
- **AQ-2f Enforce air quality control measures and monitoring at construction sites.** Construction emissions shall be controlled because, although they are temporary in nature, they can often be the greatest air quality impact of a project. Require dust and erosion control measures for construction activities.
- **AQ-3a Air quality standards and monitoring.** Identify potential emission sources of airborne toxins from mobile and stationary sources. This may be in coordination with the California Air Resource Board and the District, as appropriate. Enforce rigid high standards to restrict fumes, smoke, dust, or other environmental pollutants from stationary sources of pollution.
- **AQ-3b Develop and distribute material to educate the public on air quality issues.** Work with Cal Poly Humboldt, the California Air Resources Board, and the District to develop educational material regarding air quality, impact of air quality on people, plants and animals, and what citizens can do to improve air quality. The City will make this information available.
- **AQ-3c Cooperation in enforcement activities and programs.** Cooperate with the District in implementing and enforcing the district's rules and programs. Consider joint implementation of programs between the City and the district.
- **AQ-3d Indoor air pollution.** Factors such as sealed building interiors, inadequate ventilation, non-openable windows, and use of building materials that release toxic substances contribute to indoor air pollution. To maximize indoor air quality, the installation of openable windows and adequate ventilation systems, the use of pollution-reducing houseplants, as well as the selection of non-toxic building materials and interior finishes, is encouraged in all new buildings and in the retrofitting of existing buildings.
- **AQ-4a Odor controls.** Identify potential sources of noxious odors and regulate those sources to avoid adverse effects on adjacent sensitive receptors. Noxious odors are defined as foul smelling airborne emissions that are sufficiently concentrated to cause physical discomfort to those inhabiting adjacent areas. Regulations imposed to reduce effects of these odors shall include limiting hours for odor emissions, periodic monitoring, and filtering to reduce concentrations.

City of Blue Lake General Plan

The City of Blue Lake General Plan does not contain any policies specific to air quality.¹¹

City of Eureka General Plan

The City of Eureka 2040 General Plan was adopted in 2018 and contains the following Air Quality policies:¹²

- **AQ-1.1 Regional Coordination.** Cooperate with the North Coast Unified Air Quality Management District, Redwood Coast Energy Authority, and other agencies to develop a consistent and effective approach to air quality planning and management, as well as to reduce greenhouse gas emissions and air quality impacts in the region.

¹¹ Blue Lake, City of. 1986. General Plan. https://bluelake.ca.gov/wp-content/uploads/2022/05/General-Plan_updated_2009-_10-24-11.pdf (accessed October 2024).

¹² Eureka, City of. 2018. 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/3253/Final-Draft-2040-General-Plan> (accessed October 2024).

- **AQ-1.3 New Development.** Require new discretionary developments to incorporate mitigation measures that utilize Best Management Practices and reduce emissions from both construction and operational activities, consistent with the North Coast Unified Air Quality Management District requirements and State regulations.
- **AQ-1.4 Off-Street Parking.** Encourage and incentivize premium parking spaces for carpool, vanpool, and alternative energy vehicles, and encourage the development and addition of electric vehicle charging stations in parking lots.
- **AQ-1.5 NCUAQMD Consultation.** Require consultation and coordination with the North Coast Unified Air Quality Management District for any projects that may have a potential health risk or may expose the public to hazardous air pollutants, as well as determining compliance with adopted rules and regulations.
- **AQ-1.6 Buffering Land Uses.** Require buffering of uses, facilities, and operations that may produce toxic or hazardous air pollutants and/or odors (e.g., commercial and industrial uses, highways, etc.) to provide an adequate distance from sensitive receptors (e.g., housing and schools), consistent with California Air Resources Board recommendations.
- **AQ-1.7 Large Employers.** Encourage large employers to allow for flexibility in the work schedule that would reduce emissions of air pollutants, such as more alternative schedules and telecommuting, in addition to providing incentives for non-single occupancy vehicle commuting modes including public transit, electric vehicles, carpooling, and non-motorized transportation.
- **AQ-1.8 Localized Concentrated Air Pollution.** Strive to reduce the number and generation of localized points of concentrated automobile emissions, or “hot spots,” such as by synchronizing traffic signals.
- **AQ-1.9 Transit Funding.** Strive to secure adequate funding for transit, autonomous vehicle, mobility on-demand, and ridesharing services to provide viable transportation alternatives to help reduce greenhouse gas emissions. Require new development to contribute its fair share of the transit service costs to serve new projects.
- **AQ-1.10 Non-Motorized Transportation.** Continue to plan for and secure adequate funding for interjurisdictional non-motorized transportation facilities to help reduce greenhouse gas emissions.
- **AQ-1.11 City Employee Incentives.** Explore incentives for City employees to promote and utilize alternative modes of transportation, such as public transit, carpooling, walking, bicycling, and telecommuting.
- **AQ-1.12 City Vehicle Fleet.** Continue to purchase low-emission and zero-emission vehicles for the City’s non-emergency fleet and use only clean fuel sources for trucks and heavy equipment, where feasible.
- **AQ-1.13 Reducing the City’s Operation Emissions.** Continue to promote strategies aimed at lowering the City’s operation emissions, including exploring the feasibility of purchasing 100% renewable power through a Community Choice Aggregation program.
- **AQ-1.14 Education and Outreach.** Provide educational opportunities, and assist in engaging with the public regarding air quality, its health impacts, and potential actions that people can take to improve air quality and minimize greenhouse gas emissions.

City of Fortuna General Plan

The City of Fortuna General Plan was adopted in October 2010. Goal HS-3 is designed to improve air quality and minimize adverse effects. The following policies are intended to help support Goal HS-3:¹³

- **HS-3.1 Agency Cooperation.** The City shall cooperate with other agencies in developing an effective approach to regional air quality planning management.
- **HS-3.2 Particulate Matter.** The City shall strive to achieve and maintain compliance with National Ambient Air Quality Standards for (PM₁₀) and all Federal, State, regional, and local air quality standards.
- **HS-3.3 Odors.** The City shall require all businesses, particularly fast food and manufacturing, to minimize odors generated by the business to not be detectable off site.
- **HS-3.4 Wood Burning Appliance Standards.** The City shall adopt appropriate State and/or federal standards for EPA approved wood burning appliances. The City shall also make educational materials available for residents about the NCUAQMD Woodstove change-out program.
- **HS-3.6 Greenhouse Gas Emissions Reduction from Transportation.** Increase clean-fuel use, promote transit-oriented development and alternative modes of transportation, and reduce travel demand.
- **HS-3.7 Air Pollutant Emission Reduction Construction and Operation Measures.** The City shall require that new development incorporate air pollutant emission reduction measures during construction and operation.

City of Rio Dell General Plan

The City of Rio Dell 2015 General Plan has the following air resources policies to establish emissions reductions for mobile, point, and area sources in the City:¹⁴

- **P1.2.3-1.** Establish review procedures for development proposals to ensure that mobile, point, and area sources of air emissions are reduced to the greatest extent possible.
- **P1.2.3-2.** Reduce emissions from stationary sources by limiting wood-burning fireplace installations in new construction to low emitting, State and EPA certified fireplace inserts, woodstoves, pellet stoves, or natural gas fire stoves.

City of Trinidad General Plan

The City of Trinidad General Plan does not contain any policies specific to air quality.¹⁵

¹³ Fortuna, City of. 2010. Fortuna General Plan 2030.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20%20Policy%20Document_web.pdf (accessed October 2024).

¹⁴ Rio Dell, City of. 2015. City of Rio Dell General Plan.

https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf (accessed October 2024)

¹⁵ Trinidad, City of. 2021. General Plan. <https://www.trinidad.ca.gov/media/5491> (accessed January 2025)

3.2.4 Impacts and Mitigation Measures

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Air Quality.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?
- c) Expose sensitive receptors to substantial pollutant concentrations?
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Approach to Analysis

The following approaches are used to evaluate potential air quality impacts.

Comparison to Air Quality Plans

The policies and objectives of the RCAP are compared to those in the most recently adopted air quality plan for Humboldt, the NCUAQMD PM₁₀ Attainment Plan. In addition, the policies and objectives of the RCAP are compared to relevant policies contained in the County and City General Plans. The analysis determines if the RCAP conflicts with or obstructs implementation of these plans.

Construction Criteria Pollutant and TAC Emissions

Construction-related emissions are limited in duration but may still cause adverse air quality impacts. Construction associated with implementation of the proposed plan would generate emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, dump trucks, etc.); ground disturbance during site preparation and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

At this time, the pace, location and duration associated with construction of projects under the proposed plan are not sufficiently detailed to quantify a specific emissions impact, and, thus, it would be speculative to do so. Rather, construction criteria pollutant and TAC emissions impacts for development under the RCAP are discussed qualitatively. The OEHHA recommends evaluating risk exposure from short-term projects (e.g., construction projects) lasting more than two months.

Operation Criteria Pollutant and TAC Emissions

The long-term operational criteria pollutant and TAC emissions associated with implementation of the proposed plan are discussed qualitatively by evaluating the consistency of the proposed plan with the NCUAQMD PM₁₀ Attainment Plan and the County and City General Plan goals, policies, and control measures related to air quality. If the proposed plan is not consistent, then impacts would be potentially significant.

Odors

The impact analysis qualitatively evaluates the types of land uses facilitated by the proposed plan to evaluate whether major sources of anticipated odors would be present and, if so, whether those sources would likely generate objectionable odors.

EIR Scoping Comments Consideration

A commenter expressed concerns that the RCAP could result in increased criteria air pollutant and TAC emissions due to increased energy demand. The potential for the RCAP to result in increased criteria air pollutant emissions and TAC emissions are addressed under Impacts AQ-2 and AQ-3, respectively.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to air quality. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to air quality in Humboldt County.

Specific Thresholds of Significance

Consistency with Air Quality Plan

The applicable air quality plans include the NCUAQMD PM₁₀ Attainment Plan, which identifies measures to improve air quality and bring the region into attainment for PM₁₀. In addition, the Humboldt County General Plan Air Quality Element and Cities of Arcata, Eureka, Fortuna, and Rio Dell General Plans establish local goals and policies related to air quality. The RCAP would be consistent with these plans if it would support the goals and policies, include applicable control measures, and not disrupt or hinder implementation of the plans. Consistency with the County and individual city General Plans, as well as the PM₁₀ Attainment Plan, is the basis for determining whether the RCAP would conflict with or obstruct implementation of an applicable air quality plan.

Construction and Operational Criteria Pollutant and TAC Emissions Thresholds

The NCUAQMD does not have plan-level significance thresholds for construction air pollutants emissions. Similarly, the NCUAQMD has not formally adopted significance thresholds to guide CEQA significance determinations for land development projects. Instead, the NCUAQMD recommends use of the Best Available Control Technology (BACT) emission rates for stationary sources as defined in NCUAQMD Rule 110, which are listed in Table 3.2-5, as significance thresholds.¹⁶ Therefore, air pollution emissions from an individual project facilitated by the RCAP would have a significant individual and cumulative impact if they would exceed the NCUAQMD's significance thresholds for BACT adoption.

¹⁶ NCUAQMD. 2024. Planning & CEQA. <https://www.ncuaqmd.org/planning-ceqa> (accessed October 2024).

Table 3.2-5 NCUAQMD Significance Thresholds for BACT Adoption

Pollutant	Mass Daily Thresholds	
	Daily (pounds/day)	Annual (tons/year)
CO	500	100
Nitrogen Oxides (NO _x)	50	40
PM ₁₀	80	15
PM _{2.5}	50	10
Reactive Organic Compounds (ROC) ¹	50	40
Sulfur Oxides	80	40

¹ Reactive organic compounds (ROC) are formed during combustion and evaporation of organic solvents. ROCs are also referred to as reactive organic gases (ROG) and volatile organic compounds (VOC).

Notes: tpy = tons per year; lbs/day = pounds per day; NO_x = oxides of nitrogen; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less. The proposed project would not result in emissions of fluorides, hydrogen sulfide, lead, reduced sulfur compounds, sulfuric acid or total reduced sulfur compounds; therefore, they are not considered in the following analysis.

Source: Table 1.0 Significance Thresholds in NCUAQMD Rule 110 – New Source Review (NSR) and Prevention of Significant Deterioration (PSD), Section E.1 – BACT, July 9, 2015.

Because the NCUAQMD does not have plan-level significance thresholds, construction and operational emissions associated with RCAP implementation are discussed qualitatively to evaluate potential air quality impacts, because individual project-level information is not known at this time to reasonably estimate emissions associated with the RCAP.

Odors

The significance thresholds for odor impacts are qualitative in nature. The occurrence and severity of odor impacts from construction and operations of the RCAP would depend on numerous factors, including the nature, frequency, and intensity of the odor sources; wind speed and direction; the proximity to off-site receptors; and the sensitivity of exposed receptors. Although exposure to offensive odors generally does not result in physical harm, they can be perceived as objectionable leading to considerable distress among the public and can result in citizen complaints to local governments and regulatory agencies. The potential for odor impacts associated with the RCAP is addressed qualitatively.

Impact Evaluation

Air Quality Management Plans Consistency

Significance Criterion a: Would the proposed plan conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 THE RCAP INCLUDES MEASURES THAT WOULD REDUCE AIR POLLUTANT EMISSIONS FROM THE ENERGY AND TRANSPORTATION SECTORS AND WOULD BE CONSISTENT WITH THE APPLICABLE AIR QUALITY PLANS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction and Operation

The Humboldt County General Plan Air Quality Element was updated and adopted in 2017.¹⁷ The purpose of this Air Quality Element is to describe relevant strategies for improving air quality. Policies to reduce greenhouse gas (GHG) emissions and mitigate climate change are also included in the Air Quality Element, but consistency with such GHG and climate measures are discussed in Section 3.5, *Greenhouse Gas Emissions and Energy*. The following includes a discussion of consistency with relevant air quality measures of the applicable regional air quality plans. Table 3.2-6 identifies applicable air quality plan measures and discusses RCAP consistency, including corresponding policies from the RCAP that address the measures.

Table 3.2-6 Air Quality Consistency Analysis

Measures	Consistency
Humboldt County General Plan Air Quality Element	
AQ-P1 Reduce Length and Frequency of Vehicle Trips. Reduce the length and frequency of vehicle trips through land use and transportation policies by encouraging mixed-use development, compact development patterns in areas served by public transit, and active modes of travel.	Consistent: Projects and infrastructure under the RCAP would be consistent with the policy related to reducing length and frequency of vehicle trips. RCAP Measures T-1 and T-2 would target means to reduce vehicle trips and utilize more public transportation. RCAP Measure T-3 would increase mixed-used developments in infill priority areas to reduce regional VMT. RCAP Measure T-5 would help reduce commercial and industrial employee trips.
AQ-P2. Reduce Localized Concentrated Air Pollution. Reduce or minimize the creation of "hot spots" or localized places of concentrated automobile emissions.	Consistent. Projects and infrastructure under the RCAP, especially those under RCAP Measure T-3 would help reduce localized concentrations of air pollution. Prioritizing mixed-use development in infill priority areas would help reduce trips and VMT to reduce the localized air pollution from automobile combustion and fugitive emissions, including PM ₁₀ . In addition, RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support reduced VMT and associated air pollutant emissions by encouraging more active transportation, public transit, and car sharing use. Likewise, RCAP Measures T-6 through T-8 and T-11 would increase the adoption of zero emission vehicles (ZEVs) in Humboldt, thereby reducing automobile emissions.

¹⁷ Humboldt County. 2017. General Plan, Chapter 15 Air Quality Element.
<https://humboldt.gov/DocumentCenter/View/61991/Chapter-15-Air-Quality-Element-PDF> (accessed October 2024).

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Measures	Consistency
AQ-P8 Reduce Air Quality Impacts from Wildfires. Support and encourage fire suppression of wildfires that may have an acute air quality health impact on local population centers.	Consistent. RCAP Measures CS-3 and T-10 include actions for active forest management to reduce wildfire risks and utilize excess forest biomass for sustainable energy generation.
AQ-P13 Forest Sequestration and Biomass Energy. Provide incentives for increased carbon sequestration on forest lands and encourage the reduction of smoke production through the utilization of excess forest biomass for sustainable energy generation and other uses.	Consistent. The RCAP will conduct a feasibility study of carbon sequestration to identify technologies and potential viability of implementation under Measure CS-1a. Measure T-10 includes plans to manage biomass and organic waste through the development of biofuel infrastructure, thereby reducing smoke production.
AQ-P16 Electric Vehicle Accommodations. Encourage and provide incentives for commercial and residential design that supports the charging of electric vehicles.	Consistent: The RCAP incorporates numerous measures to support electrical vehicle accommodations. RCAP Measure T-7, for example, aims to increase commercial ZEV use and adoption through a regional charging network and development of hydrogen hubs. Increased ZEV adoption would result in reduced air pollutant emissions from the transportation sector in Humboldt.
City of Arcata General Plan Air Quality Element	
AQ-1a Reduce emissions from stationary point sources: commercial and industrial. Coordinate with energy providers to develop incentive programs encouraging the use of less polluting, energy efficient designs and equipment in commercial and manufacturing uses. Encourage commercial and industrial uses to self-enforce emissions reductions by maintaining and repairing equipment, correcting leaks, installing control devices, and minimizing accidental releases. Coordinate with the District to establish buffer zones between point sources and the public, particularly sensitive receptors such as schools, hospitals, and convalescent facilities.	Consistent: RCAP Strategies 3 and 4 would increase decarbonization of existing buildings and require new development to be decarbonized, which would improve energy efficient design and require that any end-use deemed infeasible for electrification exceed existing Title 24 energy efficiency standards as well as be prepared for future electrification. This strategy will assist with emissions reductions from commercial and industrial sources.
AQ-1b Reduce emissions from stationary area sources: residential, commercial, and industrial. Prohibit installation of wood burning appliances, including remodel, addition, or new construction. New construction retrofits must comply with energy efficient construction codes to reduce energy consumption including high-efficiency windows, water heaters, and furnaces. Encourage electric heat pump appliances.	Consistent: RCAP Strategies 3 and 4 would increase decarbonization of existing buildings and require new development to be decarbonized. These strategies would help reduce emissions from residential, commercial, and industrial area sources.
AQ-2a Implement land use measures to reduce vehicle trips, miles traveled, and air pollutant emissions. Implement or encourage the land use and development measures which reduce motor vehicle travel as outlined in the Transportation Element. These measures are also effective in reducing mobile sources of air pollutants.	Consistent: Measure T-3 will reduce regional VMT by increasing mixed-use development in infill priority areas.

Measures	Consistency
AQ-2b Implement transportation measures to reduce vehicle trips, miles traveled, and air pollutant emissions. Implement or encourage the following measures to reduce vehicle miles traveled and provide alternatives to the single occupant motor vehicle, as outlined in the Circulation & Mobility Element.	Consistent: RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support reduced VMT and associated air pollutant emissions by encouraging more active transportation, public transit, and car sharing use. In addition, RCAP Measure T-3 would reduce regional VMT by increasing mixed-use development in infill priority areas.
AQ-2c Reduce or minimize the creation of “hot spots” or localized places of concentrated automobile emissions. Implement or encourage the following measures to reduce hot spots, which occur where groups of vehicles are required to idle (e.g., at congested intersections, driveways and drive-through facilities).	Consistent. Projects and infrastructure under the RCAP, especially those under RCAP Measure T-3 would help reduce localized concentrations of air pollution. Prioritizing mixed-use development in infill priority areas would help reduce trips and VMT to reduce the localized air pollution from automobile combustion and fugitive emissions, including PM₁₀. In addition, RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support reduced VMT and associated air pollutant emissions by encouraging more active transportation, public transit, and car sharing use. Likewise, RCAP Measures T-6 through T-8 and T-11 would increase the adoption of ZEVs in Humboldt, thereby reducing automobile emissions.
AQ-2d Design Arcata’s highest traveled arterials to minimize vehicle miles traveled. Recognize that automobiles are most efficient and less polluting when driven less. Designing roads prioritized for alternative and non-motorized modes results in fewer vehicle miles traveled considering the full scope of all travel modes.	Consistent. RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support reduced VMT and associated air pollutant emissions by encouraging more active transportation, public transit, and car sharing use. These measures would support pedestrian, bicycle, and public transit infrastructure improvements to confirm the circulation system offers alternative travel modes.
AQ-2f Enforce air quality control measures and monitoring at construction sites. Construction emissions shall be controlled because, although they are temporary in nature, they can often be the greatest air quality impact of a project. Require dust and erosion control measures for construction activities.	Consistent. Individual projects facilitated by the RCAP would be subject to measures to reduce construction air pollutant emissions, as discussed in more detail under Impact AQ-2, below.
AQ-3c Cooperation in enforcement activities and programs. Cooperate with the District in implementing and enforcing the district’s rules and programs. Consider joint implementation of programs between the City and the district.	Consistent. The RCAP will not conflict with this policy. For example, RCAP Action T-8e involves direct partnership with the NCUAQMD.
AQ-3d Indoor air pollution. Factors such as sealed building interiors, inadequate ventilation, non-openable windows, and use of building materials that release toxic substances contribute to indoor air pollution. To maximize indoor air quality, the installation of openable windows and adequate ventilation systems, the use of pollution-reducing houseplants, as well as the selection of non-toxic building materials and interior finishes, is encouraged in all new buildings and in the retrofitting of existing buildings.	Consistent. RCAP Strategies 3 and 4 would increase decarbonization of existing buildings and require new development to be decarbonized. These strategies would help reduce indoor air pollution from natural gas and woodburning fuel use.

Measures	Consistency
City of Eureka General Plan	
AQ-1.1 Regional Coordination. Cooperate with the North Coast Unified Air Quality Management District, Redwood Coast Energy Authority, and other agencies to develop a consistent and effective approach to air quality planning and management, as well as to reduce greenhouse gas emissions and air quality impacts in the region.	Consistent. The RCAP includes Strategy 1, which would develop a regional coalition to effectively reduce air pollutant and GHG emissions in the region. In addition, RCAP Action T-8e includes partnership with NCUAQMD to promote adoption of zero emission offroad equipment.
AQ-1.3 New Development. Require new discretionary developments to incorporate mitigation measures that utilize Best Management Practices and reduce emissions from both construction and operational activities, consistent with the North Coast Unified Air Quality Management District requirements and State regulations.	Consistent. Individual projects facilitated by the RCAP would be subject to measures to reduce air pollutant emissions, as discussed in more detail under Impact AQ-2, below.
AQ-1.4 Off-Street Parking. Encourage and incentivize premium parking spaces for carpool, vanpool, and alternative energy vehicles, and encourage the development and addition of electric vehicle charging stations in parking lots.	Consistent. RCAP Measure T-5 includes a ride-sharing program that would consist of designated parking spaces for ridesharing vehicles, passenger loading, unloading, and waiting zones; and a website, message board, or app for coordinating ridesharing. RCAP Measures T-6 through T-8 and T-11 promote the addition of electric vehicle charging and ZEV fueling stations throughout Humboldt to increase ZEV adoption.
AQ-1.5 NCUAQMD Consultation. Require consultation and coordination with the North Coast Unified Air Quality Management District for any projects that may have a potential health risk or may expose the public to hazardous air pollutants, as well as determining compliance with adopted rules and regulations.	Consistent. Individual projects facilitated by the RCAP would be subject to measures to reduce air pollutant emissions, as discussed in more detail under Impact AQ-2, below.
AQ-1.7 Large Employers. Encourage large employers to allow for flexibility in the work schedule that would reduce emissions of air pollutants, such as more alternative schedules and telecommuting, in addition to providing incentives for non-single occupancy vehicle commuting modes including public transit, electric vehicles, carpooling, and non-motorized transportation.	Consistent. RCAP Measure T-5 would require commercial and industrial employers with 25 employees or more to develop a Transportation Management Plan.
AQ-1.8 Localized Concentrated Air Pollution. Strive to reduce the number and generation of localized points of concentrated automobile emissions, or “hot spots,” such as by synchronizing traffic signals.	Consistent. Projects and infrastructure under the RCAP, especially those under RCAP Measure T-3 would help reduce localized concentrations of air pollution. Prioritizing mixed-use development in infill priority areas would help reduce trips and VMT to reduce the localized air pollution from automobile combustion and fugitive emissions, including PM ₁₀ . In addition, RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support reduced VMT and associated air pollutant emissions by encouraging more active transportation, public transit, and car sharing use. Likewise, RCAP Measures T-6 through T-8 and T-11 would increase the adoption of ZEVs in Humboldt, thereby reducing automobile emissions.

Measures	Consistency
AQ-1.9 Transit Funding. Strive to secure adequate funding for transit, autonomous vehicle, mobility on-demand, and ridesharing services to provide viable transportation alternatives to help reduce greenhouse gas emissions. Require new development to contribute its fair share of the transit service costs to serve new projects.	Consistent. The RCAP includes actions under Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 to secure funding for pedestrian, bicycle, public transit, and car share infrastructure improvements. In addition, RCAP Strategy 8 includes measures and actions to seek funding opportunities for ZEV and alternative fueling options.
AQ-1.10 Non-Motorized Transportation. Continue to plan for and secure adequate funding for interjurisdictional non-motorized transportation facilities to help reduce greenhouse gas emissions.	Consistent. The RCAP includes actions under Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 to secure funding for pedestrian, bicycle, public transit, and car share infrastructure improvements on a regional scale.
AQ-1.11 City Employee Incentives. Explore incentives for City employees to promote and utilize alternative modes of transportation, such as public transit, carpooling, walking, bicycling, and telecommuting.	Consistent. RCAP Measure T-5 would require employers with 25 employees or more to develop a Transportation Management Plan.
AQ-1.12 City Vehicle Fleet. Continue to purchase low-emission and zero-emission vehicles for the City's non-emergency fleet and use only clean fuel sources for trucks and heavy equipment, where feasible.	Consistent. RCAP Measure T-11 is designed to "lead by example" and electrify or otherwise decarbonize 50 percent of municipal fleets by 2030 in alignment with the State's Advanced Clean Fleet Rule.
AQ-1.13 Reducing the City's Operation Emissions. Continue to promote strategies aimed at lowering the City's operation emissions, including exploring the feasibility of purchasing 100% renewable power through a Community Choice Aggregation program.	Consistent. RCAP Measure BE-1 seeks to increase grid-supplied renewable energy to 90 percent by 2030, which would reduce operational emissions related to electricity use in municipal buildings. Additionally, RCAP Measure BE-7 targets to decarbonize 30 percent of municipal buildings and facilities by 2030 and Measure T-11 directs Humboldt to decarbonize 50 percent of municipal fleets by 2030.
City of Fortuna General Plan	
HS-3.1 Agency Cooperation. The City shall cooperate with other agencies in developing an effective approach to regional air quality planning management.	Consistent. The RCAP includes Strategy 1, which would develop a regional coalition to effectively reduce air pollutant and GHG emissions in the region.
HS-3.2 Particulate Matter. The City shall strive to achieve and maintain compliance with National Ambient Air Quality Standards for (PM ₁₀) and all Federal, State, regional, and local air quality standards.	Consistent. The RCAP is intended to reduce GHG emissions; however, co-benefits of the RCAP policies to decarbonize energy sources and buildings and to reduce VMT are that these policies will also reduce PM ₁₀ and other air pollutant emissions.
HS-3.6 Greenhouse Gas Emissions Reduction from Transportation. Increase clean-fuel use, promote transit-oriented development and alternative modes of transportation, and reduce travel demand.	Consistent. The RCAP contains a variety of measures and actions supporting GHG emissions reductions from the transportation sector. For example, RCAP Measure T-6 would decarbonize 15 percent of passenger vehicle miles traveled by 2030 and 100 percent by 2045 through increased adoption of low and zero-emission vehicles and development of a regional electric vehicle charging and hydrogen fueling network. RCAP Measure T-3 would promote mixed-use, infill, and transit-oriented development. RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support increased active transportation, public transit, and carsharing use.

Measures	Consistency
HS-3.7 Air Pollutant Emission Reduction Construction and Operation Measures. The City shall require that new development incorporate air pollutant emission reduction measures during construction and operation.	Consistent. Individual projects facilitated by the RCAP would be subject to measures to reduce air pollutant emissions, as discussed in more detail under Impact AQ-2, below.
City of Rio Dell General Plan	
P1.2.3-1 Establish review procedures for development proposals to ensure that mobile, point, and area sources of air emissions are reduced to the greatest extent possible.	Consistent. The RCAP contains measures that would reduce air pollutant emissions from development proposals,
P1.2.3-2 Reduce emissions from stationary sources by limiting wood-burning fireplace installations in new construction to low emitting, State and EPA certified fireplace inserts, woodstoves, pellet stoves, or natural gas fire stoves.	Consistent. RCAP Strategies 3 and 4 would increase decarbonization of existing buildings and require new development to be decarbonized. These strategies would help reduce air pollution from woodburning fuel use.
NCUAQMD PM₁₀ Attainment Plan	
Transportation control measures include encouraging the usage of public transit, replacing the diesel-fueled bus fleet with natural gas-fueled models, recommending car-pooling and bicycle commuting, removing or repairing vehicles with inefficient emission control systems, and improving traffic flow to reduce idling and VMT.	Consistent. The RCAP contains a variety of measures and actions supporting GHG emissions reductions from the transportation sector. For example, RCAP Measure T-6 would decarbonize 15 percent of passenger vehicle miles traveled by 2030 and 100 percent by 2045 through increased adoption of low and zero-emission vehicles and development of a regional electric vehicle charging and hydrogen fueling network.
Land use control measures encourage mixed-use or more dense development to reduce sources of PM ₁₀ emissions.	Consistent. RCAP Measure T-3 would encourage mixed-use development in infill priority areas.
Limit residential wood burning and encourage the installation of EPA-certified woodstoves.	Consistent. RCAP Strategies 3 and 4 would increase decarbonization of existing buildings and require new development to be decarbonized. These strategies would help reduce air pollution from woodburning fuel use.
Note: only policies and control measures from the listed plans that are applicable to air quality specifically and the RCAP are identified in this table.	

As indicated in Table 3.2-6, the RCAP would be consistent with policies and control measures outlined in the NCUAQMD PM₁₀ Attainment Plan, Humboldt County General Plan, City of Rio Dell General Plan, City of Eureka General Plan, City of Arcata General Plan, and City of Fortuna General Plan. As such, the RCAP would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the impact related to air quality management plan consistency would be less than significant.

Mitigation Measures

None required.

Level of Significance

Less Than Significant without Mitigation

Criteria Air Pollutants Emissions Compared to Air Quality Standards

Significance Criterion b: Would the proposed plan result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?

Impact AQ-2 IMPLEMENTATION OF THE RCAP WOULD RESULT IN THE GENERATION OF AIR POLLUTANTS DURING CONSTRUCTION OF INDIVIDUAL PROJECTS, WHICH COULD AFFECT LOCAL AIR QUALITY EVEN WITH MITIGATION. IMPLEMENTATION OF THE PROPOSED PLAN WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF OPERATIONAL CRITERIA POLLUTANTS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction

The RCAP promotes sustainable infrastructure development which may result in future construction activities throughout Humboldt. Construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by construction equipment would generate pollutant emissions. These construction activities would create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROG_s and NO_x emissions, generated by construction equipment would depend on the quantity of equipment used and the hours of operation for each future project. The extent of PM_{2.5} and PM₁₀ emissions would depend upon the following factors: 1) the extent of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. The region is in nonattainment for PM₁₀, and construction dust emissions can contribute to existing exceedances of the ambient air quality standards.

If an individual project's construction emissions fall below the emission rates as established in NCUAQMD Rule 110, the project's impact on regional air quality would be individually and cumulatively less than significant. Many projects facilitated by the RCAP would not require the use of heavy equipment, such as minor energy and water efficiency retrofits or policy-focused measures to encourage adoption and use of ZEVs and decarbonized off-road equipment and, thus, would not be anticipated to result in significant air quality emissions. However, some projects may involve substantial construction such as renewable energy infrastructure installation promoted by RCAP Measures BE-1 and BE-2, transportation-related infrastructure development promoted by RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4, a new organic waste processing facility facilitated by RCAP Measure SW-1, and new or expanded recycled water facilities facilitated by Measure WW-2. Future projects occurring under these measures would require the use of heavy equipment and have the potential to produce construction emissions that could exceed NCUAQMD significance thresholds. In addition, such construction activities could result in quantities of fugitive PM₁₀ dust emitted that could cause and contribute to an exceedance of the State PM₁₀ standard, for which the region is in nonattainment.

The NCUAQMD has established rules to control fugitive dust emissions for construction activities under Rule 104.¹⁸ Control measures established by Rule 104 include BMPs such as covering open

¹⁸ NCUAQMD. 2015b. Regulation I Rule 104 – Prohibitions. <https://www.ncuaqmd.org/files/70b9a2edd/Rule+104.pdf> (accessed October 2024).

bodied trucks when transporting soil, the application of water to dirt roads and material stockpiles, and removal of track out material from paved streets. These fugitive dust emissions control measures would be implemented for each future project occurring under the RCAP.¹⁹ However, the RCAP does not include project-specific proposals or details, so it is not feasible to quantify emissions and make a conclusive determination that potential emissions would be below the NCUAQMD significance thresholds. Therefore, construction criteria air pollutant emissions and fugitive dust emissions impacts are considered potentially significant.

Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce impacts associated with construction criteria pollutants to the extent feasible. However, since project-level details and locations are unknown at this stage of planning, these mitigation measures may not be feasible or effective for all future RCAP projects. Therefore, even with implementation of Mitigation Measures AQ-1 and AQ-2, overall cumulative construction criteria pollutant emission and fugitive dust emissions impacts would remain significant and unavoidable.

Operation

Future projects that may be facilitated by the RCAP, such as new renewable energy facilities (Measures BE-1 and BE-2), new or expanded recycled water facilities (Measure WW-2), and new or expanded organic waste processing facilities (Measure SW-1), could result in operation air pollutant emissions. Operation of these future facilities could result in criteria air pollutants and fugitive dust emissions from maintenance activities occurring on unpaved surfaces, maintenance or employee vehicle trips, windblown dust settled on solar panels, or other similar types of operational activities. Although future projects under the RCAP would have the potential to result in operational sources of criteria pollutant and fugitive dust emissions, these emissions would be minor.

Compliance with State regulations requiring vehicles sold in the State after 2035 to be zero-emission vehicles would further reduce the minor operational emissions associated with regular maintenance and operational activities. Additionally, the RCAP includes strategies, measures, and actions that would reduce long-term emissions of air pollutants via reduction of GHG emissions from the transportation, energy, wastewater, and solid waste sectors. Upon implementation, many of the proposed RCAP measures would have the co-benefit of reducing air pollutant emissions by reducing natural gas and petroleum fuel consumption, as well as regional VMT reductions. RCAP strategies that would have co-benefits related to air quality include increasing carbon-free electricity (Strategy 2), decarbonization of existing and new construction (Strategies 3 and 4), shifting driving to walking and biking (Strategy 5), shifting driving to public transit or car-share (Strategy 6), reducing vehicle miles traveled (Strategy 7), increasing zero-emission vehicle adoption (Strategy 8), and conserving water and reducing wastewater emissions (Strategy 9). As such, projects and infrastructure facilitated by the RCAP are expected to result in overall improvements to regional air quality during operation, and generation of net negative emissions of operational criteria air pollutants when considered with the overall RCAP operational criteria air pollutant emission reductions. Therefore, operational impacts related to criteria air pollutant emissions and fugitive dust emissions would be less than significant.

¹⁹ Individual projects may also be subject to individual City ordinance or General Plan requirements in addition to the NCUAQMD rules and regulations. Compliance with these ordinances and requirements is assumed.

Mitigation Measures

MITIGATION MEASURE AQ-1: IMPLEMENT CONSTRUCTION FUGITIVE DUST MEASURES

For all project construction activities requiring daily usage of heavy duty offroad equipment, the reviewing agency (County or relevant city) shall incorporate the following construction measures that are consistent with NCUAQMD Rule 104 for fugitive dust:

- No person shall allow handling, transporting, or open storage of materials in such a manner that allows or may allow unnecessary amounts of particulate matter to become airborne.
- Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
 - Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
 - Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
 - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Containment methods can be employed during sandblasting and other similar operations.
 - The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
 - The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
 - The paving of roadways and their maintenance in a clean condition.
 - The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

MITIGATION MEASURE AQ-2: IMPLEMENT CONSTRUCTION DIESEL EQUIPMENT EMISSIONS STANDARDS

The reviewing agency (County or relevant City) shall ensure that, to the extent feasible, project diesel construction equipment rated 50 horsepower and above meet CARB Tier 4 emission standards for off-road heavy-duty diesel engines. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used, and engines shall be retrofitted with CARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if available for the equipment. These measures shall be noted on construction plans and contracts, and the reviewing agency shall perform periodic site inspections during construction phases.

Level of Significance

Significant and Unavoidable

Toxic Air Contaminants Emissions Exposure

Significance Criterion c: Would the proposed plan expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-3 OPERATION OF PROJECTS FACILITATED BY THE RCAP IS NOT EXPECTED TO EXPOSE SENSITIVE RECEPTORS TO SIGNIFICANT OPERATIONAL SOURCES OF TACs. DURING CONSTRUCTION OF FUTURE RCAP PROJECTS, EMISSIONS OF TACs WOULD BE REDUCED THROUGH MITIGATION MEASURE AQ-3, AND IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Many projects facilitated by the RCAP would not require the use of heavy equipment, such as minor energy and water efficiency retrofits or policy-focused measures to encourage adoption and use of ZEVs and decarbonized off-road equipment, and, thus, would not result in significant emissions of TACs. However, some projects may involve substantial construction such as renewable energy infrastructure installation promoted by RCAP Measures BE-1 and BE-2, transportation-related infrastructure development promoted by RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4, a new organic waste processing facility facilitated by RCAP Measure SW-1, and new or expanded recycled water facilities (Measure WW-2). Future projects occurring under these measures would require the use of heavy equipment, some for extensive periods of time, and may result in DPM exhaust emissions from off-road, heavy-duty diesel equipment associated with site preparation (e.g., excavation, grading, clearing), building construction, and other miscellaneous construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential non-cancer²⁰ health impacts; as such, this analysis focuses on exposure of sensitive receptors to cancer risk.²¹

The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with future projects.²² According to the OEHHA, construction of individual projects lasting longer than two months and placed within 1,000 feet of sensitive receptors could potentially expose nearby sensitive receptors to substantial pollutant concentrations.

Construction of larger-scale projects facilitated by the RCAP, such as utility-scale renewable energy facilities, may occur over long periods (e.g., greater than two months), though the use of diesel-powered construction equipment in any one area would likely occur for no more than a few years for an individual project and would cease when construction is completed in that area. The

²⁰ Non-cancer risks include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function.

²¹ CARB. 2024. Overview: Diesel Exhaust & Health. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health> (accessed October 2024).

²² OEHHA. 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. <https://oehha.ca.gov/air/cnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0> (accessed October 2024).

maximum DPM emissions would typically occur during demolition, site preparation and grading activities, which comprise only a portion of overall future projects' construction durations. DPM emissions would decrease for the remaining construction activities, such as building construction and architectural coating, because such activities require less-intensive construction equipment. It is not possible to quantify health risk without specific project details and locations, as impacts would vary based on location, intensity, construction methods, surrounding land uses, and other project-specific factors. For example, a project proposing construction of a new bicycle lane over a six-month construction period would generally have less impact than a large-scale solar energy project with a multi-year construction period.

Future projects facilitated by the RCAP would be required to comply with the applicable County or city General Plan Air Quality Elements (refer to Table 3.2-6), NCUAQMD regulatory requirements and control strategies, and the CARB In-Use Off-Road Diesel Vehicle Regulation. These policies and regulations are intended to reduce TAC emissions from construction activities. However, since location and project-specific details for future RCAP projects are unknown, it is possible that future projects could occur within 1,000 feet of sensitive receptors and exceed two-months of construction activities, and, therefore, could result in TAC emissions that cause an exceedance of the CAPCOA health risk thresholds.²³

Implementation of Mitigation Measures AQ-1 and AQ-2, provided under Impact AQ-2, would minimize construction-related TAC emissions. In addition, Mitigation Measure AQ-3 would require a construction health risk assessment (HRA) to be performed for future projects with construction timelines greater than two months and with construction activities located within 1,000 feet of sensitive receptors. A construction HRA would be completed in such instance to identify potential TAC emissions exposure to nearby sensitive receptors and provide recommended BMPs to reduce TAC emissions impacts to below the applicable health risk thresholds. With implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3, construction impacts to sensitive receptors would be less than significant.

Operation

Future projects that may be facilitated by the RCAP, such as new renewable energy facilities (Measures BE-1 and BE-2), new or expanded recycled water facilities (Measure WW-2), and new or expanded organic waste processing facilities (Measure SW-1), could result in minor TAC emissions during operation. Operation of these future facilities could result in TAC emissions from employee vehicle trips, organic waste hauling trips, and maintenance activities involving off-road equipment. Although future projects under the RCAP would have the potential to result in operational sources of TACs, these emissions would be minor and would not represent significant operational sources of TACs. Furthermore, projects and infrastructure facilitated by the RCAP in accordance with County and relevant city land use and zoning regulations would not site land uses that typically generate TACs, such as industrial land uses, in close proximity to residential land uses. Additionally, if future RCAP projects include a new stationary TAC source, like an emergency generator, then the stationary source would be required to receive an air quality permit from NCUAQMD. The air quality permitting process, including resulting BMPs required by NCUAQMD, would ensure that the stationary source does not present a health risk to sensitive receptors.

As described under Impact AQ-2, implementation of the RCAP would substantially reduce fossil fuel use, nonrenewable energy consumption, and VMT. A co-benefit of GHG reductions from the RCAP

²³ The NCUAQMD does not currently have any thresholds for toxics but recommends the use of the latest version of the CAPCOA's.

includes reduced TAC emissions as a result of increased renewable energy use (Measures BE-1, BE-2, and BE-8), building electrification (Measures BE-3 through BE-7), VMT reductions (Measures T-1 through T-5), and decarbonization of vehicles and off-road equipment (Measures T-6 through T-11). This would be reduced further as County-wide vehicles observe increased electrification pursuant to the CARB Advanced Clean Cars II rule, which states that by 2035, 100 percent of new passenger vehicles, light-duty trucks, and SUVs sold in California must be ZEVs. Therefore, operational RCAP impacts related to TAC emissions would be less than significant.

Mitigation Measures

MITIGATION MEASURE AQ-3: CONDUCT CONSTRUCTION HEALTH RISK ASSESSMENT AND IMPLEMENT DPM EMISSIONS REDUCTIONS

To identify and reduce potential risk exposure to nearby sensitive receivers during the construction of individual projects facilitated by the RCAP, the reviewing agency (County or relevant city) shall require that:

- For individual projects where construction activities would occur within 1,000 feet of sensitive receptors, would last longer than two months, and would not utilize equipment rated USEPA Tier 4 for equipment of 50 horsepower or more or construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more, and/or alternative fuel construction equipment, the project applicant shall conduct a construction health risk assessment (HRA) and implement relevant recommendations. If an HRA is to be performed, the HRA shall determine potential risk and compare the risk to the following CAPCOA thresholds:
 - Increased cancer risk of > 10.0 in a million; and
 - Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute)

Even with the application of emissions controls, the reviewing agency may recommend an individual project conduct a quantitative construction health risk assessment. If risk exceeds the thresholds, measures such as requiring the use of Tier 4 engines, Level 3 Diesel Particulate Filters, and/or alternative fuel construction equipment shall be incorporated to reduce the risk to below the thresholds of significance.

Level of Significance

Less Than Significant with Mitigation

Objectionable Odors

Significance Criterion d: Would the proposed plan result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-4 PROJECTS UNDER THE RCAP WOULD NOT CREATE OBJECTIONABLE ODORS THAT COULD ADVERSELY AFFECT A SUBSTANTIAL NUMBER OF PEOPLE. IMPACTS RELATED TO ODORS WOULD BE LESS THAN SIGNIFICANT.

Construction

The occurrence and severity of objectionable odors depend on a number of factors, including the nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of

the receiving location. Although objectionable odors seldom cause physical harm, they can be perceived as a nuisance, cause distress among the public, and result in citizen complaints.

Implementation of the RCAP would cause odors during construction from equipment use as well as odors related to asphalt paving and architectural coating for renewable energy, transit and active transportation, organic waste facility, and recycled water infrastructure projects. The odors would be limited to the construction period, dissipate quickly with distance, and occur at magnitudes that would not affect substantial numbers of people. Furthermore, construction activities for projects facilitated by the RCAP would be required to comply with NCUAQMD Rule 104 (Prohibitions), which regulates nuisance odors.²⁴ Therefore, odors emitted from the construction of individual future projects under the RCAP would be less than significant.

Operation

As stated in the CARB Air Quality and Land Use Handbook, land uses typically producing objectionable odors include sewage treatment plants, waste transfer facilities, landfills, biomass operations, rendering plants, and autobody shops.²⁵ Projects facilitated by the RCAP would primarily be related to renewable energy (e.g., RCAP Measures BE-1, BE-2, and BE-8) and transportation infrastructure (e.g., RCAP Measures T-1, T-2, T-4, T-6, T-7), which are not land uses that typically produce objectionable odors. However, the RCAP may result in some infrastructure and projects that could produce odors during operation, such as wastewater treatment facilities, biofuels facilities, and compost application projects for carbon sequestration (e.g., RCAP Measures WW-1, T-10, CS-1, and CS-2). NCUAQMD Rule 104 (Prohibitions) and California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700 prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from NCUAQMD, typically industrial and some commercial projects, are evaluated by NCUAQMD staff for potential odor nuisance. In addition, conditions may be applied (e.g., control equipment requirement), where necessary, to prevent the occurrence of public nuisance. Therefore, through compliance with NCUAPCD rules and approvals, RCAP impacts related to operational odors would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Less Than Significant without Mitigation

3.2.5 Cumulative Impacts

“Cumulative impacts” refers to two or more individual impacts that, when considered together, are considerable, or that compound or increase other environmental impacts (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor but collectively significant impacts taking place over time. If the analysis determines that the potential exists for the RCAP, taken together with other past, present, and reasonably foreseeable future growth, to result in a significant or adverse cumulative impact, the analysis then determines whether the RCAP’s

²⁴ NCUAQMD. 2015. Regulation I Rule 104- Prohibitions. <https://www.ncuaqmd.org/files/70b9a2edd/Rule+104.pdf> (accessed November 2024).

²⁵ CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. https://ww2.arb.ca.gov/sites/default/files/2023-05/Land%20Use%20Handbook_0.pdf (accessed October 2024)

incremental contribution to any significant cumulative impact is itself significant (i.e., “cumulatively considerable”).

The geographic scope of the cumulative air quality analysis is the NCAB, which includes the unincorporated and incorporated areas of Humboldt County, Del Norte County and Trinity County. The goal of this analysis is to determine whether the overall long-term impacts of cumulative growth in the NCAB would be cumulatively significant, and to determine whether the RCAP on its own would cause a “cumulatively considerable” incremental contribution to any such cumulatively significant impacts. To determine whether the overall long-term impacts of such cumulative growth would be cumulatively significant, the analysis generally considers the following:

- The area in which impacts of the RCAP would be experienced;
- The impacts of the RCAP that are expected in the area;
- Other past, proposed, and reasonably foreseeable growth that has had or are expected to have impacts in the same area;
- The impacts or expected impacts of the cumulative growth; and
- The overall impact that can be expected if the individual impacts related to the cumulative growth are allowed to accumulate.

Criteria Air Pollutants

The NCAB is listed as "attainment" or "unclassified" for all the federal and State ambient air quality standards except for the state 24-hour particulate (PM₁₀) standard in Humboldt County only. The NCAB has not exceeded the federal annual standard for particulate matter during the last five-year period. Development under the cumulative scenario would generate particulate matter and other criteria air pollutants in NCAB during construction. However, as described under Impact AQ-1, the RCAP would be consistent with the goals of air quality plans, as it would support clean energy infrastructure, decarbonization of the transportation sector, and reduction of regionwide VMT. Projects and infrastructure facilitated by the RCAP do not contain elements that would disrupt or hinder implementation of any air quality plan control measures. Discussion of these impacts considers the cumulative nature of criteria pollutants in the region. Therefore, the RCAP would not result in a cumulatively considerable contribution to a conflict with or obstruction of implementation of the applicable air quality plan.

As described under Impact AQ-2, RCAP construction would temporarily increase criteria air pollutant emissions, including particulate matter and fugitive dust. These temporary impacts would be minimized through Mitigation Measures AQ-1 and AQ-2. Discussion of these impacts considers the cumulative nature of criteria pollutants in NCAB; however, even with mitigation, it is not guaranteed that cumulative development, including projects facilitated by the RCAP, would reduce emissions to levels less than significant. Therefore, the RCAP would result in a cumulatively considerable net increase of a criteria pollutant from construction emissions. As described under Impact AQ-2, the measures, strategies and actions of the RCAP are anticipated to result in a net reduction in operational criteria pollutant emissions in Humboldt. Therefore, operation of projects facilitated by the RCAP would not result in cumulatively considerable criteria pollutant emissions.

Because construction emissions could result in a cumulatively considerable net increase in criteria pollutant emissions in NCAB, the overall cumulative impact related to criteria air pollutants would be significant and unavoidable.

Toxic Air Contaminants

Cumulative development in the NCAB would generate TAC emissions during construction that could contribute to elevated risk levels for sensitive receptors. Potential health risk impacts on maximally exposed individuals are dependent on the magnitude of emissions, proximity to emissions source, and duration of exposure. Although project-level information is unknown at this time, it is not expected that multiple individual projects facilitated by the RCAP and other cumulative development would be constructed simultaneously in the proximity of the same sensitive receptors. The NCUAQMD does not have adopted thresholds for TACs, including those for potential cumulative impacts. The CAPCOA guidance, referenced by the NCUAQMD, also does not identify cumulative thresholds for TACs. Nevertheless, as identified under Impact AQ-3, RCAP projects would not result in a significant impact related to TAC emissions with implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3. Individual projects facilitated by the RCAP would remain below the project-level risk threshold of 10 per million with mitigation. Therefore, as individual projects would be less than significant with mitigation, potential cumulative contributions to health risk impacts from the RCAP would also be less than significant with mitigation.

Odors

Construction activities occurring due to cumulative development in the NCAB would produce temporary odors from construction equipment, paving, and architectural coating. As identified under Impact AQ-4, construction odor emissions are generally minor and disperse rapidly with distance. Construction activities for cumulative development and future RCAP projects would also be required to comply with NCUAQMD Rule 104 (Prohibitions) to limit potential nuisance odors. Therefore, cumulative construction projects along with future RCAP projects occurring in close proximity to one another would not result in cumulative odor impacts.

Cumulative development and future RCAP projects involving land uses known to produce odors, such as wastewater treatment plants, organic waste facilities, and composting operations, would be required to comply with County and relevant city land use and zoning regulations that limit the development of odor-producing land uses to appropriate areas. Additionally, cumulative development and future RCAP projects would also be required to comply with NCUAQMD Rule 104 (Prohibitions) to limit potential nuisance odors during operation. Therefore, cumulative odor impacts from multiple individual projects facilitated by the RCAP and other cumulative scenario development would not result in a cumulatively considerable increase in odors. Therefore, the cumulative impact related to odors would be less than significant.

Overall Level of Cumulative Significance

Significant and Unavoidable

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3.3 Biological, Agriculture, and Forestry Resources

3.3.1 Introduction

This section describes existing biological, agricultural, and forestry resources in Humboldt, as well as the relevant regulatory framework. This section evaluates possible direct and indirect impacts to biological resources, including special-status species, sensitive natural communities, regulated waters and wetlands, sensitive habitat and mature native trees, and wildlife movement corridors associated with implementation of the proposed plan. This section also addresses and evaluates potential impacts related to agricultural and forestry resources.

3.3.2 Environmental Setting

Vegetation Communities and Other Land Cover Types

Definitions

Vegetation communities provide wildlife habitat components, including food, shelter, movement corridors, and breeding opportunities for wildlife species. They are classified in general terms with an emphasis on vegetation structure, vegetation species composition, soil structure, and water availability. Some wildlife species are generalists that use a variety of habitats, while other species are adapted to very specific habitats. Species that are limited to a single habitat type are more vulnerable to habitat loss and disturbance than are generalists and therefore, may be more at risk of experiencing population declines.

Humboldt County (Unincorporated and Incorporated)

The RCAP area encompasses the land within both unincorporated and incorporated portions of Humboldt. Humboldt is predominantly fir and montane hardwood forests (61 percent), and redwood forest (18 percent). The proposed plan has the following vegetation communities: annual grassland, aspen, chaparral, coastal oak woodland, coastal scrub, conifer, eucalyptus, fir, montane hardwood, pine, perennial grassland, and redwood riparian. These communities provide resources for a wide variety of wildlife species. The CDFW and USFWS closely monitor communities classified as sensitive native plant communities or that provide habitat for sensitive wildlife species. In addition, the proposed plan has urban land uses, which are not vegetation communities. Nearly 400,000 acres of Humboldt's mountains and coastline are within State and national park systems, leaving large tracts of existing terrestrial habitat in a natural condition.

A signature asset of Humboldt is its aquatic habitats, including rivers, estuaries, and wetlands. Humboldt Bay, one of California's largest coastal estuaries, is second only to San Francisco Bay in size. The bay is home to many invertebrates, fish, birds, and mammals. Humboldt's rivers and the ocean off the coast have tremendous productive potential. In the 1970s, over half the fish produced and consumed in California were landed in the Humboldt Bay area. Restoring this biological productivity to the region, especially the recovery of federally threatened and endangered Evolutionary Significant Units (ESUs) of coho salmon (*Oncorhynchus kisutch*; Southern Oregon and Northern California Coasts and Central California Coast, respectively) and federally threatened Distinct Population Segment (DPS) of steelhead trout (*Oncorhynchus mykiss*; Northern California), is very important to this region of California.

Existing information for Humboldt was used to create a list of vegetation communities and land cover types. The plant community descriptions and nomenclature are based on Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California*.¹ Wildlife species assemblage information are based on existing documentation from the *California Wildlife Habitat Relationships System*² and *A Manual of California Vegetation, Second Edition*.³ Table 3.3-1 and Figure 3.3-1 display the major vegetation communities and other land cover types in Humboldt.

Table 3.3-1 Vegetation Communities and Land Cover Types in Humboldt

Type ¹	Acres	Percent
Agriculture - Crops	56,635.5	2.5
Annual Grassland	213,847.1	9.3
Aspen	3.8	<1
Barren	15,787.1	<1
Chaparral ²	44,818.2	2
Coastal Oak Woodland	22,136.4	<1
Coastal Scrub	51,165.7	2
Conifer ³	18,306.6	<1
Eucalyptus	81.4	<1
Fir ⁴	664,458.9	29
Montane Hardwood ⁵	744,432.8	32
Pine ⁶	6,276.8	<1
Perennial Grassland	2,381.8	<1
Redwood	408,130.9	18
Urban	18,813.9	<1
Total	2,309,735.0	100

¹ California Department of Fish and Wildlife California Wildlife Habitat Relationships

² Includes Montane Chaparral, Mixed Chaparral, and Chamise-Redshank Chaparral

³ Includes Klamath Mixed Conifer and Subalpine Conifer

⁴ Includes Douglas fir, white fir, and red fir

⁵ Includes Montane Riparian, Montane Hardwood Conifer, and Montane Hardwood

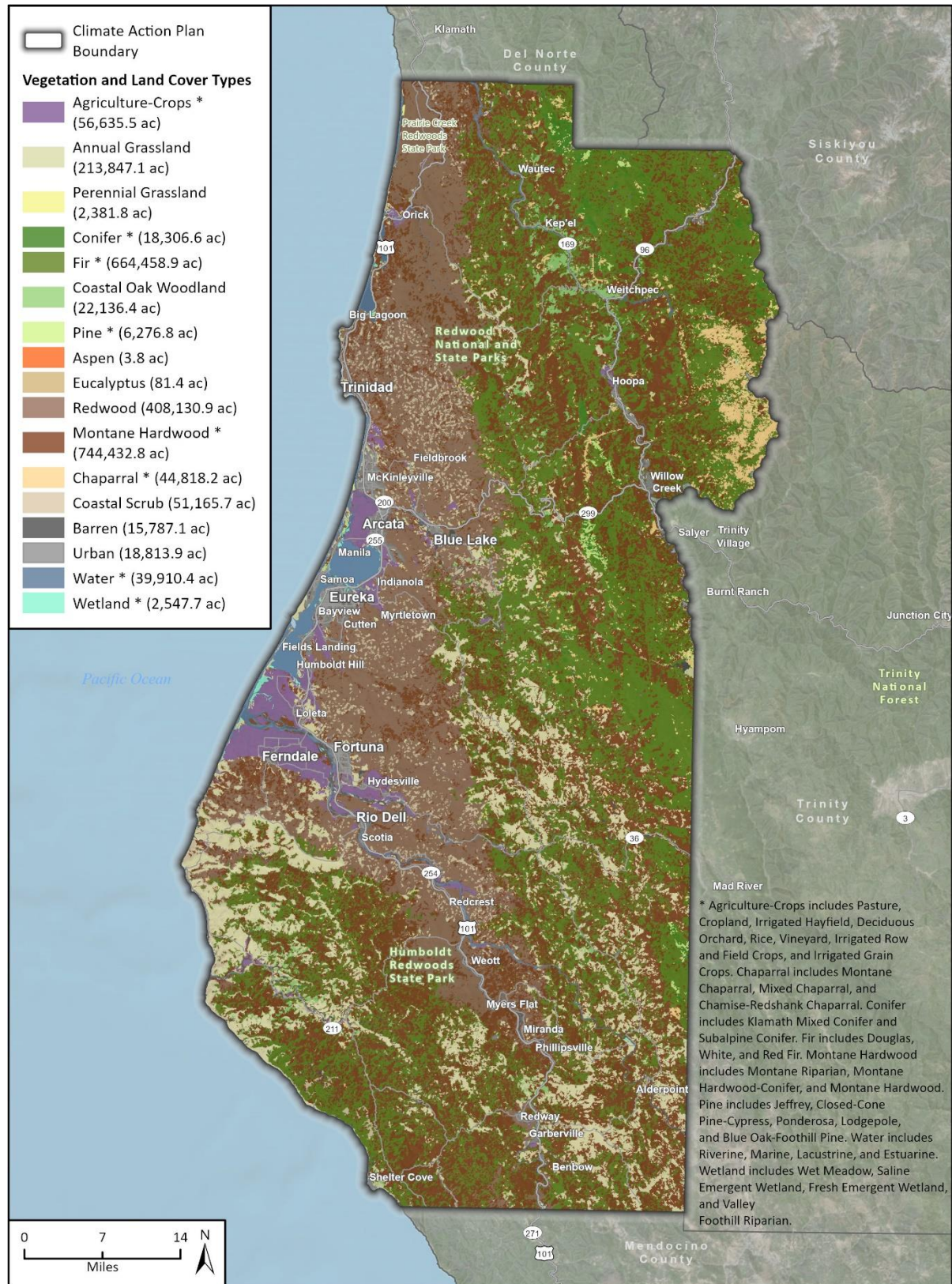
⁶ Includes Jeffery, closed-cone, pine-cypress, Ponderosa, Lodgepole, and blue oak-foothill pine

¹ Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Wildlife, Nongame Heritage Program.

² Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. <https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats>.

³ Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, California.

Figure 3.3-1 Vegetation Communities and Land Cover Types in Humboldt



AGRICULTURE – CROPS

Agriculture – Crops consists of areas that are subject to frequent human disturbance and regular cultivation activities, which are typically monotypic. Vegetation within this land cover type is variable, with crops ranging in size, shape, and growth pattern. Vegetation within this land cover type may also vary between season due to crop rotation, resulting in different species present during different times of year. Within Humboldt, this land cover type is associated with water sources including bays, lagoons, rivers, and streams and is most concentrated in the western portion of the region, occupying approximately 56,635.5 acres. This land cover type is included in the CDFW California Wildlife Habitat Relationships database as Cropland.⁴

ANNUAL GRASSLAND

Annual Grassland is a primarily non-native vegetation community comprised of annual herbaceous species. Common annual grass species found in this vegetation community include non-native wild oats (*Avena barbata*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), and foxtail barley (*Hordeum murinum*), as well as native purple needlegrass (*Stipa pulchra*). Common forbs found in this vegetation community include non-native filarees (*Erodium* spp.) and bur clover (*Medicago polymorpha*), as well as native California poppy (*Eschscholzia californica*) and turkey mullein (*Croton setiger*). Species within this vegetation community vary between seasons and years depending on temperature, precipitation, and livestock grazing. Within Humboldt, this vegetation community is most concentrated in the southern portion of the region, particularly along the coast and within eastern valleys, occupying approximately 213,847.1 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Annual Grassland.⁵

ASPEN

Aspen is a native vegetation community primarily composed of mature quaking aspen (*Populus tremuloides*) stands. This vegetation community is characterized by a relatively open canopy ranging between 60 and 100 feet in height with a dense herbaceous understory and variable shrub layer. The tree canopy is dominated by quaking aspen, with other deciduous and coniferous tree species including willows (*Salix* spp.), alders (*Alnus* spp.), black cottonwood (*Populus trichocarpa*), pines (*Pinus* spp.), and firs (*Abies* spp.) present at lower cover. The shrub layer is typically comprised of native sagebrushes (*Artemisia* spp.), roses (*Rosa* spp.), and snowberries (*Symphoricarpos* spp.), while the herbaceous understory consists of a variety of forbs and grasses. Within Humboldt, this vegetation community is scattered throughout Humboldt, occupying approximately 3.8 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Aspen.⁶

BARREN

Barren consists of areas that are generally devoid of vegetation. This land cover type includes areas comprised of 2 percent or less total cover of herbaceous species and/or 10 percent or less total cover of tree and/or shrub species. This land cover type can be found across a variety of different habitats and its structure and composition may vary greatly depending on region and surrounding

⁴ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp <https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats> (accessed November 2024).

⁵ Ibid

⁶ Ibid

environment. Within Humboldt, this vegetation community is scattered throughout the region, occupying approximately 15,787.1 acres. This land cover type is included in the CDFW California Wildlife Habitat Relationships database as Barren.⁷

CHAPARRAL

Chaparral is a native vegetation community dominated by shrub species ranging between 3 and 10 feet in height. This vegetation community is generally characterized by a dense shrub layer with a sparse to absent herbaceous layer. Emergent trees may also be present at low cover. Common shrub species found in this vegetation community include ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), chamise (*Adenostoma fasciculatum*), redshank (*Adenostoma sparsifolium*), toyon (*Heteromeles arbutifolia*), mountain mahogany (*Cercocarpus betuloides*), and scrub oak (*Quercus berberidifolia*). This vegetation community is well-adapted to fire, with some species requiring seed scarification to successfully germinate. Within Humboldt, this vegetation community is most concentrated in the eastern portion of the county, particularly in the areas east of Highway 96, occupying approximately 44,818.2 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Mixed Chaparral, Montane Chaparral, and Chamise – Redshank Chaparral.⁸

COASTAL OAK WOODLAND

Coastal Oak Woodland is a native vegetation community characterized by a tree canopy comprised of deciduous and evergreen hardwoods (mostly oaks [*Quercus* spp.]), with variable shrub and herbaceous layers. The structure and species composition of this vegetation community is highly variable, ranging between a closed tree canopy with a dense shrub layer comprised of chaparral or coastal scrub to an open woodland with an herbaceous layer comprised of annual or perennial grassland. Dominant tree species within this vegetation community include coast live oak (*Quercus agrifolia*), Oregon white oak (*Quercus garryana*), black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), madrone (*Arbutus menziesii*), and interior live oak (*Quercus wislizeni*). Within Humboldt, this vegetation community is most prevalent in the eastern foothills, particularly within the northeastern portion of the county, occupying approximately 22,136.4 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Coastal Oak Woodland.⁹

COASTAL SCRUB

Coastal scrub is a native vegetation community dominated by shrub species ranging between 1 to 7 feet in height with mesophytic branches, flexible branches, semi-woody stems, and shallow roots. The structure and species composition of this vegetation community is highly variable depending on location along the California coast. Common shrub species within this vegetation community include coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum californicum*), California sagebrush (*Artemisia californica*), silver bush lupine (*Lupinus albifrons*), coffeeberry (*Frangula californica*), bush monkeyflower (*Diplacus aurentiacus*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), California sunflower (*Encelia californica*), and woolly sunflower (*Eriophyllum lanatum*). Species present within the subshrub and herbaceous

⁷ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. <https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats> (accessed November 2024).

⁸ Ibid

⁹ Ibid

layers may include bracken fern (*Pteridium aquilinum*), western sword fern (*Polystichum munitum*), yerba buena (*Clinopodium douglasii*), and Indian paintbrush (*Castilleja densiflora*). Within Humboldt, this vegetation community is prevalent throughout the western portion of the county, particularly along the coast between Ferndale and Trinidad, occupying approximately 51,165.7 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships Database as Coastal Scrub.¹⁰

CONIFER

Conifer is a native vegetation community dominated by needle-leaved evergreen trees. The structure of this vegetation community is variable, ranging between open forests with trees of low to medium stature to tall, dense forests with patches of broad-leaved evergreen trees, deciduous trees, and shrubs. Dominant tree species within this vegetation community include white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), Ponderosa pine (*Pinus ponderosa*), incense cedar (*Calocedrus decurrens*), sugar pine (*Pinus lambertiana*), Lodgepole pine (*Pinus contorta*), western white pine (*Pinus monticola*), and mountain hemlock (*Tsuga mertensiana*). Common shrub species within this vegetation community include western thimbleberry (*Rubus parviflorus*), dwarf rose (*Rosa gymnocarpa*), California huckleberry (*Vaccinium ovatum*), and Oregon grape (*Berberis aquifolium*). The herbaceous layer within this vegetation community typically includes native grasses and forbs, including California brome (*Bromus stichensis* var. *carinatus*), lupines (*Lupinus* spp.), western rattlesnake plantain (*Goodyera oblongifolia*), and Idaho fescue (*Festuca idahoensis*). Within Humboldt, this vegetation community is prevalent within the eastern portion of the county, occupying approximately 18,306.6 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships Database as Subalpine Conifer and Klamath Mixed Conifer.¹¹

EUCALYPTUS

Eucalyptus is a naturalized non-native vegetation community characterized by scattered to dense eucalyptus (*Eucalyptus* spp.) stands. The structure of this vegetation community is highly variable, as most eucalyptus stands in California have been planted into rows for wind protection or groves for hardwood production. Species composition within this vegetation community is also variable, ranging from one to several different eucalyptus species. Dominant species within this community typically include blue gum (*Eucalyptus globulus*) and red gum (*Eucalyptus camaldulensis*). Dense eucalyptus stands tend to support sparse herbaceous layers comprised of non-native annual grasses and forbs, while scattered eucalyptus stands support a more diverse shrub layer comprised of chaparral and coastal scrub species, including chamise, manzanitas, buckwheats (*Eriogonum* spp.), and toyon. Within Humboldt, this vegetation community occupies approximately 81.4 acres. This vegetation community is included in the California Wildlife Habitat Relationships Database as Eucalyptus.¹²

FIR

Fir is a native vegetation community characterized by nearly monotypic stands of tall, needle-leaved, evergreen trees. The structure and species composition of this vegetation community is highly variable, ranging from a dense, monotypic tree canopy with sparse shrub and herbaceous

¹⁰Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. (accessed November 2024).

¹¹ Ibid

¹² Ibid

layers to a more diverse, multi-layered tree canopy with well-developed shrub and herbaceous layers. Dominant tree species within this vegetation community include white fir (*Abies concolor*), red fir (*Abies magnifica*), and Douglas fir (*Pseudotsuga menziesii*). If present, common associate tree and shrub species within this vegetation community include canyon live oak (*Quercus chrysolepis*), giant chinquapin (*Chrysolepis chrysophylla*), Oregon grape (*Berberis aquifolium*), California blackberry (*Rubus ursinus*), dwarf rose (*Rosa gymnocarpa*), and poison oak (*Toxicodendron diversilobum*). Common species within the herbaceous layer include Pacific trillium (*Trillium ovatum*), western swordfern (*Polystichum munitum*), California honeysuckle (*Lonicera hispidula*), bracken fern (*Pteridium aquilinum*), and western fescue (*Festuca occidentalis*). This vegetation community is one of the most prevalent in Humboldt, occupying approximately 664,458.9 acres along the eastern and southwestern portions of the county. This vegetation community is included in the California Wildlife Habitat Relationships Database as White Fir, Red Fir, and Douglas Fir.¹³

MONTANE HARDWOOD

Montane Hardwood is a native vegetation community dominated by hardwoods. The structure and species composition of this vegetation community is highly variable but tends to support a dense tree canopy comprised of hardwoods and conifers, with sparse shrub and herbaceous layers. Common tree species within this vegetation community include black cottonwood (*Populus trichocarpa*), bigleaf maple (*Acer macrophyllum*), canyon live oak (*Quercus chrysolepis*), California black oak (*Quercus kelloggii*), Oregon white oak (*Quercus garryana*), tanoak (*Notholithocarpus densiflorus*), ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), and Pacific madrone (*Arbutus menziesii*). If present, the shrub layer is comprised of native woody shrub species including manzanita (*Arctostaphylos* spp.), dogwood (*Cornus sericea*), mountain-mahogany (*Cercocarpus betuloides*), and poison oak (*Toxicodendron diversilobum*). Mountain Hardwood is the most prevalent vegetation community in Humboldt, occupying approximately 744,432.8 acres. This vegetation community is included in the California Wildlife Habitat Relationships Database as Montane Hardwood, Mixed Hardwood-Conifer, and Montane Riparian.¹⁴

PINE

Pine is a native vegetation community that varies greatly in structure and species composition but is typically characterized by a mix of conifers and hardwoods in the tree layer, with variable shrub and herbaceous layers. Common species within the tree layer include foothill pine (*Pinus sabiniana*), Lodgepole pine (*Pinus contorta*), Jeffrey pine (*Pinus jeffreyi*), Ponderosa pine (*Pinus ponderosa*), and blue oak (*Quercus douglasii*). The shrub layer is typically comprised of native shrub species including ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), coffeeberry (*Frangula californica*), poison oak (*Toxicodendron diversilobum*), redbud (*Cercis occidentalis*), and dogwood (*Cornus sericea*). If present, the herbaceous layer is comprised of native grasses, forbs, and sedges including bedstraw (*Galium* spp.), bracken fern (*Pteridium aquilinum*), lupine (*Lupinus* spp.), sedge (*Carex* spp.), jewelflower (*Streptanthus* spp.), and iris (*Iris* spp.). This vegetation community is most concentrated in the eastern portion of Humboldt, occupying approximately 6,276.8 acres. This vegetation community is included in the California Wildlife Habitat Relationships Database as Blue Oak – Foothill Pine, Closed-Cone Pine – Cypress, Lodgepole Pine, Ponderosa Pine, and Jeffrey Pine.¹⁵

¹³ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. (accessed November 2024).

¹⁴ Ibid

¹⁵ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. (accessed November 2024).

PERENNIAL GRASSLAND

Perennial Grassland is a native vegetation community comprised of perennial herbaceous species. Common species within this vegetation community include California oatgrass (*Danthonia californica*), California hairgrass (*Deschampsia cespitosa*), American dune grass (*Elymus mollis* ssp. *mollis*), goldfields (*Lasthenia* spp.), and bracken fern (*Pteridium aquilinum*). The structure of this vegetation community may vary based on grazing by domestic livestock or wild herbivores, including elk and deer, but typically measures between 0 and 5 feet in height. Within Humboldt, this vegetation community is most prevalent along the coast, particularly within the northwest portion of the county near Big Lagoon, Orick, and Prairie Creek Redwoods State Park. This vegetation occupies approximately 2,381.8 acres within Humboldt. This vegetation community is included in the California Wildlife Habitat Relationships Database as Perennial Grassland.¹⁶

REDWOOD

Redwood is a native vegetation community characterized by an open-to-dense tree canopy dominated by coast redwood (*Sequoia sempervirens*). The structure and species composition of this vegetation community varies based on age; second-growth redwood forests tend to be more open with sparse shrub and herbaceous layers, while old-growth redwoods forests support dense canopies with well-developed shrub and herbaceous layers. Common associate species within the tree canopy include Douglas fir (*Pseudotsuga menziesii*), Sitka spruce (*Picea sitchensis*), grand fir (*Abies grandis*), and red alder (*Alnus rubra*). The shrub layer is typically comprised of native species including California huckleberry (*Vaccinium ovatum*), coyote bush (*Baccharis pilularis*), ceanothus (*Ceanothus* spp.), poison oak (*Toxicodendron diversilobum*), west salmonberry (*Rubus spectabilis*), and western thimbleberry (*Rubus parviflorus*). Native herbaceous species including sword fern (*Polystichum munitum*), giant chain fern (*Woodwardia fimbriata*), Idaho fescue (*Festuca idahoensis*), and western fescue (*Festuca occidentalis*) comprise the herbaceous layer of this vegetation community. This is one of the most prevalent vegetation communities within Humboldt, occupying approximately 408,130.9 acres within the western portion of the region. This vegetation community is included in the California Wildlife Habitat Relationships Database as Redwood.¹⁷

URBAN

Urban consists of areas that have been developed or physically modified to the extent that they no longer contain native soil and habitat conditions and no longer support most vegetation. When present, vegetation within this land cover type typically includes tree groves, street strips, shade trees, lawns, and ornamental shrubs. Structure and species composition within this land cover type varies greatly based on purpose, design, and climate. Within Humboldt, this land cover type is associated with existing development including buildings, paved areas, and roadways, occupying approximately 18,813.9 acres. This land cover type is included in the California Wildlife Habitat Relationships Database as Urban.¹⁸

¹⁶ Ibid

¹⁷ Ibid

¹⁸ Ibid

Waters and Wetlands

Definitions

The term “waters of the United States.” has a broad meaning and incorporates both deep-water aquatic habitats and special aquatic sites, including wetlands. Generally, this term applies to the jurisdictional limits of the authority of the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (CWA). Waters of the U.S. includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters.

Wetlands are driven by hydrology and occur where water is present near the soil surface resulting in soil and plant characteristics that are not found in upland (mostly dry) or aquatic (almost always wet and un-vegetated) habitats. Wetlands are generally found in transition zones between upland and aquatic habitats. These terms are further defined along with their application in federal and state regulations below under Section 3.3.3, *Regulatory Framework*.

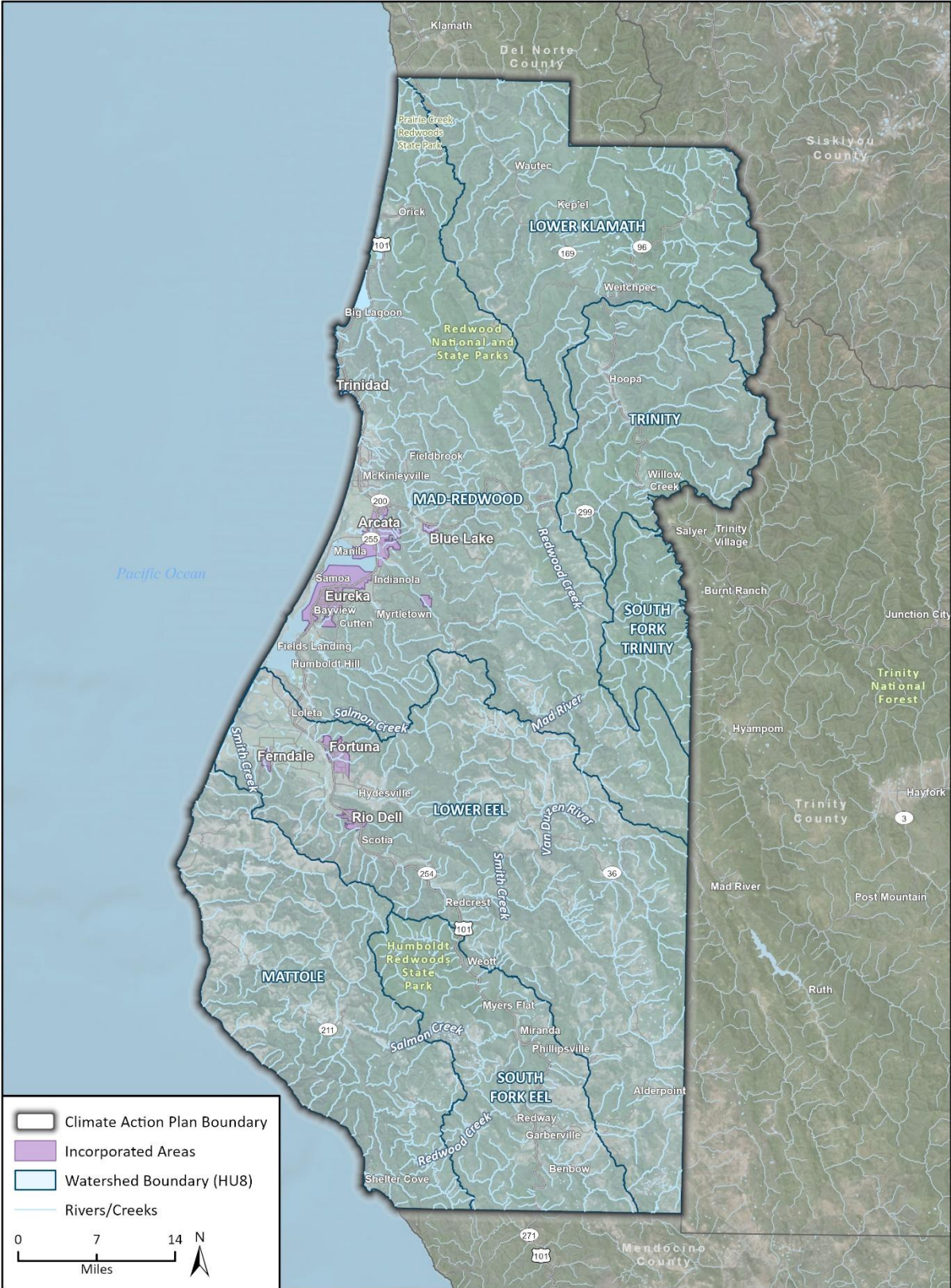
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The USFWS NWI is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of waters and wetlands. It should be noted that some wetland and stream features, such as freshwater seeps and springs, are generally not identified as part of the NWI because of the general scale of the mapping effort. The extent of the major wetlands and waterways in Humboldt, based on NWI mapping, is shown on Humboldt’s marine habitat stretches along its rugged Pacific coastline and includes diverse ecosystems, such as kelp forests, rocky intertidal zones, sandy beaches, and subtidal areas. The cold, nutrient-dense waters off the coast fuel a productive marine environment, supporting species like sea otter (*Enhydra lutris*), harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), and a variety of fish, invertebrates, and seabirds. Kelp forests, thriving in the coastal waters, provide food, shelter, and breeding grounds for numerous species, while intertidal zones create unique habitats for tidepool organisms. Marine habitats in the county are integral to the health of coastal fisheries and attract recreation and tourism, supporting the local economy (Figure 3.3-2).

Wetland features that have been mapped within Humboldt include freshwater forested/shrub wetland, freshwater ponds, and riverine habitat.¹⁹ Wetlands and waters provide habitat for a variety of special-status plant and animal species and are typically subject to USACE jurisdiction under Section 404 of the CWA. In addition, the State of California has adopted a no-net-loss policy for wetlands which is administered by the CDFW and State Water Resources Control Board (SWRCB). A description of each of these aquatic features and their location within Humboldt is provided below.

¹⁹ USFWS NWI, op. cit.

Figure 3.3-2 Wetlands and Aquatic Resources in Humboldt



FRESHWATER EMERGENT WETLAND

Freshwater emergent wetlands in Humboldt are dynamic ecosystems that support a wide range of plants and wildlife, thriving in saturated soils and seasonally inundated conditions. Found along riverbanks, around lakes, and in floodplains, these wetlands feature tall grasses, reeds, sedges, and rushes (*Juncus* spp.) that emerge above the water's surface. The NWI also includes within this category wetlands that lack vegetation if they also exhibit the same criteria as described for freshwater emergent wetlands. Freshwater forested/shrub wetlands are generally dominated by woody vegetation, such as shrubs and trees. This wetland category also can include riparian habitats.

LACUSTRINE

Lacustrine habitats in Humboldt encompass its natural lakes, ponds, and reservoirs, including Big Lagoon and Freshwater Lagoon located within Humboldt Lagoons State Park between Trinidad and Orick and Ruth Lake located within Six Rivers National Forest between two unincorporated communities, Sids Place and Forest Glen, as well as smaller highland and coastal lakes. These freshwater bodies provide essential habitat for a range of species, from fish like largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*) to amphibians, waterfowl, and aquatic invertebrates. Surrounded by diverse landscapes of forests, grasslands, and wetlands, these lakes support rich riparian zones, where vegetation, such as willows and cattails (*Typha* spp.), stabilize shorelines and provide food and shelter for wildlife. Lacustrine habitats in Humboldt play a critical role in supporting migratory birds, particularly during the winter months, and serve as recreational resources for fishing, boating, and birdwatching.

MARINE

Humboldt's marine habitat stretches along its rugged Pacific coastline and includes diverse ecosystems, such as kelp forests, rocky intertidal zones, sandy beaches, and subtidal areas. The cold, nutrient-dense waters off the coast fuel a productive marine environment, supporting species like sea otter (*Enhydra lutris*), harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), and a variety of fish, invertebrates, and seabirds. Kelp forests, thriving in the coastal waters, provide food, shelter, and breeding grounds for numerous species, while intertidal zones create unique habitats for tidepool organisms. Marine habitats in the county are integral to the health of coastal fisheries and attract recreation and tourism, supporting the local economy.

SALINE EMERGENT WETLAND

Saline emergent wetlands in Humboldt are unique coastal ecosystems characterized by salt-tolerant plants, seasonal flooding, and fluctuating salinity levels. Primarily found around Humboldt Bay, located between Eureka and Arcata along with several unincorporated communities and towns, and the Eel River estuary, located between Ferndale and Loleta, these wetlands are home to salt marsh vegetation like pickleweeds (*Salicornia* spp.), saltgrass (*Distichlis spicata*), and cordgrasses (*Spartina* spp.), which thrive in the brackish and saline waters. These plant communities provide essential habitat for a range of wildlife, including migratory shorebirds, waterfowl, and fish species that rely on the wetlands for feeding, nesting, and nursery grounds. Saline emergent wetlands serve as critical buffers against coastal erosion, floodwaters, and pollution, filtering contaminants and maintaining water quality.

RIVERINE

Humboldt's riverine habitats are dominated by an extensive network of rivers, including the Eel, Klamath, Trinity, Mad, Mattole, and Van Duzen rivers, which flow through diverse landscapes of forests, mountains, and valleys. In Humboldt, the Klamath, Trinity, Eel, and Van Duzen Rivers were classified as wild, scenic, or recreational under the federal Wild and Scenic Rivers Act and California Wild and Scenic Rivers Act. These rivers provide critical habitats for anadromous fish species, such as Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon, and steelhead trout, which migrate from the ocean to freshwater to spawn. The rivers also support amphibians, aquatic insects, and riparian vegetation, creating a rich ecosystem that sustains both aquatic and terrestrial wildlife. Riverine habitats in the county are not only biologically significant but also essential to local communities, providing water for agriculture, recreation, and cultural practices for local Native American Tribes.

WET MEADOW

Wet meadows in Humboldt are seasonal, grass-dominated ecosystems found in areas with poor drainage, typically near rivers, streams, or at higher elevations where groundwater is close to the surface. These meadows are characterized by grasses, sedges, rushes, and wildflowers that flourish in moist, nutrient-rich soils, supporting a range of wildlife, including amphibians, small mammals, and insects like butterflies and bees. Wet meadows are also crucial feeding and nesting sites for migratory and resident bird species. During the wet season, these areas act as natural sponges, absorbing and slowly releasing water, which helps maintain stream flows and reduces the impacts of flooding downstream. In summer, the soils may dry, but the meadow vegetation remains green and vibrant, offering continuous habitat value.

Sensitive Natural Communities and Critical Habitats

Definitions

Sensitive natural communities are vegetation types, associations, or sub-associations that support concentrations of special-status plant and/or wildlife species, are of relatively limited distribution, and/or are of particular value to wildlife. Currently, the CDFW publishes the California Sensitive Natural Communities List online. Natural communities are evaluated using NatureServe's Heritage Methodology, the same system used to assign Global and State rarity ranks for plant and animal species in the CNDDDB. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (State) rank, ranging from 1 (very rare and threatened) to 5 (demonstrably secure). According to the CDFW Vegetation Program, natural communities with State ranks of S1-S3 and certain other specified associations are considered imperiled, and thus, potentially of special concern. Riparian areas are also considered sensitive natural communities by the CDFW.

Critical habitat is a term used in the federal Endangered Species Act (ESA) and is defined as a specific geographic area (or areas) that contain features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. These areas provide notice to the public and land managers of the importance of these areas to the conservation of a listed species. Special protections and/or restrictions are possible in these areas when federal funding, permits, licenses, authorizations, or actions occur or are required.

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The CDFW's CNDDDB lists eight sensitive natural communities that occur within the U.S. Geological Survey (USGS) topographic quadrangles encompassing Humboldt. These natural communities include Coastal and Valley Freshwater Marsh, Coastal Douglas Fir Western Hemlock Forest, Coastal Terrace Prairie, Northern Coastal Salt Marsh, Northern Foredune Grassland, Sitka Spruce Forest, Sphagnum Bog and Upland Douglas Fir Forest. The USFWS Critical Habitat Mapper²⁰ depicts designated critical habitats within the plan area. The USFWS designated critical habitats in Humboldt include Kneeland Prairie penny-cress (*Thlaspi californicum*), Lassics lupine (*Lupinus constancei*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), Pacific marten (*Martes caurina*), tidewater goby (*Eucyclogobius newberryi*), and western snowy plover (*Charadrius alexandrinus*).

The NMFS designated critical habitats in Humboldt include green sturgeon (*Acipenser medirostris*, Southern DPS), killer whale (*Orcinus orca*, Southern Resident DPS), humpback whale (*Megaptera novaeangliae*, Central America DPS and Mexico DPS), eulachon (*Thaleichthys pacificus*), Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon, and steelhead. The Essential Fish Habitats (EFHs) located in Humboldt include highly migratory species (such as albacore tuna [*Thunnus alalunga*], blue shark [*Prionace glauca*], broadbill swordfish [*Xiphias gladius*], common thresher shark [*Alopias vulpinus*], northern bluefin tuna [*Thunnus thynnus*], shortfin mako shark [*Isurus oxyrinchus*]), coastal pelagic species, groundfish (finfish and market squid), and krill (*Thysanoessa spinifera*, *Euphausia pacifica*, other krill species). Eelgrass (*Zostera* spp.) is a flowering marine plant that is designated as a Habitat Area of Particular Concern (HAPC) and EFH by NOAA.

²⁰ USFWS Critical Habitat Mapper, op. cit.

Figure 3.3-3 USFWS Critical Habitat in Humboldt

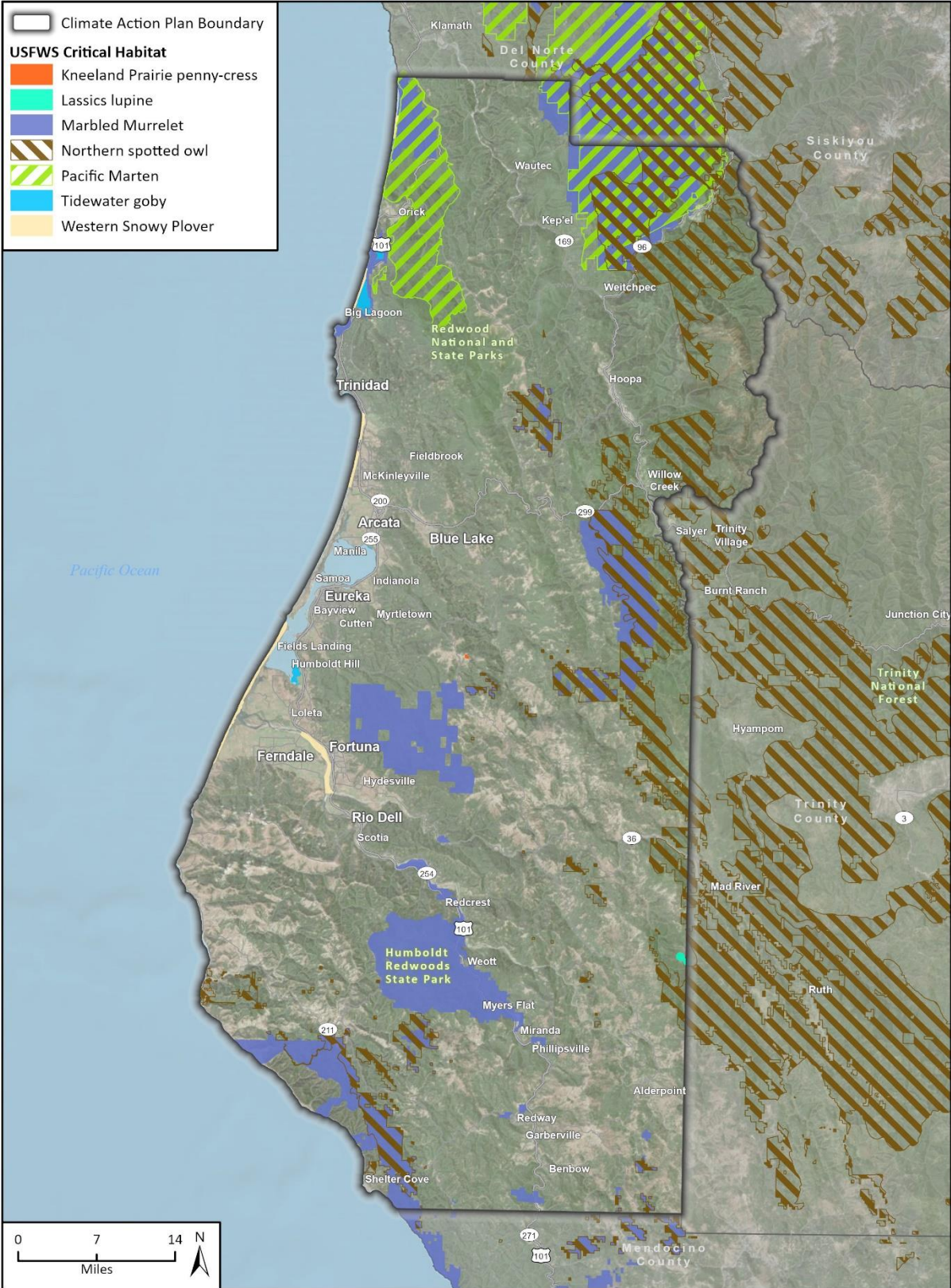
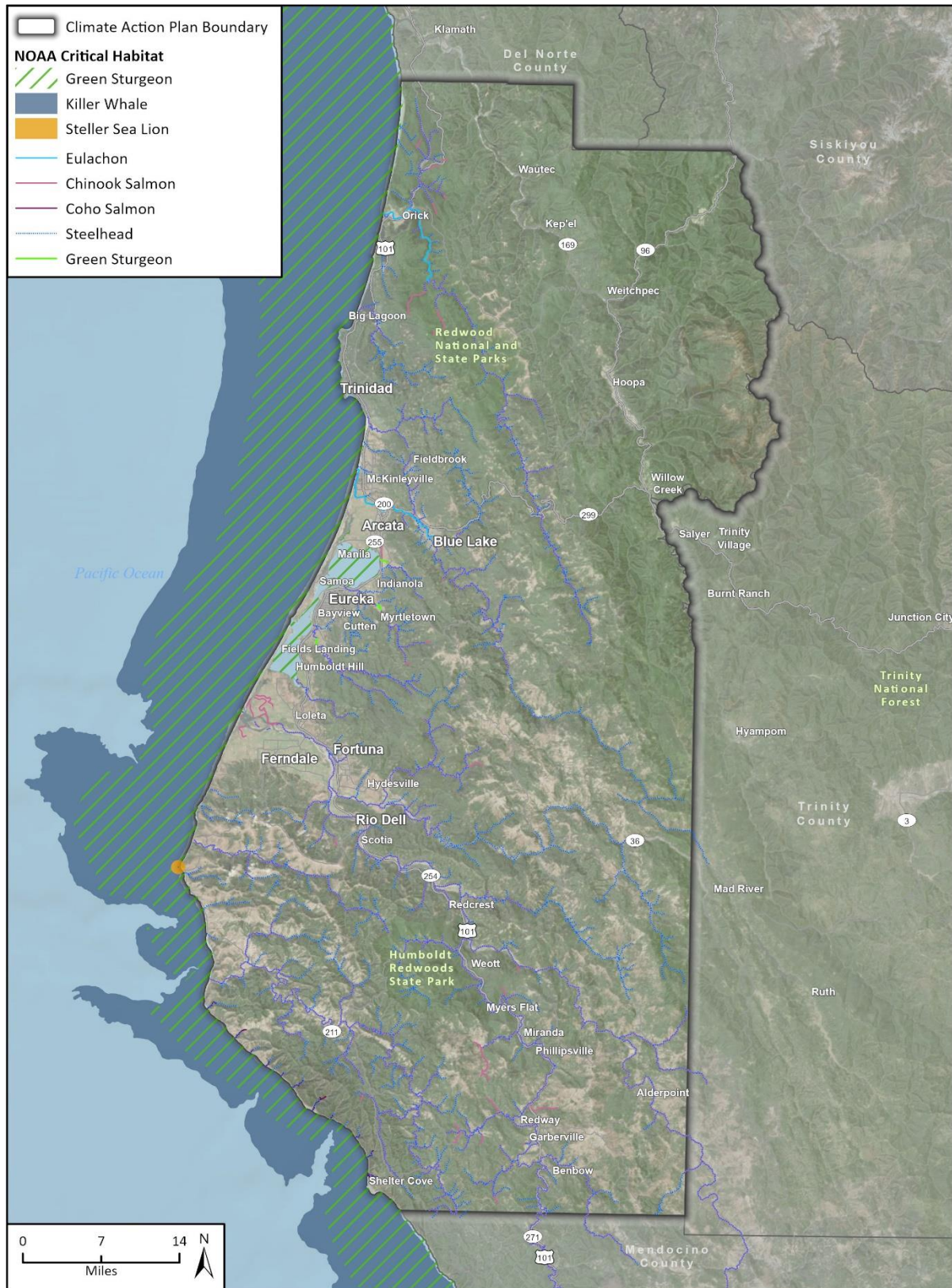


Figure 3.3-4 NOAA Critical Habitat in Humboldt



Special-Status Species

Definitions

For the purpose of this analysis, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and/or NMFS under the ESA; those listed or proposed for listing as threatened or endangered by the CDFW under the California Endangered Species Act (CESA); plants listed as rare by the CDFW under the Native Plant Protection Act; and animals designated as “Species of Special Concern,” “Fully Protected,” or “Watch List” by the CDFW. Those plants ranked as California Rare Plant Rank (CRPR) 1 or 2 are typically regarded as rare, threatened, or endangered under CEQA by lead agencies and were considered as such in this EIR. The CRPR uses the following code definitions:

- **List 1A** = Plants presumed extinct in California
- **List 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- **List 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- **List 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)
- **List 2** = Rare, threatened or endangered in California, but more common elsewhere

CRPR List 3 species are “review list,” and CRPR 4 species are considered “watch list” species. CRPR 3 and 4 species do not typically warrant analysis under CEQA except where they are part of a unique community, from the type locality, or designated as rare or significant by local governments, or where cumulative impacts could result in population-level effects. The CRPR 3 and 4 species reported from the region are not locally designated as rare or significant by the Humboldt County General Plan and are not part of a unique community. Therefore, potential impacts to CRPR 3 and CRPR 4 species were not considered in this analysis and were not included in the special-status species tables in Appendix B.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered indicators of regional habitat changes or are considered to be potential future protected species. SSC do not have any special legal status except that which may be afforded by the California Fish and Game Code. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are considered sensitive as described under the CEQA Appendix G questions. Special-status species ranked globally (G) and subnationally (S) 1 through 3 based on NatureServe’s methodologies were not considered in this analysis.

Queries of the USFWS IPaC²¹, CDFW CNDDDB²², and CNPS Inventory²³ were conducted. These queries were conducted to obtain comprehensive information regarding State and federally listed species known or considered to have potential to occur within Humboldt.

²¹ USFWS IPaC, op. cit.

²² CDFW CNDDDB, op. cit.

²³ CNPS op. cit.

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Humboldt is home to several species protected by federal and State agencies. Important animal species can be found in a variety of habitats in the region. The CDFW CNDDDB,²⁴ CNPS Inventory,²⁵ and USFWS IPaC²⁶ together list 175 special-status plant and animal species (95 plant species and 80 animal species) that occur or have potential to occur within Humboldt. The status and habitat requirements of these species are presented in Appendix B as Tables B-1 and B-2, respectively.

SPECIAL-STATUS PLANTS

Based on the database and literature review, 95 special-status plant species are known to occur, or have potential to occur in Humboldt. Humboldt is composed of a very diverse range of habitat types. These include chaparral, woodland, forest, alpine, grassland, meadows, and riparian, among others. Within these broad habitat types, there are cismontane forests and woodlands, lower montane forests, subalpine forests, foothill grasslands, riparian forests, bogs and fens, and chaparral, among others. This diverse plant mosaic within the region allows for some of the most diverse plant communities in the state. Within these plants communities there are numerous special-status plants, many of which only occur in the region (endemic). Table B-1 in Appendix B lists these special-status plant species and their listing and/or rarity status.

SPECIAL-STATUS WILDLIFE

Based on the database and literature review, 80 special-status wildlife species are known, or have potential, to occur within Humboldt. Table B-2 in Appendix B lists these special-status wildlife species and their listing status and/or other status designations.

INVERTEBRATES

There are nine special-status invertebrates known or with potential to occur within Humboldt. These include Crotch's bumble bee (*Bombus crotchii*), western bumble bee (*Bombus occidentalis*), conservancy fairy shrimp (*Branchinecta conservation*), Shasta crayfish (*Pacifiastacus fortis*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), Suckley's cuckoo bumble bee (*Bombus suckleyi*), monarch butterfly (*Danaus plexippus*), and sunflower sea star (*Pycnopodia helianthoides*). These bumble bee species typically nest underground, occasionally in old animal burrows, logs and stumps and require plants that bloom and provide adequate nectar and pollen. Monarch butterflies require a variety of habitats throughout their life cycle and migration. They rely on milkweed plants in grasslands, meadows, prairies, and open fields for laying their eggs, as milkweed is the only plant their caterpillars can eat. Their overwintering habitats are typically specific, sheltered sites in mountain forests, such as the oyamel fir forests in central Mexico, where they find the cool, moist climate needed to survive the winter months. Monarchs also overwinter along the California coast, where eucalyptus, pine, and cypress groves offer roosting spots. Sunflower sea stars are large, multi-armed sea stars that inhabit rocky reefs, kelp forests, eelgrass beds, and soft-bottomed ocean floors, ranging from the intertidal zone down to depths of about 1,000 feet. They prefer habitats with rich biodiversity and abundant prey, as they are voracious predators, feeding on sea urchins, clams, snails, and other invertebrates.

²⁴ CDFW CNDDDB, op. cit.

²⁵ Ibid.

²⁶ USFWS IPaC, op. cit.

REPTILES AND AMPHIBIANS

There are nine special-status reptiles and amphibians known or with potential to occur in Humboldt. These include: Pacific tailed frog (*Ascaphus truei*), which is restricted to perennial montane streams; northwestern pond turtle (*Actinemys marmorata*), which requires aquatic environments located along ponds, marshes, rivers, and ditches; Del Norte salamander (*Plethodon elongatus*), which is associated with old-growth forests; foothill yellow-legged frog (*Rana boylei*, North Coast DPS), which occurs in partly shaded and shallow streams with rocky soils; southern torrent salamander (*Rhyacotriton variegatus*), which is found in cold, well-shaded, permanent streams and seepages; northern red-legged frog (*Rana aurora*), which occurs in usually near dense riparian cover near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season; and the red-bellied newt (*Taricha rivularis*), which occurs in coastal drainages with moderate flow and clean, rocky substrate. There are two marine turtles with the potential to occur in Humboldt: green sea turtle (*Clelonia mydas*) and leatherback sea turtle (*Dermochelys coriacea*). These species are associated with aquatic habitat.

FISH

There are 14 special-status fish species known or with potential to occur in Humboldt. These include: green sturgeon (Southern and Northern DPSs), lower Klamath marbled sculpin (*Cottus klamathensis polporus*), Pacific lamprey (*Entosphenus tridentatus*), tidewater goby, western brook lamprey (*Lampetra planeri*), coast cutthroat trout (*Oncorhynchus clarkii clarkii*), coho salmon Southern Oregon and Northern California Coasts and Central California Coast ESUs, steelhead northern California DPS, Chinook salmon – upper Klamath and Trinity Rivers and California coastal ESUs, longfin smelt (*Spirinchus thaleichthys*), and eulachon. All of these species are associated with aquatic habitat.

BIRDS

There are 24 special-status birds known or with potential to occur in Humboldt. These include: American goshawk (*Accipiter gentilis*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), golden eagle (*Aquila chrysaetos*), ruffed grouse (*Bonasa umbellus*), marbled murrelet, rhinoceros auklet (*Cerorhinca monocerata*), mountain plover (*Charadrius montanus*), western snowy plover, northern harrier (*Circus hudsonius*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), white-tailed kite (*Elanus leucurus*), American peregrine falcon (*Falco peregrinus*), tufted puffin (*Fratercula cirrhata*), bald eagle (*Haliaeetus leucocephalus*), fork-tailed storm-petrel (*Hydrobates furcatus*), double-crested cormorant (*Phalacrocorax auritus*), osprey (*Pandion haliaetus*), short-tailed albatross (*Phoebastria albatrus*), Hawaiian petrel (*Pterodroma sandwichensis*), bank swallow (*Riparia riparia*) and northern spotted owl. These bird species live in a broad range of habitat types within Humboldt.

MAMMALS

There are 10 special-status mammals with potential to occur in Humboldt. These include: pallid bat (*Antrozous pallidus*), white-footed vole (*Arborimus albipes*), Sonoma tree vole (*Arborimus pomo*), gray wolf (*Canis lupus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), Humboldt marten (*Martes caurina humboldtensis*), Pacific marten, fisher (*Pekania pennanti*), and American badger (*Taxidea taxus*). These mammal species live in a broad range of habitat types within Humboldt.

MARINE MAMMALS

There are 12 special-status mammals with potential to occur in Humboldt. These include: fin whale (*Balaenoptera physalus*), blue whale (*Balaenoptera musculus*), gray whale (*Eschrichtius robustus*), north Pacific right whale (*Eubalaena japonica*), Steller sea lion (*Eumetopias jubatus*), humpback whale, northern elephant seal (*Mirounga angustirostris*), southern resident killer whale, harbor seal (*Phoca vitulina*), harbor porpoise (*Phocoena phocoena*), common bottlenose dolphin (*Tursiops truncatus*), and California sea lion (*Zalophus californianus*). All these species are associated with marine habitat.

Wildlife Movement Corridors

Definitions

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary habitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. Essential Connectivity Areas (ECA) are mapped in the report *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* and represent principal connections between Natural Landscape Blocks. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance connectivity between areas of high ecological importance.²⁷ ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve most of the species in each region. It is important to recognize that even areas outside of Natural Landscape Blocks and ECAs support important ecological values and should not be immediately discounted as lacking conservation value without further review.

Humboldt County (Unincorporated and Incorporated)

Wildlife movement corridors in Humboldt are crucial areas that facilitate the movement and migration of animal species across the landscape. These corridors enable animals to move between habitats for foraging, breeding grounds, and suitable living conditions, especially as they respond to seasonal changes, habitat fragmentation, and climate change. In Humboldt, corridors often connect

²⁷ Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

the coastal regions, forested lands, riparian zones, and mountainous areas of the North Coast Range, including areas in and around Redwood National and State Parks, Six Rivers National Forest, and other conservation areas. The riparian corridors that follow rivers and streams, like the Eel, Mattole, Mad, Trinity and Klamath rivers, provide pathways for species, such as otters, beavers, amphibians, and fish. These areas offer crucial connectivity for aquatic and semi-aquatic species, as well as birds and small mammals. Humboldt's old-growth redwood and mixed conifer forests are vital habitats for many terrestrial species. The expansive forests in the county offer high canopy connectivity, allowing species, such as the northern spotted owl, Pacific fisher, and mountain lion (*Puma concolor*) to traverse large distances. The lower-elevation, more open habitats are important for species like deer (*Odocoileus* spp.), Roosevelt elk (*Cervus canadensis roosevelti*), and coyote (*Canis latrans*), providing linkages between forested regions and coastal prairies. They often act as foraging and travel corridors for herbivores and the predators that follow them.

The marine portion of wildlife movement corridors in Humboldt encompasses coastal waters, estuaries, and nearshore marine environments along the Pacific coast. This marine corridor plays a vital role for a diverse range of species, facilitating seasonal migrations, foraging, breeding, and habitat connectivity. Humboldt's marine corridor is influenced by the California Current, a major upwelling system that provides nutrient-rich waters, supporting a high diversity of marine life. The nearshore areas along Humboldt's coastline are critical habitats for migratory fish, seabirds, marine mammals, and invertebrates. Species like salmon, California halibut (*Paralichthys californicus*), and herring (*Clupea* spp.) use these waters as part of their migration routes, moving between rivers and the open ocean. Marine mammals, such as gray whales, use these coastal waters to migrate between feeding grounds in Alaska and breeding areas in Baja California, passing through Humboldt's coast seasonally.

Humboldt Bay is a vital hub in this marine corridor. Estuaries serve as nurseries for fish species like salmon, steelhead, and Dungeness crab (*Metacarcinus magister*), as well as feeding grounds for shorebirds and wading birds. These areas provide refuge and a resource-rich environment for juvenile species before they transition to open waters. The deeper offshore waters, part of the California Current System, act as migratory routes for large pelagic species such as sharks, tuna, and ocean sunfish (*Mola mola*). Seabirds like albatrosses and petrels, as well as marine mammals like dolphins, seals, and sea lions, also rely on these areas for migration, foraging, and connecting with other regions of the Pacific.

Protecting and restoring these wildlife corridors in Humboldt is essential for long-term ecological health and biodiversity conservation, making it a key focus for regional environmental management.

NATIVE ANADROMOUS FISH

Chinook salmon, coho salmon, green sturgeon, Pacific lamprey and steelhead are anadromous fish species. Coho Salmon is listed as threatened under the ESA and are a focus of conservation efforts due to declining populations. Coho salmon are located within the Eel River and its tributaries, especially in the South Fork and Van Duzen River branches. The Mad River and its smaller tributaries also support coho populations, though in smaller numbers. These rivers offer spawning grounds and rearing habitats for the species. Chinook salmon primarily use the Eel River watershed, including its South Fork and the mainstem, as their primary spawning and rearing grounds. The Mad River and Klamath River, particularly where it borders northern Humboldt, are also vital habitats for Chinook, especially for the fall-run. Steelhead is present in the Eel, Mad and Trinity River Basins. Green sturgeon use Humboldt's rivers and coastal marine corridors to travel between their oceanic feeding grounds and freshwater spawning sites. Green sturgeon generally spawn in the upper reaches of

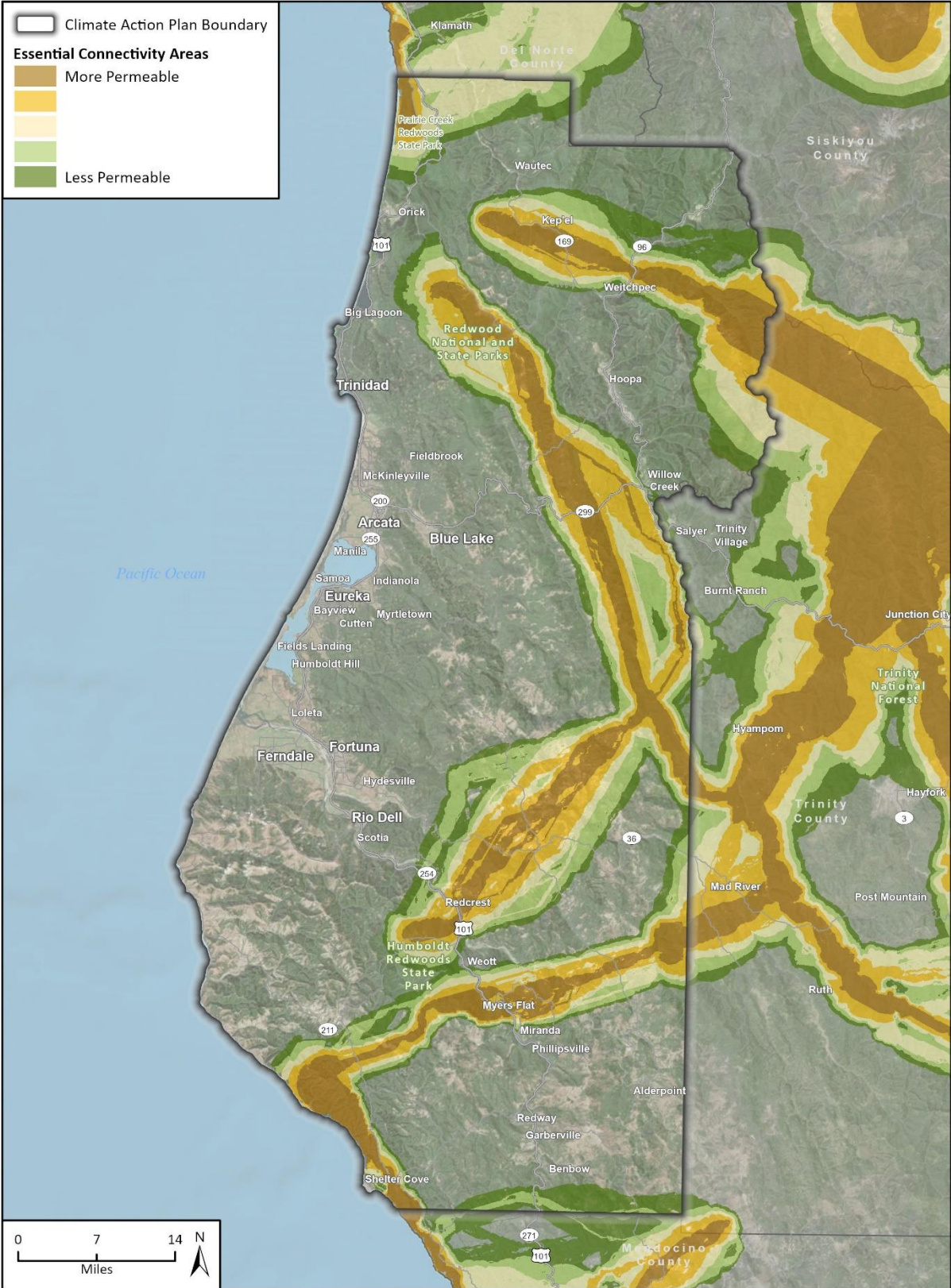
large rivers, like the Klamath and occasionally the Eel River, during spring and summer. Adult Pacific lamprey migrate from the ocean into Humboldt's freshwater rivers to spawn, typically between winter and spring. This migration can span hundreds of miles, with lamprey navigating upstream through rivers like the Eel and Klamath. Steelhead are found in both the main river systems and their smaller tributaries, where they spawn and rear before migrating to the ocean.

MARINE MAMMALS

Humboldt's marine wildlife corridor is part of the larger Pacific Coastal Migratory Corridor, influenced by the nutrient-rich California Current, which supports diverse marine species. Several specific marine mammal species use this marine corridor, each in unique ways depending on their habitat needs, behaviors, and life cycles. These species include gray whales, humpback whales, California sea lions, harbor seals, and occasionally orcas. Each species relies on this corridor for migration, foraging, resting, and, in some cases, breeding.

Gray whales are among the most well-known marine mammals that use Humboldt's corridor. Humboldt's coastal waters provide a stopover during their migration from the Arctic to Mexico, where particularly mothers with calves, swim close to shore. Gray whales can often be spotted near Trinidad Head or Sue-meg State Park. Humpback whales also use Humboldt's marine corridor, especially in the summer and fall when they migrate to Northern California's nutrient-rich waters to feed on anchovies, sardines, and krill. The upwelling zones along Humboldt's coast, particularly around the edges of the continental shelf, create feeding hotspots that attract humpbacks. California sea lions and harbor seals are common along Humboldt's nearshore waters. Often California sea lions gather at haul-out sites along rocky shores and docks, including those in Humboldt Bay and Trinidad Harbor. Harbor seals frequent sandy beaches like Mad River Beach, rocky shores, and sheltered bays, particularly around the Eel River estuary and Humboldt Bay, which provide them with protected haul-out sites. Orcas are occasionally sighted off Humboldt's coast, generally as part of transient populations that specialize in hunting marine mammals like seals, sea lions, and sometimes smaller whales.

Figure 3.3-5 Essential Connectivity Areas in Humboldt



Important Farmland Resources

Definitions

The land best suited for a wide range of agricultural crops is called “prime” agricultural land. There is neither a single fixed definition of “prime” agricultural land nor is there a single prescribed system for classifying lands as “prime”. A number of different systems of agricultural land classifications are in use in California, as described below.

USDA Farmland Definitions and Land Capability Classification System. The United States Department of Agriculture (USDA) provides the following definitions for farmland²⁸:

- Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent.
- Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.
- Farmland of statewide importance is land that does not meet the criteria for prime or unique farmland but may still be important for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.
- Farmland of local importance is land not identified as having national or statewide importance but is considered to be locally important for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

²⁸ USDA. 2024. Soil Data Access (SDA) Prime and other Important Farmlands.
https://efotg.sc.egov.usda.gov/references/public/LA/Prime_and_other_Important_Farmland.html (accessed December 2024).

The USDA Land Capability Classification System is an interpretive classification system for agricultural purposes which uses soil and climatic data to place delineated soil areas into groups of similar management options or problems. The basic foundation of the system is the soil mapping unit found in the soil survey report. Arable soils are placed into groups according to their potentialities and limitations for sustained production of cultivated crops. Non arable soils are grouped according to their potential and limitations for the production of permanent vegetation and according to their risks of soil damage if mismanaged. Classes I and II in the system are often referred to as “prime” agricultural lands.²⁹

Storie Index. The Storie Index Rating (SIR) is a quantitative system which rates four soil factors on the basis of 0-100 points. This system rated agricultural land according to its quality which was determined on the basis of productivity data from a number of major soils in California that were classified in the 1920-s and 30’s. These factors included soil profile, soil texture, slope and soil limitations (such as drainage, pH, nutrient levels, erosion, etc.). Each of these factors were rated and then multiplied together to produce the composite index rating. Thus, a poor rating in any one factor may greatly affect the overall grade. Prime agricultural land was not a part of the SIR but “excellent” agricultural land was considered to rate between 80 -100 points.³⁰

California Farmland Mapping and Monitoring Program. The California Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a critical need for assessing the location, quality, and quantity of agricultural lands and conversion of these lands over time. The FMMP is a nonregulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The modern soil surveys produced by the Natural Resources Conservation Service (NRCS) are the basis for FMMP’s qualitative soil ratings range in age, scale, and coverage. Humboldt is currently in the process of having a countywide soil survey produced by the NRCS (formerly known as the Soil Conservation Service). Therefore, Humboldt is not included in the California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP).

California Legislative Definition of Prime Land. The California Land Conservation Act or Williamson Act of 1965 defines prime agricultural lands as a combination of soil properties and/or economic considerations (California Government Code Section 51200-51297). Government Code Section 51201(c) defines prime agricultural land as any of the following:

- All land that qualifies for rating as Class I or II in the Natural Resources Conservation Service (NRCS) land use capability classification; or
- Land which qualifies for rating 80 through 100 in the Storie Index Rating; or
- Land which supports livestock used for production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; or
- Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than \$200 per acre; or

²⁹ USDA. 2011. U.S. Land Use and Soil Classification.

<https://www.ars.usda.gov/ARSUserFiles/np215/Food%20security%20talk%20inputs%20Lunch%203-15-11.pdf> (accessed December 2024).

³⁰ O’Green, A.T., Southard, S.B., and Southard R.J. 2008. A Revised Storie Index for Use with Digital Soils Information.

<https://anrcatalog.ucanr.edu/pdf/8335.pdf> (accessed December 2024).

- Land which has returned from the production of unprocessed agricultural plant products an annual gross value of not less than \$200 per acre for three of the previous five years.

To characterize the environmental baseline for agricultural resources, Humboldt County maps of agricultural soils and agricultural preserves under Williamson Act contract were reviewed.³¹ Unless otherwise expressed, the future use of “Farmland” specifically includes the following definitions utilized by the County³²:

- a. Rated Class I or II by the U.S. Soil Conservation Service.
- b. Rated 80 through 100 percent in the Storie Index.
- c. Land that has a livestock carrying capacity of one animal unit per acre.
- d. Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a non-bearing period of less than five years and which will normally provide a return adequate for economically viable operations during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production.
- e. Land capable of producing an unprocessed plant production adequate for economically viable operations.
- f. Additional lands in proximity to a, b or c above which are necessary to provide for physically and economically viable, coherent agricultural areas. These lands are included to prevent the establishment of incompatible land uses within an area defined by natural or man-made boundaries.

Humboldt County (Unincorporated and Incorporated)

According to the 2022 U.S. Department of Agriculture Census, approximately 27 percent of Humboldt land (544,630 acres) is in agricultural use with 56,635 acres of cropland. While this total includes large ranches that have a significant amount of timber production contributing to their operations, it fairly represents the overall importance of agriculture to Humboldt.

Humboldt’s dairy lands are an integral part of the landscape, history and economy of the region, generating \$38 million of milk products in 2022. The market value of cattle and calves in Humboldt exceeded \$30 million in 2022. Truck farms, located primarily in river valleys, are becoming increasingly important for supplying local fruit and vegetable demands and specialty exports. While agriculture is one of the most enduring industries in the county, agricultural operators face growing challenges to maintaining viable operations. Rising costs, increasingly complex regulatory requirements, and growing development pressures are among the hurdles facing today’s farmers.³³

The Humboldt County GIS mapping system identifies 107,249 acres of land in incorporated and unincorporated Humboldt as Farmland, including approximately 63,288 acres of prime Farmland.³⁴ In addition, there are 1,409 parcels of land within Humboldt under Williamson Act contract agricultural preserves.³⁵ Mapped Farmland and parcels under Williamson Act contract are shown in Figure 3.3-6.

³¹ US Department of Agriculture. 2022. Census of Agriculture. <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed October 2024).

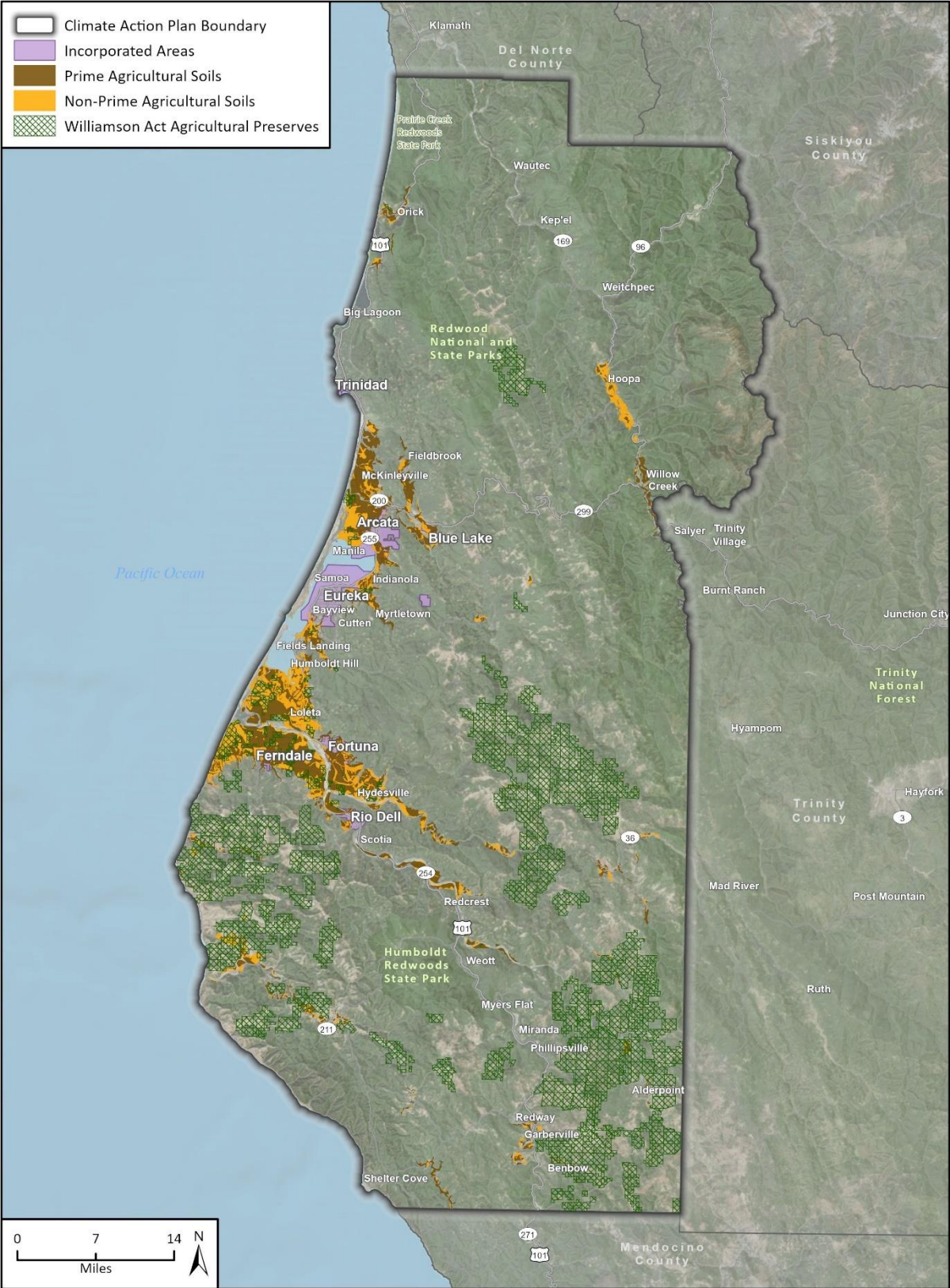
³² Humboldt County. 2017. General Plan Revised Draft Environmental Impact Report. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed December 2024).

³³ US Department of Agriculture. 2022. Census of Agriculture. <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed October 2024).

³⁴ Humboldt County. 2024. Humboldt County Web GIS. <https://webgis.co.humboldt.ca.us/HCEGIS2.0/> (accessed December 2024).

³⁵ Ibid

Figure 3.3-6 Farmland and Williamson Act Contracts in Humboldt County



Basemap and imagery provided by Microsoft Bing, Esri and their licensors © 2024.
Additional data provided by Humboldt County, 2024.

22-13470 EPS EIR
Fig X Ag Soils and Williamson Act Preserves

Productive Forestry Resources

Definitions

Forestry resources include forestland, timberland, and timberland production zones. Definitions used for forest land, timberland, and timberland production zones are those found in the California Public Resources Code Sections 12220(g) and 4789.2(g) and California Government Code Section 51104(g). These codes define forestland, timberland, and timberland production zones as follows:

- “Forest land” is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.
- “Timberland” means land on which is growing a significant stand of trees of commercial species, or potential commercial species, either in public or private ownership or that is generally capable of maintaining a stand of trees in perpetuity and not withdrawn or otherwise devoted to uses other than timber production.
- “Timberland production zone” or “TPZ” means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

Humboldt County (Unincorporated and Incorporated)

Humboldt contains over 1.5 million acres of forest land covering over 80 percent of the land area in the county. National Forests encompass nearly 338,000 acres within Humboldt. National and State parks include 70,000 and 72,000 acres, respectively, while national and state wildlife areas cover 2,600 and 2,000 acres. County parks and community parks account for 1,000 acres. The Bureau of Land Management’s forest reserves cover 7,600 acres. Altogether, these public forested lands (including reserves, parks, and other holdings) total over 679,500 acres or about 36 percent of all forested lands in Humboldt.³⁶ Roughly 990,000 acres are zoned TPZ, two-thirds of which are held by timber companies.³⁷ TPZ land in Humboldt is generally clustered along a north-south axis through the middle of the County, from the western side of the Lower Klamath watershed to the center of the Lower Eel watershed.³⁸

Humboldt’s forested areas are predominantly composed of redwood, Douglas fir, and other coniferous species, contributing to the largest concentration of coastal redwoods in the world. Humboldt is renowned for its extensive forestry resources, encompassing a significant amount of forestland and timberland that play a crucial role in the local economy and ecology. Dedicated timber management of these lands and unique growing conditions have consistently made Humboldt the State’s leading timber producer, contributing more than 20 percent of the State’s total since 2000.³⁹

³⁶ Humboldt County. 2017. General Plan Revised Draft Environmental Impact Report. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed December 2024).

³⁷ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

³⁸ Humboldt County. 2017. General Plan Revised Draft Environmental Impact Report. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed December 2024).

³⁹ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

3.3.3 Regulatory Framework

Federal Regulations

Federal Endangered Species Act

Under the ESA, authorization is required to “take” a listed species. *Take* is defined under Section 3 of the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Under federal regulation (50 Code of Federal Regulations [CFR] Sections 17.3, 222.102); “harm” is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. Section 7 of the ESA outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of the ESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of the ESA. Section 10(a) allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

The USFWS and NMFS share responsibility and regulatory authority for implementing the ESA (7 United States Code [USC] Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, “to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, [...] any migratory bird, or any part, nest, or egg of any such bird” (16 USC Section 703(a)). The Bald and Golden Eagle Protection Act is the primary law protecting eagles, including individuals and their nests and eggs. The USFWS implements the MBTA (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). Under the Bald and Golden Eagle Protection Act’s Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) regulates marine fisheries in U.S. federal waters. The Magnuson-Stevens Act was first passed in 1976 and was revised in 1996 and 2007. The purpose of the Magnuson-Stevens Act is to provide long-term biological and economic sustainability of U.S. marine fisheries.

The NMFS has regulatory authority for implementing the Magnuson-Stevens Act. The NMFS requires regional fishery management councils to develop Fisheries Management Plans (FMP)

specific to their regions, fisheries, and fish stocks. For waters off the U.S. West Coast, the Pacific Fishery Management Council has developed four FMPs, which are implemented through fisheries regulations for coastal pelagic species, groundfish species, highly migratory species, and salmon species. These FMPs also identify EFH, which is broadly defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.

River and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable water of the U.S. Regulated activities include dredging or disposal of dredged materials, excavation, filling, re-channelization and construction of any structure or any other modification of a navigable water of the U.S.

Clean Water Act

Under Section 404 of the CWA, the USACE, with United States Environmental Protection Agency (USEPA) oversight, has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other “waters of the United States” (WOTUS). Perennial and intermittent creeks are considered WOTUS if they are hydrologically connected to other jurisdictional waters. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge of dredged or fill material into jurisdictional wetlands or other jurisdictional WOTUS would require a Section 404 permit from the USACE prior to the start of work. Typically, when a project involves impacts to WOTUS, the goal of no net loss of wetlands is met by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE/USEPA 2008 Mitigation Rule (in descending order): (1) mitigation banks; (2) in-lieu fee programs; and (3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the CWA, applicants for a Section 404 permit must obtain water quality certification from the SWRCB or appropriate RWQCB.

State Regulations

California Endangered Species Act

CESA (California Fish and Game Code Section 2050 et seq.) prohibits take of State-listed threatened and endangered species without a CDFW Incidental Take Permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in California Fish and Game Code Sections 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Communities Conservation Plan (NCCP).

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning Act was established by the California Legislature, is directed by the CDFW, and is implemented by the State, as well as public and private partnerships to protect habitat in California. The Natural Communities Conservation Planning Act takes a regional approach to preserving habitat. An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Once an NCCP has been approved, CDFW may provide take authorization for all covered species, including fully protected species, Section 2835 of the California Fish and Game Code.

California Fish and Game Code Sections 3503, 3503.5, and 3511

California Fish and Game Code Sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (California Fish and Game Code Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

California Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Section 1600 et seq. of the California Fish and Game Code

Section 1600 et seq. of the California Fish and Game Code prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use of any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. For these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the CDFW and may require a lake or streambed alteration agreement. Lakes, ponds, perennial, and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Porter-Cologne Water Quality Control Act

Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must also obtain water quality certification under Section 401 from the RWQCB. Additionally, the SWRCB and each of nine local RWQCBs have jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The local RWQCB implements this general order for isolated waters not subject to federal jurisdiction.

The CWA and associated federal regulations (Title 40 of the CFR 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, including smaller sites in a larger common plan of development or sale, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges, and develop a Storm Water Pollution Prevention Plan. The NPDES Program is a federal program which has been delegated to the State of California for implementation through the SWRCB and RWQCBs.

California Code of Regulations (Wetlands and Waters Definition)

The State Water Board indicates that no single accepted definition of wetlands exists at the State level, and that RWQCBs may have different requirements and levels of analysis with regard to the issuance of water quality certifications. Generally, an area is a wetland if, under normal circumstances:

1. the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;
2. the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
3. the area's vegetation is dominated by hydrophytes, or the area lacks vegetation.

Under California State law, *waters of the State* means "any surface water or groundwater, including saline waters, within the boundaries of the state." As such, water quality laws apply to both surface water and groundwater. After the U.S. Supreme Court decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (53 USC 159), the Office of Chief Counsel of the State Water Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the State Water Board regulates discharges to isolated waters in much the same way as it does for waters of the United States, using Porter-Cologne rather than CWA authority.

California Wild and Scenic Rivers Act

The California and federal system classifies rivers as wild, scenic, or recreational in a similar manner. The state criterion is nearly identical to the federal and is specified in the California Public Resources Code Section 5093.53:

- Wild rivers are those "free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted."
- Scenic rivers are those "free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads."
- Recreational rivers are those "readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past."

Z'berg-Nejedly Forest Practice Act

The Z'berg-Nejedly Forest Practice Act of 1973 is a California law that regulates timber harvesting to ensure sustainable forest management and environmental protection. It requires logging operations to follow specific practices, such as reforestation, erosion control, and wildlife habitat preservation. The law also established the California Board of Forestry and Fire Protection, which oversees the development and enforcement of forest practice rules aimed at balancing timber production with environmental conservation.

Regional and Local Regulations

Humboldt County General Plan, Open Space and Conservation Element

The Humboldt County General Plan Open Space and Conservation Element focuses on preserving open spaces, natural habitats, and agricultural and forest lands within the County.⁴⁰ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and enhance the overall quality of life for residents by maintaining access to natural resources and recreational opportunities. The relevant goals and policies are listed below.

BIOLOGICAL RESOURCES

- **Goal ENV-2.** Protect the quality of water resources in Humboldt.
- **Policy ENV-2.6. Creek Preservation.** Creek setbacks, where feasible, should exceed minimum regulatory setback guidelines to protect native vegetation and enhance creek environments.
- **Policy ENV-2.7. Watercourse Preservation.** Preserve natural watercourses or provide naturalized drainage channels within the city. Where feasible, implement restoration and rehabilitation opportunities.
- **Policy ENV-2.8. Creek Clean-up.** Collaborate with local and regional agencies, businesses, property owners, and organizations proactively to reduce litter, illegal dumping, and reestablish native vegetation along local creeks and waterways.
- **Goal ENV-3.** Preserve and restore streams, wetlands, and riparian areas to function as open space and wildlife corridors.
- **Policy ENV-3.1. Creek Protection Zone Establishment for New Development.** Establish creek protection zones for creeks that extend a minimum of 100 feet (measured from the top of a bank and a strip of land extending laterally outward from the top of each bank), with wider buffers where significant habitat areas or high potential wetlands exist. The County shall prohibit development within creek protection zones, except as part of greenway enhancement, including habitat conservation, bike and walking paths, wildlife habitat, and native plant landscaping. County approval is required for the following activities within the creek protection zones:
 - Construction, alteration, or removal of any structure;
 - Excavation, filling, or grading;
 - Removal or planting of vegetation (except for removal of invasive plant species); or
 - Alteration of any embankment.
- **Policy ENV-3.2. Creek Contamination and Sedimentation Prevention.** Require new development to use site preparation, grading, and construction techniques that prevent contamination and sedimentation of creeks and streams.
- **Policy ENV-3.3. Creek Bank Stabilization.** Require new development proposals to include appropriate measures for creek bank stabilization, and any additional steps necessary to reduce erosion and sedimentation but preserve natural creek channels and riparian vegetation.
- **Policy ENV-3.4. Stream, Wetland, and Riparian Reclamation.** Reclaim degraded streams, wetlands, riparian areas, and wildlife migration corridors, where possible, in cooperation with the Flood Control District, and other local and regional organizations.

⁴⁰ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov.org/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

- **Policy ENV-3.5. Reclamation with New Development.** Require new development adjacent to creek protection zones to encourage the reclamation of adjacent creeks, wetlands, and riparian areas.
- **Policy ENV-3.6. Natural Stream Corridor Retention and Improvement.** Actively support the use of natural waterways within the city. The County will actively work to avoid any new channelization of creeks and waterways within the city and shall work with regional agencies to restore channelized sections to a more natural channel, where feasible.
- **Policy ENV-3.7. Erosion Control Plans.** Require erosion control plans for new development that require significant grading or are near streams, wetlands, and riparian areas. The plans shall include recommendations for grading practices that prevent erosion, loss of topsoil, and scour of drainageways, consistent with biological and aesthetic values.
- **Policy ENV-3.8. Educational and Research Access.** Work with public and private landowners adjacent to creeks to allow access to creeks, waterways, and riparian areas for educational and research programs.
- **Policy ENV-3.9. Restoration and Creek Maintenance.** Encourage all landowners in the County to remove invasive species, plant native plant species, and prevent pollution from entering local creeks and waterways.
- **Goal ENV-4.** Protect and preserve natural habitat, plants, and wildlife.
- **Policy ENV-4.1. Minimize Development Impacts.** Require new development and construction activities to minimize impacts and disturbances on plants and animals, including sensitive habitat and migration corridors, landforms, and trees.
- **Policy ENV-4.2. Natural Habitat Protection.** Preserve, protect, and improve remaining natural habitats, sensitive habitats for special status species, waterways, and wetlands.
- **Policy ENV-4.4. Biological Resources Assessment.** Require that applicants for development projects proposed to be in or adjacent to critical habitat areas to complete a site-specific biological resources assessment as part of the development review process and modify designs or add mitigations to reduce potential impacts.
- **Policy ENV-4.5. Special Status Species Protection.** Cooperate with State and Federal agencies to ensure that new development does not substantially affect any special status species on State or Federal rare, endangered, or threatened species lists.
- **Goal ENV-4.** Protect and preserve natural habitat, plants, and wildlife.
- **Policy ENV-4.3. Fish Passage Improvement.** Support efforts of the County to replace outdated culverts and other in-stream barriers with fish-friendly designs to facility the upstream and downstream movement of aquatic species.
- **Goal OSP-1.** Preserve, enhance, and protect a continuous system of open space areas, hillsides, and natural features.
- **Policy OSP-1.1. Open Space Preservation.** Keep open space and undeveloped forests free of future development.
- **Policy OSP-1.4. Connected Open Space Areas.** Integrate, wherever possible, the local open space and parks systems with the open space systems of nearby communities and the region to create and preserve a continuous and connected system of open space areas.

AGRICULTURAL RESOURCES

- **Goal AG-G1. Agricultural Production.** Economically viable agricultural operations contributing to the growth and stability of the economy and a strong market demand for agricultural lands dedicated to agricultural production.
- **Goal AG-G2. Preservation of Agricultural Lands.** Agricultural land preserved to the maximum extent possible for continued agricultural use in parcel sizes that support economically feasible agricultural operations.
- **Policy AG-P1. Planned Rural Development.** The County shall provide a Planned Rural Development (PRD) Program for lands designated Agricultural Grazing (AG) that allows voluntary clustering of homesites at a density above what would otherwise be allowed when lands most suitable for agricultural production are retained for permanent continued production. To qualify, identified homesite parcels must be clustered to avoid increasing use conflicts and not be in conflict with any applicable conservation plan. Right-to-Farm agreements shall be secured on lands proposed for conversion to residential uses. The remaining lands most suitable for continued agricultural production shall be retained solely for permanent production.
- **Policy AG-P2. Support Voluntary Purchase of Development Rights.** The County shall support the voluntary purchase of development rights to provide income to farm operations and limit the intrusion of residential development into agricultural lands.
- **Policy AG-P3. Support the Williamson Act Property Tax Incentive Program.** The County shall support the continuation, enhancement and growth of the County Williamson Act program.
- **Policy AG-P4. Supplemental Farm Income.** The County shall support activities compatible with agriculture that enhance the viability of agricultural operations such as cottage industries, farm homestays, sale of farm products, and visitor services and accommodations.
- **Policy AG-P5. Conservation of Agricultural Lands.** Agricultural lands shall be conserved and conflicts minimized between agricultural and non-agricultural uses through all of the following:
 - By establishing stable zoning boundaries and buffer areas that separate urban and rural areas to minimize land use conflicts.
 - By establishing stable Urban Development, Urban Expansion and Community Planning Areas and promoting residential in-filling of Urban Development Areas, with phased urban expansion within Community Planning Areas.
 - By developing lands within Urban Development, Urban Expansion and Community Planning Areas prior to the conversion of agricultural resource production lands (AE, AG) within Urban Expansion Areas.
 - By not allowing the conversion of agricultural resource production lands (AE, AG) to other land use designations outside of Urban Expansion Areas.
 - By assuring that public service facility expansions and non-agricultural development do not inhibit agricultural viability, either through increased assessment costs, degradation of the environment, land fragmentation or conflicts in use.
 - By increasing the effectiveness of the Williamson Act Program.
 - By allowing historical structures and/or sensitive habitats to be split off from productive agricultural lands where it acts to conserve working lands and structures.
 - By allowing lot-line adjustments for agriculturally designated lands only where planned densities are met and there is no resulting increase in the number of building sites.

- **Policy AG-P6. Agricultural Land Conversion - No Net Loss.** Lands planned for agriculture (AE, AG) shall not be converted to non-agricultural uses unless the Planning Commission makes the following findings:
 - There are no feasible alternatives that would prevent or minimize conversion;
 - The facts support an overriding public interest in the conversion; and
 - For lands outside of designated Urban Development Boundaries, sufficient off-setting mitigation has been provided to prevent a net reduction in the agricultural land base and agricultural production. This requirement shall be known as the “No Net Loss” agricultural lands policy. “No Net Loss” mitigation is limited to one or more of the following:
 - Re-planning of vacant agricultural lands from a non-agricultural land use designation to an agricultural plan designation along with the recordation of a permanent conservation easement on this land for continued agricultural use; or
 - The retirement of non-agricultural uses on lands planned for agriculture and recordation of a permanent conservation easement on this land for continued agricultural use; or
 - Financial contribution to an agricultural land fund in an amount sufficient to fully offset the agricultural land conversion for those uses enumerated in subsections a and b. The operational details of the land fund, including the process for setting the amount of the financial contribution, shall be established by ordinance.
- **Policy AG-P7. Agricultural Production in Conservation Areas.** The County shall support continued agricultural production on lands placed into conservation easements or acquired by public agencies for conservation purposes. Enforceable provisions contained in terms of sale, deeds and conservation easements shall require continued management for agricultural production.
- **Policy AG-P8. Right to Farm or Harvest.** The County shall utilize the “Right-to-Farm or Harvest” Ordinance to provide constructive notice about the nature of agricultural activities to residents living adjacent to farm operations.
- **Policy AG-P9. Predator Control.** Support predator control programs that comply with federal, state and local laws in order to reduce livestock and other agricultural production losses.
- **Policy AG-P10. Support Land Trusts.** Support private non-profit land trusts that provide agricultural conservation programs in Humboldt.
- **Policy AG-P11. Support Vegetative Management Programs.** Support vegetation management programs (controlled burning, etc.) when it is found that they improve the availability and quality of rangeland for livestock and wildlife, reduce the hazard of disastrous wildfires, and increase water quality and quantity.
- **Policy AG-P12. Advice from Agricultural Community.** Seek advice from organizations and affected individuals within the agricultural community for any future evaluation of land areas needed for urban development or for any consideration of requests by Humboldt’s Local Agency Formation Commission (LAFCo) to change spheres of influence or urban service boundaries next to or near agricultural lands.
- **Policy AG-P13. Agricultural Zoning and Parcel Size.** Utilize Agricultural Exclusive (AE) and Agricultural Grazing (AG) land use designations to ensure appropriate parcel sizes and land use for continuing availability of the necessary agricultural land base.
- **Policy AG-P14. Residential Uses on Timberland Production Zone (TPZ) Lands within Agricultural Preserves.** Residential uses on TPZ lands within agricultural preserves shall be consistent with the requirements of the Williamson Act and local Williamson Act Guidelines.

- **Policy AG-P15. Compliance with Regulations.** The County shall place a priority on abatement of violations that result in agricultural land conversion, loss of agricultural productivity or conflicts with neighboring agricultural operations.
- **Policy AG-P16. Protect Productive Agricultural Soils.** Development on lands planned for agriculture (AE, AG) shall be designed to the maximum extent feasible to minimize the placement of buildings, impermeable surfaces or non- agricultural uses on land as defined in Government Code Section 51201(c) 1- 5 as prime agricultural lands.

FOREST RESOURCES

- **Goal FR-G1. Forest Resources.** Public and private forests producing a wealth of multiple economic and natural resource values and ecosystem services. Constructive dialog and cooperation between state, federal and local agencies and private property owners and a regulatory framework that maximizes private and public interests and ecosystem services.
- **Goal FR-G2. Forestland Timber Production.** A prosperous timber industry managing a stable inventory of productive forest lands for timber production. Ranches and rural homesteads making full use of the timber production potential of their lands.
- **Goal FR-G3. Supply of Productive Forestlands.** An adequate and stable supply of forestlands whose economic and ecosystem services are sustained by policies and standards governing minimum parcel sizes, public acquisition, incompatible uses, public infrastructure investments, environmental protection and incentives for sustainable uses.
- **Goal FR-G4. Incompatible and Conflicting Uses.** Timberlands protected from the encroachment of incompatible uses and managed for the inclusion of compatible uses.
- **Goal FR-G5. Infrastructure.** A public road system maintained for transportation of logs to mills and forest products to market. Sufficient industrially zoned property to support forest products manufacturing. Wildland fire protection that prevents the loss of timber on private property.
- **Policy FR-P1. Timberland Regulatory Review.** Support efforts by the California Department of Forestry and Fire Protection's (CAL FIRE) and other agencies to improve a regulatory system that encourages the productivity and resource protection of timberlands.
- **Policy FR-P2. Timber Harvest Plan Review.** Defer to CAL FIRE on timber harvest reviews; comment only where County land-use patterns have significantly contributed to use conflicts as directed by the Board.
- **Policy FR-P3. Timber Management Regulations.** Support fewer, more effective and lower- cost timber management regulations as a strategy to maintain timber production as the primary economic use of forestlands. Coordinate County policies so they are compatible with the State Forest Practice Act and State Forest Practice Rules.
- **Policy FR-P4. Broader Use of Long-Term Timber Management Plan(s).** Support broader use of Nonindustrial Timber Management Plans, Program Timberland Environmental Impact Reports, and other long-term management plans that would include increasing the maximum acreage allowable under such plans and encouraging multiple landowner cooperative plans.
- **Policy FR-P5. Forest and Rangeland Improvement Programs.** Support continuance and funding of forest and rangeland improvement programs.
- **Policy FR-P6. Tax Incentive Programs.** Support tax incentive programs, such as the Timber Production Zone (TPZ), that maintain or increase the economic viability of timber production. Support tax policies that provide tax benefits to land owners for conservation easements.

- **Policy FR-P7. Innovative Forestland Programs.** Support development of innovative forest and rangeland programs that facilitate production and conservation goals. Support forest management and wood product certification and foster development of markets for new forest products and services, such as using bio-mass for energy and carbon storage.
- **Policy FR-P8. Protection of High Quality Timberlands.** Timberlands planned and zoned for timber production should be retained for timber production, harvesting and compatible uses, and reclassification of the Timberland Production Zones (TPZ) shall be done in accordance with the statutory requirements.
- **Policy FR-P9. Residential Construction on TPZ Zoned Parcels.** Recognize the right to construct a residence and accessory buildings under a ministerial permitting process subject to County standard consistent with other Elements of the General Plan when the use does not detract from the growing and harvesting of timber and associated compatible uses.
- **Policy FR-P10. Secondary Residential Construction on TPZ Zoned Parcels.** Accessory dwelling units may be allowed on TPZ parcels greater than 160 acres, and on parcels less than 160 acres only in the area already converted, intended to be converted, or that does not meet the definition of timberlands. Accessory dwelling units may be allowed on TPZ parcels of less than 40 acres within Community Planning Areas. (GP amendments w ADU Ord., Res. 20-78)
- **Policy FR-P11. Substandard Lots and TPZ Rezoning.** The County supports County-initiated zoning of land from the Timberland Production Zone only when it can be found that:
 - The original inclusion was in error or inappropriate; or
 - The conversion is necessary to provide for the logical expansion of an existing community; or the conversion and rezoning is necessary to provide for the reconfiguration of parcels in order to utilize development unit credits for cluster housing; or
 - The parcel is three acres or less; or
 - The parcel does not meet the definition of timberland, or timber production cannot be sustained as the primary use as determined by the Forestry Review Committee.
- **Policy FR-P12. Landowner-initiated Rezoning of TPZ Parcels.** Landowner-initiated rezoning of TPZ parcels shall be done according to state law (California Government Code Section 51120).
- **Policy FR-P13. Lot Line Adjustments.** Lot line adjustments of TPZ parcels may be approved in order to consolidate logical timberland management units or facilitate clustered residential development. Such adjustments shall be in keeping with the spirit and intent of TPZ and shall not result in a net reduction of the area of TPZ available for forest management unless a finding is made by the Board of Supervisors that it is in the public interest.
- **Policy FR-P14. Timberland Ownership.** The County shall provide incentives to maintain large-scale land ownerships for commercial timber production and to protect forest ecosystem services.
- **Policy FR-P15. Planned Rural Development.** The County shall consider, and if appropriate, develop a Planned Rural Development (PRD) program that allows voluntary clustering of home sites when lands most suitable for timber production are retained for permanent continued production. Consider incentives such as density bonuses.
- **Policy FR-P16. Public Utilities on TPZ Lands.** Where feasible avoid locating federal, state, or local public improvements and utilities in TPZ where the project or land acquisition will have a significant adverse effect on the production of timber or ecosystem services.

- **Policy FR-P17. Conservation Easements.** Support voluntary easement programs consistent with TPZ standards that combine conservation management with sustainable timber production.
- **Policy FR-P18. Transfer of Development Rights (TDR) Program. Research** and develop, if feasible, a voluntary Transfer of Development Rights program as a method of protecting larger tracts of resource lands based on community input. The density credit would not count Accessory Dwelling Units in the calculation.
- **Policy FR-P19. Planned Compatible Uses.** Lands adjacent to areas designated as Timberlands should be planned for uses compatible with timber management, including timber harvesting activities.
- **Policy FR-P20. Fire Safety Hazards.** The County shall continue to implement the State Responsibility Area Fire Safe Standards and Wildland-Urban Interface Building Codes for new development and support voluntary programs for fuels reduction, dwelling fire protection and creation of defensible space for existing development.
- **Policy FR-P21. Right to Harvest.** The County shall utilize the “Right-to-Harvest” Ordinance to provide recorded notice about the nature of timber management activities to residents living adjacent to timberlands.
- **Policy FR-P22. Maintain Public Roads.** The County shall maintain public roads and drainage facilities to support log and forest products transportation.

Humboldt County Local Coastal Program

The County has six Local Coastal Plans under the certified Humboldt County Local Coastal Program (LCP) which guide land use and development along the county’s coastline, ensuring compliance with the California Coastal Act. The LCP aims to protect coastal resources such as beaches, wetlands, and habitats, while promoting sustainable development, public access, and recreation. A key component of the LCP is the Humboldt Bay Area Plan (HBAP), which focuses specifically on the Humboldt Bay region, addressing issues like wetland conservation, bayfront development, and habitat protection. Other LCP plans include the Eel River Area Plan (ERAP), McKinleyville Area Plan (MAP), North Coast Area Plan (NCAP), South Coast Area Plan (SCAP), and the Trinidad Area Plan (TAP). Together, these plans balance environmental conservation with economic activities like agriculture, forestry, and fishing, ensuring responsible coastal management.

Humboldt County Code

STREAMSIDE MANAGEMENT AREAS AND WETLANDS ORDINANCE

Section 314-61, Chapter 4 of the Humboldt County Code (HCC) sets standards for the use and development of land located within Streamside Management Areas, wetlands and other wet areas, such as natural ponds, springs, vernal pools, marshes, and wet meadows. These standards establish buffer zones around these sensitive areas where activities (e.g., construction of vegetation removal) are restricted or require specific permits.

VEGETATION REMOVAL ORDINANCE

Section 313-64, Chapter 3 of the HCC sets provisions to preserve and protect major vegetation within the County Coastal Zone, reduce runoff, provide windbreaks or provide protection to adjacent trees from irreparable wind damage, and enhance property values and local economy by maintaining visual quality, while also respecting private property rights. Major vegetation removal is defined as the following:

- The removal of one or more trees with a circumference of 38 inches or more measured at 4.5 feet vertically above the ground;
- The removal of trees within a total aggregate contiguous or non-contiguous area or areas exceeding 6,000 square feet, measured as the total of the area(s) located directly beneath the tree canopy;
- The Director may determine that a proposal to remove woody vegetation constitutes major vegetation removal if the Director finds that it may result in a significant environmental impact pursuant to this section. In making a finding that the proposed major vegetation removal may result in a significant environmental impact, the Director shall review the proposal and determine if any of the following conditions exist or are proposed:
 - The major vegetation removal involves the use of heavy equipment;
 - The major vegetation removal is proposed on either a steep slope (15 percent or greater), or on a slope designated on the Geological Map of the General Plan with slope stability index of “2” - moderate instability, or “3” - high instability; and may result in soil erosion or landslide;
 - The major vegetation removal is located within or adjacent to an environmentally sensitive habitat as identified in the applicable coastal area plan; or
 - The major vegetation removal may result in significant exposure of adjacent trees to wind damage.

City of Arcata General Plan

The Arcata General Plan includes goals and policies related to open space, natural habitats, and agricultural and forest lands within the City.⁴¹ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant goals and policies are listed below.

POLICY RC-1 NATURAL BIOLOGICAL DIVERSITY/ ECOSYSTEM FUNCTION

- **Objective.** Set an overarching policy that emphasizes the value of biological diversity, and the optimal function of natural resources as part of a healthy ecosystem.
- **RC-1a. Maintain biological and ecological integrity.** Maintaining ecological balance, system function, biological integrity, and natural diversity is the primary focus of the Resource Conservation and Management Element. Protecting the ecological functions of natural habitats, and natural drainage and infiltration processes, will enhance natural ecosystems in the Planning Area. Ecological functions and processes are maintained through the following measures:
 - The structure and composition of ecological systems within the City shall contain the same native plant and animal species, in the same relative abundances and proportions, that are found in the least-disturbed natural ecosystems in the Planning Area.
 - The ecological functions performed by ecological systems in the City shall resemble the functions of the least-disturbed natural ecosystems in the Planning Area.
 - Ecological systems and natural processes shall not be disrupted by non-native organisms to a significant degree.

⁴¹ City of Arcata. 2024. General Plan Resource Conservation and Management Element.
https://www.cityofarcata.org/DocumentCenter/View/14688/42_ResourceCons (accessed December 2024).

- Ecological systems and natural processes shall not be disrupted by land use activities to a significant degree (e.g., a culvert or other drainage device that restricts flow or blocks fish passage).

An “adaptive management” approach shall be used to maintain ecological and biological integrity, including monitoring the status of ecological systems in the City and adjusting the City’s implementation of this Plan, to more closely approximate the conditions provided in the Planning Area’s least-disturbed natural ecosystems.

- **RC-1b. Non-native plant species.** Some non-native plant species, such as pampas grass (*Cortaderia jubata*), Himalayan blackberry (*Rubus discolor*), Scotch broom (*Cytisus scoparius*), blue gum eucalyptus (*Eucalyptus globulus*), English ivy (*Hedera helix*), English holly (*Ilex aquifolium*), cotoneaster (*Cotoneaster franchetii*), and reed canary grass (*Phalaris arundinacea*) are invasive and displace native species. The presence of these non-native species reduces the area’s natural biodiversity, biological integrity, and aesthetics. Only native plant species, or species demonstrated to be non-invasive, shall be used in public landscapes, and native plant species shall be strongly encouraged in private landscapes. The City shall provide public information on invasive plant species, maintain a program that recommends effective but non-toxic eradication measures for invasive plant species, and eradicate non-native plant species on public lands where they are displacing native species.
- **RC-1c. Protection of Environmentally Sensitive Habitat Areas.** Environmentally sensitive habitat areas (ESHA) shall be protected against any significant disruption of their habitat values, and only uses dependent on and compatible with maintaining those resources shall be allowed within ESHAs. Proposed development in areas adjacent to ESHAs shall be sited and designed to prevent impacts that would significantly degrade such areas and must be compatible with the continuance of such habitat areas.
- **RC-1d. Identification of Environmentally Sensitive Habitat Areas.** The City declares the following to be ESHAs within the Planning Area.
 - Rivers, creeks, sloughs, and associated riparian habitats: Mad River; Jacoby Creek; Beith Creek; Fickle Hill Creek; Grotzman Creek; Campbell Creek; Jolly Giant Creek; Janes Creek; Gannon Slough; Butcher Slough; and McDaniel Slough.
 - Wetlands, estuaries, and associated riparian habitats: Arcata Bay; Mad River Slough; Liscom Slough; Butcher Slough; the Aldergrove marshes and ponds; and the Arcata Marsh and Wildlife Sanctuary.
 - Other important habitat areas: waterbird rookeries; shorebird concentration sites; habitat for all rare, threatened, or endangered species on federal or state lists; and vegetated dunes.
 - Public Trust lands such as diked and drained former tidelands that are grazed.
- **RC-1e. Threshold of City review for sensitive habitat effects.** Development on parcels designated Natural Resource [NR] on the Land Use Plan Map, or within 250 feet of such a designation, or development potentially affecting a sensitive habitat area, shall be required to be in conformance with applicable habitat protection policies of this Element. All proposed development plans, including grading and drainage plans, submitted as part of a planning entitlement application for these areas, shall show the precise locations of all sensitive habitat areas on the site plan.
- **RC-1f. Sensitive habitat buffer requirements.** A setback shall be required separating all permitted development from adjacent sensitive habitat areas. The purpose of such setbacks

shall be to prevent any degradation of the ecological functions provided by the habitat area because of the development. The following shall apply to such setbacks:

- The minimum width of setbacks from development to streams and wetlands shall be as provided in policies RC-2 and RC-3, respectively.
 - The minimum width of setbacks from development to all other types of sensitive habitat shall be 100 feet unless the designated setback would eliminate all reasonable use of the property.
 - A definition and map of sensitive habitat will be maintained by the City.
- **RC-1g. Sensitive habitat information required in development application review.** Where there is a question regarding the boundary, buffer requirements, location, or status of an ESHA identified pursuant to General Plan policies, the public or private applicant shall provide the City with the following:
 - Base map delineating topographic lines, adjacent roads, and location of dikes, levees, culverts, flood control channels, and tide gates, as applicable.
 - Vegetation map, including identification of species that may indicate the existence or nonexistence of a sensitive environmental habitat area.
 - Soils map delineating hydric and non-hydric soils.
 - Census of animal species indicating the existence, or non-existence, of an environmentally sensitive habitat area.

This information shall be provided to the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service, NOAA Fisheries (also known as the National Marine Fisheries Service), and other affected agencies for review and comment. Any comments and recommendations provided by these state and federal agencies shall be immediately sent to the applicant for their review. The decision concerning the boundary, location, or status of the environmentally sensitive habitat area in question shall be based on the substantial evidence in the record and supported by written findings.

- **RC-1h. Habitat integration for ecological integrity and development of a protected habitat corridor system.** An ecological connection network plan for linking native habitats in the Planning Area, and all the environmentally sensitive habitat areas identified in this Plan, shall be prepared. The network shall incorporate all existing large areas (or “nodes”) of habitat for fish and wildlife species (such as marshes and forests) and “linkages” or “corridors” of natural habitat (such as stream zones and sloughs) for migration and species movement. The plan will link large “nodes” of natural habitat together with the “linkage” connections as a functioning ecological network. Nodes and linkages shall include a “core” of natural ecosystem elements and shall provide a protected “buffer” along the outer margins of the core habitat that shall function to protect the ecological services in the “core” habitat.
- **RC-1i. Use of biocides and other compounds with biological consequences.** Pesticides, herbicides and insecticides (biocides); hormones and antibiotics (growth promoters); and hydrocarbon-based compounds, used both commercially and individually, can accumulate to toxic levels in biological organisms, including humans. Certain substances, even at low levels, can affect reproductive health.

The City shall maintain and make available a current list of alternative, environmentally-safe products for controlling unwanted vegetation and pests, growing crops and enhancing

production of animal products. The use of substances and compounds that can accumulate to toxic levels is restricted by the City (Pesticide Ordinance).and the City shall develop a program for fostering the reduction of pesticides in private use.

POLICY RC-2 STREAMS CONSERVATION AND MANAGEMENT

- **Objective.** Enhance, maintain, and restore the biological integrity of entire stream courses (headwaters to mouth), and their associated riparian habitats, as natural features in the City's landscape.
- **RC-2a. Designation of protected streams.** The provisions of this policy shall apply to those streams shown on the Protected Watercourse Map (Figure RC-a). These watercourses and their associated riparian areas serve as habitat for fish and wildlife, provide space for the flow of stormwater runoff and flood waters, and furnish open space and recreational areas for city residents.
- **RC-2b. Environmental Buffer Area (EBA).** A streamside protection area is hereby established along both sides of the streams identified on the City Watercourse Map. The purpose of the EBA is to remain in a natural state to protect stream ecosystems and their associated riparian habitat areas. The EBA shall include:
- **RC-2c. Allowable uses and activities in Environmental Buffer Areas.** The following compatible land uses and activities may be permitted in EBAs, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements:
 - Outside the Coastal Zone:
 - agricultural operations compatible with maintenance of riparian resources;
 - fencing along property boundaries and along EBA setback boundaries to prevent bank erosion and degradation of natural riparian vegetation by livestock;
 - maintenance of existing roads, driveways, and structures;
 - construction of public road crossings;
 - forest management practices as permitted by the State of California or Arcata's Forest Management Plan;
 - construction and maintenance of trails for public access;
 - construction and maintenance of utility lines;
 - resource restoration projects;
 - emergency or preventive removal of sediment and vegetation for flood control purposes (only when authorized by the City of Arcata).
 - In the Coastal Zone:
 - all uses and activities listed in (1) above;
 - public coastal access improvements;
 - boat launching facilities.
 - If the provisions herein would result in any legal parcel, not on Public Trust lands, created prior to the date of this plan, being made unusable in its entirety for any purpose allowed by the land-use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel, subject to approval of a conditional use permit. Any land use, construction, grading, or removal of vegetation that is not listed above shall be prohibited.

- **RC-2d. The Wetland and Stream Protection Combining (:WSP) Zone.** The :WSP zone of the Zoning Code shall be applied to all streamside protection areas. [The WSP zone should be a land use designation under the NR district, e.g., NR-WSP.]
- **RC-2e. Review and approval of projects affecting streamside protection areas.** Applications for development on any parcel that is located partially or wholly within an SPA shall be subject to the requirements of Policy RC-1 and RC-2.
- **RC-2f. Conservation easement.** Dedication of a conservation easement, or equivalent deed restriction, encompassing the area within the EBA shall be required as a condition of approval of any discretionary planning permit, including design review, when any portion of the project site falls within an EBA. Such easements may be conveyed to the City of Arcata, or to another governmental agency that shall manage the easement to protect the EBA's functions, or to a mutually agreeable non-profit entity.
- **RC-2g. Maintenance of streams as natural drainage systems.** Arcata's creeks carry a significant amount of the City's stormwater runoff. Drainage controls shall be enforced through implementation of the Drainage Master Plan, to protect water quality, and to minimize erosion, sedimentation, and flood impacts to City creeks. A comprehensive stream maintenance program shall be prepared to augment stormwater utility rehabilitation projects designed to maintain or improve flow capacity, trap sediment and other pollutants that impair water quality, minimize channel erosion, prevent new sources of pollutants from entering the stream, and enhance instream and riparian habitat.
- **RC-2h. Restoration of degraded creek resources.** Portions of Janes, Jolly Giant, Campbell, and Grotzman Creeks are culverted or covered, causing degradation of creek resources. Tide gates on creek systems can be barriers that prevent anadromous salmonids from accessing critical habitat. Furthermore, recreational use can degrade riparian vegetation along upland reaches of certain creeks (e.g., Jolly Giant, Campbell and Jacoby Creeks) within Redwood Park and the Community Forest. Lack of vegetation along creek courses can cause erosion, resulting in water quality and air quality impacts. Restoration activities for improving degraded stream resources shall include:
 - Uncovering of creek courses in public rights-of-way, as part of public works improvement projects.
 - Encouraging landowners to restore degraded EBA and stream resources, including native riparian vegetation establishment and invasive species removal, as part of a new development or renovation.
 - Controlling uses that are damaging to upland reaches of creeks in the Community Forest and Redwood Park.
 - Removing or modifying barriers such as tide gates that prevent migrating anadromous salmonids which are federally listed endangered species from reaching their critical habitat.
 - Exclusionary fencing to keep livestock out of the EBA.
 - Identifying and addressing sources of pollutants that adversely impact water quality, if applicable.

POLICY RC-3 WETLANDS MANAGEMENT

- **Objective.** To protect existing wetlands areas and their functional capacities and services, maintain a standard of "no net loss" of wetland area and services, restore degraded wetland

areas, enhance wetlands functions, and create additional wetland areas to replace historical losses.

- **RC-3a. Requirement for wetland delineation and study.** All proposed development applications shall include a site plan that shows the precise location of any wetlands that exist on the subject property. Any application for development on a parcel where wetlands may be present shall include a wetland reconnaissance or delineation report.
- **RC-3b. Filling of wetlands.** The following shall apply:
 - Filling of wetlands shall be prohibited in the Coastal Zone, unless it can be demonstrated that:
 - the wetland restrictions, if imposed, would render a parcel, not subject to the Public Trust, unusable for any use permitted by the land use plan;
 - there is no feasible, environmentally less damaging alternative to wetland fill for development of a permitted use; and
 - the fill is the least amount necessary to allow development of permitted uses.
 - Filling of wetlands outside the Coastal Zone may be permitted only when the following has been demonstrated by the project proponent:
 - the fill is the least amount necessary to allow a reasonable and harmonious configuration of development on the parcel;
 - the wetlands proposed to be filled are small and isolated, and have limited functional services when compared to larger, contiguous wetland areas.
 - Filling of wetlands shall only be authorized if appropriate mitigation, resulting in “no net loss” in the area and services of wetlands, is provided. Mitigation may consist of creating and maintaining a new wetland of equal or greater functional capacity and services than the wetland proposed to be filled, restoration of previously degraded wetlands, or enhancement of existing wetland areas.
- **RC-3c. Designation of Environmental Buffer Areas for Wetlands.** An Environmental Buffer Area shall be established to separate all permitted development from adjacent existing wetlands that are to be preserved in a natural state, and from new wetland areas that are created as mitigation of wetland infill. The Environmental Buffer Area’s purpose is to remain in a natural state in order to protect wetland ecosystems and their associated habitat areas from destruction or degradation. The extent of the Environmental Buffer Area shall be established based upon analyses and recommendations contained in a site-specific wetland delineation study.
- **RC-3d. Allowable uses and activities in Environmental Buffer Areas for Wetlands.** The following compatible land uses and activities may be permitted in Environmental Buffer Areas for wetlands, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements:
 - Resource restoration or enhancement projects.
 - Farming, consistent with policy RC-3l.
 - Outdoor recreation activities, such as bird watching, hiking, boating, horseback riding, and similar activities.
 - Education, scientific research, and use of nature trails.
 - Drainage ditches when compatible with wetland function.
 - Minor modification of existing, serviceable structures.

- Fencing to prevent livestock from degrading wetlands and riparian vegetation.
- Any use, construction, grading, or removal of vegetation that is not listed above shall be prohibited.
- **RC-3e. Wetland and Stream Protection Combining (:WSP) Zone.** The :WSP zone of the City's Zoning Code shall be applied to all Wetland Protection Areas.
- **RC-3f. Review and approval of projects affecting Environmental Buffer Areas for wetlands.** Applications for development on any parcel that is located partially or wholly within an Environmental Buffer Area for wetlands shall be subject to the requirements of Policy RC-1 and RC-3.
- **RC-3g. Conservation easements.** Dedication of a conservation easement, or equivalent deed restriction, encompassing the area within the Environmental Buffer Area for wetlands shall be required as a condition of approval of any discretionary action, including design review, when any portion of the project site falls within an Environmental Buffer Area. Such easements may be conveyed to the City of Arcata, or another governmental agency, or a City-approved non-profit entity that shall manage the easement to protect the Environmental Buffer Area's functions.
- **RC-3h. Designation of wetland protection zones.** The :WSP Zone shall be applied to wetlands, wetland setbacks, wetland buffer areas and modified wetland buffer areas, as defined in the City's Zoning Code, at the time of development review and approval.

A wetlands map, maintained by the City, will show the general location of wetlands, riparian corridors, and uplands within the City limits and urban services zone. All proposed development within or adjacent to the areas identified on the map as wetlands or riparian corridors shall comply with City Wetlands Development Standards.

A Wetlands Buffer Area shall be required to protect the areas shown as wetlands on the Wetlands Map. All proposed development within the buffer areas shall comply with the Wetlands Buffer Area Development Standards of the Coastal Zoning Ordinance.

- **RC-3i. Management of Arcata Marsh for wetlands services as well as wastewater treatment.** The Arcata Marsh and Wildlife Sanctuary serves a variety of purposes and functions, including providing wetland habitat for a variety of species, wastewater treatment, and recreational use. These purposes shall be balanced for the benefit of all users.
- **RC-3j. Minimum mitigation requirements for wetland impacts.** Diking or filling of a wetland that is otherwise in accordance with the policies of this General Plan, shall, at a minimum, require mitigation measures, a monitoring program, and acceptable funding.
- **RC-3k. Wetland functional capacity maintenance requirement.** Diking, filling, or dredging of a wetland or estuary shall maintain or enhance the functional capacity of these resources. Functional capacity means the ability of the wetland or estuary to be physically and biologically self-sustaining and to maintain natural species diversity. To establish that the functional capacity is being maintained, all the following must be demonstrated:
 - Presently-occurring plant and animal populations in the ecosystem will not be altered in a manner that would impair the long-term stability of the ecosystem (i.e., natural species diversity, abundance and composition are essentially unchanged as the result of the project).
 - A species that is rare or endangered will not be significantly adversely affected.

- Consumptive uses (e.g., fishing, aquaculture and hunting) or non-consumptive functions (e.g., water quality improvement and research opportunity) of the wetland or estuary ecosystem will not be significantly reduced.
- **RC-3I. Uses allowed in diked and drained reclaimed former tidelands.** Allowable uses and development in grazed or farmed wetlands are limited to uses compatible with the Public Trust doctrine. These uses are specified in Land Use Element Policy LU-6 and are summarized below.
 - Agricultural operations limited to accessory structures, apiaries, field and truck crops, livestock raising, greenhouses (provided they are not located on slab foundations and crops are grown in the existing soil on site), and orchards.
 - Farm-related structures, including barns, sheds, and farmer-occupied housing, are necessary for the performance of agricultural operations. Such structures may be located on an existing grazed or farmed wetland parcel only if no
 - alternative upland location is available for such purpose and the structures are sited and designed to minimize adverse environmental effects on Public Trust resources and uses. No more than one primary and one secondary residential unit shall be allowed per parcel.
 - Restoration projects.
 - Nature study, aquaculture, and similar resource-dependent activities compatible with Public Trust resources and uses.
 - Incidental public service purposes that may temporarily impact the resources of the area (such as burying cables or pipes).

Expanding farming operations into non-farmed wetlands, by diking or otherwise altering the functional capacity of the wetland is not permitted. Farm-related structures (including barns, sheds, and farm-owner occupied housing) necessary for the continuance of the existing operation of the farmed wetlands may be located on an existing farmed wetland parcel, only if no alternative upland location is viable for such purpose and the structures are sited and designed to minimize the adverse environmental effects on the farmed wetland. Clustering and other construction techniques to minimize both the land area covered by such structures and the amount of fill necessary to protect such structures will be required.

POLICY RC-4 OPEN WATERS OF ARCATA BAY AND TIDELANDS

- **Objective.** Maintain existing Bay wetlands and tide lands, protect them from urban and agricultural encroachments or degradation, and manage the open waters of Arcata Bay for their wildlife, fisheries, and ecological services, as well as navigation, recreation, and tourism uses.
- **RC-4a. Protection of open waters and tideland areas of Arcata Bay.** The open water areas and tidelands of Arcata Bay constitute a fragile Public Trust resource and access shall be controlled to avoid resource degradation, while maintaining the public's right to navigation. Tidal marshes shall be enhanced and maintained, especially in the areas of McDaniel, Gannon, and Butcher's Sloughs, to protect wetland services.
- **RC-4b. Access to Arcata Bay.** The following bicycle and pedestrian routes are designated as Public Access Corridors and shall be properly signed and identified as approved Bay access points.
 - "I" Street from Samoa Boulevard, south through the Arcata Marsh and Wildlife Sanctuary to the boat launching facility on Arcata Bay.
 - South "G" Street south of "H" Street, to Highway 101.

- Humboldt Bay Trail from Samoa Boulevard (Highway 255), south to Bayside Cutoff and beyond.
- Samoa Boulevard from Highway 101 west to Mad River Slough.

A system of foot trails and interpretive sites shall be established along the Arcata Bay shore westward to the City limit, subject to the following guidelines:

- All planning and development in the area that is both south of Samoa Boulevard and west of Highway 101, and that is identified as tidelands, former tidelands, wetlands or riparian corridor on the adopted Wetlands Map shall be reviewed by the Wetlands and Creeks Committee and coordinated with California Department of Fish and Wildlife.
- Development in the area bounded by Butcher's Slough and Gannon Slough shall occur in conjunction with management of the USFWS National Wildlife Refuge, Arcata Marsh and Wildlife Sanctuary and the Jacoby Creek Gannon Slough Wildlife Area.
- Motorized vehicles shall be restricted to paved roads and parking lots.
- Pedestrians shall be restricted to designated trails and facilities.
- Valid scientific and educational studies of wetlands and tidelands are encouraged with a City Nature Area Entrance Permit.
- **RC-4c. Coastal-dependent and Public Trust uses of Arcata's tidelands.** Tidelands of Arcata Bay support a variety of wildlife, as well as human activities. The following provisions shall be made for managing tideland areas.
 - Tidelands and open water areas of Arcata Bay shall be designated Natural Resource-Public Trust lands [NR-PT] and identified as passive use recreational areas.
 - The Arcata Marsh and Wildlife Sanctuary shall be designated as Natural Resource [NR], and the recreational component of the project identified as a passive use recreational area.
 - The continued use of the tidelands for scientific and educational studies is encouraged.
 - The Arcata Marsh and Wildlife Sanctuary shall be maintained, and any new facilities shall be built consistent with the Arcata Marsh and Wildlife Sanctuary plan adopted by the City Council.
 - The South "I" Street boat launch shall be enhanced or relocated to accommodate small watercraft and windsurfing.
 - The placement of interpretative sites along the Arcata Bay shore, including Nature and Wildlife Centers, shall be coordinated with other agencies, and serve as an educational focal point for Arcata's natural resource areas.
 - Access on the levee from the Arcata Marsh and Wildlife Sanctuary westward to the City limit shall be provided for passive recreation and nature observation.
- **RC-4d. Diking, dredging, filling, and shoreline structures.** Diking, dredging, or filling of Bay waters, wetlands, and estuaries is discouraged and only permitted where it has been demonstrated that the Public Trust resources and values are being protected, and mitigation measures have been provided, which minimize adverse environmental effects, for the following limited uses:
 - Incidental public service purposes including, but not limited to, burying cables and pipes, and maintaining existing dikes and public facilities.
 - Maintaining a channel adequate to serve the boat ramp at current levels of use.

- Resource restoration purposes.
- Nature study, aquaculture, or similar Public Trust resource dependent activities.
- 5. Agriculture as currently practiced within existing diked former tidelands but not including the expansion thereof.

In order to protect existing development, shoreline structures (such as dikes or tide gates) that may alter the natural shoreline, shall be permitted only when they do not adversely affect any federally listed endangered or threatened species; and no other feasible, less environmentally-damaging alternative is available, and only when the structures are not located within a wetland, unless the wetland will be the primary beneficiary of the structure.

The placement of dredge material on existing wetlands shall not be permitted unless such placement is necessary for either a Public Trust resource restoration project, or for the maintenance of existing agricultural operations in diked former tidelands.

Wetland fill shall be allowed for aquaculture projects if it can be shown that it is necessary for the project, is required to be located within the wetland, and there is no other feasible, less environmentally-damaging, alternative.

- **RC-4e. Aquaculture use of coastal wetlands and tidelands.** To protect aquaculture activities in Arcata Bay, the City shall:
 - Ensure that its wastewater discharge does not exacerbate existing problems with coliform bacteria levels in Arcata Bay.
 - Take measures to reduce coliform loading of perennial streams within its jurisdiction, as part of a stream maintenance program. These measures shall include controlling identified sources of coliform loading such as septic tank leachate and runoff from agricultural operations.

Aquaculture shall not adversely impact natural ecological processes nor native wildlife or fisheries or their habitat in the Bay. No new aquaculture uses shall be permitted unless it can be demonstrated that adequate precautions will be taken to prevent new adverse impacts to natural ecological processes. The City shall continue its management of:

- Integrated wetland enhancement and wastewater treatment
- The tidelands, for commercial and native oyster harvesting.
- **RC-4f. Management of bayfront and marsh areas for coastal access, recreation, and tourism.** Tidelands and open water areas of Arcata Bay shall be designated Natural Resource-Public Trust land [NR-PT] and protected from uncontrolled access. The following guidelines shall be used when permitting access to these areas:
 - Motorized vehicles shall be restricted to paved roads and parking lots.
 - Pedestrians shall be restricted to designated trails and facilities.
 - Valid scientific and educational studies of the wetlands and tidelands shall be encouraged.

New development shall not restrict public access to the shoreline. Public access to the shoreline shall be required of new development. Where consistent with the Humboldt Bay National Wildlife Refuge Complex Comprehensive Conservation Plan, controlled public access to the Refuge's Jacoby Creek Unit shall be developed along Arcata Bay from the AMWS to the City's westward limit.

POLICY RC-5 AGRICULTURAL RESOURCES MANAGEMENT

- **Objective.** Protect and enhance agricultural uses on prime agricultural lands within the City and encourage more productive agricultural use of agriculturally suitable lands.
- **RC-5a. Promotion of and participation in agricultural production within the City.** Diverse and intensive agricultural production and increased participation in agricultural production, shall be promoted, to maintain the value of agricultural lands, improve the economic base, and increase employment and food production. The City does not, however, advocate more intensive agricultural uses and practices that would have adverse environmental impacts. Agricultural operations, such as Community Supported Agriculture (CSA) are strongly encouraged.
- **RC-5b. Community and farm protection.** Maintaining a compatible relationship between agricultural and residential uses shall be based on:
 - Recognizing the rights of owners of productive agricultural land to make agricultural use of their land.
 - Identifying and minimizing potential conflicts between agricultural operations and adjacent residential, commercial, and community facility uses.
- **RC-5c. Permanent protection for agricultural lands.** Protection of agricultural resources shall be secured through the purchase of conservation easements, development rights, and outright acquisition. The City shall work in conjunction with other entities such as land trusts, whenever possible, to preserve agricultural buffers and maintain and enhance agricultural uses on prime agricultural soils.

POLICY RC-6 FOREST RESOURCES MANAGEMENT

- **Objective.** Protect and enhance private and public forest lands (e.g., the Arcata Community Forest Tracts) to maintain the resiliency and integrity of the ecosystem while protection timber production, recreation, habitat values, and opportunities for education and research.
- **RC-6a. Management of Arcata Community Forest.** The City's 2022 Forest Management plan includes the following policies:
 - 1. Recreation and aesthetics resource management - The community forest will emphasize dispersed, day-use opportunities. Recreational use shall not be allowed to impact other resources such as fish, wildlife, or watershed.
 - 2. Timber resource management - To ensure the sustainable and long-term production of forest products, the rate of harvesting must not exceed the rate of production. Long-term productivity refers to the continuing ability of the forest to produce timber while retaining the associated values of watershed, wildlife, soils, recreation and aesthetics. This is dependent upon the use of management practices that do not allow for the deterioration or impairment of soil productivity. For planning purposes, long term means that exceeding fifty years.
 - Watershed resource management - Water quality, soil, riparian, and aquatic biological productivity shall be maintained and enhanced through the application of City forest management standards and the implementation of watershed improvement projects.
 - Wildlife resource management - Wildlife habitat is managed to promote species diversity and to ensure that populations of indigenous species are maintained. This can best be achieved through the maintenance and enhancement of habitat values. Habitat values that lead to species diversity include the following elements: breeding, foraging, watering, rearing, hiding and thermal cover.

- Vegetation and botanical resources - Maintain the native biodiversity of species found in a redwood forest habitat, both by controlling exotics and managing for a species mix that would naturally occur in a redwood forest habitat.
- **RC-6b. Management of Jacoby Creek Forest.** The management policies for the Jacoby Creek Forest are the same as those for the Arcata Community Forest, listed above, except that the Jacoby Creek Forest is not open to recreational use.
- **RC-6c. Allocation of forest funds.** Forest fund revenues derived from timber harvest and carbon projects shall be deposited into a special revenue account within the City to be utilized for forest management purposes. Excess net forest fund revenues, when available, may be directed towards park acquisition, maintenance, and development. This can include acquisition of stream corridors, and riparian and greenbelt areas.

These areas contribute to the diversity of parks and, in the case of linear parks along stream corridors, provide passive recreation areas compatible with the environment. The acquisition of open space shall be emphasized as an appropriate use for the remaining revenues.

- **RC-6d. Management practices for private timberlands.** The management of private timberlands shall be encouraged to use current principles of sustainable forestry for all aspects of forest use and function: recreation; timber production; biodiversity; air and water quality; and carbon storage. Timber owners are encouraged to apply for conservation easements, certified forestry, or compensation for carbon storage.
- **RC-6e. Timber harvest plans.** The City, in cooperation with California Department of Forestry, shall request review of all Timber Harvest Plans (THP) within the Planning Area. The City shall review THPs for measures that protect water quality, control erosion and flooding, and preserve the City viewshed. The city shall recommend that THPs that do not include these measures not be approved.
- **RC-6f. Urban conversions.** The sustainable management of timber resources, and related uses, shall be encouraged, so that the long-term economic return from productive timber production will provide sufficient incentives to prevent urban conversions. Urban conversions are discouraged within the Urban Services Boundary.
- **RC-6g. Setbacks.** Development adjacent to the Community Forest boundary shall be setback at least 150 feet, unless this would make the use of the parcel infeasible for its designated purpose. However, larger setbacks may be required to prevent exposure to potential hazards and to maintain forest integrity.
- **RC-6h. Monitoring.** Monitoring of forest practices, to ensure consistency with adopted management and harvest plans, shall be carried out as an implementation measure of this Element. The general objectives of the monitoring will be to:
 - Determine the effectiveness of management practices at multiple scales (i.e., individual sites to watersheds).
 - Validate ecosystem functions and processes have been maintained as predicted.

POLICY RC-7 WATER RESOURCES MANAGEMENT

- **Objective.** Manage Arcata's water resources from a watershed perspective, to maintain surface water and ground water quality and quantity. Runoff will be managed for the benefit of aquatic habitats, native and non-invasive vegetation, and soil conservation, and to recharge groundwater.

- **RC-7a. Protection of surface waters from point and nonpoint pollution sources.** The use of natural stormwater drainage systems, which preserve and enhance natural features, shall include the following:
 - Efforts to acquire land or obtain easements for drainage and other public uses of floodplains, where desirable to maintain stream courses in a natural state, shall be supported.
 - Recreational opportunities and aesthetics shall be considered in the design of stormwater retention, detention, treatment, and conveyance facilities.
 - Sound soil conservation practices shall be required, and impacts of proposed developments, with regard to water quality and effects on watersheds, wetlands and drainage courses, shall be carefully examined.
 - The quality of runoff from urban and suburban development shall be improved through use of appropriate and feasible Best Management Practices (BMPs) including, but not limited to, bioretention basins, artificial wetlands, grassy swales, oil/grit separators, with an emphasis on a Low Impact Development approach to stormwater management.
 - New development shall be required to minimize increases in stormwater peak flows and/or volume, to the extent feasible. Stormwater management measures shall take into consideration potential adverse impacts on the Mad River, Arcata Bay, and adjoining lands in the City and Planning Area.
 - New development projects shall be designed to minimize drainage concentrations, maximize permeable surfaces (such as unpaved parking areas) and maintain, to the extent feasible, natural site drainage conditions.
 - New development projects that may adversely affect the quantity and quality of stormwater runoff shall be required to allocate land necessary for detaining post-project flows and/or for incorporating measures to minimize water quality impacts from urban runoff. To the maximum extent feasible, new development shall not produce a net increase in peak stormwater runoff.
 - All development shall comply with the City's post construction stormwater management program (under the MS4 General Permit) which includes stormwater management measures for site design, source control, runoff reduction, stormwater treatment, and baseline hydromodification controls, as applicable based on project type and size.
- **RC-7b. Protection of groundwater sources.** Septic systems and onsite disposal of toxic substances are the leading causes of groundwater contamination. Septic systems within the Urban Services Boundary shall not be permitted, and incidents of onsite toxics disposal shall be referred to the appropriate county and state agencies.
- **RC-7c. Watershed and urban runoff management.** To protect structures, critical facilities, existing habitat values and water quality, flooding shall be managed on a watershed basis, using a combination of biotechnical solutions, flood protection practices, and Drainage Master Plan's management practices.
- **RC-7d. Water quality monitoring.** Water quality and quantity shall be monitored on a regular basis to ensure that City policies are being adhered to.

City of Arcata Local Coastal Program

Portions of the City of Arcata are located in the coastal zone. The City has a Certified LCP which guides land use and development along the City's coastline, ensuring compliance with the California

Coastal Act. It aims to protect coastal resources such as agricultural lands, wetlands, and habitats, while promoting sustainable development, public access, and recreation.

City of Arcata Forest Management Plan

The Arcata Community Forest Management Plan provides a comprehensive framework for managing the city's forest resources. The plan emphasizes ecological, social, and economic sustainability, aiming to balance forest health with community needs. Key management priorities include:

- **Watershed Protection:** Ensuring the health of water resources within the forest.
- **Wildlife Habitat:** Enhancing and preserving habitats for diverse species.
- **Recreation:** Providing opportunities for public enjoyment without compromising ecological integrity.
- **Carbon Sequestration:** Utilizing the forest's capacity to absorb carbon dioxide, contributing to climate change mitigation.
- **Timber Harvest Revenue:** Generating income through sustainable timber practices to support forest management and community projects.

Approximately 35 percent of the forest is designated as reserves, with the maximum allowable annual harvest set at half of the annual growth increment on the working landscape portion. This approach ensures the forest's volume and age increase over time. The plan also integrates community-based forestry principles, promoting engagement, education, and local economic development. It serves as a model for managed redwood forests, demonstrating sustainable practices that balance ecological health with community benefits.⁴²

City of Blue Lake General Plan

The City of Blue Lake General Plan Land Use Element includes goals and policies related to open space, natural habitats, and agricultural and forest lands within the City.⁴³ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant goals and policies are listed below.

ENVIRONMENTAL PROTECTION

- **Goal:** to promote and protect the quality of the natural and human environment in Blue Lake and its environments.
- **Policy 1.** The City shall consider all development with respect to potential impacts on environmental quality.
- **Policy 2.** Developers shall be encouraged to design projects so as to avoid topography changes and unnecessary stripping of natural foliage. Where feasible, existing trees and terrain shall be preserved by fitting streets and building sites into the landscape with minimum disturbance of the land, its natural vegetation and creek ways. Developers shall be encouraged to use existing natural vegetation and topographic features to provide required open space and landscaping.

⁴² City of Arcata. 2020. Arcata Community Forest Management Plan Update 2020. <https://www.cityofarcata.org/DocumentCenter/View/10327/Draft-2020-Forest-Management-Plan-Update-12-2020?bidId=> (accessed December 2025).

⁴³ City of Blue Lake. 2021. General Plan Land Use Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed December 2024).

- **Policy 3.** The City shall minimize the impacts of flooding, in areas designated by F.E.M.A. to be subject to flooding, by:
 - Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
 - Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
 - Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
 - Controlling filling, grading, dredging and other development which may increase flood damage; and
 - Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.
- **Policy 4.** The City shall encourage site design that maximizes on-site retention of stormwater and minimizes discharge to the City's storm water system.

PRESERVATION OF OPEN SPACE AND AGRICULTURAL LANDS

- **Goal:** Agriculture and open space lands shall be preserved as a buffer around the city to retain the character and sense of community of blue lake. Designated open space within the city shall be enhanced and coordinated with other city facilities.
- **Policy 1.** Land suited for agriculture shall be used for that purpose, where prime or potentially prime agricultural soils occur in economically viable units.
- **Policy 2.** There shall be an agricultural land use designation that permits exclusively agricultural uses, including a single-family residence per land unit.
- **Policy 3.** Uses considered compatible with agricultural uses shall be permitted in agriculturally designated areas; such uses shall not preclude the viability or use of the land for agricultural purposes.
- **Policy 4.** Areas devoted to agricultural use shall be coordinated with Open Space and Public Safety policies of the City and other agencies.
- **Policy 5.** Agricultural uses (non-cannabis), open spaces, recreational uses and similar areas shall be used to provide a green belt to separate Blue Lake from adjacent communities.
- **Policy 6.** Agricultural and potentially incompatible uses shall be separated, where possible, by such natural or man-made features as roads, vegetation, stream courses or topographical features.
- **Policy 7.** A pedestrian/equestrian pathway system should be developed to connect open space and recreational areas, utilizing existing open space corridors.
- **Policy 8.** Flood-prone areas should be designated for agricultural or recreational uses and kept free from urban development wherever possible.
- **Policy 9.** Property owners should be encouraged to keep areas with unique natural features in a natural or enhanced condition. Such areas include the Mad River, Powers Creek, and the site of the historic lake.
- **Policy 10.** Areas on the river side of the levee, and the levee shall be retained in undeveloped open space; public access to this area, for recreational purposes, shall be encouraged.

- **Policy 11.** Minimal outdoor spaces, such as “pocket parks” and street landscaping shall be developed for public use whenever feasible, especially in the central part of the City.
- **Policy 12.** Maximum use of school land, utility rights-of-way and other public lands for parks, recreation and open space purposes shall be encouraged.
- **Policy 13.** The City shall provide levels of service appropriate for agricultural land, in order to encourage its continued use for agriculture and discourage its conversion to other uses.
- **Policy 14.** The City shall pursue acquiring forest lands to the east of City limits for use as a community forest.
- **Policy 15.** The City shall not oppose the conversion of agricultural land in the Sphere of Influence for low density residential uses, so as to preclude or minimize the development of cannabis uses.

POWERS CREEK MANAGEMENT

- **Goal:** To protect and enhance powers creek and the various wetlands throughout the city as attractive natural features and valuable resources, and to minimize flood, erosion and other property damage.
- **Policy 1.** Powers Creek shall be managed to maintain the creek as a scenic and natural resource, and to protect adjacent properties and structures to the greatest degree possible.
- **Policy 2.** Vegetation, necessary to maintain the natural character of the creek without creating a hazard to adjacent properties, shall be maintained along the creek except where inconsistent with public access needs.
- **Policy 3.** Maintenance of the creek shall be encouraged. Maintenance goals shall be to preserve its scenic and resource value and to prevent flooding.
- **Policy 4.** The City should develop access across the creek, where necessary and appropriate to improve circulation within the City of Blue Lake.
- **Policy 5.** City actions relating to the creek shall be considered and implemented with sensitivity for the adjacent property owners. This shall include development of bridges or other access to and/or across the creek.
- **Policy 6.** The City shall pursue funding and collaboration with local groups, agencies, and non-profit organizations for the restoration of Powers Creek.
- **Policy 7.** The various wetland areas throughout the City shall be maintained as a scenic and habitat resource, and to prevent flooding impacts due to the modification of existing hydrology

Eureka General Plan

The City of Eureka General Plan includes goals and policies related to open space, natural habitats, and agricultural and forest lands within the City.⁴⁴ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant goals and policies are listed below.

WATER RESOURCES AND WATER QUALITY

- **Goal NR-1.** Protection, enhancement and restoration of surface water resources, and their associated riparian habitats, and groundwater, as well as improvement of water quality.

⁴⁴ City of Eureka. 2018. 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed December 2024).

- **Policy NR-1.1. Surface Water.** Preserve, protect, and restore all surface water resources (including bays, rivers, streams, wetlands, and sloughs) to their natural state, to the maximum extent feasible. (RDR, IGC) (Imp NR-1)
- **Policy NR-1.2. Groundwater Recharge Areas.** Regularly review and update Figure NR-1 to identify, map, protect, and preserve important groundwater recharge areas. (IGC)
- **Policy NR-1.3. Natural Open Space Areas.** Preserve undeveloped natural open space areas that provide important groundwater recharge, stormwater management, and water quality benefits, such as undeveloped open spaces, gulches, natural habitat, riparian corridors, wetlands, and other drainage areas. (RDR)
- **Policy NR-1.4. Watershed Management.** Manage water resources at the watershed level, to maintain high ground and surface water quality. (RDR, IGC)
- **Policy NR-1.5. Best Management Practices.** Require the implementation of Best Management Practices (BMPs) to minimize erosion, sedimentation, and water quality degradation resulting from the construction of new impervious surfaces. (RDR)
- **Policy NR-1.6. Water Quality.** Regulate construction and operational activities to incorporate stormwater protection measures and Best Management Practices in accordance with the City's National Pollution Discharge Elimination System to minimize adverse effects of wastewater and stormwater discharges. (RDR, MP)
- **Policy NR-1.7. Groundwater Protection.** Continue to encourage septic system users to connect to City services, and prevent onsite disposal of toxic substances per local and State regulations to reduce groundwater contamination. (RDR)
- **Policy NR-1.8. Biological Productivity.** Maintain and, where feasible, restore the biological productivity and quality of rivers, streams, and wetlands to maintain optimum populations of aquatic organisms and protect human health. (MP, OFB)
- **Policy NR-1.9. Alterations to Rivers and Streams.** Require channelization or other substantial alterations that could significantly disrupt the habitat or hydrologic values of rivers and streams to incorporate all feasible Best Management Practices. Limit such activities to trails, bridges, flood control projects, and fish and wildlife habitat restoration projects. (RDR)
- **Policy NR-1.10. Regional Coordination.** Coordinate and collaborate with agencies in the region and within the watershed to address water quality issues. (IGC)
- **Policy NR-1.11. Pervious Pavement.** Encourage the installation of pervious pavement and surfaces. (RDR)

BIOLOGICAL RESOURCES

- **Goal NR-2.** Protection of sensitive biological resources on a sustainable basis to generate long-term public, economic, and environmental benefits.
- **Policy NR-2.1. Development in Gulches and Greenways.** Allow limited development within Eureka's gulches and greenways and permit private property owners adjacent to gulch and greenway areas to develop, provided sensitive species habitat, fish and wildlife corridors, and the hydrologic capacity of the resource are protected, and vegetation removal does not occur below the high water mark or in areas subject to flooding, consistent with local, State, and federal regulations. (RDR)
- **Policy NR-2.2. Gulch Greenway Preservation and Management Guidelines.** Prepare and adopt Gulch Greenway Preservation / Management Guidelines that identify and protect sensitive species habitat and the hydrologic capacity of Eureka's gulches and greenways. Include

provisions in these guidelines for defining the boundaries of gulches and greenways, as generally indicated in Figure NR-1, identifying the boundaries of all affected parcels lying wholly or partly within the gulches and greenways, ensuring new development is compatible with the environmental and public safety values of the gulches and greenways, and restoring gulch vegetation, wetlands, and sensitive species habitat as appropriate. (RDR)

- **Policy NR-2.3. Trails in Gulches and Greenways.** Work with private landowners and Humboldt County to establish a publicly accessible trail network in and along Eureka's gulches and greenways that would not adversely impact sensitive species habitats. (MP, IGC, JP)
- **Policy NR-2.4. Wetlands Preservation.** Require appropriate public and private preservation and restoration of wetlands, and/or rehabilitation through compensatory mitigation in the development process for impacts to wetlands, consistent with State and federal permitting requirements. (Imp NR-1)
- **Policy NR-2.5. Sensitive Species Habitat.** Require development in or adjacent to sensitive species habitats that may contain special-status species to be compatible with the long-term sustainability of the habitat, and (in discretionary projects) be conditioned to prevent significant habitat degradation or harm to rare, threatened, or endangered species. (RDR)
- **Policy NR-2.6. Buffers.** Require the provision and maintenance of reasonably- sized buffers between sensitive habitat and adjacent urban uses to minimize disturbance of the resources, as appropriate. Buffers need not be larger than is recommended by a qualified professional ecologist (such as an ecologist, biologist, or wetland scientist). (RDR)
- **Policy NR-2.7. Tree and Native Vegetation Preservation and Use.** Encourage preservation of existing healthy trees and native vegetation through site planning and maintenance, promote the use of low-maintenance, low water-use native plants and trees, prohibit the use of highly invasive plants, and discourage the use of invasive species in landscaping. (RDR)
- **Policy NR-2.8. Non-native Invasive Species on Public Lands.** Maintain a program to identify, evaluate, and eradicate non-native invasive species on public lands where they are displacing native species. (MP) (Imp NR-2)
- **Policy NR-2.9. Regional Coordination.** Maintain an active relationship with adjacent communities and government agencies to encourage cooperative management of natural resources and ecosystems in the Eureka Study Area. (IGC)

OPEN SPACE

- **Goal NR-3.** Protection and enhancement of valuable open space resources in and around Eureka.
- **Policy NR-3.1. Preserve Open Space.** Preserve unique and valuable areas within and around the city that provide visual and physical relief to the cityscape, as well as critical habitat, natural drainage, farming opportunities, timber extraction, passive recreation or outdoor education in their natural state to define and enhance the city's distinct character and heritage. (MP)
- **Policy NR-3.2. Wildlife Movement.** Preserve, enhance, and create interconnected open space and natural areas along sloughs, rivers, creeks, gulches and greenways, and other naturalized areas to provide for wildlife movement and protect biodiversity. (MP)

AGRICULTURE AND TIMBERLANDS PRESERVATION

- **Goal AG-1.** Preservation of agricultural and timber lands and aquaculture and fishing operations within and surrounding Eureka, enhanced forest ecosystems, reduced land use conflicts, and a sustained yield of forest, agricultural, and fisheries products.
- **Policy AG-1.1. Agricultural Lands within Coastal Zone.** Protect and conserve designated agricultural lands within Eureka's Coastal Zone consistent with the California Coastal Act and the Local Coastal Program. (RDR, MP)
- **Policy AG-1.6. Productive Use of Timberlands.** Continue to work with Humboldt County and the California Department of Forestry and Fire Protection (CDF) to encourage the sustained productive use of timberland as a means of providing open space, conserving other natural resources, and preventing urban conversions. (IGC)
- **Policy AG-1.7. Discourage Conflicts with Timberland Management.** Continue to work with Humboldt County and the California Department of Forestry and Fire Protection (CDF) to discourage development that conflicts with timberland management. (IGC)
- **Policy AG-1.8. McKay Tract Community Forest.** Collaborate with Humboldt County to establish public transit, non-motorized access routes, and public access points to the McKay Tract Community Forest for use by Eureka's residents. (IGC)
- **Policy AG-1.9. Setbacks.** Set back development adjacent to the McKay Tract Community Forest boundary to a sufficient distance to prevent exposure to potential hazards and to maintain forest integrity. (RDR)
- **Policy AG-1.10. Timber Harvest Plans.** Request review of all Timber Harvest Plans (THP) within Eureka's sphere of influence in cooperation with California Department of Forestry. THPs should be reviewed for measures that protect water quality, control erosion and flooding, and preserve the forested character surrounding the City of Eureka. (IGC)
- **Policy AG-1.11. Wood Waste.** Encourage and promote the productive use of wood waste generated in the Eureka area. (MP)
- **Policy AG-1.12. Timber Management in Residential Zones.** Allow management of timberlands and hazardous trees, including removal of trees on residentially zoned properties, balanced with protection of timber as a resource. (RDR)

SEA LEVEL RISE

- **Goal SL-1.** Anticipated effects of sea-level rise are understood, prepared for, and successfully mitigated.
- **Policy SL-1.5. Natural Shoreline Areas.** Encourage the preservation and habitat enhancement of natural shoreline areas as identified in the most recent shoreline mapping assessment. (MP) (Imp SL-2)
- **Policy SL-1.6. Protect Key Coastal Assets.** Prioritize the development and implementation of adaptation measures to protect key coastal assets. (MP) (Imp SL-2)

City of Eureka Local Coastal Program

Portions of the City of Eureka west of Broadway, north of 3rd Street and east of Myrtle Avenue are located in the Coastal Zone. The land use designations within the Coastal Zone are part of the City's LCP that includes policies and regulations to protect coastal resources.

City of Eureka Municipal Code

The City of Eureka Municipal Code Chapter 155 includes tree removal regulations, and landscaping regulations that prohibit invasives and require at least 75 percent of required landscaping by plant count be native. If a project is not large enough for a Stormwater Pollution Prevention Plan, the City still requires a construction-phase Erosion and Sediment Control Plan. A post-construction Stormwater Control Plan is required consistent with the MS4 Permit, Humboldt Low Impact Development Stormwater Manual, and City stormwater regulations.

City of Ferndale General Plan

The City of Ferndale General Plan includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁵ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant policies are listed below.

- **Policy LU-3.1 - Conservation:** Preserve existing open space and agricultural land at the edges of and surrounding the City.
- **Policy LU-3.2 – Improve Drainage and Landscaping:** Incorporate drainage improvements and low impact development (LID) features in all areas of the City to increase onsite retention, protect water quality and associated aquatic habitats, and reduce flooding. The quality of runoff from urban and suburban development shall be improved through use of appropriate and feasible Best Management Practices (BMPs) including, but not limited to, bioretention basins, artificial wetlands, grassy swales, oil/grit separators, with an emphasis on a Low Impact Development approach to stormwater management. Landscaping and vegetated LID features should avoid the use of noxious weeds or other invasive plants identified by the California Invasive Plant Council (Cal-IPC) and prioritize use of locally-appropriate native vegetation.
 - a. New development shall be required to minimize increases in stormwater peak flows and/or volume, to the extent feasible.
 - b. New development projects shall be designed to minimize drainage concentrations, maximize permeable surfaces, and maintain, to the extent feasible, natural site drainage conditions.
- **Policy LU-3.3 – Manage Flood Plains:** Development is to be encouraged outside the 100-year floodplain. Development within the 100-year flood zone must have ground floor elevations above 100-year flood elevation and shall not significantly increase downstream flow levels and be in compliance with the Drainage Ordinance.
- **Policy LU-3.4 – Francis Creek Corridor:** The Francis Creek riparian corridor shall be maintained or improved to permit natural flow where possible, prevent flooding in developed areas, and maintain natural habitat uses where appropriate.
- **Policy LU-3.5 – Forest Lands Preservation:** Encourage preservation of forest resources and require timber management plans for any proposed forested lands conversion or harvesting that address erosion control and revegetation. The management of timberlands shall be encouraged to use current principles of sustainable forestry for all aspects of forest use and function: recreation, timber production, biodiversity, air and water quality, and carbon storage.

⁴⁵ City of Ferndale. 2024. General Plan Land Use Element. <https://www.dropbox.com/scl/fi/tmc0cortefgcksfilp92p/ADOPTED-Land-Use-Element-11.20.24.pdf?rlkey=7z2c7snake8wn1e4xe6rhiiie&st=mle4j1ef&dl=0> (accessed January 2025).

- **Policy LU-3.6 – Funding:** Develop a program and pursue funding to coordinate acquisition of important open space property from willing landowners through conservation and/or drainage easements or other mechanisms.
- **Policy LU-3.7 – Regional Coordination:** Maintain an active relationship with adjacent communities and government agencies to encourage cooperative management of natural resources and ecosystems in the surrounding area. Coordinate open space planning, acquisition, and development efforts with those of Humboldt County and regional and State agencies.
- **Policy LU-3.8 – Wetland Delineation Requirement:** Any application for new development involving ground disturbance on a parcel where wetlands may be present according to the National Wetland Inventory or other site-specific evidence shall include a wetland reconnaissance and delineation report prepared by a qualified professional. The site plan shall show all proposed new development is located outside of any wetlands that exist on the subject property and appropriate wetland buffers based upon analyses and recommendations in the site-specific study. New development proposed within wetlands or wetland buffer areas shall require consultation and required regulatory approvals from the U.S. Army Corps of Engineers (USACE), the North Coast Regional Water Quality Control Board (NCRWQCB), and/or California Department of Fish and Wildlife (CDFW).
- **Policy LU-4.3 – Agricultural Use Preservation:** Encourage infill development and revitalization of existing residential and commercial uses with setbacks and other measures to preserve prime agricultural lands on the outer edges of the City.

Fortuna General Plan

The City of Fortuna General Plan includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁶ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant policies are listed below.

WATER RESOURCES

- **Goal NCR-1.** To ensure that the City has access to a quality water supply that is free from pollution.
- **Policy NCR-1.1. Watershed Protection.** The City shall condition development to minimize point source and non-point source pollutant discharges to local watersheds. The City shall also require mitigation for development that may change runoff quality and/or quantity for pollution prevention.
- **Policy NCR-1.2. Reclaimed Water.** The City shall support programs that would supply reclaimed water for park irrigation and agricultural uses.
- **Policy NCR-1.3. Groundwater.** The City shall seek additional groundwater locations to supplement existing drinking water sources.
- **Policy NCR-1.4.** The City shall require proposed new projects that result in parcels less than one (1) acre in size to connect to the result in parcels less than one (1) acre in size to connect to the City's municipal water wastewater, and storm drain systems.

⁴⁶ City of Fortuna. 2010. City of Fortuna General Plan.
https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed December 2024).

- **Policy NCR-1.5.** The City shall develop a standard to require the use of impervious paving surfaces and/or other low impact designs (LID) to reduce stormwater runoff.
- **Policy NCR-1.6.** The City shall require the integration of best management practices in new development and re-development projects to control pollutant sources and prevent pollutants in runoff during and following development.
- **Policy NCR-1.7.** The City shall require the use of basic water quality strategies that self-treat runoff in new development and re-development projects. These strategies may include infiltrating runoff, retaining/detaining runoff, conveying runoff slowly through vegetation, and/or treatment of runoff on a flow-through basis using other standard treatment technologies.
- **Policy NCR-1.8.** The City shall comply with Clean Water Act requirements with the intent of minimizing pollutant discharges from point and non-point sources to surface waters. Mitigation may include, but may not be limited to, wetland restoration, off-site replacement for no net loss, or project design/operation modification.

BIOLOGICAL RESOURCES

- **Goal NCR-2.** To protect and maintain, or relocate through mitigation, existing sensitive habitats and species, including riparian corridors, wetlands, and Environmentally Sensitive Habitat Areas (ESHA).
- **Policy NCR-2.1. Riparian Corridor Protection.** The City shall establish riparian buffers to provide for fish and terrestrial wildlife habitat protection, enhancement, and movement along riparian corridors through the Planning Area. Activities within these buffers shall be limited to passive recreational uses (hiking, biking, sightseeing, horseback riding) and the movement of wildlife.
- **Policy NCR-2.2. Salmonid Bearing Stream Protection.** The City shall consult with, and require developers of projects to consult, the California Department of Fish and Game (CDFG) and other regulatory agencies for expertise and guidance prior to any restoration activity within salmonid-bearing streams. Some recommendations relative to all tributaries are as follows:
 - Identify and inventory those portions of streams originating within or passing through the General Plan Area that are considered to support salmonid species;
 - Inventory and map sources of stream bank erosion, then prioritize them according to present and potential sediment yield. Identified sites should be treated to reduce the amount of fine sediment entering the stream;
 - Design and construct habitat enhancement structures that yield better gravel sorting, reduce fine sediment retention, increase pool habitat, and allow for juvenile and adult fish passage (i.e., barrier removal);
 - Remove exotic vegetation and replant native vegetation, especially where the stream canopy is deemed less than optimum; and
 - Reduce cattle trampling within the stream and riparian zone by exploring alternatives with landowners.
- **Policy NCR-2.3. CDFG Collaboration.** The City shall work to implement the recommendations put forth in the Recovery Strategy for California Coho Salmon (CDFG, 2004b) to benefit salmonid species present within the General Plan Area by enhancing and restoring riparian ecosystems, improving water quality, and reducing flooding.

- **Policy NCR-2.6. Biological/Ecological Review.** When considering building permit applications, planning applications or development applications, the City shall undertake the three-stage process outlined below:
 - Upon receipt of building permits applications, planning applications or development applications, City staff shall perform an initial screening to determine whether the application would have the potential to impact special status species as defined by CEQA Guidelines §15380. For ministerial projects, the initial screening shall be performed in the context of the application checklist. For discretionary projects, the initial screening shall be performed in the context of Initial Study preparation required under CEQA. For purposes of this screening, the application would have the potential to impact special status species if development or other activities would occur in ESHA areas, wetlands or riparian areas, forested areas, areas within 50 feet of any blue line stream as shown on USGS maps, or any undeveloped rural parcel of greater than one acre in size.
 - If the initial screening indicates the potential for impacts to special status species, the applicant shall have a records search performed in the California Natural Diversity Database (CNDDDB) and the City's ESHA inventory to determine whether any sensitive species have been documented on or within the vicinity of the subject parcel.
 - If the CNDDDB or ESHA inventory indicates that sensitive species have been documented on or within the vicinity of the subject parcel, or if the proposed activities would occur within wetland, riparian vegetation, or forested areas, within 50 feet of any blue line stream, or would disturb more than 10 acres, or at the discretion of City staff, a biological study shall be performed for the proposal by a qualified biological consultant, the application shall be referred to the appropriate responsible and trustee agencies (CDFG, USFWS, etc.), and any mitigation measures identified by the biologist and the responsible and trustee agencies incorporated into the project. Mitigation may include, but may not be limited to restoration, off-site replacement for no net loss, or project design/operation modification.
- **Policy NCR-2.7. Endangered Species.** The City, as lead agency, shall require that all projects comply with the requirements of the federal Endangered Species Act, California Endangered Species Act, Clean Water Act, CDFG code, and CEQA.
- **Policy NCR-2.8. Native Vegetation.** The City shall coordinate with resource agencies to require the preservation of native vegetation, while managing areas with high concentrations of invasive species and/or noxious weeds and preventing their encroachment into new areas.
- **Policy NCR-2.9. Community Education.** The City shall require the installation of interpretive signs that educate the public on various environmental issues including stormwater runoff and detention, creek biology, and watersheds affecting the city. Appropriate Signs and plaques may be placed at sites near the Eel River and along public trails and bike paths adjacent to creeks.
- **Policy NCR-2.10. Wetland Identification and Protection.** In considering new development projects, the City shall conduct an initial screening, as described in Policy NCR-2.6 in order to determine whether the proposal would have the potential to impact wetlands. If the initial screening indicates the potential presence of wetlands, a wetland assessment/ delineation shall be prepared to determine the presence of jurisdictional wetlands. The assessment/delineation, with proposed mitigation, shall be submitted to the City, and appropriate state (CDFandG) and federal (USCOE) agencies for concurrence prior to permitting. Mitigation may include, but may not be limited to, avoidance, minimization of impacts, restoration, off-site replacement, and/or the use of buffers.

- **Policy NCR 2.11. Wildlife Movement Corridors.** Terrestrial wildlife using movement corridors and fish within fish-bearing streams shall not be limited by physical barriers within the Planning Area. Projects proposed within the mapped movement corridors shall be reviewed for consistency with Policies NCR-2.1, NCR- 2.6, NCR-2.7, NCR-2.8 and NCR-2.9.
- **Policy NCR-2.12. Permitted Activities within ESHAs.** The following activities shall be permitted in ESHAs with approval from the Fortuna Planning Department and after consultation with Responsible and Trustee agencies: THPs; removal of dead, dying or diseased trees or downed vegetation within the streambed or streambank; the removal of vegetation obstructing streamflow or causing streambed or streambank erosion; and road crossings.
- **Policy NCR-2.13. Watercourse, Wetland and Riparian Buffers.** The City shall require appropriate watercourse, wetland, and riparian area buffers to protect water quality and biologic values.
- **Policy NCR-15.** The City shall prepare a streamside management/ wetland protection ordinance, following collaboration with resource agencies including but not limited to CDFG, establishing setback recommendations for perennial and intermittent streams, wetlands, and riparian corridors. At a minimum, the City shall implement the following watercourse, wetland and riparian area protection measures:

Watercourses and Riparian Areas

- The City shall maintain Streamside Management Areas (SMAs) of at least 50 feet around perennial streams and 25 feet around ephemeral streams, unless a biological report indicates that such SMA setbacks are not required. The buffers shall be measured from the top of the stream bank (for example, the 50 foot setback would be 50 feet from each stream bank, for a total of a 100 foot wide buffer);
- New development/activities within SMAs shall be limited to: (1) activities for wildlife enhancement/ restoration, flood control or drainage, new fencing so long as it would not impede natural drainage or wildlife, and bank protection; (2) commercial timber management and harvest activities regulated by the Forest Practices Act; (3) road and bridge replacement or construction, when it can be demonstrated that it would not degrade fish and wildlife resources or water quality; (4) removal of vegetation for disease control or public safety; and (5) management and maintenance of trees, shrubs and other plant life; and
- New development within SMAs shall minimize adverse effects, including, at a minimum: retaining snags and live trees with visible evidence of use as nesting sites; replanting disturbed areas with riparian vegetation; and performing erosion control measures.

Wetlands

- The City shall maintain Wetland Buffer Areas of at least 50 feet around jurisdictional wetlands, unless a biological report indicates that such Wetland Buffer Areas are not required;
- New development within Wetland Buffer Areas shall be limited to: fish and wildlife management; wetland restoration; removal of trees for disease control and public safety; and new fencing so long as it does not impede drainage or wildlife movement;
- No new development shall be permitted in Wetland Buffer Areas which degrades the wetland; and

- Wetland Buffer Areas disturbed by permitted activities shall be restored to the original contours and promptly replanted with native riparian vegetation.

Combined Watercourses/Riparian Areas and Wetlands

- Storm water runoff to watercourses and wetlands shall not exceed the existing rate of storm runoff for a 50 year storm of 10 minute duration;
- Sediment in storm water runoff draining to watercourses and wetlands shall be minimized through the use of sediment basins, seeding or replacing bare soil, diversion of runoff away from graded areas and areas heavily used during construction, and limiting grading in buffer areas to the dry season (May through October);
- Stormwater outfalls, culverts, gutters, and other similar facilities draining to watercourses and wetlands shall be dissipated; and
- Septic systems shall not be permitted within wetland buffer areas. Adjacent to these areas, septic systems shall meet County Health Department and RWQCB standards.

AGRICULTURAL AND TIMBER RESOURCES

- **Goal NCR-3.** To encourage the utilization of productive agricultural lands for their value as an economic resource and community identity in the Eel River Valley.
- **Policy NCR-3.1. “Right-to-Farm.”** The City shall encourage continuation (e.g., “right-to-farm ordinance”) of existing agricultural activities so long as these agricultural activities occur consistent with applicable federal, state, and local regulations.
- **Policy NCR-3.2. Retain Agricultural Lands.** The City shall support and encourage the retention of active cultivation operations until such time that these areas are needed for planned urban or suburban expansion or mitigation for flood projects.
- **Policy NCR-3.3. Urban/Agricultural Conflicts.** The City shall ensure that new developments adjacent to agricultural areas are informed about nearby agricultural operations and the potential for noise, dust, aerial spraying, and odor.
- **Policy NCR-3.4. Agricultural Buffers.** The City shall require proposed development to assess potential impacts from adjacent agricultural uses and recommend buffers and other design features to mitigate the impacts, including air quality impacts.
- **Policy NCR-3.5. County Agricultural Policies.** The City shall support policies adopted by Humboldt County to promote the viability of agriculture.
- **Policy NCR-3.6. Regional Cooperation.** The City shall cooperate with local agricultural organizations and regional and State agencies that provide funds for agricultural conservation/mitigation to promote the viability of local agriculture.
- **Policy NCR-3.7. Retain Timber Lands.** The City shall encourage timber land retention.
- **Policy NCR-3.8.** The City shall support agricultural land conservation and encourage minimal conflicts between agricultural and non- agricultural uses through all of the following:
 - By establishing stable boundaries separating urban and rural areas, when necessary, and buffer areas to minimize land use conflicts;
 - By promoting in-filling to achieve a more logical urban/agricultural boundary;
 - By developing available lands not suited for agriculture, or those located within Urban Study Areas, prior to the conversion of agricultural lands outside of those areas.

- By assuring that public service facility expansions and non-agricultural development do not inhibit agricultural viability, either through increased assessment costs or degraded air or water quality.
- By broadening the utility of agricultural preserves and the Williamson Act Program;
- By not allowing residential subdivision of lands planned Agriculture; and
- By allowing lot-line adjustments for agriculturally designated lands only where planned densities remain constant and there is no resulting increase in the number of building sites.

SOIL RESOURCES

- **Goal NCR-5.** To protect, maintain, and conserve the City’s soil resources through reduced erosion and proper agricultural practices.
- **Policy NCR-5.1. Soil Stabilization Measures.** The City shall continue to require soil stabilization measures that mitigate soil erosion and sedimentation.
- **Policy NCR-5.2. Preventing Soil Contamination.** The City shall continue to ensure the proper use, storage, and disposal of toxic chemicals to prevent soil contamination.
- **Policy NCR-5.3. Soil Conservation.** The City shall promote the employment of soil conservation practices as recommended by the U.S. Soil Conservation Service.
- **Policy NCR-5.4. Native Plants.** The City shall require the protection and preservation of native plant communities next to creeks to aid in the prevention of bank and levee erosion.
- **Policy NCR-5.5. Erosion Control Measures.** The City shall require the use of vegetated buffer strips and other “best management practices” to slow runoff from impermeable surfaces and to improve natural pollutant removal when permitting new development.

City of Rio Dell General Plan

The City of Rio Dell General Plan Open Space and Conservation Element includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁷ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, ensure the provision of open space, and preserve important agricultural and forestry resources. The relevant policies are listed below.

- **Goal G1.2-1.** To prevent air, land, and water pollution that would reduce our quality of life.
- **Goal G1.2-2.** To preserve natural and man-made resources which create a unique scenic character for Rio Dell.
- **Goal G1.2-3.** To preserve river, stream, and drainage channels that collect run-off, provide natural habitat, and serve as scenic open space.
- **Goal G1.2-4.** To maintain the small-scale agricultural uses in the Monument and Bellevue neighborhoods.
- **Goal G1.2-5.** To protect our citizens by regulating clearing and development of steep slopes and river, stream, and drainage channels, and their flood plains.
- **Goal G1.2-6.** To provide an adequate, consistent, and safe supply of water to meet our domestic, commercial, and fire safety requirements.

⁴⁷ City of Rio Dell. 2013. General Plan Open Space and Conservation Element.
https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/rio_dell_conservation_and_open_space_element_august_2013_0.pdf
(accessed December 2024).

- **P1.2.7-1.** Update the Conservation and Safety Element to identify a system of public parks and open space.
- **P1.2.7-2.** Ensure that environmentally sensitive habitat areas (ESHAs) such as the Eel River corridor, streams and drainage channels with riparian habitat, and forested areas that could potentially support sensitive species, are buffered to protect against any significant disruption of their habitat values.
- **Goal CO 5.2-1.** Provide open space for the preservation of natural resources for the preservation of plant and animal life, such as habitat for fish and wildlife and areas required for ecological and other scientific study (for example: rivers, streams, bays and estuaries, coastal beaches, lakeshores, riverbanks, and watersheds).
- **Policy CO 5.2-1.** Riparian areas within the City shall be protected when adjacent development projects are proposed.
- **Goal CO 5.2-2.** Preserve existing trees and encourage additional trees on hillsides and within the urban developed areas of the City.
- **Policy CO 5.2-2.** Maintain and expand the tree canopy within and outside the developed areas of the City.
- **Policy CO 5.2-3.** Protect distinctive natural vegetation such as riparian corridors and mixed evergreen forests by maintaining the natural features as a whole. Preservation of individual trees or features rather than the larger habitat does not satisfy this policy.
- **Goal CO 5.2-7.** Conserve natural vegetation and wildlife resources.
- **Policy CO 5.2-7.** Conserve and protect the area's natural vegetation by ensuring that:
 - Drainage and runoff from City sources is not impairing the water quality of the Eel River.
 - Retaining existing riparian vegetation within the conservation buffers along all natural watercourses to preserve riparian vegetation and habitat.
 - Restoring degraded riparian habitats where feasible.
 - Prohibiting agricultural activities within the conservation buffers along all natural watercourses.
 - Avoiding the contamination of groundwater supplies.
- **Goal CO 5.3-1.** Conserve and protect working agricultural lands within and adjacent to the City.
- **Goal CO 5.3-2.** Encourage small scale timber production within the City while minimizing impacts to adjacent properties.

Trinidad General Plan

The City of Trinidad General Plan includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁸ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, ensure the provision of open space, and preserve important agricultural and forestry resources. The City is entirely within the coastal zone and the General Plan acts as the Land Use Plan portion of the LCP. The City is required to comply with the Coastal Act requirements. The relevant policies are listed below.

⁴⁸ City of Trinidad. 2021. City of Trinidad General Plan. <https://www.trinidad.ca.gov/media/5491> (accessed December 2024).

POLICIES TO ELIMINATE/REDUCE AQUATIC POLLUTION AND HYDROLOGIC MODIFICATION

- **CONS-1b.1.** New development shall minimize land disturbance activities from construction (e.g., clearing, grading, soil compaction, and cut-and-fill), and avoid development on steep slopes, unstable areas, and highly erosive soils to the extent feasible in order to minimize erosion. (CONS-5.2)
- **CONS-1b.2.** New development shall minimize disturbance of natural vegetation during construction, including preservation of mature trees and native vegetation. Where vegetation is removed, the root structures shall be maintained, where appropriate, to prevent erosion and sedimentation.
- **CONS-1b.3.** In order to minimize erosion and discharge of sediment and other pollutants (e.g., paint, solvents, vehicle fluids, and debris) during construction, a construction-phase erosion and sediment/pollution control plan shall be required for development that has the potential to adversely affect water quality. The level of detail required in such a plan shall be commensurate with the type and scale of the development, and the potential for adverse impacts to coastal water quality. (CIRC-8.6)
- **CONS-1b.4.** Prohibit grading during the rainy season (from October 15th through April 30th) in areas with slopes of 15% or greater, except in response to emergencies. Grading on slopes less than 15% is discouraged during the rainy season, but may be allowed on a case-by-case basis as long as any areas that are disturbed incorporate appropriate BMPs and monitoring to prevent water quality impacts. (CONS-5.3)
- **CONS-1b.5.** Require stabilization of disturbed areas through revegetation or other appropriate means as soon as feasible. (CONS-5.5)
- **CONS-1b.8.** New development shall demonstrate the adequacy of the OWTS design and capacity. Upgrades shall be required as needed to provide adequate OWTS capacity and protect water quality. (CIRC-10.2.1)
- **CONS-1b.9.** Minimize the area of impervious surfaces in new and existing development to the maximum extent practicable. Development shall be planned, sited, and designed to maintain or enhance onsite infiltration of runoff where appropriate and feasible. (CIRC-8.1)
- **CONS-1b.11.** Require Low Impact Development techniques to manage stormwater, preserve hydrologic function, and maximize on-site infiltration of runoff to the extent practicable, except where it may negatively impact OWTS or slope stability. For development where infiltration is precluded by site conditions, implement appropriate BMPs, such as retention and filtration to attenuate peak flows and reduce the discharge of polluted runoff. (CIRC-8.3)
- **CONS-1b.12.** Avoid construction of new stormwater outfalls. For new development, if infiltration is infeasible, provide onsite treatment and filtration to the extent feasible and direct stormwater to existing facilities. (CIRC-8.4)
- **Goal CONS-2.** Preserve and Enhance the City's Environmentally Sensitive Habitat Areas (ESHAs), including habitat for special status species.

POLICIES TO LIMIT DEVELOPMENT IN ESHAs AND/OR NEAR SPECIAL STATUS SPECIES

- **CONS-2a.1.** Diking, Filling, and Dredging of open coastal waters, wetlands, estuaries, creeks and other bodies of water and shall maintain or enhance the functional capacity of any impacted wetland or estuary. In addition, these activities will only be permitted where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects and shall be limited to the following:

- New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
- Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
- Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
- Restoration purposes.
- Nature study, aquaculture, or similar resource-dependent activities.
- **CONS-2a.2.** Channelization, dams, or other substantial alterations of coastal streams, shall incorporate the best mitigation measures feasible for and be limited to:
 - Necessary water supply projects, or
 - Flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or
 - Developments where the primary function is the improvement of fish and wildlife habitat.
- **CONS-2a.3.** Protect ESHAs against any significant disruption of their habitat values, and allow only uses dependent on those resources within ESHAs.
- **CONS-2a.4.** The City shall require the establishment of open space or conservation easements for all ESHA and ESHA buffers as a condition of approval for development on properties containing ESHA.
- **CONS-2a.5.** Landscaping, revegetation, and other plantings associated within new development located within or adjacent to ESHAs shall be from locally native stock (not cultivars) to the extent feasible. At a minimum, the use of plants listed by CNPS or DFW to be invasive, problematic or noxious shall be prohibited, and any existing such plants shall be removed. Maintenance requirements over the life of the development may be required.
- **CONS-2a.6.** Prohibit new land divisions creating new parcels located entirely within an ESHA or Buffer Areas unless the parcel to be created is restricted at the time of its creation solely for open space, public recreation, or conservation.
- **CONS-2a.7.** Require review of any changes in runoff volume, pollutant load, velocity, or duration for development that may affect sensitive plant and animal populations, ESHAs, or their Buffer Areas, by a qualified biologist to ensure that there will not be adverse hydrologic, erosion, nutrient, pollutant-based or sedimentation impacts on sensitive resources. Identify and adopt mitigation measures and compliance monitoring standards to minimize potential adverse runoff impacts.
- **CONS-2a.8.** Preserve, enhance and restore native vegetation within ESHAs, including riparian corridors. Locate allowable new structures and activities outside ESHAs whenever feasible to protect native vegetation. Ensure that areas that must temporarily be disturbed due to special circumstances be kept to a minimum, be carefully reviewed by the City, and be replanted with appropriate native vegetation.

- **CONS-2a.9.** Require permit applications for development in areas that may contain ESHAs to include a Biological Report prepared by a qualified biologist which identifies any resources and provides recommended measures to ensure that the requirements of the Coastal Act and LCP are fully met.

POLICIES FOR DEVELOPMENT IN ESHA BUFFER AREAS

- **CONS-2b.1.** Site and design development in areas adjacent to ESHAs and parks and recreation areas to prevent impacts that would significantly degrade such areas, and to be compatible with the continuance of such habitat areas through the use of appropriate buffers.
- **CONS-2b.2.** Limit development in Buffer Areas to certain resource dependent and compatible uses allowed in the adjacent ESHA consistent with Coastal Act §30240(a), §30233(a) and §30236, and other uses that are sited and designed to prevent impacts which would significantly degrade the ESHA and which are compatible with the sustainable continuance of the adjacent ESHA.
- **CONS-2b.3.** Require a setback separating development from identified ESHAs. In general, ESHA buffers shall be 100 feet unless the designated setback would eliminate all reasonable use of the property. A larger buffer width, adequate to protect the resource from degradation and allow for the continuance of the ESHA, shall be applied if information collected in an analysis of potential adverse impacts of development on adjacent ESHA shows one is necessary. Conversely, analysis by a qualified professional may justify a reduced setback based on specific findings that the development would not significantly degrade the ESHA and would be compatible with the continuance of the ESHA.
- **CONS-2b.4.** Prohibit native vegetation removal in Buffer Areas except for the following activities, which are also subject to other applicable standards and policies and may be subject to additional standards or restrictions to protect ESHA.
 - Vegetation removal authorized through coastal development permit approval to accommodate permissible development;
 - Removal of trees that are diseased or pose a hazard to structures or people as documented by an arborist or other qualified professional;
 - Vegetation removal for public safety purposes to abate a nuisance consistent with Coastal Act Section 30005;
 - Removal of firewood for the personal use of the property owner at his or her residence to the extent that such removal does not constitute major vegetation removal as defined herein;
 - Minor vegetation maintenance to preserve existing yards and viewsheds to the extent that such maintenance does not constitute major vegetation removal;
 - Vegetation removal to restore or enhance habitat values as recommended by a qualified professional.
- **CONS-2b.5.** In addition to complying with City lighting requirements (e.g. CIRC-10.4), all exterior lighting in buffer areas shall be restricted to low intensity fixtures, directed downward (downcast), and shielded so that no light or glare shines into an ESHA. (CD- 5.1)
- **Goal CONS-3.** Identify and protect native plants, animals and their habitats in and around the City.

POLICIES TO PROTECT AND IMPROVE NATIVE HABITAT AND MINIMIZE IMPACTS TO NATIVE SPECIES

- **CONS-3.1.** Preserve, protect, and to the extent feasible restore native habitat areas to their natural state.
- **Program CONS-3.1.1.** Develop additional guidelines for the maintenance of water courses to further assure that native vegetation is not unnecessarily removed and that maintenance minimizes disruption of wildlife breeding activities and wildlife movement. Incorporate these guidelines, where appropriate, into development approvals and the City's maintenance procedures.
- **CONS-3.2.** Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.
- **CONS-3.3.** The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.
- **CONS-3.4.** Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation.
- **CONS-3.5.** Minimize disturbance of natural vegetation during site planning, construction and maintenance of development, including preservation of mature trees and native vegetation. (CONS-1b.2 partial; CD-7.5))
- **CONS-3.6.** Outside of the core urbanized area, require development to maintain adequate open space to permit effective plant and wildlife corridors for animal movement between open spaces.
- **CONS-3.7.** Construction timing and extent shall be limited as necessary to avoid impacts to sensitive species during nesting and breeding seasons.
- **CONS-3.8.** New development shall not be allowed to utilize any species of invasive non-native plants or native cultivars deemed undesirable by the City, including but not limited species rated as "high" or "moderate" on the Cal-IPC Inventory. Maintenance of the property to prevent identified species from naturalizing or persisting on the project site shall be required.
- **CONS-3.9.** permit major vegetation removal where both habitat values and viewsheds can be adequately protected.
- **CONS-3.10.** Ensure that major vegetation removal occurs outside the nesting season (March 1 – August 15) or that an appropriate survey occurs prior to vegetation removal if work occurs during the nesting season.
- **CONS-3.11.** A planting plan shall be required for proposed development that requires plantings to mitigate adverse impacts, such as to protect the visual character or an area, address erosion and runoff control and/or protect adjacent ESHA from development impacts. Such planting plans shall prioritize native drought-tolerant plants and shall not include invasive plants.

Maintenance provisions may also be required depending on the proposed development and related impacts.

TIMBERLAND

- **Goal CONS-4.** Preserve economically viable timber stands for use as sustainably harvested commercial timber while protecting water quality, special status species and sensitive habitats.

SOIL CONSERVATION

- **Goal CONS-5.** Protect and preserve soil as a natural resource.
- **CONS-5.1.** Minimize land disturbance activities from construction (e.g., clearing, grading, soil compaction and cut-and-fill), and avoid development on steep slopes, unstable areas, and highly erosive soils in order to minimize erosion. (CONS-1b.1)
- **CONS-5.2.** Prohibit grading during the rainy season (from October 15th through April 30th) in areas with slopes of 15% or greater, except in response to emergencies. Grading on slopes less than 15% is discouraged during the rainy season, but may be allowed on a case-by-case basis as long as any areas that are disturbed incorporate appropriate BMPs and monitoring to prevent water quality impacts. (CONS-1b.4)
- **CONS-5.3.** Require stabilization of disturbed areas through revegetation or other appropriate means as soon as feasible. (CONS-1b.5)
- **CONS-5.4.** The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.
- **CONS-5.5.** Require detailed studies of soil characteristics and hydrology for developments in areas with soil limitations (such as instability, clay content or high groundwater) to ensure that the lot size, foundation requirements, stormwater control and OWTS design are adequate to prevent direct or cumulative adverse impacts on soil stability or water resources.

Habitat Conservation Plans within Humboldt

Several habitat conservation plans exist within Humboldt, including:

- **Green Diamond Resource Company Habitat Conservation Plan.** Green Diamond's HCP is one of the largest in Humboldt, covering timberland and focusing on the conservation of species such as the northern spotted owl, marbled murrelet, and salmonid species (e.g., coho, Chinook, and steelhead). This HCP spans over 400,000 acres of timberland owned by Green Diamond Resource Company. The plan sets guidelines for forest management practices that minimize impacts on sensitive species, including habitat retention, road management, and riparian protections.
- **Humboldt Redwood Company Habitat Conservation Plan.** This HCP covers over 200,000 acres in Humboldt and includes protections for species, such as the northern spotted owl, marbled murrelet, and salmonids species. The plan focuses on sustainable timber harvesting practices and long-term conservation commitments to protect habitat for threatened and endangered species while enabling ongoing forestry operations.
- **Humboldt Bay National Wildlife Refuge Comprehensive Conservation Plan.** This plan is focused on protecting habitats in and around Humboldt Bay, including wetlands, estuaries, and riparian areas, which support a wide range of bird species, fish, and marine life. Managed by USFWS, this

CCP aims to enhance habitat for migratory birds along the Pacific Flyway and endangered species, like the western snowy plover and various salmonids. The plan outlines strategies for wetland restoration, invasive species control, and public education.

- **Six Rivers National Forest Land and Resource Management Plan.** Six Rivers National Forest is home to diverse ecosystems that support threatened and endangered species, including salmon, steelhead, northern spotted owls, and marbled murrelets. This plan, managed by the U.S. Forest Service, focuses on ecosystem management, watershed health, and sustainable land use to protect forest ecosystems. It includes guidelines for habitat restoration, recreation management, and fire control.
- **Yurok Tribe Fisheries Program and Salmon Restoration Efforts.** The Yurok Tribe has spearheaded habitat conservation and fisheries restoration along the Klamath River, focusing on coho and Chinook salmon, Pacific lamprey, and green sturgeon. These conservation initiatives aim to improve water quality, restore riparian and spawning habitat, and support traditional subsistence fishing practices for tribal communities, enhancing the health of the Klamath River ecosystem.

3.3.4 Impacts and Mitigation Measures

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Biological, Agriculture, and Forestry Resources.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?
- c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?
- g) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?
- h) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

- i) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timber Production?
- j) Result in the loss of forest land or conversion of forest land to non-forest use?
- k) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Approach to Analysis

Environmental impacts to biological, agricultural, and forestry resources have been assessed using impact significance criteria from federal, State, and local regulations. CEQA, Chapter 1, Section 21001(c) states that it is the policy of the State of California to “prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological, agricultural, and forestry resources have been assessed using impact significance criteria set forth in the *CEQA Guidelines* and federal, State, and local plans, regulations, and ordinances.

Biological Resources

The analysis of impacts related to biological resources is based on review of available literature online record searches of the following databases: the CDFW CNDDDB,⁴⁹ CNPS *Online Inventory of Rare, Threatened and Endangered Plants of California*,⁵⁰ USFWS NWI,⁵¹ USFWS *Critical Habitat Mapper*,⁵² and USFWS IPaC System. Rincon Biologists evaluated impacts on biological resources based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present within Humboldt, and the likely effects of construction or operation on these resources. For the purposes of this EIR, the word “substantial” as used in the significance thresholds below is defined by the following three principal components:

- Magnitude and duration of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to disturbance.

Agricultural and Forestry Resources

Pursuant to Appendix G of the CEQA Guidelines, the RCAP would have a significant impact if it would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. Humboldt does not participate in the statewide Farmland Mapping and Monitoring Program, and is therefore unable to analyze the impacts to these specific categories of Farmland.

Rather, the analysis of agricultural and forestry resources is based on review of available literature. The primary source of information reviewed to evaluate impacts was the Humboldt County database to search for documented areas of prime and non-prime farmlands, Williamson contracts, timber harvest lands and other forestry lands.⁵³

⁴⁹ CDFW CNDDDB, op.cit.

⁵⁰ CNPS op. cit.

⁵¹ USFWS NWI, op.cit.

⁵² USFWS *Critical Habitat Mapper*, op.cit.

⁵³ DOC, op. cit.

EIR Scoping Comments Consideration

This section also addresses comments received in response to the EIR NOP related to the analysis and impacts on biological, agricultural, and forestry resources with implementation of the RCAP (see Table 1-1 in Chapter 1.0, *Introduction*). Specifically, comments regarding biological resources were related to the potential for the RCAP to destroy or degrade wildlife habitat. These topics are addressed under Impacts BIO-1 through BIO-3. Comments regarding agricultural and forestry resources were related to the potential for the RCAP to result in conversion of farmland and forests and result in deforestation due to renewable diesel production. These topics are addressed under Impacts BIO-6 and BIO-7.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to biological, agricultural, and forestry resources. Therefore, the analysis in this section focuses on the potential for implementation of the RCAP to result in impacts related to biological, agricultural, and forestry resources in Humboldt.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of Biological, Agriculture, and Forestry Resources impacts resulting from implementation of the proposed plan:

- Result in direct take or habitat removal or alteration for candidate, sensitive, or special-status species
- Adversely affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS
- Remove, fill, or damage a federally protected wetland
- Interrupt fish movement in an aquatic channel or impede terrestrial movement via a land corridor
- Remove, damage, or replace trees designated as protected by the County or incorporated cities
- Conflict with the provisions of an applicable HCP
- Result in conversion of Farmland to non-agricultural resources
- Result in conversion of forestry resources to non-forestry resources

Impact Evaluation

Special-Status Species

Significance Criterion a: Would the proposed plan have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-1 INFRASTRUCTURE FACILITATED BY THE RCAP COULD RESULT IN DIRECT OR INDIRECT IMPACTS TO SPECIAL-STATUS SPECIES OR THEIR ASSOCIATED HABITATS INCLUDING IMPACTS TO MIGRATORY BIRD NEST SITES. DIRECT IMPACTS TO SPECIAL STATUS SPECIES WOULD BE LESS THAN SIGNIFICANT WITH IMPLEMENTATION OF MITIGATION MEASURES BIO-1 THROUGH BIO-4. HOWEVER, INDIRECT IMPACTS DUE TO THE LOSS OF COMMON HABITAT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction

The USFWS, CNDDDB, and CNPS databases identified 176 special-status species that occur, or potentially occur within Humboldt (see Appendix B). Some species require localized microhabitats, while others are highly mobile and may occur throughout Humboldt. All special-status species are presumed present at any given time throughout their habitat range. In addition, migratory bird species are protected under the California Fish and Game Code and MBTA and may occur throughout the urbanized and rural areas of Humboldt.

The RCAP is a policy document and does not include specific projects that would have adverse impacts on migratory birds and special-status species. Rather, implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on vacant and undeveloped land. This measure would promote the preservation of habitat and open space areas that support special-status species. Nonetheless, construction of future infrastructure projects facilitated by certain RCAP measures could adversely affect migratory birds and special-status species. Construction of renewable energy, electric power, renewable fuel, organic waste, recycled water, and transportation infrastructure facilitated by the RCAP per RCAP Measures BE-1 through BE-4, BE-7, BE-8, T-1, T-2 Urban and Rural, T-6, T-7, T-10, T-11, SW-1, and WW-2 could potentially result in impacts to migratory birds and special status species either directly by causing mortality or indirectly through habitat modification or loss.

Construction-related activities, such as vegetation removal, building demolition and/or relocation, grading, materials laydown, access, infrastructure improvements, and building construction, could result in the disturbance of nesting migratory birds. The most identifiable potential direct impact to migratory bird species would involve the removal of vegetation, particularly trees that may serve as perching or nesting sites for migratory birds. These adverse effects on listed or special-status bird species would represent a potentially significant impact. However, implementation of Mitigation Measures BIO-1 and BIO-2 (conduct pre-construction bird surveys and implement avoidance measures prior to removal) would be required for future projects where mature trees and other habitat are present, and construction activities are scheduled from early spring to late summer. With implementation of Mitigation Measures BIO-1 and BIO-2, direct construction impacts related to migratory birds would be less than significant.

Special-status bats, such as pallid bat, Townsend's big-eared bat, and western red bat, are State SSC and have potential to occur within Humboldt. Pallid bats are found in grasslands, shrublands, woodlands, and forests, and may roost in trees or buildings. Townsend's big-eared bats are found in a wide variety of habitats and may roost in abandoned buildings or large trees. Western red bats prefer habitat edges along conifer forests with open spaces for foraging. Bats prefer open areas or areas under a tree canopy for foraging, and often roost near water. Disturbance of maternity roosts by construction activities resulting in roost destruction or abandonment would constitute a potentially significant impact to bat species and would potentially violate the California Fish and Game Code. Such adverse effects on special-status bats would constitute a potentially significant impact. However, implementation of Mitigation Measures BIO-1 and BIO-3 would be required for RCAP projects where trees, abandoned structures, or other habitat for roosting bats is present and construction activities may occur during seasonal periods of bat activity. With implementation of Mitigation Measures BIO-1 and BIO-3, direct construction impacts related to special-status bats would be less than significant.

RCAP Measure BE-8 includes actions related to the planned Humboldt Bay Offshore Wind project, such as actions related to enhancing energy transmission infrastructure to distribute energy from the offshore wind project throughout Humboldt. Such activities have the potential to occur along the coast. Marine mammals such as blue whales, humpback whale, Steller sea lion, and killer whale are protected under the Marine Mammal Protection Act (MMPA). Construction activities may occur during seasonal periods of marine mammal migration. Disturbance to the marine mammal migration, rookeries and nursery sites by construction activities resulting in abandonment of young marine mammals would constitute a potentially significant impact to marine mammal species and potentially violate the MMPA. Such adverse effects on marine mammals would be a potentially significant impact. However, implementation of Mitigation Measure BIO-1 and BIO-4 would be required for future RCAP projects with the potential to affect marine mammals. With implementation of Mitigation Measures BIO-1 and BIO-4, the direct construction impacts to marine mammals would be less than significant.

In summary, construction activities would be subject to the provisions of the various federal and State natural resources regulations and their respective permitting processes, as well as the requirements of Mitigation Measures BIO-1 through BIO-4. Compliance with regulations and implementation of mitigation would result in the avoidance of direct mortality to migratory birds and special-status species from construction activities by requiring preconstruction surveys, construction monitoring, and avoidance and minimization measures, where warranted. Mitigation measures would apply only if specific projects have potentially significant impacts. With mitigation, direct construction impacts would be less than significant.

Although direct impacts on migratory birds and special-status species would be mitigated, significant indirect impacts on special-status species would occur due to the loss of common, non-sensitive habitat. With the development facilitated by RCAP measures and actions, habitat and biological resources to support special-status species could be reduced. Thus, even with implementation of mitigation measures, indirect impacts on migratory birds and special-status species would remain significant and unavoidable.

Operation

The RCAP includes Measures T-10 and CS-3, which promote the ongoing maintenance of forests through actions such as understory clearing to reduce the potential for wildfires and provide excess biomass for the production of renewable fuels. In addition, RCAP Measure BE-2 may result in the

development of utility-scale wind projects to generate renewable electricity. These measures have the potential to result in operational impacts to migratory birds and special status species.

RCAP Measures T-10 and CS-3 aim to boost biofuel production through sustainable means without contributing to deforestation or logging solely for energy purposes. Instead of increasing logging activities, it focuses on sourcing biofuel from responsible forest management practices, such as forest thinning initiatives that are designed primarily to reduce wildfire risk. Forest thinning involves selectively removing smaller trees and underbrush to create healthier, less fire-prone forests. This method provides biomass for biofuel without compromising forest ecosystems or triggering unnecessary deforestation. Additionally, the RCAP incorporates agricultural biowaste as another significant biofuel source. Agricultural biowaste includes crop residues, animal manure, and other organic byproducts generated by farms, which can be converted into biofuels. By utilizing waste materials from agriculture, the plan supports a circular approach, repurposing existing resources rather than extracting additional natural resources. Overall, these measures would ensure that biofuel production grows in harmony with environmental protection goals, leveraging underutilized organic materials while safeguarding forest health and minimizing the need for disruptive logging or land clearing. These measures would likely have long-term beneficial effects on special status species and their habitat related to improved forest health and less frequent and less intense wildfires.

Utility-scale wind projects that may occur under RCAP Measure BE-2 could result in direct mortality and indirect impacts to birds and bats. Wind projects could cause mortality to avian species and bats that may be hit by spinning wind turbine blades and may also result in injury to bats whose flight can be disrupted by the air pressure differential created around wind turbines. Additionally, wind projects could result in the loss of functional foraging habitat for raptors. Future utility-scale wind projects would be required to be evaluated for project-specific impacts under CEQA at the time of application. Project-specific mitigation, in addition to Mitigation Measures BIO-1 through BIO-4, described below, would minimize or eliminate impacts to special-status species to the extent feasible. However, operation of wind facilities associated with implementation of RCAP Measure BE-2 could still adversely affect special-status species because of the scale and nature of the projects. Impacts would remain significant and unavoidable.

Mitigation Measures

The following mitigation measures would apply to future RCAP-related projects with the potential to significantly affect any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service:

MITIGATION MEASURE BIO-1 CONDUCT PROJECT- LEVEL BIOLOGICAL RESOURCES ASSESSMENT

The reviewing agency (County or specific city) shall require biological resources to be analyzed on a project-specific level by a qualified biological consultant. Prior to or during the preparation of project-level environmental documents, and prior to the start of construction activities, a biological resources assessment shall be conducted to characterize the project site if initial assessment indicates that special status species or sensitive habitat may be present. Suitable buffer areas surrounding the project site shall be included where native habitat is contiguous with off-site habitat areas. The assessment and analysis shall emphasize identifying endangered, threatened, rare, and other special-status species; regionally and locally unique species; and sensitive natural communities, jurisdictional waters, and oak woodlands, as applicable. Focused surveys shall be

conducted as necessary to determine the presence of special-status species (e.g., focused sensitive plant or wildlife surveys). Focused surveys shall be conducted according to established CDFW or USFWS protocols, if available for the object species. Natural communities shall be mapped and identified according to floristic alliance- and/or association-based mapping protocols consistent with CDFW natural communities. A jurisdictional delineation may be required if there are signs of potentially regulated wetlands and non-wetland waters. A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze direct and indirect impacts on biological resources, and propose mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as those species with potential to occur on-site).

If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report shall include a mitigation measure requiring pre-construction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. The mitigation measures shall also include consultation with and obtaining permits from USFWS, NMFS, or CDFW prior to construction, if required by FESA or CESA for listed endangered and threatened species. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocation of such species into areas of appropriate restored habitat would have the best chance of replacing/incrementing populations that are lost due to habitat converted to development. Relocation to restored habitat areas shall be the preferred goal of this measure. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.

MITIGATION MEASURE BIO-2 CONDUCT PRE-CONSTRUCTION BIRD SURVEYS AND IMPLEMENT AVOIDANCE AND MINIMIZATION MEASURES

For construction activities initiated during the bird nesting season (February 1–September 15) involving removal of vegetation that could potentially serve as habitat for special-status bird species or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot and shall include a buffer around the construction site at a distance determined by a qualified biologist. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in Humboldt (i.e., qualified biologist). If nests are found, an avoidance buffer shall be determined by a qualified biologist dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside the site. The buffer shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground-disturbing activities shall occur within the buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A report summarizing the pre-construction

survey(s) shall be prepared by a qualified biologist and shall be submitted to the reviewing agency (County or specific city) prior to the commencement of construction activities.

Future project site plans shall include a statement acknowledging compliance with the MBTA and California Fish and Game Code that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests, including checking for nests prior to construction activities during February 1 to September 15 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities.

MITIGATION MEASURE BIO-3 CONDUCT PRE-CONSTRUCTION ROOSTING BATS SURVEYS AND IMPLEMENT AVOIDANCE MEASURES PRIOR TO REMOVAL

Prior to the removal or alteration of trees and structures that may serve as roosting habitat for special-status bat species, a qualified biologist shall conduct a focused survey of all trees and structures to be removed or impacted by construction activities to determine whether active roosts of special-status bats are present on site. Tree or structure removal shall be planned for either the spring or the fall and timed to ensure both suitable conditions for the detection of bats and adequate time for tree and/or structure removal to occur during seasonal periods of bat activity exclusive of the breeding season, as described below. Trees and/or structures containing suitable potential bat roost habitat features shall be clearly marked or identified. If no bat roosts are found, the results of the survey will be documented and submitted to the reviewing agency, after which no further action will be required.

If day roosts are present, the biologist shall prepare a site-specific roosting bat protection plan to be implemented by the contractor following the agency's approval. The plan shall incorporate the following guidance as appropriate:

- When possible, removal of trees/structures identified as suitable roosting habitat shall be conducted during seasonal periods of bat activity, including the following:
 - a) Between September 1 and about October 15, or before evening temperatures fall below 45 degrees Fahrenheit and/or more than 0.5 inch of rainfall within 24 hours occurs
 - b) Between March 1 and April 15, or after evening temperatures rise above 45 degrees Fahrenheit and/or no more than 0.5 inch of rainfall within 24 hours occurs
- If a tree/structure must be removed during the breeding season and is identified as potentially containing a colonial maternity roost, then a qualified biologist shall conduct acoustic emergence surveys or implement other appropriate methods to further evaluate if the roost is an active maternity roost. Under the biologist's guidance, the contractor shall implement measures that consist of (or exceed) the following:
 - a) If it is determined that the roost is not an active maternity roost, then the roost may be removed in accordance with the other requirements of this measure.
 - b) If it is found that an active maternity roost of a colonial roosting species is present, the roost shall not be disturbed during the breeding season (April 15 to August 31).
- Tree removal procedures shall be implemented using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on day one. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed to not return to the roost that night. The remainder of the tree is removed on day two.

- Prior to the demolition of vacant structures within the project site, a qualified biologist shall conduct a focused habitat assessment of all structures to be demolished. The habitat assessment shall be conducted enough in advance to ensure the commencement of building demolition can be scheduled during seasonal periods of bat activity (see above), if required. If no signs of day roosting activity are observed, no further actions will be required. If bats or signs of day roosting by bats are observed, a qualified biologist will prepare specific recommendations such as partial dismantling to cause bats to abandon the roost, or humane eviction, both to be conducted during seasonal periods of bat activity, if required.
- If the qualified biologist determines a roost is used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultation with CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.

MITIGATION MEASURE BIO-4 DEVELOP A MARINE MAMMAL MONITORING PLAN AND IMPLEMENT AVOIDANCE AND MINIMIZATION MEASURES

A Marine Mammal Monitoring Plan shall be prepared to avoid and minimize potential adverse impacts to these species. The plan shall implement general guidelines set forth in the MMPA. Vessels under power shall remain at least 100 yards (300 feet) away from whales and 50 yards (150 feet) from dolphins, porpoises, seals and sea lions. When encountering marine mammals, the vessel shall slow down, operate at no-wake speed and be put in neutral to let the individual/s pass. If construction activities occur from November 1 to April 30, vessel larger than 65 feet are restricted to 10 knots or less. No survey or construction activities (such as pile-driving) will be performed at night unless an alternative monitoring plan is provided by the reviewing agency. Additionally, a qualified biologist shall be on site (either observing from a dock or aboard a vessel) to monitor the construction activities and vicinity for the presence of marine mammals during all in-water activities.

Level of Significance

Significant and Unavoidable.

Sensitive Natural Communities and Wetlands

Significance Criterion b:	Would the proposed plan have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
Significance Criterion c:	Would the proposed plan have a substantial adverse effect on State or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-2 INFRASTRUCTURE FACILITATED BY THE RCAP COULD ADVERSELY IMPACT RIPARIAN HABITAT, OTHER SENSITIVE NATURAL COMMUNITIES, OR PROTECTED WETLANDS IN HUMBOLDT. IMPLEMENTATION OF MITIGATION MEASURES BIO-5 THROUGH BIO-7 WOULD REDUCE IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.

Construction

Humboldt contains sensitive natural communities, such as riparian, conifer, montane hardwood and redwood forests, streams, rivers and wet meadows. In addition, wetlands, marshes, vernal pools, other types of seasonal and perennial wetland communities exist throughout Humboldt, as described in Section 3.3.2, *Environmental Setting*, above. The RCAP is a policy document and does not include specific projects that would have adverse impacts on sensitive natural communities and wetland resources. Most of the infrastructure improvements facilitated by the RCAP would be located on infill sites that are already developed with structures, parking, and/or transportation infrastructure, such as measures related to existing and new building electrification (e.g., RCAP Measures BE-3 through BE-7), active transportation and public transit (e.g., RCAP Measures T-1 through T-4), and zero emission vehicles (e.g., RCAP Measures T-6 through T-9 and T-11). Because these areas are urbanized and currently developed, they are unlikely to contain sensitive natural communities or wetlands.

However, construction of renewable energy, electric power, renewable fuel, organic waste, and recycled water facilitated by the RCAP per RCAP Measures BE-1, BE-2, BE-8, T-10, SW-1, and WW-2 could potentially occur on undeveloped, rural sites where sensitive natural communities and wetlands may be present. These measures may facilitate new development such as large utility-scale energy projects (e.g., solar, wind, battery storage, substation, transmission), a new organic waste processing facility, hydrogen and renewable fuel production facilities, and water recycling facilities and could result in significant impacts to sensitive natural communities, wetlands, or other waters of the United States by direct removal or conversion of habitat, filling, hydrological interruption (including dewatering), alteration of bed and bank, runoff of pollutants into riparian habitats or wetlands, compaction of soils, and/or indirectly through dust and vegetation thinning.

If future RCAP projects occur on sites containing sensitive natural communities, riparian habitat, wetlands, streams, creeks, or other waters of the United States, an aquatic resources delineation would be required to identify the limits and potential jurisdiction of protected waters, wetlands, and sensitive natural communities. Any proposed development in areas identified as jurisdictional waters and/or wetlands, streambed/banks, or riparian vegetation would be subject to the permit requirements of the USACE, RWQCB, and CDFW, pursuant to Section 404 and 401 of CWA, the Porter-Cologne Water Quality Control Act, and/or California Fish and Game Code Section 1600 et

seq. These include but are not limited to streambed alteration permits from the CDFW and permits for grading near the wetlands and certain watercourses from the USACE and RWQCB. These permit clearances may also be required as conditions of approval for grading work to commence. Approval of permits also requires findings that the proposed grading will not result in erosion, stream sedimentation, or other adverse off-site effects to riparian habitat.

Additionally, for future projects one acre or larger, implementation of the required Storm Water Pollution Prevention Plan Best Management Practices (BMPs), in accordance with the NPDES Construction General Permit, during project construction would reduce the potential for eroded soil and contaminants to affect waterbodies and habitats following a storm event. Additionally, HCC Section 337-13a provides site design standards, source control, runoff reduction and baseline hydromodification management to address erosion and sedimentation. Future developments facilitated by the RCAP would employ erosion and stormwater control measures as outlined in the HCC Section 337-13c to protect and enhance the water quality. The incorporated city municipal codes also contain similar construction and grading BMP requirements, which would apply to any projects occurring within incorporated city limits.

Compliance with the abovementioned regulatory requirements would reduce the potential for future RCAP infrastructure projects to damage riparian habitat, sensitive natural communities, and wetlands. In addition, Mitigation Measures BIO-1 and BIO-5 through BIO-7 would be required to reduce impacts related to wetland resources and sensitive natural communities. Where full avoidance is not possible, the participation in pre-established habitat protection programs or State/federal permit mitigation programs would offset potential impacts associated with project implementation. With regulatory compliance and implementation of Mitigation Measures BIO-1 and BIO-5 through BIO-7, construction impacts to riparian habitat, sensitive natural communities, and wetlands would be less than significant.

Operation

Given that potential impacts to riparian habitats, sensitive natural communities, and wetlands would occur during construction either directly via fill or indirectly related to habitat modification, there would be no RCAP operational impacts related to sensitive natural communities.

Mitigation Measures

The following mitigation measures would apply to future RCAP-related projects with the potential to have a substantial adverse effect on riparian habitat, sensitive natural communities, and/or State or federally protected wetlands:

MITIGATION MEASURE BIO-5 PREPARE AQUATIC ENVIRONMENT DOCUMENTATION

Prior to approval of individual projects, the reviewing agency (County or specific city) shall retain a qualified biologist to perform an assessment of the project area to identify wetlands, riparian, and other sensitive aquatic environments. If wetlands are present the qualified biologist shall perform a wetland delineation following the 1987 *Corps of Engineers Wetlands Delineation Manual* and any applicable regional supplements to the *Corps of Engineers Wetlands Delineation Manual*. The wetland delineation shall be submitted to the USACE for verification.

MITIGATION MEASURE BIO-6 IMPLEMENT AQUATIC ENVIRONMENT AVOIDANCE AND MINIMIZATION MEASURES

If wetlands, riparian, or other sensitive aquatic environments are found within the project limits, the reviewing agency (County or specific city) shall design or modify the project to avoid direct and indirect impacts on these habitats, if feasible. Additionally, the reviewing agency shall minimize the loss of riparian vegetation by trimming rather than removal where feasible.

Prior to construction, the reviewing agency shall install orange construction barrier fencing to identify buffer areas around the seasonal wetland (50 feet from edge), riparian area (100 feet from edge), perennial wetlands (150 feet from edge) and other aquatic habitats (250 feet from edge of vernal pool), or as defined by the agency with regulatory authority over the resource(s). No buffer shall be required for man-made wetlands except wetlands created for mitigation purposes. The location of the fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

The Contractor's attention is directed to the areas designated as "environmentally sensitive areas." These areas are protected, and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the reviewing agency. The Contractor will take measures to ensure that Contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.

Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer.

Immediately upon completion of construction activities the contractor shall stabilize exposed soil/slopes impacted within the aquatic habitat. On highly erodible soils/slopes, use a nonvegetative material that binds the soil initially and breaks down within a few years. If more aggressive erosion control treatments are needed, geotextile mats, excelsior blankets, or other soil stabilization products will be used. All stabilization efforts should include habitat restoration efforts.

MITIGATION MEASURE BIO-7 COMPENSATE FOR LOSS OF AQUATIC ENVIRONMENTS

If wetlands or riparian habitat are disturbed as part of an individual project, the reviewing agency shall compensate for the disturbance to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site-specific information and determined through coordination with State, federal, and local agencies as part of the permitting process for the project. Unless determined otherwise by the regulatory/permitting agency, the compensation shall be at a minimum ratio of two acres restored, created, and/or preserved for every one acre disturbed.

Compensation may comprise on-site restoration/creation, off-site restoration, preservation, or mitigation credits (or a combination of these elements). The reviewing agency shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created and monitored over a minimum period of time.

Level of Significance

Less than Significant with Mitigation.

Wildlife Movement Corridors and Nursery Sites

Significance Criterion d: Would the proposed plan interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact BIO-3 INFRASTRUCTURE FACILITATED BY THE RCAP WOULD RESULT IN IMPACTS TO WILDLIFE MOVEMENT CORRIDORS AND WILDLIFE NURSERY SITES IF THEY NARROW OR REMOVE EXISTING CORRIDORS OR DEGRADE OR REMOVE NURSERY SITES. IMPLEMENTATION OF MITIGATION MEASURE BIO-8 WOULD REDUCE POTENTIAL IMPACTS TO THE EXTENT FEASIBLE. HOWEVER, IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

Most of Humboldt is vastly undeveloped, and the region is known for its dense forests, large diverse river systems, and rugged coastal areas, all of which provide wildlife movement corridors and may also provide wildlife nursery sites. The RCAP is a policy document and does not include specific projects that would have adverse impacts on wildlife corridors, habitat linkages, and native wildlife nursery sites. However, projects facilitated by RCAP measures and actions could adversely affect wildlife corridors, habitat linkages, and native wildlife nursery sites. Most of the infrastructure improvements facilitated by the RCAP would be located on infill sites that are already developed with structures, parking, and/or transportation infrastructure, such as measures related to existing and new building electrification (e.g., RCAP Measures BE-3 through BE-7), active transportation and public transit (e.g., RCAP Measures T-1 through T-4), and zero emission vehicles (e.g., RCAP Measures T-6 through T-9 and T-11). Because these areas are urbanized and currently developed, they are unlikely to serve as wildlife corridors, habitat linkages, or native wildlife nursery sites.

However, construction of renewable energy, electric power, renewable fuel, organic waste, and recycled water facilitated by the RCAP per RCAP Measures BE-1, BE-2, BE-8, T-10, SW-1, and WW-2 could potentially occur on undeveloped, rural sites where wildlife movement corridors and native wild nursery sites may be present. These measures may facilitate new development such as large utility-scale energy projects (e.g., solar, wind, battery storage, substation, transmission), a new organic waste processing facility, hydrogen and renewable fuel production facilities, and water recycling facilities and could result in significant impacts to wildlife corridors, habitat linkages, and native wildlife nursery sites if they narrow or remove existing corridors or degrade or remove nursery sites. Impact associated with narrowing or removing existing wildlife corridors, habitat linkages, and/or native wildlife nursery sites would be considered significant.

Mitigation Measure BIO-8 would require that future RCAP projects are designed to facilitate the movement of sensitive species to the greatest extent feasible. Compliance with Mitigation Measure BIO-8 and existing State, local, and/or federal regulations would reduce RCAP construction impacts related to wildlife movement corridors and nursery sites. However, even with the application of Mitigation Measure BIO-8, construction impacts may not be able to be reduced, and impacts would remain significant and unavoidable.

Operation

Given that potential impacts to wildlife movement corridors and nursery sites would occur during construction via removal or modification, there would be no RCAP operational impacts related to wildlife movement corridors and nursery sites.

Mitigation Measures

The following mitigation measure would apply to future RCAP-related projects with the potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors:

MITIGATION MEASURE BIO-8 INCORPORATE WILDLIFE CORRIDOR MEASURES INTO DESIGN PRIOR TO CONSTRUCTION

Prior to design approval and construction of individual projects that traverse or interface with an existing wildlife corridor, the reviewing agency (County or relevant city) shall incorporate economically viable design measures, as applicable and necessary, to allow wildlife or fish to continue to move through an existing wildlife corridor, both during construction activities and post construction. If the project cannot be designed with these design measures (i.e., due to transportation corridor safety, etc.) the reviewing agency shall coordinate with the appropriate regulatory agencies (i.e., USFWS, NMFS, CDFW) to obtain regulatory permits and implement alternative project-specific mitigation prior to construction activities.

Level of Significance

Significant and unavoidable.

Local Biological Resources Policies or Ordinances Consistency

Significance Criterion e: Would the proposed plan conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-4 INFRASTRUCTURE FACILITATED BY THE RCAP WOULD BE REQUIRED TO CONFORM WITH APPLICABLE LOCAL POLICIES AND ORDINANCES PROTECTING BIOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Humboldt County's General Plan and LCP as well as the seven incorporated cities general plans incorporate goals and policies to protect biological resources, such as plant habitats, trees, redwoods, woodlands, wildlife habitats, and rare and endangered species in the county. Additionally, Humboldt County plans to adopt a Significant Tree Ordinance and Landmark Tree Policy (BR-P13), which would preserve trees and enhance the ecological benefit to the community by providing for the regulation of planting, management, maintenance, preservation and, where necessary, removal of trees.

The RCAP is a policy document and does not include specific projects that would have adverse impacts related to trees protected by local tree preservation ordinances or conflicts with other local biological resources policies. Rather, implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on vacant

and undeveloped land. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region's forests and wetlands, as well as promote biodiverse forests and wetlands. These measures would promote the preservation of habitat and open space areas, consistent with goals and policies established by the County and city general plans.

The RCAP would promote sustainable infrastructure development and redevelopment including renewable energy, electric power, renewable fuel, organic waste, recycled water, and transportation infrastructure per RCAP Measures BE-1 through BE-4, BE-7, BE-8, T-1, T-2 Urban and Rural, T-6, T-7, T-10, T-11, SW-1, and WW-2. The purpose and intended effect of the RCAP is to reduce GHG emissions generated in Humboldt to help reduce the effects of climate change. Any future RCAP projects that would affect trees protected by a local ordinance would be required to comply with the permitting conditions of the applicable local ordinance, such as preservation and protection measures, or the provision of replacement trees. Therefore, the RCAP would not conflict with or obstruct implementation of the applicable policies for preserving biological resources nor result in the loss of trees protected by local ordinances.

Operation

Given that potential impacts to trees would occur during construction, there would be no RCAP operational impact related to consistency with local biological resources policies and ordinances.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation.

Habitat or Natural Community Conservation Plans Consistency

Significance Criterion f: Would the proposed plan conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact BIO-5 THE RCAP WOULD NOT CONFLICT WITH AN ADOPTED HCP, NCCP, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN. ANY FUTURE RCAP-RELATED INFRASTRUCTURE PROJECTS OCCURRING WITHIN AN ADOPTED HCP, NCCP, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN WOULD BE REQUIRED TO COMPLY WITH THE APPLICABLE PLAN'S REQUIREMENTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Humboldt has several habitat conservation initiatives aimed at protecting wildlife habitats and managing land use to preserve biodiversity. These plans include HCPs and other regional conservation programs, such as the NCCP, established to protect wildlife and fish species (i.e., northern spotted owl, marbled murrelet, salmonid species, Pacific lamprey, green sturgeon, marine mammals, migratory birds) as well as natural habitat (i.e., woodlands, riparian, wetland) while balancing sustainable land use and development. The habitat conservation plans within Humboldt are listed in Section 3.3.3, *Regulatory Setting*.

The RCAP is a policy document and does not include specific projects that would have adverse impacts related to adopted HCCPs/NCCPs. Rather, implementation of RCAP Measure T-3, which

promotes infill development and the minimization of urban sprawl, would reduce development pressure on vacant and undeveloped land. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region’s forests, as well as promote biodiverse forests and wetlands. These measures would promote the preservation of habitat and open space areas, consistent with habitat conservation goals and policies.

The RCAP would promote sustainable infrastructure development and redevelopment including renewable energy, electric power, renewable fuel, organic waste, recycled water, and transportation infrastructure per RCAP Measures BE-1 through BE-4, BE-7, BE-8, T-1, T-2 Urban and Rural, T-6, T-7, T-10, T-11, SW-1, and WW-2. The purpose and intended effect of the RCAP is to reduce GHG emissions generated in Humboldt to help reduce the effects of climate change. Any future RCAP projects that would occur in areas protected by adopted HCPs and NCCPs would be required to comply with applicable HCP/NCCP requirements promulgated by local, State, and/or federal agencies to proceed with development. Therefore, the RCAP would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation.

Farmland Conversion and Williamson Act Zoning Consistency

Significance Criterion g:	Would the proposed plan convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
Significance Criterion h:	Would the proposed plan conflict with existing zoning for agricultural use or a Williamson Act contract?
Significance Criterion k:	Would the proposed plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

Impact AG-1 INFRASTRUCTURE FACILITATED BY THE RCAP HAS THE POTENTIAL TO CONVERT FARMLAND TO NON-AGRICULTURAL USE AND CONFLICT WITH EXISTING ZONING FOR AGRICULTURAL USE OR A WILLIAMSON ACT CONTRACT. MITIGATION MEASURES AG-1 THROUGH AG-4 WOULD BE IMPLEMENTED TO AVOID CONVERSION OF ACTIVELY FARMED LANDS AND REDUCE THE POTENTIAL FOR PERMANENT LOSS OF FARMLAND TO THE EXTENT FEASIBLE. HOWEVER, IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction and Operation

Humboldt’s agricultural lands consist of a diverse mix of productive farmland, rangeland, and pastureland, with a focus on dairy operations, cattle grazing, and specialty crops such as wine grapes, organic vegetables, and cannabis. In addition, there are numerous properties currently under Williamson Act contract within Humboldt. The RCAP is a policy document and does not include specific projects that would have adverse impacts related to farmland. Rather,

implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on agricultural and rural areas of Humboldt. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region's agricultural and forest lands. The RCAP also contains Measure CS-2 to work with agricultural industries in Humboldt to procure and distribute high-quality compost to farms within the region. These measures would benefit agriculture in Humboldt and promote the preservation of agricultural lands.

Most of the infrastructure improvements facilitated by the RCAP would be located on infill sites that are already developed with structures, parking, and/or transportation infrastructure, such as measures related to existing and new building electrification (e.g., RCAP Measures BE-3 through BE-7), active transportation and public transit (e.g., RCAP Measures T-1 through T-4), and zero emission vehicles (e.g., RCAP Measures T-6 through T-9 and T-11). Because these areas are urbanized and currently developed, they are unlikely to contain Farmland, conflict with zoning for agricultural use or Williamson Act contracts, or result in other changes that could lead to the conversion of Farmland to non-agricultural use.

However, construction of renewable energy, electric power, renewable fuel, organic waste, and recycled water infrastructure facilitated by the RCAP per RCAP Measures BE-1, BE-2, BE-8, T-10, SW-1, and WW-2 could potentially occur on undeveloped, rural sites and result in the conversion of Farmland⁵⁴ to non-agricultural use. In particular, utility-scale renewable energy projects require large tracts of land and present a substantial potential impact to agricultural resources. Elements of utility-scale renewable energy generation facilities may include, but would not be limited to, solar collector arrays, mounting posts, wind turbines, on-site substations, electrical infrastructure, transmission lines, operations and maintenance buildings, battery-storage facilities, and other accessory structures. Utility-scale renewable energy facilities could require development on hundreds of acres; therefore, if developed in agricultural areas, these projects could have a substantial effect on Farmland. Utility-owned substation upgrades to increase load capacity would most likely be contained within the existing substation fence line and would be regulated by the California Public Utilities Commission if owned by an investor-owned utility such as Pacific Gas and Electric. Upgrades to existing transmission lines may also be required at specific tower locations, which could permanently disturb Farmland in the area where the work would occur. Should future utility-scale renewable energy facilities be proposed on Farmland, in particular Farmland that is used for the production of agricultural products (i.e., rather than used for residential, governmental, or other allowable non-agricultural uses of agricultural zoned lands), they could convert an agricultural use to a non-agricultural use. This impact would be significant.

Projects facilitated by the RCAP would be required to comply with County and city general plan goals and policies and zoning requirements that protect and preserve agricultural resources, such as Humboldt General Plan Policies AG-P6 and AG-P16, Arcata General Plan Policies RC-5b and RC-5c, Blue Lake General Plan Preservation Of Open Space And Agricultural Lands Policies 1 through 15,

⁵⁴ "Farmland" specifically includes the following definitions utilized by the County:

- a. Rated Class I or II by the U.S. Soil Conservation Service.
- b. Rated 80 through 100 percent in the Storie Index.
- c. Land that has a livestock carrying capacity of one animal unit per acre.
- d. Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a non-bearing period of less than five years and which will normally provide a return adequate for economically viable operations during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production.
- e. Land capable of producing an unprocessed plant production adequate for economically viable operations.
- f. Additional lands in proximity to a, b or c above which are necessary to provide for physically and economically viable, coherent agricultural areas. These lands are included to prevent the establishment of incompatible land uses within an area defined by natural or man-made boundaries.

Eureka General Plan Policy AG-1.1, Ferndale General Plan agricultural land use policies, Fortuna General Plan Policies NCR-3.1 through 3.6 and NCR-3.8, Rio Dell General Plan Goal CO 5.3-1, and Trinidad General Plan Goal CONS-5. However, conversion of Farmland may still occur depending on future project locations and details.

Mitigation Measure AG-1 would reduce the potential for conversion of Farmland to non-agricultural uses by avoiding the development of actively farmed lands when there is an otherwise suitable site available. Additionally, Mitigation Measures AG-2 through AG-4 would reduce impacts related to the permanent loss of agricultural soils and agricultural activities. However, these measures would not ensure that the conversion of Farmland could be avoided. As such, impacts would remain significant and unavoidable.

Mitigation Measures

The following mitigation measures would apply to future RCAP-related projects with the potential to convert Farmland to non-agricultural use and conflict with existing zoning for agricultural use or a Williamson Act contract:

MITIGATION MEASURE AG-1: AVOID ACTIVELY FARMED LANDS

If a project facilitated by the RCAP is proposed on actively farmed land, the reviewing agency (County or individual city) shall require the project sponsor to demonstrate their consideration of alternate sites not in agricultural use, such as sites that were formerly developed or contaminated lands located within the jurisdictional limits of the reviewing agency when such development is consistent with general plan and zoning requirements of the alternate sites.

MITIGATION MEASURE AG-2 PREPARE AND IMPLEMENT AN AGRICULTURE MANAGEMENT PLAN

If a project facilitated by the RCAP is proposed on actively farmed land, prior to the issuance of a building permit, the project sponsor shall submit to the reviewing agency (County or individual city) an Agricultural Management Plan (AMP) that provides for the ongoing agricultural productivity of the project site for the life of the project to the extent feasible. Agricultural uses may include but are not limited to sheep grazing, the keeping of honeybees, or planting of row crops, on a rotational basis. During rotational periods, the AMP shall include planting and maintenance of locally appropriate native plants, focusing on species that provide the greatest value to bees, moths, butterflies, and other native pollinators. Some potential options include yarrow (*Achillea millefolium*), farewell to spring (*Clarkia amoena*), California poppy (*Eschscholzia californica*), riverbank lupine (*Lupinus rivularis*), California bee plant (*Scrophularia californica*), and rough hedgenettle (*Stachys rigida*). To maintain habitat value, mowing shall not occur during the bloom period, though targeted removal of invasive species is encouraged. The AMP shall summarize the types and duration of agricultural uses as well as operator information for the property. The reviewing agency reserves the right to reject or require revisions to the plan to ensure the effectiveness of the planned agricultural operations.

MITIGATION MEASURE AG-3 PREPARE AND IMPLEMENT A DECOMMISSIONING AND SOIL RECLAMATION PLAN

If a project facilitated by the RCAP is proposed on a site containing prime agricultural soils, prior to the issuance of a building permit, the applicant shall submit, for review and approval by the reviewing agency (County or individual city), a Soil Reclamation Plan (Plan) for the restoration of the site at the end of the project's useful life. The Plan shall contain an analysis of general pre-

construction conditions of the project site, the site shall be photographically documented by the applicant prior to the start of construction. The Plan shall contain specific measures to restore the soil to approximate its pre-project condition, including (1) removal of all above-ground and below-ground project fixtures, equipment, and non-agricultural driveways, (2) tilling to restore the sub-grade material to a density and depth consistent with its pre-project condition, (3) revegetation using a seed mixture approved by the reviewing agency, consisting of native species, and designed to maximize revegetation shall be broadcast or drilled across the project site, and (4) application of weed-free mulch spread, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions shall be assessed by reviewing agency staff. Additional seedlings and applications of weed-free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (i.e., restored to pre-project conditions) until the entire project area has been restored to conditions equivalent to pre-construction conditions. All waste shall be recycled or disposed of in compliance with applicable law. The project sponsor shall submit documentation to the reviewing agency to verify the completion of reclamation within 18 months of expiration of the project use permit or vacation of the project site.

MITIGATION MEASURE AG-4 PROVIDE FINANCIAL ASSURANCE TO IMPLEMENT SOIL RECLAMATION PLAN

If a Soil Reclamation Plan is required pursuant to Mitigation Measure AG-3, prior to the issuance of a building permit, the project sponsor shall post a performance or cash bond, submit a Certificate of Deposit, submit a letter of credit, or provide such other financial assurances acceptable to the reviewing agency (County or specific city), in an amount provided in an Engineer's Cost Estimate, approved by the reviewing agency, to ensure completion of the activities under the Soil Reclamation Plan. Every five years from the date of completion of construction of the project, the project sponsor shall submit an updated Engineer's Cost Estimate for financial assurances for the Soil Reclamation Plan, which will be reviewed every five years by the reviewing agency to determine if the amount of the assurances is sufficient to implement the Soil Reclamation Plan. The amount of the assurances must be adjusted if, during the five-year review, the amount is determined to be insufficient to implement the Soil Reclamation Plan.

Level of Significance

Significant and Unavoidable

Forest Land Conversion and Forest/Timberland Zoning Consistency

Significance Criterion i:	Would the proposed plan conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
Significance Criterion j:	Would the proposed plan result in the loss of forest land or conversion of forest land to non-forest use?
Significance Criterion k:	Would the proposed plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?

Impact AG-2 THE RCAP INCLUDES MEASURES THAT PROMOTE THE CONSERVATION OF HUMBOLDT'S FOREST LAND AND TIMBERLAND. ADDITIONALLY, INFRASTRUCTURE FACILITATED BY THE RCAP WOULD NOT BE ANTICIPATED TO RESULT IN THE CONVERSION OF FOREST LAND NOR CONFLICT WITH EXISTING ZONING FOR FORESTRY OR TIMBERLAND USE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction and Operation

As described in Section 3.3.2, *Environmental Setting*, over 80 percent of the land area in Humboldt is forested. The forest land across Humboldt includes a mix of private, State, and federal ownership, and includes parks, forest reserves, and areas of active timber production. Major private timberland owners include companies like Humboldt Redwood Company, Green Diamond Resource Company, and State-managed lands by the California Department of Forestry and Fire (CAL FIRE) also contribute to the region's timber resources.

The RCAP is a policy document and does not include specific projects that would have adverse impacts related to forest land, timberland, or timberland zoned Timberland Production. Rather, implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on forested areas of Humboldt. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region's agricultural and forest lands. This measure promotes the conservation of Humboldt's forest and timberlands.

RCAP Measures T-10 and CS-3 aim to boost biofuel production through sustainable means without contributing to deforestation or logging solely for energy purposes. This measure focuses on sourcing biofuel from responsible forest management practices, such as forest thinning initiatives that are designed primarily to reduce wildfire risk. Forest thinning involves selectively removing smaller trees and underbrush to create healthier, less fire-prone forests. This method provides biomass for biofuel without compromising forest ecosystems or triggering unnecessary deforestation. Additionally, the RCAP incorporates agricultural biowaste as another significant biofuel source. These measures would ensure that biofuel production grows in harmony with environmental protection goals, leveraging underutilized organic materials while safeguarding forest health and minimizing the risk of wildfires.

Additionally, future projects facilitated by the RCAP would not be anticipated to substantially affect forested areas and would be required to demonstrate consistency with (depending on jurisdiction) the HCC and city zoning codes, as well as with the County and cities General Plan goals and policies

to safeguard and improve both private and public forest lands to preserve ecosystem integrity and resilience while supporting sustainable timber production, recreational use, habitat conservation, and opportunities for education and research. As such, implementation of the RCAP would not convert forest land to non-forest use. Therefore, RCAP construction and operational impacts related to conversion of forestry uses to non-forestry uses or conflicts with forest/timberland zoning would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

3.3.5 Cumulative Impacts

The geographic scope of the cumulative biological, agriculture, and forestry resources analysis is Humboldt. Regional cumulative analysis considers potential Countywide impacts that would occur from projected long-term Countywide growth identified in Table 3-1 of Section 3, *Environmental Setting*. The general approach to cumulative impact analysis used in this EIR is discussed in Section 3, *Environmental Setting*.

Special-status Wildlife and Plant Species

A list of 175 special-status species that have been documented to occur within Humboldt is provided in Appendix B, *Biological Resources*. Species are accorded special status generally because they are recognized as declining in extent and/or distribution. These species are considered to be sufficiently at risk to warrant some level of protection either through the CEQA review process or by local regulations. Accordingly, a significant cumulative impact of past, present, and reasonably foreseeable projects would occur with respect to these species.

The RCAP would result in a significant direct and indirect incremental contribution to this significant cumulative impact. The RCAP's contribution would be mitigated to a less than cumulatively considerable (less than significant) level for direct impacts through implementation of Mitigation Measures BIO-1 through BIO-4. However, for indirect cumulative impacts resulting from the loss of common habitats and diminished resource availability, the implementation of Mitigation Measures BIO-1 through BIO-4 would not be sufficient to reduce the level of impact to a less than significant level. Additional mitigation opportunities for indirect impacts to special status species are limited or unavailable. Accordingly, the RCAP's incremental contribution, taken into consideration with the cumulative projects' impacts on special-status species over the span of the RCAP, would remain cumulatively considerable and significant and unavoidable.

Sensitive Natural Communities and Wetlands

Riparian habitat, sensitive natural communities, and wetlands are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent and/or distribution. These communities are considered threatened enough to warrant some level of protection either through the CEQA review process or by federal, state, and local regulations, including the permitting jurisdiction of USACE, CDFW, and/or the RWQCB. Past, present, and reasonably foreseeable future projects involving temporary or permanent impacts on riparian

habitat, sensitive natural communities, and jurisdictional waters and/or wetlands through removal, filling, stockpiling, construction access, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, geotechnical investigations, or any other modifications that involve the discharge of fill and/or alteration of a jurisdictional resource, have contributed to and are expected to continue to contribute to the loss of riparian habitat, sensitive natural communities, and wetlands Countywide. Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to these resources.

The RCAP has the potential to result in an incremental contribution to this significant cumulative impact. However, RCAP impacts to riparian habitat, sensitive natural communities, and wetlands would be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) through implementation of Mitigation Measures BIO-1 and BIO-5 through BIO-7. With the implementation of these mitigation measures and compliance with the regulatory agencies of USACE, CDFW, and RWQCB implementing their “no net loss” of biological resource habitat policies, the plan-specific, incremental contribution would not be cumulatively considerable. Cumulative impacts would be less than significant.

Wildlife Movement Corridors

Wildlife movement corridors in Humboldt are essential pathways that allow animal species to travel and migrate across the landscape. These corridors enable access to habitats needed for foraging, breeding, and survival, particularly as species adapt to seasonal changes, habitat fragmentation, and climate change. In Humboldt, these pathways often link coastal areas, forests, riparian zones, and the mountainous regions of the North Coast Range, including parts of Redwood National and State Parks, Six Rivers National Forest, and other protected areas. Riparian corridors along rivers and streams such as the Eel, Mattole, Mad, Trinity, and Klamath provide critical routes for species like otters, beavers, amphibians, and fish, while also supporting connectivity for birds and small mammals. Past, present, and reasonably foreseeable future projects involving temporary or permanent impacts on wildlife movement corridors and native wildlife nursery sites through habitat removal, fragmentation, and disturbance, have contributed to and are expected to continue to contribute to the loss of wildlife movement corridors and native wildlife nursery sites. Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to these resources.

The RCAP would result in a significant incremental contribution to this significant cumulative impact. Even with the implementation of Mitigation Measure BIO-8, the proposed plan’s incremental contribution, taken into consideration with the cumulative projects’ impacts on wildlife corridor, habitat linkages, and wildlife nursery sites over the span of the RCAP, would be cumulatively considerable. Additional mitigation opportunities for wildlife movement are limited or unavailable. A significant and unavoidable cumulative impact from interference with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites would result.

Agricultural Resources

Agriculture is a key industry in Humboldt, and large portions of the region are identified as Farmland. Although the County and cities General Plans contain goals and policies to preserve and protect Farmland, according to the Humboldt General Plan EIR, past, present, and reasonably foreseeable future development have contributed to and are expected to continue to contribute to

the conversion of Farmland to non-agricultural uses Countywide.⁵⁵ Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to agricultural resources.

The RCAP would result in a significant incremental contribution to this significant cumulative impact. Even with the implementation of Mitigation Measures AG-1 through AG-4, the proposed plan's incremental contribution, taken into consideration with the cumulative projects' impacts related to the conversion of Farmland to non-agricultural use over the span of the RCAP, would be cumulatively considerable. Additional mitigation opportunities for the loss of Farmland are limited or unavailable. A significant and unavoidable cumulative impact from the conversion of Farmland would result.

Forestry Resources

Over 80 percent of the land area within Humboldt is forested, including a mix of forest land, timberland, and TPZ. Although the County and cities General Plans contain goals and policies to preserve and protect forest land, according to the Humboldt General Plan EIR, past, present, and reasonably foreseeable future development have contributed to and are expected to continue to contribute to the conversion of forest land to non-forest uses Countywide.⁵⁶ Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to forestry resources.

Although a significant cumulative impact exists, the RCAP includes measures to conserve and protect Humboldt's forest and timberlands as an important source of carbon sequestration. Future projects occurring under the RCAP would not be anticipated to significantly affect Humboldt's forested areas. As such the RCAP's incremental contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.

Overall Level of Cumulative Significance

Significant and Unavoidable

⁵⁵ Humboldt County. 2017. General Plan Update Revised Draft EIR. <https://humboldt.gov.org/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Documents-PDF> (accessed December 2024).

⁵⁶ Humboldt County. 2017. General Plan Update Revised Draft EIR. <https://humboldt.gov.org/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Documents-PDF> (accessed December 2024).

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Figures

None.

3.4 Cultural and Tribal Cultural Resources

3.4.1 Introduction

This section addresses cultural and Tribal resources in Humboldt County (unincorporated and incorporated areas) as well as the relevant regulatory framework. This section also analyzes the potential impacts to cultural resources and Tribal cultural resources anticipated to result from implementation of the RCAP.

3.4.2 Environmental Setting

Cultural Resources Definitions

The term “cultural resources” under CEQA encompasses historic, archaeological, and Tribal cultural resources as well as burial sites. Below is a brief summary of each definition:

- **Historical Resources:** Historical resources are resources listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources or identified in a historical resources survey, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. Historical resources may include eligible built environment resources of the precontact¹ or historic periods. For the purposes of this section, historical resources are associated with the recent past. Specifically in California, historical resources are typically associated with the Spanish, Mexican, and American periods in the State’s history and are generally less than 200 years of age.
- **Archaeological Resources:** Archaeology is the study of artifacts and material culture with the aim of understanding human activities and cultures in the past. Archaeological resources may be associated with prehistoric indigenous cultures as well as historic periods.
- **Tribal Cultural Resources:** Tribal cultural resources include sites, features, places, or objects that are of cultural value to one or more California Native American Tribes.
- **Burial Sites and Cemeteries:** Burial sites and cemeteries are formal or informal locations where human remains have been interred.

Overall Cultural Setting

Following is a brief overview of the indigenous history, ethnographic background, and post-contact history of the proposed plan area. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview. Further details can be found in ethnographic studies, records, and major published sources.

Indigenous History

During the twentieth century, many archaeologists developed chronological sequences to explain prehistoric cultural changes within all or portions of northern California.² The project area lies within

¹ Precontact refers to the period prior to European settler contact with Native Americans, in this case specifically in California.

² Terry Jones and Kathryn Klar, *California Prehistory: Colonization, Culture and Complexity*, (Rowman Altamira Press, 2007); Michael Moratto, *California Archaeology*, (New York: Academic Press, 1984).

the Northwest California archaeological region.³ The prehistoric chronology for the area can be generally divided into six periods: the Pleistocene- Holocene transition (11,500 to 8,000 B.C.), the Early Holocene (8,000 to 5,000 B.C.), the Middle Holocene (5,000 to 2,000 B.C.), and the Late Holocene (Post 2,000 B.C.).⁴

PLEISTOCENE-HOLOCENE TRANSITION (CA. 11,500 TO 8,000 B.C.)

Very little is known about this period in the Northwest California archaeological region. Limited finds dating to the Pleistocene-Holocene transition have been made in the Northwest Coast region, including Post Pattern sites near Clear Lake and Cache Creek in Lake County and isolated finds in Mendocino County and at Bodega Head.⁵ Post Pattern assemblages typically include fluted (Clovis-like) projectile points.

EARLY HOLOCENE (8,000 TO 5,000 B.C.)

The Early Holocene in this area is primarily categorized by the Borax Lake Pattern, which has been extensively studied throughout the interior of Northwest California.⁶ This pattern is categorized by large, wide-stemmed projectile points, serrated bifaces, ovoid flake tools, handstones, millingslabs, and edge-flaked spalls, and is found in a variety of contexts. Due to the associated material culture and the lack of evidence of storage, the Borax Lake Pattern suggests a mobile forager strategy. Evidence for this period in coastal areas is lacking. Only one clear Borax Lake Pattern site has been identified near the ocean, a hunting camp apparently focused on hunting Roosevelt elk, located approximately two kilometers from the coast.

MIDDLE HOLOCENE (5,000 TO 2,000 B.C.)

The Middle Holocene is poorly represented throughout Northwest California, particularly the early part of the period.⁷ North of Cape Mendocino, no occupation evidence has been identified until after 3,000 B.C., when the Mendocino Pattern becomes apparent. Common artifacts attributed to this pattern include various side-notched, corner-notched, and concave-base projectile points, handstones, and millingslabs, and several types of flake tools.

LATE HOLOCENE (POST 2,000 B.C.)

The Late Holocene in the project vicinity demonstrates a continuation of the Mendocino Pattern of the Middle Holocene. By A.D. 500, however, a major change occurs with the emergence of the Gunther Pattern, a precursor to the ethnographic cultures of the area.⁸ The Gunther Pattern is represented by Gunther barbed projectile points, and concave-based points used on harpoons, ground and polished stone artifacts, and artistic items. Sites are often complex, with defined house areas, cemeteries, storage, and midden areas.

3 William R. Hildebrandt, "Northwest California: Ancient Lifeways Among Forested Mountains, Flowering Rivers, and Rocky Shores," in *California Prehistory: Colonization, Culture, and Complexity*, (Rowman Altamira Press, 2007).

4 Hildebrandt, "Northwest California: Ancient Lifeways Among Forested Mountains, Flowering Rivers, and Rocky Shores," 2007.

5 Hildebrandt, 2007.

6 Hildebrandt, 2007.

7 Hildebrandt, 2007.

8 Hildebrandt, 2007.

Ethnographic Background

The archaeological record of the north coast includes Native American data from over 12,000 years ago.⁹ Historically, the Humboldt County area was one of the most culturally diverse regions in present-day California and was home to more than a dozen distinct peoples. Native American tribes occupied discrete areas with precise boundaries conforming to the natural watershed basins.

Humboldt County consisted of three ethnolinguistic groups: Athabascan, Hoka, and Algic/Algonquin. Tribal groups with ancestral territories in the project area include: Yurok and Wiyot (Algic/Algonquin); Chilula, Whilkut, Hoopa, Nongatl, Lassik, Mattole, Sinkyone, and Mailaki (Athabascan); and Karuk (Hoka).

The Yurok ancestral territory includes a coastal strip from Little River in today's Humboldt County to Del Norte County, and inland along the Klamath River. At the time of anthropological documentation, there were over 70 known villages within the ancestral territory, situated along the banks of the Klamath River, ocean streams, and lagoons.¹⁰ Wiyot territory extends eastward from the Pacific to the crest of the first mountain range some 15 to 20 miles inland, bounded on the north by the Little River and to the south by the Bear River.¹¹ Their territory thus includes Humboldt Bay and many miles of ocean front and the lower courses of rivers, as well as inland redwood forest.

The Chilula inhabited the area located on or adjacent to lower Redwood Creek. All but one of their known 18 village sites were located on the east side of Redwood Creek.¹² The Whilkut inhabited the area south of the Chilula on or near the Upper Redwood Creek and Mad River, except at the mouth, and up to the vicinity of Iaqua Buttes.¹³ The Hoopa ancestral territory includes valleys on the lower part of the Trinity River (present-day Hoopa Valley), beginning at the South Fork of the Trinity River to Klamath River, and including portions of present-day Trinity County.¹⁴

The southern portion of Humboldt County was inhabited by Southern Athapaskan speakers, sometimes collectively referred to as the Eel River Athapaskans, including: Lassik, Mattole, Sinkyone, and Wailaki. The Lassik occupied the drainage of the Main Eel River between the mouths of Dobbyn and Kekawawa creeks and the headwaters of the North Fork Eel and Mad Rivers. They were bordered by the Nongatl to the north, the Sinkyone to the west and the Eel River Wailaki to the south.

The Karuk ancestral territory is inland, mostly within Siskiyou County and the northeastern part of Humboldt County, and bordered by Bluff and Red Cap Creek to the south along the Klamath River and by Walker Creek to the north. Archaeological excavations of the interior area of Northwestern California suggests that while Karuk generally settled in villages adjacent to the river, there were also sites present on high ridges.¹⁵

9 Michael J. Moratto, *California Archaeology* (New York: Academic Press, 1984).

10 Alfred J. Kroeber, *Handbook of the Indians of California*. Bulletin 78, Bureau of American Ethnology, (Washington DC: Government Printing Office, 1925); TT Waterman, *Yurok Geography* (Trinidad: Trinidad Museum Society, 1920); A. Pilling, "c, Volume 8, California, (Washington DC: Government Printing Office, 1978).

11 Albert B. Elsasser, "Wiyot" in *Handbook of North American Indians*, Volume 8, California, (Washington DC: Government Printing Office, 1978).

12 Edwin C. Bearss, "Redwood National Park History Basic Data," (Washington DC: National Park Service, 1969), https://www.nps.gov/parkhistory/online_books/redw/index.htm. Accessed October 2024.

13 Kroeber, 1925.

14 Pliny Earle Goddard, *Life and Culture of the Hupa*, *American Archaeology and Ethnology*, (Berkeley: University of California, 1903), <https://digitalassets.lib.berkeley.edu/anthpubs/ucb/text/ucp001-003.pdf>. Accessed October 2024.

15 John F. Salter, *White Paper on Behalf of the Karuk Tribe of California: A Context Statement Concerning the Effect of Iron Gate Dam on Traditional Resource Use and Cultural Patterns of the Karuk People within the Klamath River Corridor*, (2003), https://sipnuuk.karuk.us/system/files/atoms/file/AFRIFoodSecurity_UCB_JenniferSowerwine_001_009.pdf Accessed October 2024

While some people lived in permanent villages occupied by the entire population for the majority of the year along the coast and rivers, both coastal and inland groups moved to seasonal coastal villages for specific harvesting and gathering opportunities.¹⁶ Northwestern California supported relatively high populations of people who resided in sub-terranean plank houses within permanent villages. There are two types of semi-subterranean plank houses used among Native Americans in Northwestern California: family houses and sweathouses. Although houses varied in minor design details, their general form and function was similar throughout the region. Houses were “snug, well-made structures engineered to keep out the constant wind and rain”.¹⁷ Typically there were three family houses for every sweathouse group, clustered according to extended family lines.¹⁸ Sweathouses were used by men and post-pubescent boys and women were not permitted entry except for ceremonial purposes.¹⁹ Men sweated once or twice daily. Sweathouse activities included gambling and the construction of bows, nets, and harpoons.

The household was the fundamental social and economic unit throughout the Pacific Northwest Coast. Though household size and organization varied between tribes, there was no political organization beyond the local group. Northwestern California sociopolitical organization is typified by a high social group structure involving family-based households. Tribes in the area were closely involved by marriage, ceremony, and culture. The region’s rivers – Klamath and Trinity, connected people in every regard except language.²⁰ The area’s linguistic diversity meant inhabitants near Tribal boundaries, however, were frequently bilingual or trilingual due to the personal kin and economic ties across boundaries.²¹

All California indigenous peoples, at the time of colonization, subsisted by hunting and gathering. Coastal groups relied heavily on marine food resources, such as fish, shellfish, and marine mammals, as well as terrestrial resources, while interior groups within the North Coast Region relied primarily on terrestrial resources for subsistence. Acorns were the main dietary staple of most Contact Period groups in California.²² In Northwestern California, however, acorns were second to salmon. Elaborate fishing technology was utilized to catch spawning species of fish in the region including Chinook salmon, silver salmon, and steelhead, among others. Variability in fishing technology among groups is understood in terms of environmental positions and constraints rather than cultural differences. Technologies included weirs, harpoons, plunge nets, snares, traps, diving, and hook/line.²³

The pursuit of wealth and its link to status is a defining element of Northwestern California culture. Wealth items including obsidian blades, white deerskins, and dentalium shell money were acquired through various means: dowries, trade, or collection of fines.²⁴ These items were only occasionally used to purchase necessities such as food, which was abundant, rather the importance of wealth was a marker of social status (Kennedy 1949). In addition to all wealth items, all valuable property

16 Marine Line Protection Act Initiative (MLPAI), Regional Profile of the North Coast Study Region, (2010), <https://stacks.stanford.edu/file/druid:vq778kb5323/profile.pdf>. Accessed October 2024.

17 Richard Gould, *Archaeology of the Point St. George Site and Tolowa Prehistory*, (Berkeley: UC Berkeley, 1966).

18 Kroeber, 1925.

19 Shannon Tushingham, *Archeology, Ethnography, and Tolowa Heritage at Red Elderberry Place, Chvn-su’lh-dvn, Jedidiah Smith Redwoods State Park*, (Sacramento: California State Parks, 2013),

https://www.parks.ca.gov/pages/22491/files/CA_State_Parks_Archaeological_Report_Vol30_JedediahSmith.pdf. Accessed October 2024.

20 Salter, 2003.

21 Marc A. Baker, *The Ethnobotany of the Yurok, Tolowa, and Karok Indians of Northwest California*, (Humboldt: Humboldt State University, 1981).

22 Kroeber, 1925.

23 Alfred L. Kroeber and Samuel A. Barrett, “Fishing Among the Indians of Northwestern California,” (Berkeley: University of California Anthropological Records, 21, 1960).

24 Tushingham, 2013.

was owned, including fishing spots, oak groves, and certain technologies.²⁵ Valuable fishing spots were owned individually or shared by several people, and was not limited to the vicinity of the owner's residence.²⁶

Northwestern California groups shared many cultural traits, including World Renewal Rituals, including the Hoopa and Yurok White Deerskin Dance, which was done to stabilize a preferred way of life. Other spiritual ceremonies included the Jump Dance, to solicit support from ancestors; the Kick Dance, a prayerful adjustment of spiritual powers; and the Brush Dance, to cure a sick child.²⁷ Although some tribes to the south practiced cremation, Northwest California tribes generally buried their dead in plank-lined graves, and cemeteries were established near the permanent villages. Archaeologically significant sites have been identified by the presence of refuse from marine life, debris from stone toolmaking, mortar, and tools.

The Yurok village of Tsurai at Trinidad Bay is documented as the most frequently visited site by Euro-American explorers in Northwestern California prior to the Gold Rush of 1849, apparently due to its proximity to the coast and accessibility relative to other places along the rocky shore of the north coast. Humboldt Bay was generally avoided due to rough waters and to avoid conflict with the Wiyot. Jedidah Strong Smith's 1828 expedition is regarded as the first direct Euro-American contact with Northwestern California groups.²⁸ Inland groups like the Karuk were less impacted by the invasion of Europeans than their Yurok and Hoopa neighbors because of their relative remoteness.²⁹ However, once gold was discovered on the Trinity River in 1848 an influx of miners arrived in the area. For local populations, the Gold Rush Era was a time of rapid change. Violent encounters commenced with the founding of major towns, including Eureka (1850) and Crescent City (1853). The Yurok participated in a revolt against settlers in 1855, the Red Cap War, which was successful at stemming white settlement for a short time.³⁰ Multiple massacres of Native people took place across Northwestern California, including the 1860 massacre of nearly an entire Wiyot village on Tuluwat Island in Humboldt Bay. Survivors were scattered to the Klamath River, Hoopa, and Smith River Reservations.³¹ By 1860, the population had shrunk from 1,000 to 200; by 1910, only 152, including 58 full-blooded, local people were left.³²

Other factors contributed to the decline of Native people during this time including malnutrition, kidnapping, and forced servitude. People were forcibly removed to reservations including Klamath Reservation on the lower Klamath River, the Hupa Reservation in Hoopa, Round Valley in Yuki territory, and the Siletz Reservation in southwest Oregon.³³

Today, there are several federally recognized and unrecognized tribes, rancherias, and sovereign tribal governments in Humboldt County and its vicinity. These include: Big Lagoon Rancheria, Blue Lake Rancheria, Cher-Ae Heights Indian Community, Elk Valley Rancheria, Estom Yukema Maidu Tribe of the Enterprise Rancheria, Grindstone Rancheria, Hoopa Valley Tribal Council, Karuk Tribe of California, Bear River Band of Rohnerville Rancheria, Melochundum Band of Tolowa Indians, Quartz Valley Indian Community, Round Valley Reservation/Covelo Indian Community, Shasta Indian Nation, Tolowa Dee-ni' Nation, Trinidad Rancheria, Tsugwe Council, Wiyot Tribe and the Yurok

25 Tushingham, 2013.

26 Kroeber, 1925.

27 Baker, 1981.

28 Janet P. Eidsness, *A Summary of Cultural Resources Projects: Redwood National Park*. (Arcata: Redwood National Park, 1988).

29 Salter, 2003.

30 Tushingham, 2013.

31 Elsasser, 1978.; Llewellyn L. Loud, *Ethnogeography and Archaeology of the Wiyot Territory*, (Berkeley: University of California Publications in American Archaeology and Ethnology, 1918).

32 Edward S. Curtis, "The Wiyot," in *The North American Indian*, (New York: Johnson Reprint Co., 1929); Loud, 1918.

33 Tushingham, 2013.

Tribe. Membership are active in ceremony and traditions, and several participate in archaeological research. Many area tribes also participate in the InterTribal Sinkyone Wilderness Council Northern California. The Council's ten federally recognized, sovereign Tribes have members hailing from various Northern California indigenous ethnicities including: Bear River, Cahto, Coast Yuki, Concow, Huchnom, Hupa, Karuk, Lassik, Mattole, Nomlaki, Nongath, Pit River, Pomo, Sinkyone, Tolowa, Wailaki, Wintu, Wiyot, Yuki, Yurok, and many others and work collectively to protect culturally important lands.³⁴Post-Contact History

Post-contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present).

Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States.

SPANISH PERIOD (1769 – 1822)

Spanish explorers made sailing expeditions along the coast of California between the mid-1500s and mid-1700s. Juan Rodriguez Cabrillo in 1542 led the first European expedition to observe what was known by the Spanish as Alta (upper) California. For more than 200 years, Cabrillo and other Spanish, Portuguese, British, and Russian explorers sailed the Alta California coast and made limited inland expeditions, but they did not establish permanent settlements.³⁵ The Spanish crown laid claim to Alta California based on the surveys conducted by Cabrillo and Vizcaíno.³⁶

By the 18th century, Spain developed a three-pronged approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and pueblos (towns) throughout Alta California. The 1769 overland expedition by Captain Gaspár de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Father Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

Construction of missions and associated presidios was a major emphasis during the Spanish Period in California to integrate the Native American population into Christianity and communal enterprise. However, no missions or presidios were established in Humboldt County.

Spanish Captains Heceta and Bodega landed in in Trinidad Bay on June 9, 1775 during their expedition of the northwest coast. On June 11, 1775, Trinity Sunday, the explorers and two Franciscan friars marched from shore to the summit of Trinidad Head and erected a cross and took possession in the name of Charles III of Spain.³⁷ They stayed for over a week to hunt game and

³⁴ MLP AI, 2010.

³⁵ Walton Bean, *California: An Interpretive History*, (New York: McGraw Hill, 1968)

³⁶ Blake Gumprecht, *The Los Angeles River: Its Life, Death, and Possible Rebirth*, (Maryland: The Johns Hopkins University Press, 1999).

³⁷ California Office of Historic Preservation, "Historical Landmark – Trinidad Head," n.d, <https://ohp.parks.ca.gov/ListedResources/Detail/146?ref=travellens.co>, Accessed October 2024.

collect water for their expedition, and had friendly interactions with the residents of Tsurai. Spain never returned to assert their claim.

MEXICAN PERIOD (1822 – 1848)

Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants.³⁸

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. Commonly, former soldiers and well-connected Mexican families were the recipients of these land grants, which now included the title to the land.³⁹ No ranchos were established in Humboldt County and it remained largely untouched by Euro-American visitors. Jedediah Strong Smith's 1828 expedition is regarded as the first direct Euro-American contact in the area. Smith led a party of 18 men and 300 horses to establish a trading post in the area. He entered the region via the Trinity River, traveled through the Hoopa Valley, continuing up the west coast, and into Oregon. Other contact during this period was limited to short encounters in Trinidad Bay, like Captain George Vancouver's visit in 1793 and Russian fur traders in the following decades.

AMERICAN PERIOD (1848 – PRESENT)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico \$15 million for conquered territory including the present-day states of California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of Southern California continued to increase during the early American Period. Ranchos were sold or otherwise acquired by Americans, with many subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush and California's population grew exponentially. The discovery of gold in the Trinity River in 1848 led to dramatic changes in Humboldt County. Gold seekers soon poured in, and the founding of the County's first major town, Eureka (1850), followed. The miners' need for great quantities of timber made sawmills the foremost branch of manufacturing in the state and Humboldt County's abundance of redwoods made it one of the forefronts of lumber production.⁴⁰ The need to ship timber stimulated a local ship building industry, and fishing followed. Other productive activities included the arrival of new agricultural uses, blacksmiths, bankers, and dairies. An influx of Chinese immigrants led to the founding of Chinatowns in Eureka and Arcata, but anti-Chinese discrimination led to a conflict and mass expulsion of the Chinese population in 1885.

The influx of outsiders resulted in turmoil for the Native American population. In addition to massacres and other acts of violence, populations were forcibly removed to reservations. Additionally, the settlers' use and transformation of the land restricted Native Americans from

³⁸ Ramon Gutierrez et al., *Contested Eden: California Before the Goldrush*, (Berkeley: University of California Berkeley Press, 1998).

³⁹ Burgess Shumway, *California Ranchos*, (San Bernadino: Borgo Press, 2007).

⁴⁰ Walton E. Bean, *California: An Interpretive History*, (New York: McGraw Hill Book Company, 1968).

accessing traditional lands and resources. In 1853, Fort Humboldt was established to introduce an Army presence to quell conflict, and closed in 1867.

The area’s moderate climate later encouraged farmers to the area and sheep raising became a primary industry. The relative isolation of the area was removed beginning in the early 20th century with the completion of rail connections and completed with the construction of the Redwood Highway and the rise of the automobile.

After World War II and with the increased demand for lumber in the housing industry, timber harvesting expanded to the Douglas fir forests. By 1952, Humboldt County had 258 small lumber mill operations, which depleted the Douglas fir population on private land in the area by the late 1960s, and made a serious impact of timber growth on Forest Service lands by the 1980s.

Since the diminishment of the timber industry, the tourism industry has grown to take advantage of the region’s beauty and recreational opportunities. With the “back-to-the-land movement” in the 1960s and 1970s, several individuals left urban centers for the area further boosting the population and making way for the new marijuana cultivation economy still seen in the area today.⁴¹

Existing Cultural Resources

Historical Resources in RCAP Area

A review of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), the California State Office of Historic Preservation Built Environment Directory (BERD), Humboldt County Register, and local City inventories revealed that there are hundreds of historical resources in Humboldt County. Listed resources in unincorporated Humboldt County are outlined below in Table 3.4-1. Listed resources in incorporated cities are outlined in Table 3.4-2 through Table 3.4-7.

Table 3.4-1 Unincorporated Humboldt County Historical Resources

Community	Resource Name	National Register	State Landmark	California Register	Humboldt County Register
Bayside	Old Jacoby Creek School	X		X	
Bayside	Bayside Grange Hall			X	
Bayside	Bayside Temperance Hall			X	
Bayside+	Myrtle Avenue and Myrtle Road Houses			X	
Bayside	Jacoby Creek Cabin			X	
Bayside	1686 Old Arcata Road			X	
Bayside	3333 Old Arcata Road			X	
Bayside	Andrain House			X	
Bayside	Peterson-Hendrickson House			X	
Bridgeville	Lower Blackburn Grade Bridge (Van Duzen)	X		X	

41 Thomas S. Keter, “Environmental and Cultural History of the Eel River Basin,” <http://wordpress.solararch.org/wp-content/uploads/2021/02/Environmental-and-Cultural-History-of-the-Eel-River-Basin-updated-112017.pdf>. Accessed October 2024.

Community	Resource Name	National Register	State Landmark	California Register	Humboldt County Register
Carlotta	Carlotta Hotel	X		X	
Centerville	Petersen-Machado Centerville Dairy				X
Fernbridge	Fernbridge	X		X	
Ferndale	Grizzly Bluff School	X		X	
Ferndale	Fern Cottage Historic District	X		X	
Ferndale	FW Andreasen/John Rossen House	X			X
Fortuna	56025 US 101 S			X	
Garberville	Benbow Inn	X		X	
Garberville	Garberville Civic Clubhouse				X
Hoopa	De-No-To Cultural District	X		X	
Hoopa	Hoopa Valley Adobe	X		X	
Humboldt Hill	No. 882 Humboldt Harbor Historical District		X	X	
Loleta	Humboldt Fish and Gun Club Cabin			X	
Myers Flat	Myers Flat Hotel				X
Loleta	Bank of Loleta	X		X	
Orick*	Bald Hills Archaeological District	X		X	
Orick*	Lyons Ranches Historic District	X		X	
Orick*	Prairie Creek Fish Hatchery	X		X	
Orleans	Tishawnik	X		X	
Petrolia	Punta Gorda Light Station	X		X	
Petrolia	Beatty Cabin			X	
Samoa	Humboldt Bay Life-Saving Station	X		X	
Weott*	California Federation of Women's Clubs Grove Hearthstone	X		X	
Willow Creek	Gambi Waterwheel			X	
Table Bluff	Southport Landing/Charles Henry House				X
Centerville	No. 173 Centerville Beach Cross ¹		X		
Korbel	No. 164 The Old Arrow Tree ¹		X		
Petrolia	No. 543 California's First Drilled Oil Wells ¹		X		

*located in Redwood National and State Parks

+ Comprised of several individual properties assigned a BERD Status Code "2S" indicating properties were determined eligible for the National Register by the Keeper and are listed in the California Register. Full list in Appendix C.

¹ California State Historical Landmarks below #770 are not generally considered historical resources for the purposes of CEQA.

Table 3.4-2 City of Arcata Historical Resources

Resource Name	National Register	State Landmark	California Register
John G. Chapman House	X		X
Hotel Arcata	X		X
Jacoby Building	X	X	X
James Kleiser House	X		X
Phillips House	X		X
Schorlig House	X		X
Stone House	X		X
Whaley House	X		X
Pythian Castle	X		X
No. 215 Camp Curtis ¹		X	
John Van Duzer Theatre			X
McKenzie House			X
Vaissade House			X
Stewart School			X

¹ California State Historical Landmarks below #770 are not generally considered historical resources for the purposes of CEQA.

In addition to national and State-listed resources, the City of Arcata also adopted a Historic Resource Preservation Ordinance, providing the authority to designate local Historic Landmarks, Historic Districts, and Neighborhood Conservation Areas. The City has listed 94 individual local Historic Landmarks, one Historic District, and two Neighborhood Conservation Areas. Listed resources are outlined in Appendix C.

Table 3.4-3 City of Blue Lake Historical Resources

Resource Name	National Register	State Landmark	California Register
Arcata and Mad River Railroad Company		X	X
Hasty Property			X

The City of Blue Lake's municipal code includes provisions for designating local Landmark Sites and Historic Districts. The City has not officially designated any local Landmark Sites or Historic Districts to date.

Table 3.4-4 City of Eureka Historical Resources

Resource Name	National Register	State Landmark	California Register
Bank of Eureka Building	X		X
Carnegie Free Library	X		X
William S. Clark House	X		X
John A. Cottrell House	X		X

Resource Name	National Register	State Landmark	California Register
Eureka Inn	X		X
Eureka Theatre	X		X
First and F Street Building	X		X
Humboldt Bay Woolen Mill	X		X
F. Janssen Building	X		X
D.C. McDonald Building	X		X
George McFarlan House	X		X
Odd Fellows Hall	X		X
Thomas F. Ricks House	X		X
Odd Fellows Hall	X		X
Simpson Vance House	X		X
Sweasey Theater-Loew's State Theatre	X		X
U.S. Post Office and Courthouse	X		X
Washington School	X		X
Magdalena Zanone	X		X
Eureka Old Town Historic District	X		X
Falk Archaeological District	X		X
Gunther Island Site 67	X		X
Tsahpek	X		X
Vance Hotel			X
McAdam House			X
1413 D Street			X
1737 J Street			X
1016 F Street			X
The Professional Building			X
811 M Street			X
226 West Grant Street			X
2115 Albee Street			X
W.J. Little Building			X
2335 Union Street			X
Dolbeer & Carson Company Railroad Line			X
No. 154 Fort Humboldt ¹		X	
No. 477 City of Eureka ¹		X	
No. 882 Humboldt Harbor Historical District		X	X

¹ California State Historical Landmarks below #770 are not generally considered historical resources for the purposes of CEQA.

In addition to national and State-listed resources, the City of Eureka also adopted a Historic Preservation Ordinance, which provides the City the authority to designate local Historic Districts and Properties. They maintain the City of Eureka Local Register of Historic Places. To date, the City has listed 532 individual local Historic Properties. Locally listed resources are outlined in Appendix C.

Table 3.4-5 City of Ferndale Historical Resources

Resource Name	National Register	State Landmark	California Register
Alford-Nielson House	X		X
A Berding House	X		X
Ferndale Public Library	X		X
Catholic Church of the Assumption Rectory	X		X
Shaw House	X		X
Ferndale Main Street Historic District	X		X
No. 883 – The entire town of Ferndale		X	X

Table 3.4-6 City of Fortuna Historical Resources

Resource Name	National Register	State Landmark	California Register
Gushaw-Mudgett House	X		X
Humboldt County Fairgrounds			X

Table 3.4-7 City of Trinidad Historical Resources

Resource Name	National Register	State Landmark	California Register
Holy Trinity Church	X		X
Trinidad Head Light Station	X		X
No. 146 Trinidad Head		X	X
No. 216 Town of Trinidad ¹		X	
No. 838 Old Indian Village of Tsurai		X	X

¹ California State Historical Landmarks below #770 are not generally considered historical resources for the purposes of CEQA.

There are no listed historical resources in the City of Rio Dell. The City has not adopted a Historic Preservation Ordinance. The unincorporated area of Humboldt County and many of the County's incorporated Cities include California State Historical Landmarks below #770 and are generally not considered historical resources under CEQA unless they are listed separately in the CRHR or locally, but such resources may be historical resources pending further evaluation. In addition to the properties outlined above, the BERD includes over 125 properties that have been identified as potentially eligible for listing in the NRHP or CRHR or as a State Historical Landmark throughout Humboldt County that may be historical resources pending further analysis (Appendix C).

Archaeological Resources in RCAP Area

Rincon Consultants requested a review of the Sacred Lands File (SLF) on behalf of Humboldt County and received a response from the Native American Heritage Commission (NAHC) on October 24, 2024 that indicated that the County is positive for Sacred Lands. There are several known archaeological resources in Humboldt County, including two NRHP-listed districts and one site in unincorporated Humboldt County and one NRHP-listed district and two sites in the City of Eureka. It is also known that other archaeological resources, though unlisted, have also been identified within the County. However, information on archaeological resources is confidential and will not be further discussed here. The California Historical Resources Information System (CHRIS) maintains a wide range of documents relating to historical resources. The Northwest Information Center (NWIC), located at Sonoma State University, is the official State repository for cultural resources and records and reports for sites located in Humboldt County.

Tribal Cultural Resources in RCAP Area

As part of its Tribal Cultural Resource identification process pursuant to California Assembly Bill (AB) 52, Humboldt County sent letters via certified mail on September 5, 2024 to 32 Native American Tribal contacts identified by the NAHC as being traditionally and culturally affiliated with the RCAP area. The Tribal contacts included the following:

- Josefina Frank, Chairwoman, Bear River Band of Rohnerville Rancheria
- Virgil Moorehead, Chairperson, Big Lagoon Rancheria
- Jacob Pounds, THPO, Blue Lake Rancheria
- Rachel Sundberg, THPO, Cher-Ae Heights Indian Community of the Trinidad Rancheria
- Garth Sundberg, Chairperson, Cher-Ae Heights Indian Community of the Trinidad Rancheria
- Amy Atkins-Kelley, Executive Manager, Cher-Ae Heights Indian Community of the Trinidad Rancheria
- Crista Stewart, Tribal Administrator, Elk Valley Rancheria
- Kevin Mealue, Cultural Resource Specialist, Elk Valley Rancheria
- Dale Miller, Chairperson, Elk Valley Rancheria
- LaWanda Green, THPO, Elk Valley Rancheria
- Glenda Nelson, Chairperson, Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Ronald Kirk, Chairperson, Grindstone Rancheria of Wintun-Wailaki
- Keduescha Lara-Colegrove, Tribal Historic Preservation Officer, Hoopa Valley Tribe
- Bill Tripp, Dept of Natural Resources, Karuk Tribe
- Russell Attebery, Chairperson, Karuk Tribe
- Melochundum, Melochundum Band of Tolowa Indians
- Fawn Murphy, Chairperson, Pulikla Tribe of Yurok People (formerly Resighini Rancheria)
- Megan Rocha, Executive Director, Pulikla Tribe of Yurok People (formerly Resighini Rancheria)
- Shaunna McCovey, Director of Governmental Affairs, Pulikla Tribe of Yurok People (formerly Resighini Rancheria)
- Moonchay Dowd, Natural Resource Manager, Pulikla Tribe of Yurok People (formerly Resighini Rancheria)
- Kathy Dowd, THPO, Pulikla Tribe of Yurok People (formerly Resighini Rancheria)

- Harold Bennett, Chairperson, Quartz Valley Indian Community
- James Russ, President, Round Valley Reservation/ Covelo Indian Community
- Shawn Davis, Chairperson, Scotts Valley Band of Pomo
- Sami Jo Difuntorum, Culture Preservation Officer, Shasta Indian Nation
- Roy Hall, Chairperson, Shasta Nation
- Jeri Lynn Thompson, Chairperson, Tolowa Dee-ni' Nation
- Paul Ammon, Chairperson, Tsnungwe Council
- Michelle Vassel, Tribal Administrator, Wiyot Tribe
- Marnie Atkins, Tribal Secretary, Wiyot Tribe
- Ted Hernandez, Chairperson, Wiyot Tribe
- Joe James, Chairperson, Yurok Tribe

Under AB 52, tribes have 30 days to respond and request consultation. The County did not receive any requests for consultation under AB 52.

3.4.3 Regulatory Framework

Federal Regulations

National Historic Preservation Act

Properties which are listed in or have been formally determined eligible for listing in the NRHP are automatically listed in the CRHR. The following is therefore presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per Code of Federal Regulations, Title 36, Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A:	Are associated with events that have made a significant contribution to the broad patterns of our history
Criterion B:	Are associated with the lives of persons significant in our past
Criterion C:	Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
Criterion D:	Have yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

Location:	The place where the historic property was constructed or the place where the historic event occurred
Design:	The combination of elements that create the form, plan, space, structure, and style of a property
Setting:	The physical environment of a historic property
Materials:	Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property
Workmanship:	The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
Feeling:	A property's expression of the aesthetic or historic sense of a particular period of time
Association:	The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluate significance (National Park Service 1997:41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

Archaeological Resources Protection Act

The ARPA amended the Antiquities Act of 1906 (16 USC 431–433) and set a broad policy that archaeological resources are important to the nation and should be protected, and required special permits before the excavation or removal of archaeological resources from public or Indian lands. The purpose of the ARPA was to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites that are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data that were obtained before October 31, 1979.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA) established federal policy to protect and preserve the inherent rights of freedom for Native groups to believe, express, and exercise their traditional religions. These rights include but are not limited to access to sites, use and possession of sacred objects, and freedom to worship through ceremonial and traditional rites.

Native American Graves Protection and Repatriation Act

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and Tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants

or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State Regulations

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC §§5024.1 and 4852. The CRHR is an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for state use in order to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP however, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2006). Further, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2006). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

Properties are eligible for listing in the CRHR if they meet one of more of the following criteria:

- Criterion 1:** Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Criterion 2:** Is associated with the lives of persons important to our past
- Criterion 3:** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Criterion 4:** Has yielded, or may be likely to yield, information important in prehistory or history

California Environmental Quality Act

CEQA GUIDELINES SECTION 15064.5(A) – CEQA DEFINITION OF HISTORICAL RESOURCES

California Public Resources Code (PRC) Section 21804.1 requires lead agencies to determine if a project could have a significant impact on historical or unique archaeological resources. As defined in PRC Section 21084.1, a historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR); a resource included in a local register of historical resources or identified in a historical resources survey pursuant to PRC Section 5024.1(g); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. PRC Section 21084.1 also states resources meeting the above criteria are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates otherwise. Resources listed in the National Register of Historic Places (NRHP) are automatically listed in the CRHR and are, therefore, historical resources under CEQA.

Historical resources may include eligible built environment resources and archaeological resources of the precontact or historic periods.

CEQA GUIDELINES SECTION 15064.5(B) – SUBSTANTIAL ADVERSE CHANGE IN SIGNIFICANCE

According to CEQA, an impact that results in a substantial adverse change in the significance of a historical resource is considered a significant impact on the environment. A substantial adverse change could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines §15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR or a local register (CEQA Guidelines §15064.5[b][2][A]).

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC §21083.2[a], [b]).

CEQA GUIDELINES SECTION 15064.5(C) – EFFECTS ON ARCHAEOLOGICAL RESOURCES

CEQA Guidelines Section 15064.5(c) provides further guidance on the consideration of archaeological resources. If an archaeological resource does not qualify as a historical resource, it may meet the definition of a “unique archaeological resource” as identified in PRC Section 21083.2. PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: 1) it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; 2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or 3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological resource does not qualify as a historical or unique archaeological resource, the impacts of a project on those resources will be less than significant and need not be considered further (CEQA Guidelines Section 15064.5[c][4]). CEQA Guidelines Section 15064.5 also provides guidance for addressing the potential presence of human remains, including those discovered during the implementation of a project.

CEQA GUIDELINES SECTION 15064.5(D) – EFFECTS ON HUMAN REMAINS

Native American human remains and associated burial items may be significant to descendant communities and/or may be scientifically important for their informational value. They may be significant to descendant communities for patrimonial, cultural, lineage, and religious reasons. Human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendant groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines § 15064.5(d); PRC § 5097.98). CEQA and other State regulations regarding Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects on human remains within the contexts of their value to both descendant communities and the scientific community:

- When an initial study identifies the existence or probable likelihood that a project would affect Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the NAHC to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines § 15064.5(d); PRC § 5097.98).
- If human remains are accidentally discovered, the county coroner must be contacted. If the county coroner determines that the human remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC must identify the most likely descendant (MLD) to provide for the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items.
- If the MLD fails to make recommendations within 24 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (PRC § 5097.98).
- If potentially affected human remains or a burial site may have scientific significance, whether or not it has significance to Native Americans or other descendent communities, then under CEQA, the appropriate mitigation may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines § 15064.5(c)(2)).

CEQA GUIDELINES SECTION 15126.4 – CULTURAL RESOURCES MITIGATION

Section 15126.4 of the CEQA Guidelines stipulates an EIR shall describe feasible measures to minimize significant adverse impacts. In addition to being fully enforceable, mitigation measures must be completed within a defined time period and be roughly proportional to the impacts of the project. Generally, a project which is found to comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the Standards) is considered to be mitigated below a level of significance (CEQA Guidelines Section 15126.4(b)(1)). For historical resources of an archaeological nature, lead agencies should also seek to avoid damaging effects where feasible. Preservation in place is the preferred manner to mitigate impacts to archaeological sites; however, data recovery through excavation may be the only option in certain instances (CEQA Guidelines Section 15126.4(b)(3)).

California Health and Safety Code (Human Remains)

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification.

California Public Resources Code §5097.91 (Sacred Lands Inventory)

Section 5097.91 of the Public Resources Code established duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. This inventory is referred to as the NAHC Sacred Lands File. Under Section 5097.9 of the Public Resources Code, a State policy of noninterference

with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. Section 5097.98 of the Public Resources Code specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Assembly Bill 52 (Effects on Tribal Cultural Resources & Tribal Consultation)

AB 52 expanded CEQA by defining a new resource category, "Tribal cultural resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a Tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code [PRC] Section 21084.2). AB 52 further states when feasible, the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a Tribal cultural resource (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines Tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe," and meets either of the following criteria:

- a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k).
- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

In recognition of California Native American Tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American Tribal governments and with respect to the interests and roles of project proponents, it is the intent of AB 52 to accomplish the following:

1. Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in Tribal cultural traditions, heritages, and identities.
2. Establish a new category of resources in CEQA called "Tribal cultural resources" that considers the Tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
3. Establish examples of mitigation measures for Tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
4. Recognize that California Native American tribes may have expertise with regard to their Tribal history and practices, which concern the Tribal cultural resources with which they are traditionally and culturally affiliated (because CEQA calls for a sufficient degree of analysis, Tribal knowledge about the land and Tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources).
5. In recognition of their governmental status, establish a meaningful consultation process between California Native American Tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning Tribal cultural resources, early in the CEQA environmental

review process, so that Tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency.

6. Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
7. Ensure that local and Tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to Tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
8. Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, Tribal cultural resources.
9. Establish that a substantial adverse change to a Tribal cultural resource has a significant effect on the environment.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. AB 52 requires that lead agencies “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

Regional and Local Regulations

Humboldt County General Plan, Conservation and Open Space Element

The Humboldt County General Plan, which was adopted in 2017, includes goals and policies relevant to the discussions of cultural and Tribal cultural resources. As presented in the Conservation and Open Space Element these include:

- **CU-G1 Protection and Enhancement of Significant Cultural Resources:** Protected and enhanced significant cultural resources, providing heritage, historic, scientific, educational, social and economic values to benefit present and future generations.
- **CU-P1 Identification and Protection:** The potential for impacts to significant cultural resources shall be identified during ministerial permit and discretionary project review, impacts assessed as to significance, and if found to be significant, protected from substantial adverse change per California Public Resources Code (PRC) §5020.1.
- **CU-P2 Native American Tribal Consultation:** Native American Tribes (as defined below in CU-S3) shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. Consultation on ministerial permits shall be initiated if it has been determined the project may create a substantial adverse change to a significant cultural resource. At their request, Tribes shall be afforded the opportunity to review and provide comments to the County early in project review and planning (screening) about known or potential Tribal cultural resources located in project areas within their respective Tribal geographical area of concern.
- **CU-P3 Consultation with Other Historic Preservation Agencies and Organizations:** Historic preservation agencies and organizations shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural

resources. These include, but may not be limited to, the County's Cultural Resources Advisory Committee, Humboldt County Public Works Department and the Planning and Building Divisions, the Northwest Information Center of the California Historical Resources Information System (NWIC), the California Office of Historic Preservation, the Native American Heritage Commission, local historical societies, museums, colleges and universities, and incorporated cities historic preservation commissions or committees for their respective LAFCO sphere of influence, and local historians, cultural resources consultants and historic preservation staff affiliated with various state and federal agencies.

- **CU-P4 Avoid Loss or Degradation:** Projects located in areas known, or suspected to be archeological sites or Native American burial sites shall be conditioned and designed to avoid significant impacts to significant sites, or disturbance or destruction to Indian burial grounds. Preserving Native American remains undisturbed and in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) are feasible. Conditions of approval shall include standard provisions for post-review inadvertent archaeological discoveries and discovery and respectful treatment and disposition of Native American remains with or without funerary objects in accordance with state law (Health and Safety Code (HSC) §7050.5 and PRC §5097.98).
- **CU-P5 Findings Necessary for Loss or Destruction:** Substantial adverse changes to significant cultural resources shall not be allowed through ministerial or discretionary access unless: (a) the cultural resource has been found not to be significant based on consultation with culturally affiliated Native American Tribe(s) and other historic preservation agencies and organizations as required by CU-P2 and CU-P2x or (b) There is an overriding public benefit from the project, and compensating mitigation to offset the loss is made part of the project.
- **CU-P6 Mitigation:** Mitigation measures shall be required for any permitted project or County action that would adversely impact significant cultural resources.
- **CU-S4 Conditioning, Designing, or Mitigating Projects to Avoid Loss or Reduce Impacts to Archaeological Resources.** Conditioning, designing, and/or mitigating projects to avoid or reduce impacts to archaeological resources, significant for their cultural value to descendent communities and/or scientific value shall consider the following options:
 - **A. Avoidance.** Design projects involving any ground disturbance to avoid known archaeological sites, or
 - **B. Capping.** Provide protective cover (e.g. cap with geotextile material and/or other barrier and cover with imported fill soil using light-weight rubber tired equipment) and confine development to the protective cover for all or portions of known sites that cannot be feasibly avoided, after the site has been adequately characterized (depth, area, constituents) and reported on using appropriate scientific excavation techniques, or
 - **C. Data Recovery.** Where site avoidance or capping is infeasible, design and implement a research design guided mitigation excavation program, in consultation with culturally affiliated Tribe(s) or other descendant groups, as appropriate, under the direction of a professional archaeologist knowledgeable about regional archaeology, to recover and document significant scientific information that would otherwise be lost by project implementation. Preserving Native American remains undisturbed in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) is (are) feasible.
 - **D. Conservation Easements.** Voluntary deeding of the site into a permanent conservation easement.

- **E. Standard Conditions and Notations for Inadvertent Archaeological or Native American Remains Discoveries.** In addition, for discretionary projects and ministerial permits that involve ground disturbing activities, the following measures shall be included as standard conditions of approval or as notations to be placed on development plans:
 - "The project site is not located within an area where known archaeological sites have been identified. However, as there exists the possibility that undiscovered archaeological resources may be encountered during construction activities, the following post-review, inadvertent archaeological discovery measures are required under state and federal laws:
 - If archaeological resources are encountered, all ground disturbing work at the find location plus a reasonable buffer zone must be immediately suspended, the approving County department contacted, and a qualified professional archaeologist retained to analyze the significance of the find and formulate further mitigation (e.g., project relocation, excavation plan, and protective cover) in consultation with culturally affiliated tribes or other descendant groups, where applicable.
 - Pursuant to California Health and Safety Code §7050.5, if known or suspected Native American or other human remains are encountered, all ground-disturbing work must cease in the vicinity of the discovery, and the County Coroner contacted. The respectful treatment and disposition of remains and associated grave offerings shall be in accordance with PRC §5097.98.
 - The applicant and successors in interest are ultimately responsible for ensuring compliance with this condition."
- **CU-S6 Assessment and Treatment of Impacts to Significant Historic Structures, Buildings and Districts.**
 - **A. Ministerial Permit Review.** For ministerial permits, a records check will be conducted by staff. If the project site and/or structures are listed on the local, State, or federal register, or has been surveyed and determined to be eligible for listing on the local, State, or federal register, it will be considered a significant cultural resource. The project will either be modified as may be necessary to ensure continued protection of the significant historic structures, buildings or districts, or the project will be subjected to the discretionary review process described below.
 - **B. Discretionary Project Review.** For discretionary projects, a records check will be conducted by staff, and if no listing or survey for eligibility has been done, an initial screening will be conducted to determine whether there is a potential for significant historic structures, buildings or districts to be significantly impacted by the project. Where it is found that there is a potential for significant adverse impacts, an historic architectural resources report meeting the Secretary of the Interior's Standards for Historic Preservation prepared by a qualified professional shall be required. The report shall assess the presence, extent, condition, and explicit significance values of all extant cultural resources and the likely impact upon such resources found to qualify as significant historical resources under CEQA. The report shall include recommendations for avoiding and/or mitigating identified significant adverse impacts.
 - **C. Areas of Historic Concern.** To assist in protecting potential historical structures yet to be surveyed, the Board of Supervisors may designate areas of historical concern, in which all structures 45 years or older would be assessed as outlined for discretionary projects above. Designating an "area of historic concern" shall require providing written notice to all the

affected property owners and at least one public hearing by the Board of Supervisors prior to approving the designation.

- **D. Encouraging Nomination to the California Register.** To assist in identifying historical resources of significance, the County encourages the cultural resources community to utilize the nomination process for the California Register of Historical Resources, which provides notice and comment opportunities for local government and the property owner, in determining eligibility for register listing.

Humboldt County Code

Chapter 71.1 of the Humboldt County Code (HCC) addresses County Historic Structures and states the following:

- **71.1.2 Designation of County Historical Structures.** The Board of Supervisors may, by resolution, designate any structure within the unincorporated areas of the County to be a County historical structure. In making this designation, the Board of Supervisors shall review the significance of the structure in the context of Humboldt County history.
- **71.1.3 Demolition of Exterior Alteration of Designated County Historical Structures.** No designated County historical structure shall be demolished, altered, improved, or otherwise changed in exterior appearance except as hereinafter provided:
 - 71.1.3.1 Normal repair and maintenance of a County historical structure shall be allowed without first securing Design Review approval.
 - 71.1.3.2 Exterior alterations of County historic structures shall be limited to necessary repairs and shall be subject to Design Review.
 - 71.1.3.3 Within the sixty (60) day period, the Board of Supervisors shall determine whether any Federal, State, or local agencies or organizations can acquire the structures and site, or make other suitable arrangements with the owner which would protect the historical significance of the structure.

City of Arcata General Plan, Plan Design and Historical Preservation Element

The City of Arcata General Plan Design and Historical Preservation Element includes policies for the identification and treatment of historical and cultural resources. The following Historical Preservation Element policies relate to the proposed plan.⁴²

- **H-1 Historic Landmarks.** Designate and preserve significant structures and sites that are representative of the city's social and physical development; that are reminders of past eras, events, and persons important in local, state, or national history; which provide significant examples of architectural styles of the past; or which are unique and irreplaceable assets to the city, and the neighborhood in which the structure or site is located.
- **H-2 Noteworthy Structures.** Identify and encourage retention of structures which could qualify as historical landmarks, but are not currently designated. Although some of these structures may lack the level of significance attached to designated landmarks, they have an architectural or design character which represents particular building styles or eras in the City's development, and they contribute to the overall character and historical texture of a neighborhood.

⁴² City of Arcata. 2008. Historic Preservation Element. <https://www.cityofarcata.org/DocumentCenter/View/35/Chapter-5-Design-and-Historical-Preservation---2-Historical-Preservation-Element-PDF> (accessed October 2024).

- **H-3 Arcata Plaza Area Historic District.** Protect and preserve the Arcata Plaza and the older structures that border the adjacent streets and help define the Plaza's character, for the unique historical, architectural, aesthetic, and economic values that it represents to the city.
- **H-4 Neighborhood Conservation Areas.** Designate the Central Arcata, Arcata Heights, Bayview, and Bayside areas as Neighborhood Conservation Areas and assure that new construction, modifications or alterations of noteworthy structures, and significant changes to other structures are harmonious with the existing character of these neighborhoods.
- **H-5 Controls on Demolitions of Structures.** To prevent the premature demolition of existing buildings without first evaluating whether they are contributory to the historical or architectural character of the City or neighborhood and to consider the potential for preservation of those found to contribute to such character.
- **H-7 Archaeological and Cultural Resources.** Protect and preserve Native American and Euro-American archeological sites and cultural resources within the City of Arcata

City of Arcata Municipal Code

The City of Arcata adopted a Historic Resource Preservation Ordinance, which outlines designation procedures for designating local buildings, structures, sites, objects, district, and cultural landscapes. As outlined in Chapter 9.53.040 of the City's Municipal Code, it also includes procedures for the treatment of inadvertent archaeological discoveries.⁴³

City of Blue Lake General Plan, Land Use Element

The City of Blue Lake's General Plan identifies policies for the treatment of cultural resources. The following Land Use Element policies relates to the proposed plan.⁴⁴

- **Character Policy 8** The City shall encourage preservation of all historically significant properties.
- **Cultural Resources Policy 1:** The potential for significant impacts to cultural resources shall be identified, as required by State law, during discretionary project review under the California Environmental Quality Act (CEQA)
- **Cultural Resources Policy 2:** Projects not subject to CEQA shall be required to adhere to an inadvertent discovery protocol for archaeological resources.
- **Commercial Center Policy 5:** The City shall pursue historical district designation of the Downtown area and adjacent areas; and proposed historical district shall include as much of the Downtown area as qualifies for designation.

City of Blue Lake Municipal Code

The City of Blue Lake Municipal Code Section 15.12.020 provides provisions for inadvertent discovery protocol for archaeological resources encountered during permitted or non-permitted grading activities⁴⁵.

⁴³ City of Arcata. Chapter 9.53 Historic Resource Preservation.

<https://www.codepublishing.com/CA/Arcata/#!/LUC/ArcataLUC0950/ArcataLUC0953.html#9.53.100>. (accessed October 2024).

⁴⁴ City of Blue Lake. General Plan, Land Use Element, 2021. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf. (accessed October 2024).

⁴⁵ City of Blue Lake. Municipal Code Section 15.12.020.

<https://www.codepublishing.com/CA/Arcata/#!/LUC/ArcataLUC0950/ArcataLUC0953.html#9.53.100>. (accessed October 2024).

Section 17.20.060 of the City of Blue Lake Municipal Code provides procedures for the designation of local Landmark Sites and Historic Districts.⁴⁶

City of Eureka General Plan, Historic and Cultural Preservation Element

The City of Eureka's Historic and Cultural Preservation Element guides the identification and treatment of the City's cultural resources. The following Historic and Cultural Preservation Element policies relate to the proposed plan.⁴⁷

- **HCP 1.1 Preservation.** Encourage and support the identification, preservation, rehabilitation, and restoration of historically significant buildings, landscape features, significant trees and plantings, hardscapes, fountains, lighting, sculptures, signs and other natural or designed features through incentives such as reduction of Historic Preservation application fees and programs such as the Local Register of Historic Places and the Mills Act.
- **HCP 1.4 Procedures for Demolition of Eligible Historic Resources.** Create a ministerial process to determine when a building or structure is an eligible historic resource. Once the process is established, require discretionary review for the issuance of demolition permits of eligible historic resources unless, consistent with City regulations: rehabilitation is not feasible; demolition is necessary to protect health, safety, and/or welfare; or the benefit of demolition outweighs the loss of the structure.
- **HCP 2.1 Protection.** Continue to identify, protect, and preserve significant archaeological sites and conduct good-faith government-to-government consultation with local Tribes to identify and protect Tribal Cultural Resources.
- **HCP 2.2 Coordination with Tribes.** Continue to solicit input from local Native American Tribes, and/or a qualified cultural resource professional early in project planning and review processes in areas known or believed to contain buried archaeological or cultural resources.
- **HCP-2.3 Consultation with Tribes.** For projects subject to CEQA, initiate formal consultation as early as feasible with local Tribes to identify and protect Tribal Cultural Resources in their respective areas of traditional and cultural affiliation. Topics to discuss during consultation include project alternatives, recommended mitigation measures, and significant effects; other topics may include type of environmental review, resource significance, impact significance, and tribal alternatives for mitigation.
- **HCP 2.5 Construction Monitoring.** Condition permit approval with inadvertent discovery language and/or require monitoring of ground-disturbing activities in areas known or believed to contain buried archaeological or cultural resources.
- **HCP-2.6 Coordination.** Coordinate with Humboldt County and local Tribes to promote the preservation of archaeological and cultural resources in the Study Area.
- **HCP 2.7 Discretionary Projects.** Require discretionary development projects be designed to avoid potential impacts to significant archaeological and cultural resources whenever feasible, reduce unavoidable impacts to the maximum extent feasible, and comply with mitigation measures as agreed upon during formal consultation. Make determinations of significance, impacts, and mitigation in conjunction with a qualified cultural resources professional and/or local Tribes.

⁴⁶ City of Blue Lake. Municipal Code Section 17.20.060.

<https://ecode360.com/44213425?highlight=historic,historical&searchId=10705016760629394#44213425> (accessed October 2024).

⁴⁷ City of Eureka. General Plan 2040, 2018. <https://www.eurekaca.gov/DocumentCenter/View/3253/Final-Draft-2040-General-Plan> (accessed October 2024).

City of Eureka Municipal Code

The City of Eureka Municipal Code Chapter 157 establishes the City's Historic Preservation Commission and the process by which the Commission reviews applications for additions, alterations, new construction, and demolition on properties listed on Eureka's Local Register of Historic Places. Cultural resources are also addressed in the City's Local Coastal Program, including establishing development standards in areas with known archaeological resources.⁴⁸

City of Ferndale General Plan, Historical and Cultural Resources Element

The City of Ferndale's Historical and Cultural Resources Element sets goals, policies, and implementation strategies for the City's cultural resources. The following Historical and Cultural Resources Element policies relate to the proposed plan.⁴⁹

- **Policy 1.1.** Use state recommended and federally established guidelines for designation of potential historic and cultural resources.
- **Policy 1.3.** Develop a program to identify and document historic buildings, structures, and sites. There shall be a clear process for both adding and removing identified resources.
- **Policy 1.4.** Encourage the use of the Secretary of Interior Standards and the State Historic Building Code as guidelines for the preservation and rehabilitation of historic properties.

City of Fortuna General Plan, Natural and Cultural Resources Chapter

The City of Fortuna's General Plan's Natural and Cultural Resources Chapter includes goals and policies related to the identification and protection of archaeological, cultural, and historical resources. The following chapter policies relate to the proposed plan.⁵⁰

- **NCR-7.1 Historic, Archaeological and Paleontological Resources.** The City shall maintain a record of significant historic and archaeological resources and use applicable State and Federal Standards to evaluate the significance of development on those resources. For historic, archaeological and paleontological resources determined to be significant, the City shall require that these resources be studied, curated, and/or otherwise preserved as required by federal and state regulations.
- **NCR -7.3 Historic Resources Evaluation.** The City shall require the use of appropriate State and Federal standards to evaluate the significance of historic resources identified within the City.
- **NCR-7.14 Native American Consultation Regarding Archaeological Resources.** Where proposed development activities have the potential to impact archaeological resources, the City shall request Native American consultations.
- **NCR-7.15 Discovery of Human Remains.** If human remains are discovered during construction activities, applicable agency notifications shall be made (County Coroner, Native American groups, etc.) and remains treatment protocols followed.

48 City of Eureka. Municipal Code. https://codelibrary.amlegal.com/codes/eureka/latest/eureka_ca/0-0-0-29214 (accessed October 2024).

49 City of Ferndale. General Plan: Historical and Cultural Resources Element, 2012. https://ci.ferndale.ca.us/wp/general-plan/Ferndale%20H%26CRE_adopted%20May%202012.pdf (accessed October 2024).

50 City of Fortuna. General Plan 2030, 2010.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20%20Policy%20Document_web.pdf. (accessed October 2024).

City of Rio Dell General Plan, Community Environment Chapter

The City of Rio Dell's General Plan's Community Environment Chapter includes policies for the treatment of historic resources. The following cultural resources policies relate to the proposed plan:

- **P1.3.4-1.** Ensure that planning decisions integrate information about cultural resources, and provide for consultation and collaboration with outside entities.
- **P1.3.4-2.** Areas of archaeological, paleontological, and architectural significance should be identified, assessed, and protected from destruction.

City of Trinidad General Plan

The City of Trinidad's General Plan Recreation and Community Design Chapters include policies for the treatment of cultural and historic resources. The following cultural resources policies relate to the proposed plan:

- **Policy 69.** Within the Tsurai Study Area, shown on Plate 1B, the State Historic Preservation Officer, in cooperation with the lineal descendants of Tsurai and the Northwest Indian Cemetery Protective Association, shall investigate and establish definitive boundaries around Tsurai. There shall be no disturbance, vegetative removal or construction, except for a protective fence around the burial ground, on lands designated as Open Space within the Tsurai Study Area without the approval of the lineal descendants of Tsurai, Trinidad Rancheria, City of Trinidad, and the State Historic Preservation Officer. Lands designated as Special Environment within the Study Area may be developed as provided in the Special Environment regulations provided the State Historic Preservation Officer is consulted and reasonable measures are required to mitigate any adverse impacts on this cultural resource.
- **Policy 76.** The design assistance committee should ensure that any proposed development does not detract from these historical sites and structures.

City of Trinidad Municipal Code

The City of Trinidad's Municipal Code Title 17 Sections 17.16, 17.20 and 17.60 includes provisions on the treatment of special environment zones and protected cultural resources, to maximize the natural and scenic character of these areas. It includes guidance on the treatment of the Tsurai study area, a recognized cultural resource.⁵¹

3.4.4 Impacts and Mitigation Measures

Significance Criteria

The County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Cultural Resources and Tribal Cultural Resources.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Cause a substantial adverse change in the significance of a historic resource pursuant to §15064.5?

⁵¹ City of Trinidad Municipal Code. Title 17.20 SE Zone.
<https://www.codepublishing.com/CA/Trinidad/#!/Trinidad17/Trinidad1720.html#17.20.110>. (accessed October 2024).

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
- c) Disturb any human remains, including those interred outside of formal cemeteries?
- d) Cause a substantial adverse change in the significance of a Tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - 1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
or
 - 2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Approach to Analysis

Environmental impacts to historical, archaeological, or Tribal cultural resources are assessed using impact significance criteria set forth in the CEQA Guidelines and federal, State, and local plans, regulations, and ordinances.

Historical Resources

The analysis of impacts related to historical resources is based on results of review of the NRHP, CRHR, and BERD, along with the Humboldt County Register, and local registers and inventories of incorporated cities in the RCAP area. Data used for this analysis are summarized in Section 3.4.1. Rincon Architectural Historians evaluated impacts on historical resources based on the likelihood that historical structures, sites, districts, or landscapes are present within the RCAP area, and the likely effects of construction or operation on these resources.

Archeological Resources and Human Remains

The analysis of the impacts related to archeological resources and human remains is based on a search of the SLF that was conducted by the NAHC. Since there are no known RCAP project locations at this time, a site-specific analysis was not completed, and a CHRIS records search was not completed.

Tribal Cultural Resources

In accordance with AB 52, Humboldt County sent letters via certified mail to 32 Native American Tribal contacts. The results of this Tribal consultation are utilized for the analysis of impacts related to Tribal cultural resources.

EIR Scoping Comments Consideration

No EIR scoping comments relevant to cultural and Tribal cultural resources were received.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to cultural and Tribal cultural resources. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to cultural and Tribal cultural resources in Humboldt County.

Specific Threshold of Significance

For the purposes of this analysis, the following thresholds are used to evaluate the significance of cultural resources and Tribal cultural resources impacts resulting from implementation of the proposed plan:

- Result in a substantial adverse change in the significance of an historical resource. Specifically, a substantial adverse change to a historical resource would occur if the proposed plan could result in the demolition, destruction, relocation, or alteration of the resources or its immediate surroundings such that the significance of the historical resource would be materially impaired. Specifically, the significance of a historical resource would be materially impaired if the proposed plan would:
 - Demolish or materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
 - Demolish or materially alter in an adverse manner those that account for its inclusion in a local register of historical resources, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - Demolish or materially alter in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.
 - Demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][2]).
- Physically damage or destroy archaeological data or human remains.
- Physically damage, destroy, or otherwise adversely impact a site, feature, place, or cultural landscape with cultural value to a California Native American tribe and that is a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Impact Evaluation

Historical Resources

Significance Criterion a: Would the proposed plan cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Impact CR-1 IMPLEMENTATION OF THE RCAP COULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF AN HISTORICAL RESOURCE. MITIGATION MEASURE CR-1 WOULD REDUCE IMPACTS TO THE EXTENT FEASIBLE, BUT THIS IMPACT WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

There are 37 known historical resources in unincorporated Humboldt County and hundreds of additional known historical resources in the plan area's incorporated Cities (see Appendix C). In addition to these known historical resources, there may be other yet unidentified resources within Humboldt that are age-eligible for listing in the NRHP, CRHR, or locally. Although there are no specific projects or locations identified in the RCAP, implementation of RCAP measures and corresponding actions to reduce GHG emissions would facilitate projects that could result in physical demolition, destruction, relocation, or alteration of identified or potential historical resources.

For example, the RCAP would promote the installation of renewable energy infrastructure (wind, solar, and hydrogen) per RCAP Measures BE-1, BE-2, BE-3 Urban and Rural, BE-7, and T-10, EV charging and parking infrastructure per RCAP Measures T-6 and T-7, and transportation infrastructure (transit, bicycle, and pedestrian) per RCAP Measure T-1 Urban and Rural, T-2 Urban and Rural, and T-4. Other components of RCAP implementing actions may include installation of small-scale residential and commercial solar and the decarbonization of existing residential, nonresidential, and municipal buildings per RCAP Measures BE-2, BE-3 Urban and Rural, BE-4, and BE-7. In addition, the RCAP includes Measure T-3, which would prioritize mixed-use, infill development in urban areas of Humboldt. Such activities have the potential to result in significant impacts to historical resources if they occur on or nearby sites containing historical resources.

Effects on historical resources are only knowable once a specific project and location has been proposed because the effects are highly dependent on both the individual project site conditions, project activities that may alter the character of a built environment resource, and the characteristics of the proposed ground-disturbing activity. Demolition or other structural alteration associated with projects and infrastructure facilitated by the RCAP have the potential to impair historical built-environment resources. Consequently, damage to or destruction of historical resources could occur as a result of development under the proposed plan. In order to ensure that development within Humboldt does not have a detrimental effect on historical resources, each project would need to be assessed once it is proposed, and location details are identified. Subsequent environmental review would be required at the time future discretionary RCAP-related projects or plans are proposed to assess the potential for impacts related to historical resources and need for additional mitigation, if applicable.

Adherence to the applicable County and incorporated City General Plan goals and policies and local ordinances listed in Section 3.4.3, *Regulatory Setting*, would reduce potential RCAP impacts to historical resources. These include Humboldt County General Plan Goal CU-G1 and adherence to its associated policies (CU-P1 and CU-P5), HCC Section 71.1.3, Arcata General Plan Policies H-1 through

H-5, Arcata Municipal Code Chapter 9.53.040, Blue Lake General Plan Land Use Element Character Policy 8, Cultural Resources Policy 1 and Commercial Center Policy 5, Eureka General Plan Policies HCP 1.1, 1.4 and 2.7, Eureka Municipal Code Chapter 157, Fortuna General Plan Policies NCR-7.1 and NCR-7.3, Rio Dell General Plan Policies P1.3.4-1 and P1.3.4-2, and Trinidad Municipal Code Title 17 Sections 17.16, 17.20 and 17.60. However, despite these goals, policies, and ordinances, there would still be potential for RCAP project construction and infrastructure installation to impact historical resources.

Implementation of Mitigation Measure CR-1 would reduce impacts to historical resources by identifying and evaluating significant historical resources and managing relocation, rehabilitation, or alteration in compliance with the Standards as applicable. Nonetheless, even with implementation of Mitigation Measure CR-1, existing and eligible historical resources could still be materially impaired by future development that would be carried out under the proposed plan. While Historic American Building Survey (HABS) documentation would reduce impacts to the greatest extent feasible in cases where compliance with the Standards or avoidance is not possible, legal precedent has established that such a measure cannot mitigate impacts to a level of less than significant, because the loss of historical fabric cannot be readily compensated for by commemorative mitigation.⁵² Therefore, RCAP construction impacts related to historical resources would be significant and unavoidable with mitigation.

Operation

Given that impacts to historical resources occur during construction, there would be no operational impact related to historical resources.

Mitigation Measures

The following mitigation measure would apply if a future RCAP-related project would potentially cause a substantial adverse change in the significance of a historical resource:

MITIGATION MEASURE CR-1	PREPARE HISTORICAL RESOURCES EVALUATION PRIOR TO APPROVAL FOR PROJECTS INVOLVING BUILT ENVIRONMENT RESOURCES 45 YEARS OR OLDER AND IMPLEMENTATION OF MITIGATION PRIOR TO AND DURING CONSTRUCTION

The reviewing agency (County or respective City) shall prepare a historical resources evaluation prior to approval of a RCAP project involving the demolition or substantial alteration of a building, structure, object, or other built environment feature that is 45 years of age or older, as described below:

- The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards in architectural history or history (as defined in Code of Federal Regulations, Title 36, Part 61). The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation to identify potential historical resources within the proposed project site. All built environment resources 45 years of age or older shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the reviewing agency for review and concurrence. If the property is already listed

⁵² *League for Protection of Oakland's etc. Historic Resources v. City of Oakland* (1997) 52 Cal.App.4th 896.

in the NRHP, CRHR, or a local register, the historical resources evaluation described above shall not be required.

- If historical resources are identified within the site of a proposed project, efforts shall be made to the greatest extent feasible to ensure that the relocation, rehabilitation, or alteration of the resource is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the Professional Qualification Standards. In conjunction with a development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features during construction activities shall be provided to the reviewing agency for review and concurrence. As applicable, the report shall demonstrate how a project complies with the Standards and be submitted to the reviewing agency for review and approval prior to the issuance of permits.
- If significant historical resources are identified on a development site and compliance with the Standards and or avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures may include documentation of the historical resource in the form of a Historic American Building Survey (HABS) report, or equivalent. The report shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation and shall generally follow the HABS Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Professional Qualification Standards and submitted to the reviewing agency prior to issuance of any permits for demolition or alteration of the historical resource.

Level of Significance

Significant and Unavoidable

Archaeological Resources

Significance Criterion b: Would the proposed plan cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Impact CR-2 THE RCAP HAS THE POTENTIAL TO RESULT IN SIGNIFICANT IMPACTS IF PROJECTS CARRIED OUT UNDER THE PLAN WOULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHAEOLOGICAL RESOURCE, INCLUDING THOSE THAT QUALIFY AS HISTORICAL RESOURCES. MITIGATION MEASURE CR-2 WOULD REQUIRE ARCHAEOLOGICAL RESOURCES ASSESSMENTS FOR FUTURE PROJECTS AND MEASURES TO PROTECT ANY RESOURCES IDENTIFIED. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

In addition to known archaeological resources in the plan area, it is presumed that additional archaeological resources that are eligible for inclusion in the NRHP or CRHR exist throughout Humboldt. Effects on archaeological resources are only known once a specific project and location has been proposed, because the effects are highly dependent on both the individual project site conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities associated with development facilitated by the proposed plan, particularly in areas that

have not been studied through a cultural resources investigation, or when excavation depths exceed those previously attained, have the potential to damage or destroy previously-unknown historic or prehistoric archaeological resources that may be present on or below the ground surface. Impacts to archaeological resources are especially likely in instances where ground disturbance will occur in native soils, in historic-age fill of unknown origin. Consequently, damage to or destruction of archaeological resources could occur as a result of projects under the proposed plan. In order to ensure that RCAP projects and infrastructure within Humboldt do not have a detrimental effect on archaeological resources, each future project would need to be assessed once the project location and design concept is available.

Although there are no specific projects and locations identified in the RCAP, implementation of the RCAP would facilitate projects and infrastructure that may include site preparation, demolition, and other construction activities. Such projects would include renewable energy infrastructure (wind, solar, and hydrogen) per RCAP Measures BE-1, BE-2, BE-3, BE-7, and T-10, EV charging and parking infrastructure per RCAP Measures T-6 and T-7 and transportation infrastructure (transit, bicycle, and pedestrian) per RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-7. In addition, RCAP Measures SW-1 and WW-2 may result in new organic waste processing and recycled water facilities and infrastructure. Construction of such projects would include site preparation and other ground-disturbing construction activities that could affect identified and previously unknown archaeological resources.

Adherence to the applicable County and incorporated City General Plan goals and policies and local ordinances listed in Section 3.4.3, *Regulatory Setting*, would reduce potential RCAP impacts to historical resources. These include Humboldt County General Plan Goal CU-G1 and adherence to its associated policies (CU-P1, CU-P4, CU-P5, and CU-S4), Arcata General Plan Policy H-7, Arcata Municipal Code Chapter 9.53.040, Blue Lake General Plan Land Use Element Character Cultural Resources Policies 1 and 2, Blue Lake Municipal Code Section 15.12.020, Eureka General Plan Policies HCP 2.1, HCP 2.2, HCP 2.5 and HCP 2.7, Fortuna General Plan Policies NCR-7.1 and NCR-7.14, and Rio Dell General Plan Policies P1.3.4-1 and P1.3.4-2. Adherence to these goals and policies would help reduce the potential for archaeological resources to be adversely impacted by the ground-disturbing activities associated with projects facilitated by the proposed plan. However, there would still be potential for RCAP project construction and infrastructure installation to impact archaeological resources, and those impacts would be potentially significant. Implementation of Mitigation Measure CR-2 would require preparation of archaeological resources assessments and implementation of measures to protect any identified resources for future RCAP projects involving ground-disturbing activities. With implementation of Mitigation Measure CR-2, impacts from construction would be less than significant.

Operation

Given that potential impacts to archaeological resources would occur during construction, there would be no operational impact related to archaeological resources.

Mitigation Measures

The following mitigation measure would apply if a future RCAP-related project would potentially cause a substantial adverse change in the significance of an archaeological resource:

MITIGATION MEASURE CR-2 PREPARATION OF ARCHAEOLOGICAL RESOURCES ASSESSMENT PRIOR TO PROJECT APPROVAL AND IMPLEMENTATION OF MITIGATION PRIOR TO AND DURING CONSTRUCTION

Prior to approval of a project that involves ground disturbance activities, the reviewing agency (County or respective City) shall prepare an archaeological resources assessment under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualification Standards in either prehistoric or historic archaeology.

- Assessments shall include a California Historical Resources Information System records search at the Northwest Information Center (NWIC) and a Sacred Lands File search maintained by the Native American Heritage Commission (NAHC). The records searches will characterize the results of previous cultural resource surveys and disclose any cultural resources that have been recorded and/or evaluated in and around a project site. A Phase I pedestrian survey shall be undertaken at a project site that is on previously undeveloped land in order to locate any surface cultural materials. By performing a records search, consultation with the NAHC, and a Phase I survey, a qualified archaeologist shall be able to classify a project site as having high, medium, or low sensitivity for archaeological resources.
- If the Phase I archaeological survey identifies resources that may be affected by a project, the archaeological resources assessment shall also include Phase II testing and evaluation. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be identified in the Phase II evaluation. These measures shall include, but would not be limited to, a Phase III data recovery program, avoidance, or other appropriate actions to be determined by a qualified archaeologist in consultation with the reviewing agency and any interested Tribes. If significant archaeological resources cannot be avoided, impacts may be reduced to less than significant levels by filling on top of the sites rather than cutting into a cultural deposit. Alternatively, and/or in addition, a data collection program may be warranted, including mapping the location of artifacts, surface collection of artifacts, or excavation of the cultural deposit to characterize the nature of the buried portions of sites. Curation of the excavated artifacts or samples shall occur as specified by the archaeologist in consultation with the reviewing agency and any interested Tribes. The final disposition of artifacts not directly associated with Native American graves shall be negotiated during consultation with interested tribes. If Native American tribes do not accept the artifact, it shall be offered to an institution staffed by qualified professionals, as determined by the reviewing agency. Artifacts include material recovered from all phases of work, including the initial survey, testing, indexing, data recovery, and monitoring.

Level of Significance

Less Than Significant with Mitigation

Disturbance of Human Remains

Significance Criterion c: Would the proposed plan disturb any human remains, including those interred outside of formal cemeteries?

Impact CR-3 THE DISCOVERY OF HUMAN REMAINS IS ALWAYS A POSSIBILITY DURING GROUND-DISTURBING ACTIVITIES. GROUND DISTURBANCE ASSOCIATED WITH PROJECTS CARRIED OUT UNDER THE RCAP MAY DISTURB OR DAMAGE KNOWN OR UNKNOWN HUMAN REMAINS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH ADHERENCE TO EXISTING REGULATIONS.

Construction

Human burials outside of formal cemeteries can occur in prehistoric archaeological contexts. Excavations during construction activities related to RCAP project construction and infrastructure installation could have the potential to disturb these resources that could include Native American burial sites, particularly in areas where ground disturbance has not already occurred or where excavation depths exceed those previously attained. As such, ground disturbing activities that may occur within the plan area during implementation of the RCAP have the potential to unearth previously unidentified human remains.

Although there are no specific projects and locations identified in the RCAP, implementation of the RCAP would facilitate projects and infrastructure that may include site preparation and other construction activities that could unearth human remains. Such projects would include renewable energy infrastructure (wind, solar, and hydrogen) per RCAP Measures BE-1, BE-2, BE-3, BE-7, and T-10 and transportation infrastructure (transit, bicycle, and pedestrian) per RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-7. In addition, RCAP Measures SW-1 and WW-2 may result in new organic waste processing and recycled water facilities and infrastructure.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in PRC Section 5097. The California Health and Safety Code (Section 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protect them from disturbance, vandalism, or destruction. They also include established procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

All projects are also subject to State of California Health and Safety Code Section 7050.5, which states that, if human remains are unearthed, no further disturbance can occur until the county coroner has made the necessary findings as to the origin and disposition of the remains pursuant to the PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and make recommendations to the landowner within 48 hours of being granted access. Furthermore, future RCAP-related projects would be required to comply with local policies that protect human remains, including Humboldt County General Plan Goal CU-G1 and Policies CU-P2 and CU-P4, Arcata General Plan Policy H-7, Arcata Municipal Code Chapter 9.53.040, Blue Lake General Plan Land Use Element Character Cultural Resources Policies 1 and 2, Blue Lake Municipal Code Section 15.12.020, Eureka General Plan Policies HCP 2.1, HCP 2.2, HCP 2.5 and HCP 2.7, Fortuna General Plan Policies NCR-7.1, NCR-7.14 and NCR-7.15, and Rio Dell General Plan Policies P1.3.4-1 and P1.3.4-2.

Implementation of the policies listed above would require evaluation, protection, and Tribal consultation related to human remains encountered during construction associated with the RCAP. As such, adherence to these policies as well as existing regulations discussed above would reduce the potential for human remains to be adversely impacted by ground-disturbing activities associated with RCAP project construction and infrastructure installation. Therefore, RCAP construction impacts related to human remains would be less than significant.

Operation

Given that potential impacts to human remains would occur during construction, there would be no operational impact related to human remains.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

Tribal Cultural Resources

Significance Criterion d: Would the proposed plan cause a substantial adverse change in the significance of a Tribal cultural resource as defined in Public Resources Code Section 21074 that is either 1) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k) or 2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

Impact CR-4 IMPLEMENTATION OF THE RCAP HAS THE POTENTIAL TO IMPACT UNIDENTIFIED TRIBAL CULTURAL RESOURCES. MITIGATION MEASURE CR-3 WOULD REQUIRE THAT CONSTRUCTION IS HALTED IN THE EVENT THAT TRIBAL CULTURAL RESOURCES ARE ENCOUNTERED AND THAT AN ARCHAEOLOGIST AND LOCAL NATIVE AMERICAN REPRESENTATIVE ARE CONSULTED TO ASSESS THE FIND AND PREPARE A MITIGATION PLAN, IF WARRANTED. WITH IMPLEMENTATION OF MITIGATION MEASURE CR-3, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Ground-disturbing activities associated with future development projects under the RCAP could expose previously unidentified subsurface archaeological resources that may qualify as Tribal cultural resources and could be adversely affected by project construction.

The RCAP is a high-level planning document, and it remains a possibility that unknown Tribal cultural resources may be present throughout Humboldt. AB 52 Tribal consultation has been initiated and, thus far, no requests for consultation have been received. No Tribal cultural resources have been identified in the plan area through AB 52 Tribal consultation. However, there are many known and potentially unknown Tribal cultural resources throughout Humboldt. SLF results received from the NAHC were positive for Sacred Lands. Adherence to the requirements of AB 52 would require Tribal consultation with local California Native American Tribes prior to implementation of any future

RCAP project activities that are subject to CEQA. In compliance with AB 52, a determination of whether project-specific substantial adverse effects on Tribal cultural resources would occur along with identification of appropriate project-specific avoidance, minimization, or mitigation measures would be required. Future projects facilitated by the RCAP that are not subject to AB 52 would be required to adhere to the applicable General Plan and City Municipal Code policies that protect Tribal cultural resources and require Tribal consultation, which include Humboldt County General Plan Goal CU-G1, Policies CU-P1, CU-P2, CU-P4, CU-P6 and CU-S4, Arcata General Plan Policy H-7, Arcata Municipal Code Chapter 9.53.040, Blue Lake General Plan Land Use Element Character Cultural Resources Policies 1 and 2, Blue Lake Municipal Code Section 15.12.020, Eureka General Plan Policies HCP 2.1, HCP 2.2, HCP 2.5 and HCP 2.7, Fortuna General Plan Policies NCR-7.1, NCR-7.14 and NCR-7.15, and Rio Dell General Plan Policies P1.3.4-1 and P1.3.4-2. Lastly, the RCAP includes Actions BE-1c, CS-1c, and CS-3c, which specifically direct coordination with tribes regarding renewable energy, carbon sequestration, and wetland conservation projects.

The policies listed above would help reduce the potential for Tribal cultural resources to be adversely impacted by the ground-disturbing activities associated with the RCAP project construction and infrastructure installation. However, there would still be potential for development to affect Tribal cultural resources, and those impacts would be potentially significant. Implementation of Mitigation Measure CR-3 would require that construction is halted if Tribal cultural resources are encountered and that an archaeologist and local Native American representative are consulted to assess the find and prepare a mitigation plan, if warranted. With implementation of Mitigation Measure CR-3, impacts to Tribal cultural resources would be less than significant.

Operation

Given that impacts to Tribal cultural resources occur during construction, there would be no operational impacts related to Tribal cultural resources.

Mitigation Measures

The following mitigation measure would apply if a future RCAP-related project would potentially cause a substantial adverse change in the significance of a Tribal cultural resource:

MITIGATION MEASURE CR-3: SUSPEND WORK AROUND TRIBAL CULTURAL RESOURCES IDENTIFIED DURING CONSTRUCTION

In the event that cultural resources of Native American origin are identified during construction of a project implemented under the RCAP, the reviewing agency (County or respective city) shall temporarily suspend or redirect all earth-disturbing work within 100 feet of the find until an archaeologist has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted. If the reviewing agency, in consultation with local Native Americans, determines that the resource is a Tribal cultural resource and, thus, significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with local Native American group(s). The mitigation plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American Tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for Tribal cultural resources include, but are not limited to,

protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery.

Level of Significance

Less Than Significant with Mitigation

3.4.5 Cumulative Impacts

The geographic scope of the cumulative cultural and Tribal cultural resources analysis is Humboldt. Regional cumulative analysis considers potential Countywide impacts that would occur from projected long-term Countywide growth identified in Table 3-1 of Section 3, *Environmental Setting*. The general approach to cumulative impact analysis used in this EIR is discussed in Section 3, *Environmental Setting*.

Historical Resources

The combination of the proposed plan as well as other relevant plans and larger scale projects could potentially involve the cumulative demolition or alteration of historical resources. Although Mitigation Measure CR-1 would be required to reduce impacts to these resources to the maximum extent feasible, cumulative development could nonetheless cause the loss of built-environment historical resources. Alteration or demolition of historical resources remains a possibility throughout the plan area and immediate surroundings with potentially cumulative impacts. As such, the incremental effect of the RCAP would be cumulatively considerable. Therefore, the cumulative impact related to historical resources would be significant and unavoidable.

Archaeological and Tribal Cultural Resources

Projects facilitated by the RCAP in conjunction with other nearby past, present and reasonably foreseeable future projects could potentially disturb areas that may contain archaeological and Tribal cultural resources. While there is the potential for significant cumulative impacts to archaeological and Tribal cultural resources, it is anticipated that potential impacts associated with individual cumulative projects would be addressed and mitigated on a case-by-case basis and would be subject to local and State regulations regarding the protection of such resources. Therefore, the cumulative impact related to archaeological and Tribal cultural resources would be less than significant with mitigation.

Human Remains

Projects facilitated by the RCAP in conjunction with other nearby past, present and reasonably foreseeable future projects could potentially disturb areas that may contain previous unknown human remains. While there is the potential for significant cumulative impacts to human remains, it is anticipated that potential impacts associated with individual cumulative projects would be addressed on a case-by-case basis and would be subject to local and State regulations regarding the treatment of human remains. With compliance with State regulations and the applicable local policies, the cumulative impacts related to human remains would be less than significant.

Overall Level of Cumulative Significance

Significant and Unavoidable

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3.5 Greenhouse Gas Emissions and Energy

3.5.1 Introduction

This section describes existing greenhouse gas (GHG) emissions and sources and energy uses Statewide and within Humboldt as well as the relevant regulatory framework. This section also analyzes possible impacts related to GHG emissions and energy use from implementation of the Regional Climate Action Plan (RCAP).

3.5.2 Environmental Setting

3.5.2.1

Greenhouse Gas Emissions

Greenhouse Effect, Global Warming, and Climate Change

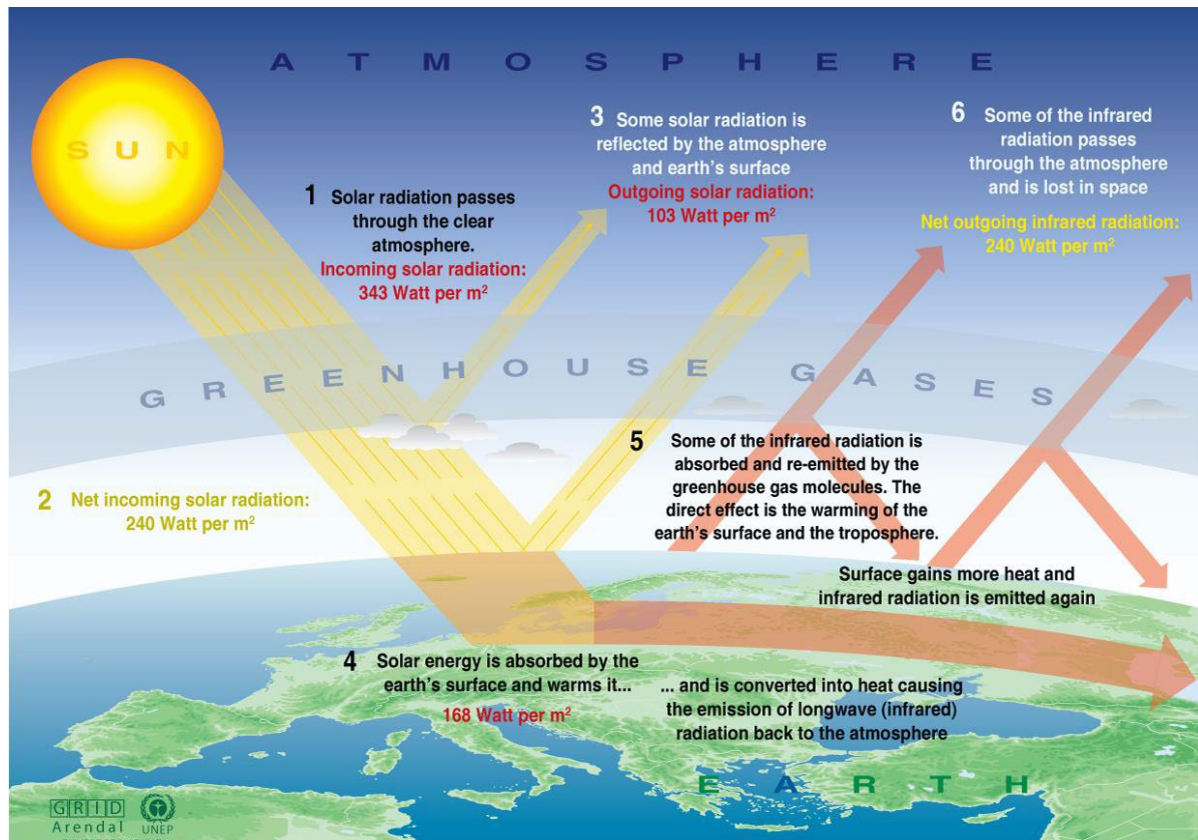
Most of the energy that affects the Earth's climate comes from the sun. Some solar radiation is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected by the atmosphere back toward space. As the Earth absorbs high frequency solar radiation, its surface gains heat and then re-radiates lower frequency infrared radiation back into the atmosphere.

Most solar radiation passes through gases in the atmosphere classified as GHGs; however, infrared radiation is selectively absorbed by GHGs. GHGs in the atmosphere play a critical role in maintaining the balance between the Earth's absorbed and radiated energy, the Earth's radiation budget, by trapping some of the infrared radiation emitted from the Earth's surface that otherwise would have escaped to space (see Figure 3.5-1). Radiative forcing is the difference between the incoming energy and outgoing energy. Specifically, GHGs affect the radiative forcing of the atmosphere, which in turn affects the Earth's average surface temperature. This phenomenon, the greenhouse effect, keeps the Earth's atmosphere near the surface warmer than it would be otherwise and allows successful habitation by humans and other forms of life.

Combustion of fossil fuels and deforestation release carbon into the atmosphere that historically has been stored underground in sediments or in surface vegetation, thereby exchanging carbon from the geosphere and biosphere to the atmosphere in the carbon cycle. With the accelerated increase in fossil fuel combustion and deforestation since the Industrial Revolution of the 19th century, concentrations of GHGs in the atmosphere have increased exponentially. Such emissions of GHGs in excess of natural ambient concentrations contribute to the enhancement of the natural greenhouse effect. This enhanced greenhouse effect has contributed to global warming, an increased rate of warming of the Earth's average surface temperature. Specifically, increases in GHGs lead to increased absorption of infrared radiation by the Earth's atmosphere and warm the lower atmosphere further, thereby increasing temperatures and evaporation rates near the surface.

Variations in natural phenomena such as volcanoes and solar activity produced most of the global temperature increase that occurred during preindustrial times. More recently, however, increasing atmospheric GHG concentrations resulting from human activity have been responsible for most of the observed global temperature increase.

Figure 3.5-1 The Greenhouse Gas Effect



Source: United Nations Environmental Program/GRID-Arendal. 2005. Greenhouse Effect. <https://www.grida.no/resources/6467> (accessed October 2024).

Warming affects global atmospheric circulation and temperatures; oceanic circulation and temperatures; wind and weather patterns; average sea level; ocean acidification; chemical reaction rates; precipitation rates, timing, and form; snowmelt timing and runoff flow; water supply; wildfire risks; and other phenomena, in ways collectively referred to as climate change. Climate change is the alteration in the average weather of the Earth that is measured by modifications in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

TEMPERATURE PREDICTIONS

The United Nations Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius ($^{\circ}\text{C}$) to 6.4 $^{\circ}\text{C}$. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios. The report also concluded that “[w]arming of the climate system is

unequivocal,” and that “[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations.” Warming of the climate system is now considered to be unequivocal, with the global surface temperature increasing about 1.33 degrees Fahrenheit (°F) over the last 100 years. The IPCC predicts increases in global average temperature of between 2°F and 11°F over the next 100 years.¹

GREENHOUSE GASES AND GLOBAL EMISSION SOURCES

Gases that trap heat in the atmosphere are referred to as GHGs. Prominent GHGs that naturally occur in the Earth’s atmosphere are water vapor, carbon dioxide (CO₂), methane (CH₄), oxides of nitrogen (NO_x), and ozone. Anthropogenic (human-caused) GHG emissions include releases of these GHGs plus release of human-made gases with high global warming potential (GWP) (ozone-depleting substances such as chlorofluorocarbons [CFCs]) and aerosols, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). The GHGs listed by the IPCC (CO₂, CH₄, nitrous oxide (N₂O), HFCs, PFCs, and SF₆) are discussed below, in order of abundance in the atmosphere. Water vapor, despite being the most abundant GHG, is not discussed below, because natural concentrations and fluctuations far outweigh anthropogenic influences, making it impossible to predict. Ozone is not included, because it does not directly affect radiative forcing. Ozone-depleting substances (CFCs, halons, carbon tetrachloride, methyl chloroform, and hydrochlorofluorocarbons) are not included, because they have been replaced by HFCs and PFCs.

The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere and is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO₂. Individual GHG compounds have varying potential for contributing to global warming. For example, CH₄ is 25 times as potent as CO₂, while SF₆ is 22,200 times more potent than CO₂ on a molecule-per-molecule basis. To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method for comparing GHG emissions is the GWP methodology defined in the IPCC reference documents.² The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalents (CO₂e), which compares the gas in question to that of the same mass of CO₂ (by definition, CO₂ has a GWP of 1). The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. Thus, to describe how much global warming a given type and amount of GHG may cause, the CO₂e is used. A CO₂e is the mass emissions of an individual GHG multiplied by its global warming potential. As such, a high GWP represents high absorption of infrared radiation and a long atmospheric lifetime compared to CO₂. One must also select a time horizon to convert GHG emissions to equivalent CO₂ emissions to account for chemical reactivity and lifetime differences among various GHG species. The standard time horizon for climate change analysis is 100 years. Generally, GHG emissions are quantified in terms of metric tons (MT) of CO₂e emitted per year.

The atmospheric residence time of a gas is equal to the total atmospheric abundance of the gas divided by its rate of removal. The atmospheric residence time of a gas is, in effect, a half-life measurement of the length of time a gas is expected to persist in the atmosphere when accounting for removal mechanisms such as chemical transformation and deposition. Units commonly used to describe the concentration of GHGs in the atmosphere are parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt), referring to the number of molecules of the GHG in a sampling of 1 million, 1 billion, or 1 trillion molecules of air. Collectively, HFCs, PFCs, and SF₆ are referred to as

¹ IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. <https://www.ipcc.ch/report/ar4/wg1/> (accessed October 2024)

² IPCC. 2014. Frequently Asked Questions. <https://www.ipcc-nggip.iges.or.jp/faq/FAQ.pdf> (accessed October 2024)

high-GWP gases. CO₂ is by far the largest component of worldwide CO₂e emissions, followed by CH₄, N₂O, and high-GWP gases, in order of decreasing contribution to CO₂e.

The primary human processes that release GHGs include the burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release CH₄, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high-GWP gases. Deforestation and land cover conversion have also been identified as contributing to global warming by reducing the Earth's capacity to remove CO₂ from the air and altering the Earth's albedo or surface reflectance, thus allowing more solar radiation to be absorbed. Specifically, CO₂ emissions associated with fossil fuel combustion are the primary contributors to human-induced climate change. CO₂, CH₄, and N₂O emissions associated with human activities are the next largest contributors to climate change. GHGs of California concern are defined by California Assembly Bill (AB) 32 (see the Regulatory Environment subsection below for a description) and include CO₂, CH₄, NO_x, HFCs, PFCs, and SF₆. A seventh GHG, nitrogen trifluoride (NF₃), was also added under the California Health and Safety Code Section 38505(g)(7) as a GHG of concern. These GHGs are described in terms of their physical description and properties, global warming potential, atmospheric residence lifetime, sources, and atmospheric residence lifetime in Table 3.5-1.

Global Climate Change

EXTENT

Climate change is a global problem, because GHGs are global pollutants, unlike criteria air pollutants and hazardous air pollutants (i.e., toxic air contaminants) that are pollutants of regional and local concern. Pollutants with localized air quality effects have relatively short atmospheric lifetimes, approximately one day; by contrast, GHGs have long atmospheric lifetimes, several years to several thousand years. GHGs persist in the atmosphere for enough time to be dispersed around the globe.

Although the exact lifetime of particular GHG molecules depends on multiple variables and cannot be pinpointed, more CO₂ is currently emitted into the atmosphere than is sequestered. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through photosynthesis and dissolution, respectively. These are two of the most common processes of CO₂ sequestration. Of the total annual human-caused CO₂ emissions, approximately 54 percent is sequestered through ocean uptake, Northern Hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46 percent of human-caused CO₂ emissions is stored in the atmosphere.³

Similarly, effects of GHGs are borne globally, as opposed to the localized air quality effects of criteria air pollutants and hazardous air pollutants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known and cannot be quantified, and no single plan or project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global or local climates or microclimate. However, emissions of GHGs have the potential to adversely affect the environment, because such emissions contribute, on a cumulative basis, to global climate change.

³ Seinfeld, J.H. and Pandis, S.N. 2006. *Atmospheric Chemistry and Physics: From Air Pollution to Climate Change*, 2nd Edition. New York. John Wiley & Sons.

Table 3.5-1 Description of Greenhouse Gases of California Concern

Greenhouse Gas	Physical Description and Properties	Global Warming Potential (100 years)	Atmospheric Residence Lifetime (years)	Sources
Carbon dioxide (CO ₂)	Odorless, colorless, natural gas.	1	50–200	Burning coal, oil, natural gas, and wood; decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; oceanic evaporation; volcanic outgassing; cement production; land use changes.
Methane (CH ₄)	Flammable gas and is the main component of natural gas.	25	12	Geological deposits (natural gas fields) extraction; landfills; fermentation of manure; and decay of organic matter.
Nitrous oxide (N ₂ O)	N ₂ O (laughing gas) is a colorless GHG.	298	114	Microbial processes in soil and water; fuel combustion; industrial processes.
Chloro-fluoro-carbons (CFCs)	Nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (level of air at the Earth's surface); formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane with chlorine and/or fluorine atoms.	3,800–8,100	45–640	Refrigerants aerosol propellants; cleaning solvents.
Hydro-fluoro-carbons (HFCs)	Synthetic human-made chemicals used as a substitute for CFCs and contain carbon, chlorine, and at least one hydrogen atom.	140–11,700	1–50,000	Automobile air conditioners; refrigerants.
Per- fluoro-carbons (PFCs)	Stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface.	6,500–9,200	10,000–50,000	Primary aluminum production; semiconductor manufacturing.
Sulfur hexafluoride (SF ₆)	Human-made, inorganic, odorless, colorless, and nontoxic, nonflammable gas.	22,800	3,200	Electrical power transmission equipment insulation; magnesium industry, semiconductor manufacturing; a tracer gas.
Nitrogen trifluoride (NF ₃)	Inorganic, is used as a replacement for PFCs, and is a powerful oxidizing agent.	17,200	740	Electronics manufacture for semiconductors and liquid crystal displays.

Sources:

IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. <https://www.ipcc.ch/report/ar4/wg1/> (accessed October 2024)

IPCC 2007. AR4 Climate Change 2007: Synthesis Report. <https://www.ipcc.ch/report/ar4/syr/> (accessed October 2024)

TRENDS AND EFFECTS

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than was observed during the 20th century. Long-term trends found that each of the past four decades was warmer than all the previous decades in the instrumental record. The observed global mean surface temperature for the decade from 2011 to 2020 was 1.1°C higher than the global mean surface temperature over the period from 1850 to 1900.⁴ Several independently analyzed data records of global and regional Land-Surface Air Temperature obtained from station observations agree that Land-Surface Air Temperature and sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades.^{5,6}

According to California's Fourth Climate Change Assessment, Statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years. While there is growing scientific consensus about the possible effects of climate change at a global and Statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy.⁷

In California, climate change may result in consequences such as the following:

- **Reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the forests, grasslands and chaparral ecosystems of Southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase

⁴ World Meteorological Organization. 2023. Rate and impacts of climate change surges dramatically in 2011-2020. <https://wmo.int/news/media-centre/rate-and-impact-of-climate-change-surges-dramatically-2011-2020> (accessed November 2024)

⁵ IPCC. 2014. Summary for Policymakers. In: AR5 Climate Change 2014, Mitigation of Climate Change. <https://www.ipcc.ch/report/ar5/wg3/> (accessed October 2024)

⁶ IPCC. 2018. Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report. <https://www.ipcc.ch/sr15/> (accessed October 2024)

⁷ California, State of. 2018. California Fourth Climate Change Assessment Statewide Summary Report. <http://www.climateassessment.ca.gov/state/> (accessed October 2024)

expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.

- **Rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **Increase in temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **Decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced nuisance insect population, and establishment of non-native species.
- **Damage to marine ecosystems and natural environment.** Climate change can cause damage to marine ecosystems, including acidification of the oceans due to increased CO₂ levels (including coral bleaching).

Existing GHG Emissions

GLOBAL

In 2019, worldwide anthropogenic emissions totaled 49,758 billion metric tons (MT) of CO₂e, which is a 53 percent increase from 1990 levels. Specifically, 74.4 percent of CO₂e is from CO₂, 17.3 percent from CH₄, 6.2 percent from N₂O, and 2.1 percent from fluorinated gases were emitted in 2019. The largest source of GHG emissions were energy production and use (including fuels used by vehicles and buildings), which accounted for 73.2 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 18.4 percent and 5.2 percent, respectively. Waste sources contributed to 3.2 percent.⁸

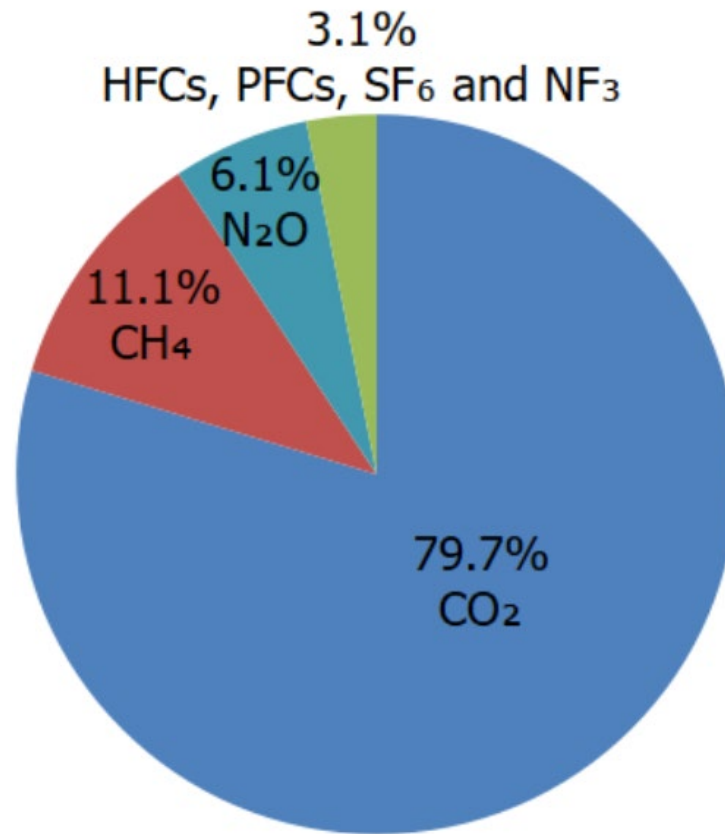
UNITED STATES

In 2021, total U.S. GHG emissions were 6,347.7 million MT of CO₂e, which is a 2 percent decrease from 1990 levels. Net GHG emissions decreased by 16.3 percent from 2005 to 2021 but increased by 6.8 percent from 2020 to 2021. From 2019 to 2020, there was a sharp decline in emissions largely due to the impacts of the COVID-19 pandemic on travel and other economic activity. Between 2020 and 2021, the increase in total GHG emissions was driven largely by an increase in CO₂ emissions from fossil fuel combustion due to economic activity rebounding after the COVID-19 pandemic. In 2022, the largest source of CO₂, and of overall emissions, was fossil fuel combustion, representing approximately 79.7 percent of U.S. GHG emissions. CH₄ accounted for nearly 11.1 percent, N₂O accounted for approximately 6.1 percent, and the remaining 3.1 percent of U.S. GHG emissions were HFCs, PFCs, SF₆, and NF₃.⁹ These numbers are reflected in Figure 3.5-2, below.

⁸ Our World in Data. 2023. Greenhouse Gas Emissions. <https://ourworldindata.org/greenhouse-gas-emissions> (accessed October 2024).

⁹ United States Environmental Protection Agency (USEPA). 2024. "Overview of Greenhouse Gases." Overviews and Factsheets. 2024. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases> (accessed October 2024)

Figure 3.5-2 2022 U.S. GHG Emissions by Gas



Source: The United States Environmental Protection Agency. 2022. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022.

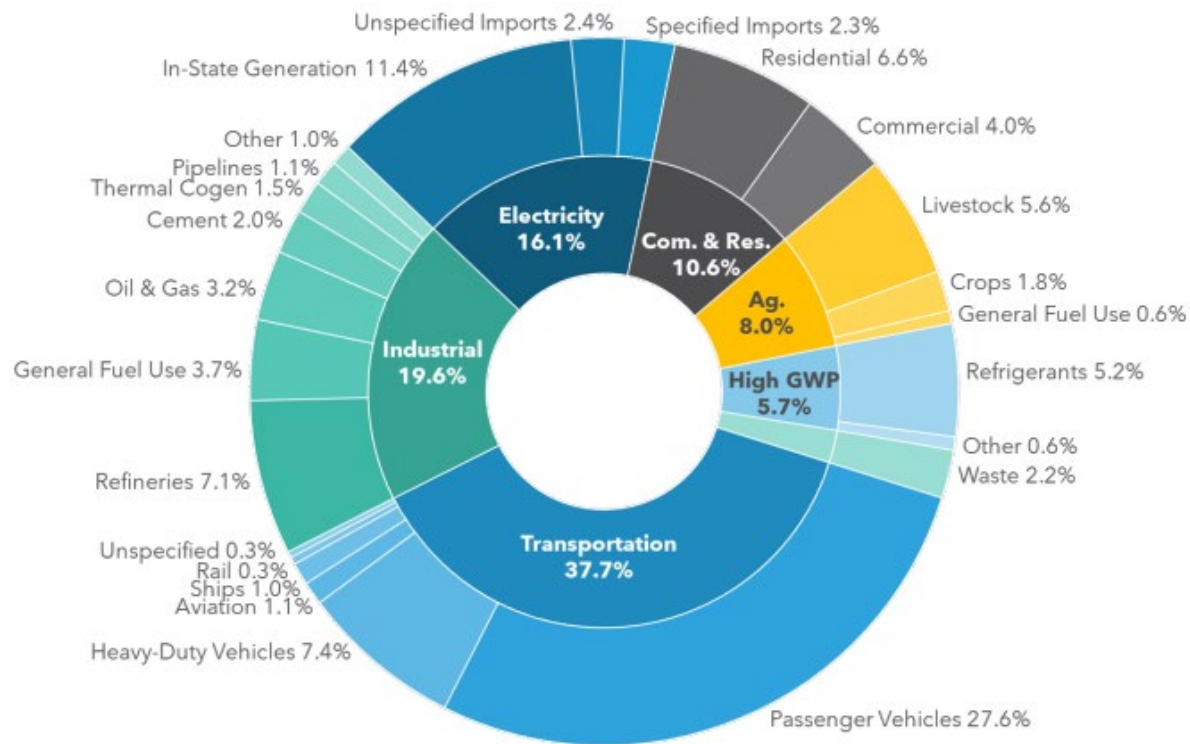
CALIFORNIA

Based on the California Air Resources Board (CARB) California Greenhouse Gas Inventory for 2000-2022, total California GHG emissions were 371.1 million MT of CO₂e in 2022. This is 9.3 million MT of CO₂e (2.4%) lower than in 2021 (380.4 million MT of CO₂e). The major source of GHG emissions in California is associated with transportation, which contributed nearly 38 percent of statewide GHG emissions in 2022. The industrial sector is the second largest source, contributing 19.6 percent of statewide GHG emissions, and the electricity sector accounted for approximately 16 percent.¹⁰ The breakdown of GHG emissions by sector and subsector is reflected in Figure 3.5-3, below. The annual 2030 statewide target emissions level is 260 MT of CO₂e.¹¹

¹⁰ CARB. 2024. California GHG Emissions for 2000 to 2022: Trends of Emissions and Other Indicators. https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-2000_2022_ghg_inventory_trends.pdf (accessed October 2024)

¹¹ CARB. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed October 2024).

Figure 3.5-3 2022 California GHG Emissions by Scoping Plan Sectors and Sub-Sectors



Note: This figure breaks out 2022 California emissions by sector into an additional level of sub-sector categories. The inner ring shows the broad CARB Climate Change Scoping Plan sectors. The outer ring breaks out the sectors into sub-sectors or emission categories. The transportation sector represents tailpipe emissions from on-road vehicles and direct emissions from other off-road mobile sources; it does not include emissions from petroleum refineries and oil extraction and production, which are included in the industrial sector.

Source: CARB. 2024. California GHG Emissions for 2000 to 2022: Trends of Emissions and Other Indicators.
https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-2000_2022_ghg_inventory_trends.pdf (accessed October 2024)

HUMBOLDT COUNTY (RCAP AREA)

Per the 2022 Humboldt GHG emissions inventory that serves as the GHG emissions baseline for the RCAP, approximately 1,531,167 MT of CO₂e was emitted in Humboldt in 2022 for sectors under local jurisdictional control. GHG emissions in the inventory are categorized based on sectors. These sectors include residential and commercial energy use, on- and off-road transportation, water, wastewater, and landfilled waste. The residential and commercial energy sector represents emissions that result from electricity and natural gas used in both private and public sector buildings and facilities, as well as emissions from wood and propane use in residential buildings. The transportation sector includes emissions from on-road passenger and commercial vehicles within the County, as well as off-road vehicles and equipment. Water sector emissions, arising from electricity use in water delivery and treatment, are accounted for under electricity sector emissions as the entirety of water supplied to Humboldt County community members occurs within the County's geographic and jurisdictional boundaries.¹² Table 3.5-2 provides the Humboldt GHG emissions in 2022 by sector as well as each sector's percentage of Humboldt's emissions. The largest sectors of GHG emissions in Humboldt are transportation (on-road transportation) and building energy use (specifically natural gas use).

¹² Water sector operation information is based on feedback provided by the County and water districts that supply water to the regional Humboldt community.

Table 3.5-2 Humboldt 2022 GHG Emissions Inventory (Baseline) Summary

GHG Emissions Sector/Source	CO ₂ e (MT)	Percent of Total Emissions
Energy and Water	248,116	16
Transportation	1,235,883	81
Solid Waste	37,538	2
Wastewater	9,630	1
Total	1,531,167	100

CO₂e = carbon dioxide equivalent; MT = Metric Tons

Source: Humboldt County. 2024. Draft Humboldt Regional Climate Action Plan. August 2024.

Energy

Energy Fundamentals

Energy is generally transmitted either in the form of electricity, measured in kilowatts (kW) or megawatts (MW), or natural gas measured in British thermal units (BTU), cubic feet, or therms. Fuel, such as gasoline or diesel, is measured in gallons or liters.

ELECTRICITY

Electricity is used primarily for lighting, appliances, cooking, HVAC equipment, and other uses associated with building and vehicle operations. Electricity sources include clean, renewable, and fossil fuels. Clean energy is that which produces little to no greenhouse gas emissions, is generated from renewable sources, or is carbon-free. Nuclear power is an example of clean energy. A renewable energy source is defined as a power source other than a conventional power source (i.e., nuclear energy, large hydropower (> 30 MW) or combustion no fossil fuels).¹³ Examples of renewable energy sources include solar, small hydropower, biomass¹⁴, wind and geothermal.

NATURAL GAS

Natural gas is used primarily for heating, water heating, and cooking and is typically associated with building operations.

FUEL

Fuel is used primarily for powering off-road equipment and vehicles (commercial trucks and other vehicles). The typical fuel types used are diesel and gasoline. In addition, propane fuel is used in parts of Humboldt, particularly in rural areas, for heating and powering appliances.

Electricity Supply

CALIFORNIA

Based on the California Energy Commission (CEC) California Energy Demand 2022-2035 Revised Forecast, Pacific Gas and Electric (PG&E) total energy to serve load¹⁵ for 2023 is 97,285-gigawatt

¹³ CEC. 2017. RPS Eligibility Guidebook, Ninth Edition Revised. <https://efiling.energy.ca.gov/getdocument.aspx?tn=217317> (accessed January 2025)

¹⁴ Biomass is considered renewable if a facility is using fuel that results from "biomass conversion" as defined in Public Resources Code Section 40106 according to the *RPS Eligibility Guidebook, Ninth Edition Revised*.

¹⁵ The total energy to serve load is the total electricity demand for a given forecasted year within a utility service area. This forecast is a benchmark for the utility to have enough electricity to serve total demand.

hour (GWh), and by 2035 will be 115,677 GWh of electricity.¹⁶ The amount of California electricity generation is presented in Table 3.5-3. As shown in Table 3.5-3, 36.56 percent of this electricity was sourced from natural gas, 48.56 percent from renewable sources, 9.34 percent from nuclear, and the remaining 5.54 percent was sourced from coal, oil, other and unspecified sources. Specifically, the 48.56 percent of California's 2022 retail electric sales that were served by renewable resources including wind, solar, geothermal, biomass, small hydroelectric, and large hydroelectric.

Table 3.5-3 California 2023 Total System Electric Generation

Fuel Type	In-State Generation (GWh)	Percent of In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	State Energy Mix (GWh)	State Power Mix
Coal	257	0.12%	163	4,561	4,981	1.77%
Natural Gas	94,192	43.68%	52	8,530	102,774	36.56%
Oil	36	0.02%	0	0	36	0.01%
Other (Waste Heat/Petroleum Coke)	206	0.10%	0	0	206	0.07%
Unspecified	0	0.00%	100	10,273	10,373	3.69%
Total Thermal and Unspecified	94,690	43.91%	316	23,363	118,370	42.10%
Nuclear	17,714	8.22%	196	8,361	26,272	9.34%
Large Hydro	27,066	12.55%	4,712	1,109	32,886	11.70%
Biomass	5,037	2.34%	753	-	5,790	2.06%
Geothermal	10,999	5.10%	221	2,347	13,567	4.83%
Small Hydro	4,853	2.25%	133	2	4,988	1.77%
Solar	41,344	19.17%	417	6,108	47,869	17.03%
Wind	13,920	6.46%	9,177	8,302	31,399	11.17%
Total Non-GHG and Renewable Resources	120,932	56.09%	15,609	26,229	162,771	57.90%
Total Energy	215,623	100.00%	15,925	49,593	281,140	100.00%

GWh = gigawatt-hours

Source: CEC. 2024. California 2023 Total System Electric Generation. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation> (accessed October 2024).

Electricity is distributed through the various electric load-serving entities (LSEs) in California. These entities include investor-owned utilities, publicly owned LSEs, rural electric cooperatives, community choice aggregators, and electric service providers.¹⁷

HUMBOLDT COUNTY (RCAP AREA)

Two electricity providers serve Humboldt County: Pacific Gas and Electric Company (PG&E) and the Redwood Coast Energy Authority (RCEA). RCEA provides clean energy that is 50 to 100 percent carbon free, either sourced entirely from renewable energy (21.5 percent solar, 20.4 percent

¹⁶ CEC. 2023. California Energy Demand Forecast, 2022 - 2035 Baseline Forecast PGE Planning Area. <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2022-integrated-energy-policy-report-update-2> (accessed November 2024).

¹⁷ CEC. 2024. Electric Load-Serving Entities (LSEs) in California. https://www.energy.ca.gov/almanac/electricity_data/utilities.html (accessed October 2024)

biomass and 7 percent wind) or 100 percent renewable (including hydroelectric, solar, and wind).¹⁸ PG&E's default power mix offers 38.3 percent renewable, and they offer customers options for 67 percent or 96.2 percent renewable power mixes.¹⁹ In conjunction with the utility companies, the California Public Utilities Commission (CPUC) is involved in energy conservation programs.

To establish an accurate estimate of county-wide electricity use, PG&E-provided electricity to these communities was estimated using CEC county-wide data as the basis for total Humboldt electricity usage. CEC county-wide data is reported based on residential and nonresidential consumption and includes all electricity end-uses, which includes PG&E-supplied electricity, RCEA-supplied electricity, and direct access. The CEC 2022 electricity usage for Humboldt was 355,284,200 kWh for residential uses, 419,005,700 kWh for nonresidential uses, for a total of 774,289,900 kWh.²⁰

Natural Gas Distribution

CALIFORNIA

According to the CPUC, natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora.²¹ Because natural gas is a dispatchable energy resource that provides load when the availability of hydroelectric power generation and/or other energy sources decrease, distribution varies greatly from year to year. The availability and distribution of hydroelectric-sourced energy, increasing renewable-source energy, and overall consumer demand are the variables that shape the need for natural gas.

HUMBOLDT COUNTY (RCAP AREA)

Humboldt consumed approximately 30.4 million therms of natural gas in 2022 in both residential and non-residential uses.²² PG&E is the natural gas provider for the County.

Fuel Distribution

CALIFORNIA

Petroleum Fuels

Distributors of gasoline include companies or individuals who make the first distribution of gasoline in California. Aircraft manufacturers and certificated or licensed carriers by air may be included within the definition of distributor. Distributors can also be "Brokers," which includes every person, other than a distributor or a retailer, who deals in lots of 200 or more gallons of gasoline. Based on the California Transportation of Petroleum Second Northern California Refinery Safety Forum, output from the refineries is usually placed in intermediate tanks before blending finished products.

¹⁸ RCEA. 2024. 2022 Power Content Label Redwood Coast Energy Authority. <https://www.energy.ca.gov/filebrowser/download/6060> (accessed October 2024)

¹⁹ PG&E. 2024. 2022 Power Content Label Pacific Gas and Electric Company. <https://www.energy.ca.gov/filebrowser/download/6048> (accessed October 2024)

²⁰ Humboldt County. 2024. Draft Humboldt Regional Climate Action Plan, Greenhouse Gas Inventory, Forecast and Targets Report.

²¹ CPUC. 2024. Natural Gas and California. <https://www.cpuc.ca.gov/industries-and-topics/natural-gas/natural-gas-and-california> (accessed October 2024)

²² CEC. 2024. Gas Consumption by County. <http://www.ecdms.energy.ca.gov/gasbycounty.aspx> (accessed October 2024)

Most gasoline is shipped from refinery by pipeline, which serves over 60 distribution terminals, which is then transported to retail and nonretail stations by tanker trucks.²³

Alternative Vehicle Fuels

Various Statewide regulations and plans encourage alternative fuel use to reduce GHG emissions and criteria pollutant emissions. These include the Low Carbon Fuel Standard and SB 32, as well as myriad other Statewide and local air district regulations. Conventional gasoline and diesel may be replaced with different alternative fuels, depending on the capability of the vehicle. Descriptions of the most widely used alternative fuels include the following:

- **Electricity** can power electric and plug-in hybrid electric vehicles directly from the power grid. Generally, these vehicles draw from the electricity grid and store the energy in their batteries. According to the CEC, there are a total of 225 Level 2 electric vehicle charging stations and 50 DC Fast electric vehicle charging stations in Humboldt. ²⁴
- **Biodiesel** is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant grease. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Generally, biodiesel can run in any diesel engine without alterations, but fueling stations have been slow to make it available. There is one biodiesel refueling stations in Eureka and one in Arcata and a total of six within Humboldt County.²⁵
- **Compressed natural gas (CNG) and liquefied natural gas (LNG)** is currently being used in vehicles. CNG is used in light-, medium-, and heavy-duty vehicles and gets about the same fuel economy. LNG is costly to produce and therefore is used in limited applications, typically in medium- and heavy-duty vehicles. There are no CNG stations and no LNG stations within Humboldt County. The nearest CNG station is in the City of Orland or Santa Rosa and the nearest LNG station is in Sacramento.²⁶
- **Hydrogen** is being explored for use in combustion engines and fuel cell electric vehicles. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency: hydrogen is two to three times more efficient than gasoline. The closest station to Humboldt County is in Sacramento or the City of Mill Valley. Fuel cells are being explored as a way to use electricity generated on-board the vehicle to power electric motors. There are not any hydrogen stations in Humboldt County, though a hydrogen station is anticipated to be completed in late 2026 or early 2027. ²⁷

Existing Energy Use

CALIFORNIA

According to the U.S. Energy Information Administration (USEIA), total electricity direct consumption within California in 2022 was 13,052.857 GWh, down 0.004 percent, or 0.55 GWh,

²³ Schremp. 2015. California Transportation of Petroleum: Second Northern California Refinery Safety Forum. <https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Refinery-Documents-2015yr-Petroleum.pdf> (accessed October 2024).

²⁴ CEC. 2025. <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/electric> (accessed October 2024).

²⁵ Ibid.

²⁶ Ibid.

²⁷ Humboldt Transit Authority. 2025. Personal Communication with Jerome Qirazi, Transit Planner. Email.

from 2021.²⁸ In 2023, total California natural gas demand for industrial, residential, commercial, and electric power generation was 2,087,461 million cubic feet per year (MCF/year).²⁹

The main category of fuel use in California is transportation fuel, specifically gasoline and diesel. Gasoline is the most used transportation fuel in California: 97 percent of all gasoline sold in California is consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2022, an estimated 13.6 billion gallons of gasoline were sold (i.e., 37 million gallons of gasoline per day).³⁰ Diesel is the second largest transportation fuel used in California. Many heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction, and heavy-duty military vehicles and equipment have diesel engines. According to the California Annual Retail Fuel Outlet Report Results (CEC-A15), in 2023, 2,016 million gallons of diesel annually (i.e., 5.5 million gallons of diesel per day), including off-road diesel, was sold.³¹

HUMBOLDT COUNTY (RCAP AREA)

As shown in Table 3.5-4, approximately 54 million gallons of transportation fuel were consumed in Humboldt in 2023, of which approximately 42 million gallons were gasoline and approximately 12 million gallons were diesel fuel.³² This equates to approximately 0.15 million gallons of fuel per day or 1.11 gallons of fuel per person per day, based on a 2023 Countywide population of 134,597 people.³³

Table 3.5-4 Transportation Energy Consumption in Humboldt

Fuel Type	2023 Annual Fuel Use (million gallons)	2023 Daily Fuel Use (million gallons)
Gasoline (County)	42	0.12
Diesel (County)	12	0.03
Total (County)	54	0.15

Notes: Btu = British thermal units

Source: CEC. 2024. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting> (accessed October 2024).

3.5.3 Regulatory Framework

Additional regulatory information related to GHG emissions and energy efficiency standards are included throughout the other resource sections including Section 3.9, *Utilities and Service Systems*, which includes discussion of water use efficiency standards, solid waste standards, and wastewater standards, and Section 3.2, *Air Quality*, which includes discussion of air quality-related regulations.

²⁸ USEIA. 2022. California Electricity Profile 2022. <https://www.eia.gov/electricity/state/archive/2022/california/> (accessed October 2024)

²⁹ USEIA. 2022. Natural Gas Consumption by End Use 2023. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_sca_a.htm (accessed October 2024)

³⁰ CEC. 2024. California Gasoline, Data, Facts, and Statistics. <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics> (October 2024)

³¹ CEC. 2024. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting> (accessed October 2024)

³² CEC. 2024. 2010-2023 CEC-A15 Results and Analysis – Diesel Sales by County. <https://www.energy.ca.gov/media/3874> (accessed October 2024)

³³ California Department of Finance (DOF). 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2022 with 2010 Census Benchmark. <https://dof.ca.gov/Forecasting/Demographics/Estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/> (accessed October 2024)

3.5.3.1

Federal Regulations

Clean Air Act (Regulation of GHGs)

The United States Environmental Protection Agency (USEPA) issued an Endangerment Finding under Section 202(a) of the Clean Air Act, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the Clean Air Act. To date, the USEPA has not promulgated regulations on GHG emissions, but it has already begun to develop them.

Federal Fuel Efficiency Standards (CAFE)

Under the Clean Air Act, corporate average fuel economy (CAFE) standards have been set for passenger cars and light trucks. The State of California has traditionally had a waiver to set its own more stringent fuel efficiency standards. However, on August 2, 2018, the NHTSA and USEPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). This rule addresses emissions and fuel economy standards for motor vehicles and is separated in two parts as described below.

- Part One, “One National Program” (84 FR 51310) revokes a waiver granted by USEPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by USEPA for the explicit purpose of GHG reduction, and indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, potentially restricting the ability of CARB to enforce more stringent GHG emission standards for new vehicles and set zero emission vehicle mandates in California.
- Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021 to 2026. This rulemaking proposes new CAFE standards for model years 2022 through 2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026. The proposal addressing CAFE standards was jointly developed by NHTSA and USEPA, with USEPA simultaneously proposing tailpipe CO₂ standards for the same vehicles covered by the same model years.

Construction Equipment Fuel Efficiency Standard

USEPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower (hp) and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 hp and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015.

U.S. Consolidated Appropriations Act (Mandatory GHG Reporting)

The Consolidated Appropriations Act, passed in December 2007, required the establishment of mandatory GHG reporting requirements. In September 2009, the USEPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to USEPA. The first annual reports for the largest emitting facilities, covering calendar year 2010, were submitted to USEPA in 2011.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (NHTSA), a part of the United States Department of Transportation (USDOT), for establishing and regularly updating vehicle standards. USEPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 30.7 mpg for the 2014 model year and can increase to 54.5 by 2025.

National Energy Policy Act of 1992

The National Energy Policy Act of 1992 (EPACT92) calls for programs that promote efficiency and the use of alternative fuels. EPACT92 requires certain federal, state, and local governments and private operators to stock vehicle fleets with a percentage of light duty alternative fuel vehicles each year. In addition, EPACT92 has financial incentives: federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of alternative fuel vehicles. EPACT92 also requires states to consider a variety of incentive programs to help promote alternative fuel vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels

- Reduces United States demand for oil by setting a national fuel economy standard of 35 miles per gallon (mpg) by 2020 – an increase in fuel economy standards of 40 percent

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 USC Section 17001 et seq.

Energy Star Program

In 1992, USEPA introduced Energy Star® as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star® label. In 1996, USEPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, as well as homes.³⁴

State Regulations

Assembly Bill 1493 (Pavley Regulations and Fuel Efficiency Standards)

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as Pavley), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the USEPA granted the waiver of CAA preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the USEPA. Pavley I regulates model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

Assembly Bill 32 (Global Warming Solutions Act and Scoping Plan)

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 Statewide GHG level and 2020 limit of 427 million MTCO₂e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

³⁴ Energy Star. 2024. Our History. <https://www.energystar.gov/about/how-energy-star-works/history> (accessed October 2024).

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan Update defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 Statewide goals. The 2013 Scoping Plan Update highlighted California's progress toward meeting the 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use. The State of California achieved its 2020 GHG emission reduction targets in 2016, and emissions have subsequently fallen further in 2018 to 425 MMTCO₂e.

Senate Bill 32 (Global Warming Solutions Act and Scoping Plan Extension)

Senate Bill (SB) 32 signed into law on September 8, 2016, tightens the requirements of AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies, such as SB 350 and SB 1383. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, it recommends that local governments adopt policies consistent with statewide per capita goals of 6 MTCO₂e by 2030 and 2 MTCO₂e by 2050. As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level).

AB 1279 (California Climate Crisis Act and Scoping Plan Extension)

The California Climate Crisis Act (AB 1279), signed into law on September 16, 2022, requires the State to achieve and maintain net zero GHG emissions as soon as possible, but not later than 2045. The Climate Crisis Act also requires the State to reduce Statewide anthropogenic GHG emissions to 85 percent below the 1990 levels by 2045. Updates to the scoping plan are required to identify and recommend measures to achieve these goals and identify and implement policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in the State.

On November 16, 2022, CARB also adopted the 2022 Scoping Plan, which provides a framework for achieving targets for carbon neutrality and reducing anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The 2022 Scoping Plan relies on significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. HCAOG was not assigned regional targets under SB 375.

Senate Bill 1383

Adopted in September 2016, SB 1383 (Lara, Chapter 395, Statutes of 2016) requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- CH₄ – 40 percent below 2013 levels
- HFCs – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery, in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

California Code of Regulations Title 24 (California Building Code)

Updated every three years, Title 24 of the California Code of Regulations requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code). The California Building Code is applicable to all development in California. (Health and Safety Code Sections 17950 and 18938(b).) The regulations receive input from members of industry, as well as the public, with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (Pub. Res. Code Section 25402.) These regulations are scrutinized and analyzed for technological and economic feasibility (Pub. Res. Code Section 25402(d)) and cost effectiveness (Pub. Res. Code § 25402(b)(2) and (b)(3)).

PART 6 – BUILDING ENERGY EFFICIENCY STANDARDS/ENERGY CODE

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The current iteration is the 2022 Title 24 standards.

The 2022 Standards build on California's technology innovations, encouraging energy efficient approaches to encourage building decarbonization, emphasizing in particular on heat pumps for space heating and water heating. This set of Energy Codes also extends the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combinations with heat pumps to enable California buildings to be responsive to climate change. This also strengthens ventilation standards to improve indoor air quality. This update provides crucial steps in the state's progress toward 100 percent clean carbon neutrality.

The 2022 Standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (there are 16 in California) and building type; thus, the Energy Code are tailored to local conditions and provide flexibility in how energy efficiency in buildings can be achieved. Finally, the third set constitutes an alternative to the performance

standards, which is a set of prescriptive packages that provide a recipe or a checklist compliance approach.

PART 11 – CALIFORNIA GREEN BUILDING STANDARDS

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective on January 1, 2011 (as part of the 2010 California Building Standards Code). The 2022 CALGreen includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures. It also includes voluntary tiers with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The mandatory standards require:

- Minimum 20 percent reduction in indoor water use relative to specified baseline levels;³⁵
- Waste Reduction:
 - Minimum 65 percent non-hazardous construction/demolition waste diverted from landfills;
 - Non-residential and Multifamily dwellings with 5 or more units shall provide readily accessible areas identified for the depositing, storage and collection of nonhazardous materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastic, organic waste, and metals;
 - Nonresidential: 100 percent of trees, stumps, rocks and associated vegetation soils resulting from primary land clearing shall be reused or recycled.
- Inspections of energy systems to ensure optimal working efficiency;
- Electric Vehicle (EV) Charging for New Construction:³⁶
 - Multifamily dwellings, hotels/motels with less than 20 units/rooms: Designation of at least 10 percent of the total number of parking spaces shall be EV capable and at least 25 percent of the total number of parking spaces shall be EV Ready.
 - Multifamily dwellings, hotels/motels with greater than 20 units/rooms: Designation of at least 10 percent of the total number of parking spaces shall be EV capable, at least 25 percent of the total number of parking spaces shall be EV Ready, and at least 5 percent of the total number of parking spaces shall be equipped with a Level 2 Charging Station.

The CALGreen voluntary standards are only mandatory if a local ordinance requires them. Since the County has not made any of the voluntary measures mandatory, the following voluntary standards may not be applicable to the RCAP³⁷:

- Deconstruct existing buildings and reuse applicable salvaged materials;

³⁵ Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

³⁶ EV Capable = a vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways to support EV charging. EV Ready = a vehicle space which is provided with a branch circuit and any necessary raceways to accommodate EV charging stations including a receptacle for future installation of a charger. See 2022 California Green Building Standard Code, Title 24 Part 11 for full explanation of mandatory measures including exceptions.

³⁷ The individual cities may require the CALGreen voluntary standards by ordinance.

- **Residential Bicycle Parking:**
 - Multifamily/hotel/motel short-term parking: Provide permanently anchored bicycle racks within 100 feet of visitor's entrance for 5 percent of visitor motorized vehicle parking capacity (minimum 1 two-bike capacity rack).

The CALGreen voluntary standards are divided into two tiers. Tier 1 adds additional requirements beyond the mandatory measures, whereas Tier 2 further increases the requirements.

- **Tier I**
 - Stricter energy efficiency requirements;
 - Stricter water conservation requirements for specific fixtures;
 - Minimum 65 percent reduction in construction waste with third-party verification, Minimum 10 percent recycled content for building materials;
 - Minimum 20 percent permeable paving;
 - Minimum 20 percent cement reduction;
 - Multifamily developments/hotels/motels: Minimum 35 percent of total parking spaces shall be EV ready and for projects with 20 or more dwelling units/rooms a minimum of 10 percent of the total number of parking spaces shall be equipped with EV charging stations;
- **Tier II**
 - Stricter energy efficiency requirements,
 - Stricter water conservation requirements for specific fixtures;
 - Minimum 75 percent reduction in construction waste with third-party verification,
 - Minimum 15 percent recycled content for building materials;
 - Minimum 30 percent permeable paving;
 - Minimum 25 percent cement reduction;
 - Multifamily developments/hotels/motels: Minimum 40 percent of total parking spaces shall be EV ready and for projects with 20 or more dwelling units/rooms a minimum of 15 percent of the total number of parking spaces shall be equipped with EV charging stations.

Assembly Bill 341/Assembly Bill 1826 (Mandatory Recycling/Composting)

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows diversion away from landfills of 75 percent of all solid waste by 2020 and annually thereafter. AB 1826 requires recycling of organic waste (i.e., composting). All businesses and public entities that generate four or more cubic yards of solid waste per week and multi-family residential dwellings that have five or more units are required to recycle and compost.

Senate Bills 350 & 100 (Renewable Portfolio/Clean Energy & Pollution Reduction Act)

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency in existing buildings by 2030.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was last

updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

Assembly Bill 1007 (State Alternative Fuels Plan)

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a State plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other federal, State, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-State production of biofuels without causing a significant degradation of public health and environmental quality.

CARB In-Use On-Road and Off-Road Diesel Rules

The CARB rule imposes limits on idling, restricts the addition of older vehicles, and requires the retirement or replacement of older engines depending on their fleet size category. This policy indirectly impacts energy consumption. More specifically, CARB is also charged with developing air pollution control regulations based upon the best available control measures and implementing feasible control measures under the State and Federal Clean Air Act. (Health & Saf. Code, Sections 39602.5, 39667, 43013, subds. (a) and (h), 43018, 40600, 40601, 40612(a)(2) and (c)(1)(A).) Pursuant to these statutory authorities, more stringent emission standards were adopted in 2004 for off-road construction equipment (i.e. "Tier 4" standards) (40 Code of Federal Regulations Parts 1039, 1065, and 1068; Cal. Code Regs., tit. 13, Section 2025; AR 2854). CARB also adopted emission standards for on-road heavy duty diesel vehicles (i.e. haul trucks). (Cal. Code Regs., tit. 13, Section 1956.8.) These haul truck regulations mandate fleet turn-over to ensure that by January 1, 2023 nearly all on-road diesel trucks will have 2010 model year engines or equivalent [i.e. Tier 4]. In addition, interim steps are incorporated into the regulations (e.g., vehicles older than 1999 will be replaced with newer engines by 2020).

California Advanced Clean Trucks Program

In June 2020, CARB approved the Advanced Clean Trucks regulation, which requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. In addition, the regulation requires company and fleet reporting for large employers and fleet owners with 50 or more trucks. By 2045, all new trucks sold in California must be zero-emission. Implementation of this regulation would reduce consumption of nonrenewable transportation fuels as trucks transition to alternative fuel sources.

California Advanced Clean Fleets Regulation

In April 2023, CARB approved the Advanced Clean Fleets (ACF) regulation. The ACF regulation is part of California's strategy to accelerate the adoption of medium- and heavy-duty zero-emission vehicles (ZEVs). It complements the Advanced Clean Trucks ACT regulation and aims to achieve public health, air quality, and climate goals. The ACF regulation applies to fleets performing drayage operations, those owned by State, local, and federal government agencies, and high priority fleets.

The ACF regulation includes components such as a manufacturer sales mandate, drayage fleet registrations, requirements for drayage fleets to transition to zero-emission vehicles, and mandates for high priority and government fleets to purchase increasing percentages of ZEVs over time. The regulation provides flexibility and exemptions for cases where zero-emission trucks are not yet available. The ACF regulation is expected to significantly increase the number of ZEVs on California roads, leading to emissions reductions and health benefits. The Advanced Clean Trucks and ACF regulations together are expected to result in about 510,000, 1,350,000, and 1,690,000 ZEVs in California in 2035, 2045, and 2050, respectively.

Executive Order B-48-18 (Zero-Emission Vehicles)

On January 26, 2018, Governor Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

Executive Order N-79-20 (Zero Emissions Vehicles Sales)

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the State will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the State to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

Senate Bill 1020

Senate Bill 1020 (SB 1020), signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. All State agencies facilities must be served by 100 percent renewable and zero-carbon resources by 2030. SB 1020 also requires the Public Utilities Commission, Energy Commission, and CARB to issue a joint progress report outlining the reliability of the electrical grid with a focus on summer reliability and challenges and gaps. Additionally, SB 1020 requires the Public Utilities Commission to define energy affordability and use energy affordability metrics to develop protections, incentives, discounts, or new programs for residential customers facing hardships due to energy or gas bills.

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act established a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields.

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

CARB Gas Appliances Sales Ban

As part of the 2022 State Implementation Plan, CARB adopted a ban on new sales of natural gas heaters, water heaters, and furnaces by 2030. This new measure is intended to reduce emissions from new residential and commercial space and water heaters sold in the State. An emission standard for space and water heaters will go into effect in 2030. Beginning in 2030, 100 percent of the sales of new natural gas-powered heaters and water heaters would need to comply with the emission standard, such as putting in electric heaters or other zero-emission options.

Assembly Bill 2076 (Reducing Dependence on Petroleum)

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and CARB prepared and adopted a joint-agency report, *Reducing California's Petroleum Dependence*, in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Senate Bill 1389 (Integrated Energy Policy Report)

Senate Bill 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent assessment, the 2024 *Integrated Energy Policy Report*, highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy and provides more detail on

several key energy policies, including decarbonizing buildings, increasing energy efficiency savings, and integrating more renewable energy into the electricity system.³⁸

Regional and Local Regulations

North Coast Unified Air Quality Management District Regulation VII, Greenhouse Gas Mitigation & Control

NCUAQMD Regulation VII includes GHG control measures for methane emissions generated by municipal solid waste landfills, as well as emission of refrigerants from stationary, non-residential refrigeration equipment and from the installation and servicing of stationary refrigeration and air-conditioning appliances.³⁹ NCUAQMD does not recommend any thresholds of significance for evaluating GHG emitted for individual projects (or plan-level analyses). In its brief CEQA guidance, NCUAQMD states that the thresholds used for determining whether NSR and federal Title V permitting applies to a stationary source “should not be used as a [CEQA] threshold of significance for stationary source projects”.⁴⁰

Redwood Coast Energy Authority (RCEA) Repower Humboldt Action Plan for Energy

The RCEA 2019 Update to the Comprehensive Action Plan for Energy (also known as “RePower Humboldt”) is a plan focused on the development and implementation of sustainable energy initiatives in Humboldt. RCEA will help address Humboldt’s supply-side energy needs through its existing Community Choice Energy (CCE) program and development of new programs and initiatives. RePower Humboldt includes the following goals:

- By 2025: 100 percent of RCEA’s power mix will be from a combination of State-designated renewable energy sources (solar, wind, biomass, small hydroelectric, and geothermal) and state-designated net-zero-carbon-emission existing large hydroelectric facilities.
- By 2030: Humboldt County will be a net exporter of renewable electricity and the RCEA power mix will consist of 100 percent net-zero-carbon-emission renewable sources.

Humboldt County General Plan, Air Quality Element

The 2017 Humboldt County General Plan includes policies applicable to GHG emissions and energy use. The policies identified are intended to support the goals of improving air quality, reducing GHG emissions, reducing energy consumption, and increasing the production of renewable energy. Relevant policies include:⁴¹

- **AQ-P1. Reduce Length and Frequency of Vehicle Trips.** Reduce the length and frequency of vehicle trips through land use and transportation policies by encouraging mixed-use development, compact development patterns in areas served by public transit, and active modes of travel.
- **AQ-P8. Reduce Air Quality Impacts from Wildfires.** Support and encourage fire suppression of wildfires that may have an acute air quality health impact on local population centers.

³⁸ California Energy Commission. 2024. 2024 Integrated Energy Policy Report Update. <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2024-integrated-energy-policy-report-update> (accessed October 2024)

³⁹ NCUAQMD. 2024c. Rules & Regulations. <https://ncuaqmd.org/rules-regulations> (accessed October 2024)

⁴⁰ NCUAQMD. 2024b. Planning & CEQA. <https://www.ncuaqmd.org/planning-ceqa> (accessed October 2024)

⁴¹ Humboldt County. 2017. General Plan, Chapter 15 Air Quality Element. <https://humboldt.gov/DocumentCenter/View/61991/Chapter-15-Air-Quality-Element-PDF> (accessed October 2024)

- **AQ-P9. County Climate Action Plan.** Through public input and review, develop and implement a multi-jurisdictional Climate Action Plan to achieve reductions in greenhouse gas emissions consistent with the state Global Warming Solutions Act and subsequent implementing legislation and regulations.
- **AQ-P13. Forest Sequestration and Biomass Energy.** Provide incentives for increased carbon sequestration on forest lands and encourage the reduction of smoke production through the utilization of excess forest biomass for sustainable energy generation and other uses.
- **AQ-P14. Solar Electric System Capacity.** Encourage and provide incentives to increase solar-electric capacity in residential, commercial, and industrial sectors.
- **AQ-P15. Energy Efficient Building Design.** Encourage and provide incentives for construction of buildings and energy saving measures beyond Title 24 requirements for residential and commercial projects.
- **AQ-P16. Electric Vehicle Accommodations.** Encourage and provide incentives for commercial and residential design that supports the charging of electric vehicles.

City of Arcata General Plan

The City of Arcata General Plan includes guiding principles and goals to promote clean air. The Circulation and Mobility Element has policies to support a “car-free lifestyle” with a goal to reduce GHG emissions. Policy AQ-2 under the Air Quality Element has multiple objectives to reduce mobile source emissions, including GHG emissions. Implementation Measure AQ-4 is the adoption of a Climate Action Plan to collaborate regionally. The City of Arcata General Plan also includes goals to reduce energy usage through conservation and efficiency practices, reduce energy costs to the city and its residents, and increase the percentage of energy purchased from renewable sources. The specific relevant policies are as follows:⁴²

- **AQ-2a Implement land use measures to reduce vehicle trips, miles traveled, and air pollutant emissions.** Implement or encourage the land use and development measures which reduce motor vehicle travel as outlined in the Transportation Element. These measures are also effective in reducing mobile sources of air pollutants.
- **AQ-2b Implement transportation measures to reduce vehicle trips, miles traveled, and air pollutant emissions.** Implement or encourage the following measures to reduce vehicle miles traveled and provide alternatives to the single occupant motor vehicle, as outlined in the Circulation & Mobility Element.
- **AQ-3e Greenhouse gas reduction.** Many of the chemicals of concern for air quality are also greenhouse gases. The City shall work locally and regionally to develop plans and programs to reduce or reverse greenhouse gas emissions to meet State and Federal greenhouse gas reduction goals.
- **CM-1j Mobility infrastructure that supports a car-free lifestyle.** Plan and implement the mobility and circulation infrastructure to support a car-free lifestyle, increase pedestrian safety, reduce greenhouse gas emissions, and minimize vehicle miles traveled.
- **CM-2a Land use development patterns.** The City encourages and supports travel demand management efforts. The City shall promote land use and development patterns that encourage walking, bicycling and transit use. In recognition of the link between land use and transportation, the land use plan shall discourage low density, homogenous land-use patterns

⁴² Arcata, City of. 2024. Arcata General Plan 2045. Adopted July 17, 2024.

https://www.cityofarcata.org/DocumentCenter/View/14362/General-Plan-204520240717_CI_WEB (accessed October 2024)

that foster automobile travel and are impractical to serve with transit. Land use planning shall emphasize high density and mixed land-use patterns that translate into higher transit and pedestrian travel in the downtown and neighborhood commercial areas. Infill, redevelopment, and reuse of underutilized property at higher densities shall be encouraged prior to outward expansion of City boundaries.

- **Policy CM-5 Bicycle and Pedestrian Facilities.** Create a complete, interconnected bikeway system and pedestrian network. Increase the percentages of person trips via walking and bicycling, which serves the full range of mobility needs.
- **PF-6f Energy conservation and decarbonization of City facilities.** Continue reducing City facility energy consumption, including conservation and weatherization measures exceeding building code standards, electric only appliances, HVAC, water heating systems and renewable energy sources. Consider Greenhouse Gas Reduction measures in all new facility, renovations, site design and connectivity decisions. Develop and implement City practices to increase electrification equity and affordability for all residents.
- **PS-8a Land use and urban development.** Compact urban development has co-beneficial climatic effects, including reducing greenhouse gases, preserving habitats, producing healthy vibrant communities, and facilitating opportunities for environmental justice. The City shall support land use activities that promote compact, climate-friendly design, such as infill development, densification, and regenerative building design. City projects and private developments shall be designed to consider multi-benefit solutions that mitigate hazard risk and support the City's climate goals. Urban design and development will be informed by the latest climate science to determine how to best protect and modify existing public and private infrastructure and assets and how to design new infrastructure and assets. Urban design and development should also take environmental justice considerations into account, working to eliminate disparities and burdens related to all hazards and the climate crisis for all people in Arcata.
- **PS-8b Greenhouse gas reduction.** City actions shall reduce local contributions towards climate change by mitigating greenhouse gases and increasing carbon sequestration. The City shall update relevant plans and policies periodically to meet State and local climate goals.
 - Encourage reduction in greenhouse gas emissions, by providing alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively fueled vehicles, bicycle and pedestrian routes, and bicycle- and pedestrian-friendly development design.
 - Encourage and facilitate investments in renewable energy and green technology.
 - Prioritize nature-based solutions that restore ecosystem function and maximize ecological benefits to plants, animals, and people.
- **PS-8c Regional collaboration.** The City shall continue to participate in regional multi-agency efforts to coordinate climate mitigation and adaptation and ensure Arcata becomes more resilient to the threats of climate change.
- **LU-4g Energy development, production, and use.** The City of Arcata recognizes the national need for the responsible exploration, recovery, and processing of the country's energy resources. The City also recognizes the potential adverse impacts such activities may have. Petroleum extraction is of particular concern on the North Coast. On- or offshore petroleum extraction will result in negative impacts on the climate and our coastal scenic resources, as well as our sensitive land and marine environments. Therefore, the City finds that, in order to minimize adverse impacts to such resources, on- and off-shore petroleum product exploration,

recovery, and processing should be confined to those geographic areas which now accommodate these uses and activities. Consistent with this policy, the City shall prohibit on-shore petroleum exploration, production, and processing within its boundaries, and shall oppose the use of off-shore areas south and west of Arcata and in Humboldt County in general for such uses.

- **RC-8a Encouragement of appropriate energy alternatives.** The City will participate in Redwood Coast Energy Authority's Community Choice Energy (CCE) program, supporting renewable energy purchases over non-renewable sources.
- **RC-8b Encouragement of energy efficiency and conservation.** The City shall disseminate Redwood Coast Energy Authority information to educate residents, property owners, and business operators about the need for and benefits of conserving energy. This includes information about building insulation; energy efficient appliances, lighting, and heating; other conservation measures and materials; and home power alternatives. The City shall continuously seek and implement cost-effective steps to reduce City energy use. The City shall adopt national "Energy Star Program" goals (or its successor programs) for all City construction projects and all construction projects assisted by grants for which the City is an applicant. These goals include achieving a minimum of 15% greater energy efficiency than would a building designed with existing Title 24 standards. Explore and, if appropriate, adopt energy efficiency standards for existing residential and commercial buildings upon substantial remodel. Consider requiring energy efficiency inspections, disclosure, and retrofits at change of ownership based on cost effective and commercially available energy efficiency measures.
- **RC-8c Promotion of energy efficiency in transportation.** Reduce motor vehicle trips within the city and between the city and other destinations and reduce per-trip energy consumption; this policy applies to trips by residents, non-residents, and city staff. Such measures as bike and pedestrian paths, public transportation, shared parking, and alternative-fueled vehicles shall be used to make these reductions.
- **RC-8d Restoration for Greenhouse Gases Absorption.** Foster and restore forests and other terrestrial ecosystems that offer significant carbon mitigation potential, consistent with the Humboldt County Climate Action Plan.
- **RC-8e City Electrification Ordinance.** Prepare and pass an 'all electric' Ordinance that phases out natural gas infrastructure and use.

City of Arcata Community GHG Reduction Plan

The City of Arcata's Community GHG Reduction Plan was developed and adopted in 2006, which identified six action areas to change energy usage to reduce community wide GHG emissions. These six action areas included energy efficiency, renewable energy, sustainable transportation, waste and consumption reduction, carbon sequestration and other methods, and cross-cutting approaches.⁴³ The plan outlined goals and strategies for achieving the 2010 targets identified.

City of Blue Lake General Plan

The City of Blue Lake General Plan includes goals for population density and energy efficiency that may have an effect of reducing GHG emissions and energy use. The only Blue Lake General Plan policy directly relevant to GHG emissions and energy use is as follows:

⁴³ Arcata, City of. 2006. Community GHG Reduction Plan. <https://www.cityofarcata.org/DocumentCenter/View/315/Community-Greenhouse-Gas-Reduction-Plan-PDF?bidId=> (accessed January 2025).

- Policy 6: The provision of energy conserving measures and materials shall be encouraged for all new residential development and rehabilitation.

According to the Blue Lake General Plan, the City encourages energy conservation by:⁴⁴

1. Reviewing site plans and subdivision designs for solar access;
2. Requires compliance with State energy conservation standards; and
3. Suggests and supports "solar design" through the Design Review process.

City of Eureka General Plan

The City of Eureka 2040 General Plan was adopted in 2018 and contains an air quality section with goals that relate to GHG emissions. The GHG emissions policies are as follows:⁴⁵

- **AQ-1.1 Regional Coordination.** Cooperate with the North Coast Unified Air Quality Management District, Redwood Coast Energy Authority, and other agencies to develop a consistent and effective approach to air quality planning and management, as well as to reduce greenhouse gas emissions and air quality impacts in the region.
- **AQ-1.2 GHG Reduction.** Continue to work with Redwood Coast Energy Authority to implement appropriate measures to reduce regional greenhouse gas emissions in Eureka, such as incentivizing the use of alternative energy sources, and periodically update the City's greenhouse gas inventory and reduction plan, consistent with State reduction targets and regulations.
- **AQ-1.3 New Development.** Require new discretionary developments to incorporate mitigation measures that utilize Best Management Practices and reduce emissions from both construction and operational activities, consistent with the North Coast Unified Air Quality Management District requirements and State regulations.
- **AQ-1.4 Off-Street Parking.** Encourage and incentivize premium parking spaces for carpool, vanpool, and alternative energy vehicles, and encourage the development and addition of electric vehicle charging stations in parking lots.
- **AQ-1.7 Large Employers.** Encourage large employers to allow for flexibility in the work schedule that would reduce emissions of air pollutants, such as more alternative schedules and telecommuting, in addition to providing incentives for non-single occupancy vehicle commuting modes including public transit, electric vehicles, carpooling, and non-motorized transportation.
- **AQ-1.9 Transit Funding.** Strive to secure adequate funding for transit, autonomous vehicle, mobility on-demand, and ridesharing services to provide viable transportation alternatives to help reduce greenhouse gas emissions. Require new development to contribute its fair share of the transit service costs to serve new projects.
- **AQ-1.10 Non-Motorized Transportation.** Continue to plan for and secure adequate funding for interjurisdictional non-motorized transportation facilities to help reduce greenhouse gas emissions.
- **AQ-1.11 City Employee Incentives.** Explore incentives for City employees to promote and utilize alternative modes of transportation, such as public transit, carpooling, walking, bicycling, and telecommuting.

⁴⁴ Blue Lake, City of. 1986. General Plan. https://bluelake.ca.gov/wp-content/uploads/2022/05/General-Plan_updated_2009-_10-24-11.pdf (accessed October 2024).

⁴⁵ Eureka, City of. 2018. 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/3253/Final-Draft-2040-General-Plan> (accessed October 2024)

- **AQ-1.12 City Vehicle Fleet.** Continue to purchase low-emission and zero-emission vehicles for the City's non-emergency fleet and use only clean fuel sources for trucks and heavy equipment, where feasible.
- **AQ-1.13 Reducing the City's Operation Emissions.** Continue to promote strategies aimed at lowering the City's operation emissions, including exploring the feasibility of purchasing 100% renewable power through a Community Choice Aggregation program.
- **AQ-1.14 Education and Outreach.** Provide educational opportunities, and assist in engaging with the public regarding air quality, its health impacts, and potential actions that people can take to improve air quality and minimize greenhouse gas emissions.
- **U-2.7 Best Management Practices.** Identify and implement, where feasible, best practices and technologies for wastewater collection and treatment, including strategies that reduce wastewater demand, maintain maximum energy efficiency, and reduce costs and greenhouse gas emissions.
- **U-4.6 Recycling for Residential Uses.** Continue to encourage residential uses to increase the solid waste diversion from landfills through participation in recycling programs and organic waste diversion, consistent with State-mandated diversion goals and the City's goals to reduce greenhouse gas emissions.
- **U-5.5 Renewable Energy.** Encourage new development to install renewable energy systems and facilities (e.g., solar and wind energies) consistent with the City's greenhouse gas emission reduction goals.
- **U-5.6 Community Energy Efficiency.** Identify and promote programs, funding opportunities, and rebates from utility providers to increase energy conservation in existing buildings and require new buildings to implement additional energy efficient measures that are consistent with the City's greenhouse gas emission reduction goals.
- **U-5.8 City Energy Efficiency.** Promote energy conservation for all City-owned facilities, vehicles, and equipment, and implement additional energy efficient measures that are consistent with the City's goal of reducing greenhouse gas emissions.
- **U-5.11 Energy Education and Outreach.** Encourage a public understanding of the importance of renewable energy and energy efficiency through partnerships with energy-related organizations.

City of Fortuna General Plan

The City of Fortuna General Plan was adopted in October 2010. Goal HS-3 is designed to improve air quality and minimize adverse effects. The General Plan also includes policies to improve energy efficiency. The following policies are intended to help support GHG reductions and energy efficiency:⁴⁶

- **HS-3.5 Restoration for Greenhouse Gases Absorption.** Foster and restore forests and other terrestrial ecosystems that offer significant carbon mitigation potential.
- **HS-3.6 Greenhouse Gas Emissions Reduction from Transportation.** Increase clean-fuel use, promote transit-oriented development and alternative modes of transportation, and reduce travel demand.

⁴⁶ Fortuna, City of. 2010. Fortuna General Plan 2030.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed October 2024).

- **H-5.2** Actively enforce new state construction standards for energy efficiency.
- **H-6.3** Encourage the use of solar energy within the City.
- **NCR-6.1 Site Design Standards.** The City shall strive to incorporate cost-effective, energy-efficient construction techniques and materials.
- **NCR-6.2 New Development Requirements.** The City shall encourage new residential and commercial development to be pre-wired to accept electricity generated on-site from solar panels, wind generators, or other means and plumbed for the future installation of hot water panels.
- **NCR-6.4 Energy Education and Training.** The City shall support the Redwood Coast Energy Authority (RCEA) in its effort to provide community education on energy issues, including the benefits of reduced energy consumption and increased energy efficiency. This includes collaborating with schools and colleges on energy-related research, education, and management practices.
- **NCR-6.5 Solar Access.** The City shall encourage maximized solar access (active and passive) in site planning and design. Where possible, lots and buildings in subdivisions and new development should be oriented and designed to maximize and protect solar exposure.
- **NCR-6.7 Energy Star® Equipment.** The City shall purchase or operate Energy Star® electrical equipment (considering life-cycle costs) to follow principles of energy-efficient source reduction and resource recovery for its own operations and promote these principles in the community.
- **NCR-6.8 Energy Audits.** The City shall coordinate with the RCEA to encourage property owners to conduct energy audits.
- **NCR-6.9 Retrofitting for Energy Efficiency.** The City shall promote retrofitting of existing energy-inefficient buildings to meet or exceed the most-current energy efficiency standards (i.e., LEED certification).
- **NCR-6.10 Energy Recovery Systems.** The City shall require, whenever economically and physically feasible, the use of energy recovery systems in projects greater than one single-family residential unit.
- **NCR-6.13 Public Information and Education.** Continue to provide information, marketing, training, and education to support energy efficiency and energy conservation.
- **NCR-6.14 Explore Energy Efficiency Standards for Existing Buildings.** Explore and, if appropriate, adopt energy efficiency standards for existing residential and commercial buildings upon substantial remodel.
- **PFS-7.1 Energy Conservation.** The City shall require that new construction take advantage of energy conservation techniques and that buildings are oriented and designed to take advantage of solar heating.
- **PFS-7.2 Renewable Energy.** The City shall support the use of renewable energy sources, such as solar, in residential, commercial, and industrial developments and municipal facilities.
- **PFS-7.7 Alternative Energy Sources.** The City shall encourage the use of alternative energy technologies as they become commercially available and demonstrate reduced operating costs throughout the life cycle of the technology.

City of Rio Dell General Plan

The City of Rio Dell 2015 General Plan contains Policies P1.2.3-1 and P1.2.3-2 to establish emissions reductions plans for mobile, point, and area sources in the City. Policies P1.2.5-1 through P1.2.5-3

support energy conservation education and require new construction to comply with energy efficiency codes. Relevant policies are provided below:⁴⁷

- **P1.2.3-1** Establish review procedures for development proposals to ensure that mobile, point, and area sources of air emissions are reduced to the greatest extent possible.
- **P1.2.3-2** Reduce emissions from stationary sources by limiting wood-burning fireplace installations in new construction to low emitting, State and EPA certified fireplace inserts, woodstoves, pellet stoves, or natural gas fire stoves.
- **P1.2.5-1** Coordinate with energy suppliers and agencies to educate residents, property owners, and business operators about the need for and benefits of conserving energy.
- **P1.2.5-2** Maintain and distribute current information about building insulation, energy efficient appliances, lighting, and heating; other conservation measures and materials; and home power alternatives.
- **P1.2.5-3** Require that new construction and retrofits comply with energy efficient construction codes including high-energy windows, water heaters, and furnaces, to reduce energy consumption.

City of Trinidad General Plan

The City of Trinidad General Plan does not contain any policies specific to GHG emissions and energy.

3.5.4 Impacts and Mitigation Measures

3.5.4.1

Significance Criteria

The County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to GHG Emissions and Energy.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?
- c) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- d) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Approach to Analysis

GHG Emissions

At this time, the pace, location, and duration associated with constructing projects permitted by the proposed plan are not sufficiently detailed to quantify construction emissions, and, thus, it would be

⁴⁷ Rio Dell, City of. 2015. City of Rio Dell General Plan.
https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf
(accessed October 2024)

speculative to do so. Rather, construction GHG emissions impacts for the RCAP are discussed qualitatively. The long-term operational emissions associated with implementation of the proposed plan are also discussed qualitatively. The qualitative discussion of GHG emissions associated with implementation of the RCAP is performed by comparing the proposed plan to the CARB 2022 Scoping Plan. In addition, the proposed plan is qualitatively compared to other applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

Energy

Energy consumption is analyzed herein in terms of construction and operational energy. Construction energy demand accounts for anticipated energy consumption during construction of projects and infrastructure facilitated by the proposed plan, such as fuel consumed by construction equipment and construction workers' vehicles traveling to and from the construction site. Operational energy demand accounts for the anticipated energy consumption during operation of the projects and infrastructure facilitated by the proposed plan, such as fuel consumed by cars, trucks, and public transit; natural gas consumed for on-site power generation; and electricity consumed for renewable energy generation, EV charging/transmission, public transit/active transportation, and other RCAP-related power needs. This analysis considers the equipment and processes employed during construction and operation of projects and infrastructure facilitated under the RCAP to qualitatively determine whether energy consumed during construction and operation would be wasteful, inefficient, or unnecessary. In addition, the proposed plan is qualitatively compared to applicable plans adopted for the purpose of reducing non-renewable and overall energy consumption.

EIR Scoping Comments Consideration

This section also addresses comments received in response to the EIR NOP related to the analysis and impact of GHG emissions with implementation of the RCAP (see Table 1-1 in Chapter 1.0, *Introduction*). Specifically, comments were related to the promotion and implementation of biofuels (like renewable diesel) and the potential resulting GHG emissions (like from new VMT) associated with those types of activities. These topics are addressed under Impacts GHG-1 and GHG-2.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to GHG emissions and energy. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to GHG emissions and energy in Humboldt.

Specific Thresholds of Significance

GHG Emissions Generation

Individual projects do not generate sufficient GHG emissions to influence climate change directly. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a plan or project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section

15064[h][1]). The NCUAQMD does not have an adopted GHG emissions significance threshold for individual projects or plan-level documents. Therefore, the RCAP is analyzed qualitatively for its ability to result in substantial GHG emissions and for consistency with applicable plans to reduce GHG emissions, with the primary plans being the CARB 2022 Scoping Plan, the Humboldt County General Plan, and the individual City General Plans. If the RCAP is not consistent with these plans, it could be considered to have an incremental significant impact on GHG emissions.

Energy

Humboldt County does not have quantitative thresholds for evaluation of energy; however, the following qualitative thresholds are used to evaluate the significance of energy impacts resulting from implementation of the proposed plan if it would:

- Result in a wasteful, inefficient, and unnecessary consumption of energy during construction and operational activities; or if
- Construction and operation of buildings and appliances would not adhere to the energy-use reduction measures included in CALGreen.

Impact Evaluation

GHG Emissions Generation and GHG Reduction Plans Consistency

Significance Criterion a: Would the proposed plan generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
Significance Criterion b: Would the proposed plan conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Impact GHG-1 IMPLEMENTATION OF THE RCAP WOULD NOT GENERATE GHG EMISSIONS IN A MANNER THAT WOULD HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT. THE RCAP WOULD SUPPORT APPLICABLE PLANS, POLICIES, AND REGULATIONS INTENDED TO REDUCE EMISSIONS OF GHGs. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

GHG Emissions Generation

Construction

Projects and infrastructure facilitated by the RCAP would result in GHG emissions during construction. GHG emissions during construction would result primarily from fuel consumption associated with heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment that may result in indirect GHG emissions from the energy generation. Generally, GHG emissions from construction represent a small portion of a project's lifetime GHG emissions. Projects and infrastructure facilitated by RCAP would also utilize construction contractors that comply with applicable CARB regulations such as accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment, and restricted idling of heavy-duty diesel motor vehicles. Construction contractors are required to comply with the provisions of CCR Title 13, sections 2449 and 2485, prohibiting diesel-fueled commercial and off-road vehicles from idling for more than five minutes, minimizing unnecessary GHG emissions.

Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient fuel consumption and, thus, emissions of GHGs. These construction equipment standards (i.e., Tier 4 efficiency requirements) are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Per applicable regulatory requirements of CALGreen, development facilitated by the RCAP would comply with construction waste management practices to divert construction and demolition debris from landfills. These practices would result in efficient use of energy by construction facilitated by the RCAP and, therefore, would minimize unnecessary GHG emissions. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary that in turn would also have the effect of minimizing GHG emissions. Therefore, RCAP construction GHG emissions impacts would be less than significant.

Operation

GHG Emissions Generation

The RCAP is a policy-level document that addresses GHG emissions generated within Humboldt. The RCAP contains strategies, measures, and actions to reduce long-term emissions of GHGs. Projects and infrastructure facilitated by the RCAP are expected to result in overall GHG emissions reductions by reducing natural gas, gasoline, and diesel fuel consumption across several GHG emission sectors. Proposed measures that would result in direct GHG emissions reductions quantified in the RCAP include:

Measure BE-1: By 2030, source 90% of grid-supplied electricity from renewable and carbon-free sources.

Measure BE-3 Urban: Reduce existing residential building natural gas consumption by 4% by 2030 and 74% by 2045.

Measure BE-4: Reduce existing nonresidential building natural gas consumption by 5% by 2030 and 79% by 2045.

Measure BE-5: Decarbonize 95% of new residential building construction by 2027.

Measure BE-6: Decarbonize 95% of new nonresidential building construction by 2027.

Measure T-1 Urban: Implement programs, such as those identified in HCAOG's RTP, to increase the mode share of active transportation in urbanized areas from 9% to 12% by 2030 thereby achieving a regional active transportation mode share of 8%.

Measure T-1 Rural: Implement programs, such as those identified in HCAOG's RTP, that increase access to safe active transportation, to increase the mode share of active transportation in rural areas from 5% to 6% by 2030 thereby achieving a regional active transportation mode share of 9%.

Measure T-2 Urban: Expand the public transit network in support of HCAOG's Regional Transportation Plan to increase public transit mode share from 2% to 20% public transit mode share in urbanized areas to achieve a regional 13% public transit mode share by 2030.

Measure T-2 Rural: Develop a robust public transit network in support of HCAOG's Regional Transportation Plan to increase public transit mode share from 1% to 10% in rural areas and achieve a regional 13% public transit mode share by 2030.

Measure T-6: Decarbonize 15% of passenger vehicle miles traveled by 2030 and 100% by 2045 through increased adoption of low and zero-emission vehicles and development of a regional electric vehicle charging and hydrogen fueling network.

Measure T-7: Increase commercial zero-emission vehicle use and adoption to 10% by 2030 and 100% by 2045 through a regional charging network and development of hydrogen hubs.

Measure T-8: Electrify or otherwise decarbonize 12% of applicable small off-road engines (SOREs) off-road equipment by 2030 and 100% by 2045 and replace fossil diesel consumption with renewable diesel in 55% of applicable large diesel in alignment with EO N-79-20 by 2030.

Measure SW-1: Establish a local waste separation facility and organics management to be able to reduce waste sent to landfills by 75% by 2030. Reduce GHG emissions by limiting truck trips required to ship waste out of the county and import compost from out of the county.

Measure CS-2: Offset fossil-based emissions and increase carbon sequestration in the community by achieving SB 1383 procurement requirements (0.08 tons recovered organic waste per person) by 2030.

Future projects that may be facilitated by the RCAP, such as new renewable energy facilities (Measures BE-1 and BE-2), new or expanded recycled water facilities (Measure WW-2), new or expanded organic waste processing facilities (Measure SW-1), and new green hydrogen and biofuel production and distribution facilities (Measure T-10) could result in new operational GHG emissions from regular maintenance and operational activities including mobile source emissions from worker trips and energy used to run the facilities, some of which may come from fossil fuel sources. New operational sources of emissions from individual projects, including from maintenance trips and activities, would be minimal and would generate negligible quantities of GHG emissions. While energy use at these facilities may result in some indirect GHG emissions, overall, there would be a large magnitude of GHG emissions offset from operation of new renewable energy projects and transportation projects that encourage pedestrian and bike travel resulting in reduced VMT and mobile GHG emissions.⁴⁸ Energy suppliers have targets to lower carbon content and increase renewable-sourced energy, such as from SB 100 requirements or through the RePower Humboldt program. The RCAP would facilitate an increase in renewable projects to support these efforts and further reduce GHG emissions. As such, there would be a net overall reduction in GHG emissions related to operation of projects and infrastructure under the RCAP. Therefore, RCAP operational impacts related to generation of GHG emissions would be less than significant.

⁴⁸ Reference Table 2-3, where the adjusted BAU Forecast demonstrates a reduction from 1,531,167 MT of CO₂e in 2022 to 1,387,943 MT of CO₂e in 2045 due to implementation of the RCAP.

Consistency with State GHG Reduction Plans

The CARB 2022 Climate Change Scoping Plan outlines a pathway to achieving the 2030 reduction target set under California Senate Bill (SB) 32, which is considered an interim target toward meeting the longer-term 2045 carbon neutrality target set under California Assembly Bill (AB) 1279. In addition, the CARB 2022 Scoping Plan outlines a path to achieving carbon neutrality and reduction of anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 set under AB 1279. The RCAP addresses all changes in State law pertaining to climate change and emissions, as well as setting GHG threshold targets for Humboldt.

Future RCAP projects related to renewable energy, transit and active transportation, natural carbon sequestration efforts, building decarbonization, VMT reduction, EV charging and parking, reduced solid waste production, and reduced water consumption would support the goals of the CARB 2022 Scoping Plan related to use of clean technologies and fuels, reductions in short-lived climate pollutants, and increased action on natural and working lands to sequester carbon. For example, RCAP Measures BE-1 and BE-2 promote the use of renewable sources of electricity (such as offshore wind, solar, and biofuels), Measures BE-5, BE-6 and BE-7 encourage and support decarbonization of new and existing buildings in Humboldt, and Measures T-3, T-5 and T-6 through T-11 would reduce VMT while also increasing the percentage of ZEVs on the road and expanding the regional EV charging network. In addition, the RCAP would reduce waste (Measure SW-1), reduce per capita water consumption (Measure WW-2), and increase carbon sequestration (Measure CS-2). These RCAP measures support the CARB 2022 Scoping Plan goals of achieving carbon neutrality and reducing petroleum demand through building decarbonization, VMT reduction, and increasing the EV charging network.

Implementation of the RCAP alongside State laws and programs would reduce regional GHG emissions to approximately 1,241,589 MT of CO₂e by 2030 and 159,815 MT of CO₂e by 2045. The measures included in the RCAP combined with State-wide legislation and initiatives and regional transportation programs would enable Humboldt to meet its emissions reduction target of 40 percent below 1990 levels by 2030 (a maximum total annual emissions of 1,241,589 MT of CO₂e). Humboldt needs to achieve a GHG emissions reduction from 2030 BAU levels of 369,405 MT of CO₂e to meet the SB 32 target. The estimated GHG reductions from 2030 BAU levels that would be achieved by the RCAP along with State-wide legislation and initiatives total 370,842 MT of CO₂e by 2030 and would slightly exceed the SB 32 requirements. Because SB 32 is considered an interim target toward meeting the 2045 State goal of carbon neutrality, implementation of the RCAP would also be considered substantial progress toward meeting the State's long-term 2045 goal. Avoiding interference with and making substantial progress toward these long-term State targets are important, because these targets have been set at levels that achieve California's fair share of international emissions reduction targets that will stabilize global climate change effects and help avoid the associated adverse environmental consequences.

Given the aforementioned, the RCAP would be consistent with the SB 32 GHG reduction target for 2030, the AB 1279 GHG reduction target for 2045, and the 2022 California Climate Change Scoping Plan. Therefore, RCAP operational impacts related to consistency with State GHG reduction plans would be less than significant.

Consistency with Regional and Local GHG Reduction Plans

Policies to reduce GHG emissions and mitigate climate change are included in the Humboldt County General Plan Air Quality Element.⁴⁹ Specifically, Policy AQ-P9 of the Humboldt County General Plan Air Quality Element is to “develop and implement a multi-jurisdictional Climate Action Plan to achieve reductions in greenhouse gas emissions consistent with the State Global Warming Solutions Act and subsequent implementing legislation and regulations.” The purpose of the RCAP is to meet Policy AQ-P9 and support implementation of projects that would help Humboldt achieve State GHG reduction goals.

Furthermore, Humboldt General Plan Policy AQ-P1 aims to reduce length and frequency of vehicle trips. Projects and infrastructure under the RCAP would be consistent with the policy related to reducing length and frequency of vehicle trips. RCAP Measures T-1 and T-2 would target means to reduce vehicle trips through improvements to active transportation and public transit facilities. RCAP Measure T-3 would increase mixed-used developments in infill priority areas to reduce regional VMT. Additionally, RCAP Measure T-5 would help reduce commercial and industrial employee trips.

Humboldt General Plan Policy AQ-P14 encourages and provides incentives to increase solar-electric capacity in residential, commercial and industrial sectors. RCAP Measures BE-1 and BE-2 would increase the development of solar projects, micro-grids, and energy storage across the region to help facilitate electrification of buildings and transportation. In addition, RCAP Measure BE-3 Rural would help homeowners in assessing the viability and permitting of installing off-grid solar and battery alternative energy sources on their homes and finance options.

Humboldt General Plan Policy AQ-P16 encourages and provides incentives for commercial and residential design that supports the charging of electric vehicles. The RCAP incorporates numerous measures to support electrical vehicle accommodations. Measure T-7, for example, aims to increase commercial zero-emission vehicle use and adoption through a regional charging network and development of hydrogen hubs. As such, the RCAP would be consistent with the goals and policies of the Humboldt County General Plan Air Quality Element.

Policies to reduce GHG emissions and mitigate climate change are also included in the General Plans of Arcata, Blue Lake, Eureka, Fortuna, and Rio Dell. Some of the General Plans include goals for developing climate action plans. The RCAP would serve as the Humboldt-wide climate action plan and, thus, would support those goals and objectives, and would further support or expand upon, the other GHG policies and objectives in the individual City General Plans. For example, Arcata General Plan Policies AQ-2a and AQ-2b aim to implement measures that encourage reduction of vehicle trips and miles traveled, and the City of Rio Dell Policy P1.2.3-1 aims to ensure that mobile, point, and area sources of air emissions are reduced to the greatest extent possible. As previously stated, RCAP Measures T-1 and T-2 would help to reduce vehicle trips and encourage residents to utilize more active transportation and public transit resources, while RCAP Measure T-3 would increase mixed-used developments in infill priority areas to reduce regional VMT. These RCAP measures align with the City of Arcata General Plan and City of Rio Dell General Plan policies related to air and GHG emissions.

The City of Eureka has similar goals of reducing VMT under General Plan Policies AQ-1.7, AQ-1.9 and AQ-1.11, for example. There also exists Eureka General Plan Policy AQ-1.12 to help reduce emissions from City vehicle fleets and Policy AQ-1.13 to reduce the City’s operation emissions. RCAP Measure

⁴⁹ Humboldt County. 2017. General Plan, Chapter 15 Air Quality Element.
<https://humboldt.gov.org/DocumentCenter/View/61991/Chapter-15-Air-Quality-Element-PDF> (accessed October 2024)

T-11 is designed to “lead by example” and electrify or otherwise decarbonize 50 percent of municipal fleets by 2030 in alignment with the State’s Advanced Clean Fleet Rule. RCAP Measure BE-1 seeks to increase grid-supplied renewable energy to 90 percent by 2030, which would reduce operational emissions related to electricity use in municipal buildings. Additionally, RCAP Measure BE-7 targets to decarbonize 30 percent of municipal buildings and facilities by 2030. These RCAP measures align with the City of Eureka General Plan policies related to GHG emissions.

The City of Fortuna General Plan Policy HS-3.6 seeks to reduce GHG emissions from the transportation sector. The RCAP contains a variety of measures and actions supporting GHG emissions reductions from the transportation sector. For example, RCAP Measure T-6 would decarbonize 15 percent of passenger vehicle miles traveled by 2030 and 100 percent by 2045 through increased adoption of low and zero-emission vehicles and development of a regional electric vehicle charging and hydrogen fueling network. RCAP Measure T-3 would promote mixed-use, infill, and transit-oriented development. RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-5 would support increased active transportation, public transit, and car sharing use. These RCAP measures align with the City of Fortuna General Plan policies related to GHG emissions.

As such, the RCAP would be consistent with the goals and policies of the General Plans of Arcata, Blue Lake, Eureka, Fortuna, and Rio Dell. Therefore, RCAP operational impacts related to consistency with regional and local GHG reduction plans would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

Energy Consumption

Significance Criterion c: Would the proposed plan result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact GHG-2 THE RCAP WOULD IMPLEMENT GHG REDUCTION STRATEGIES THAT WOULD ALSO PROMOTE GREATER OVERALL ENERGY EFFICIENCY. WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY WOULD NOT OCCUR. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Projects and infrastructure facilitated by the RCAP would require the use of energy during construction. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment. Development facilitated by the RCAP would utilize construction contractors that comply with applicable CARB regulations such as accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment, and restricted idling of heavy-duty diesel motor vehicles. Construction contractors are required to comply with the provisions of CCR Title 13, sections 2449 and 2485, prohibiting diesel-fueled commercial and off-road vehicles from idling for more than five

minutes, minimizing unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient fuel consumption. These construction equipment standards (i.e., Tier 4 efficiency requirements) are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Electrical power would be consumed during demolition and construction activities, and the demand, to the extent required, would be supplied from existing electrical infrastructure in the area.

Overall, construction activities would not have any adverse impact on available electricity supplies or infrastructure. Demolition and construction activities would utilize fuel-efficient equipment consistent with State and federal regulations and would comply with State measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. Per the applicable regulatory requirements of CALGreen, development facilitated by the RCAP would comply with construction waste management practices to divert construction and demolition debris from landfills. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. These practices would result in efficient use of energy during construction facilitated by the RCAP.

The RCAP is designed to promulgate renewable energy and transit and active transportation projects in line with the AB 1279 2045 goals. The energy used to construct related projects and infrastructure is necessary, because the RCAP is intended to implement GHG emission reduction strategies to meet Statewide goals, including strategies that promote greater energy efficiency and reduced energy use. As such, construction activities associated with the RCAP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy and impacts would be less than significant.

Operation

Some projects and infrastructure facilitated by the RCAP would require the use of energy during operation. Daily operation of the regional transportation system, including future transportation projects facilitated by the RCAP, uses energy in the form of fuel consumed by propulsion of passenger vehicles, including automobiles, vans and trucks, and transit vehicles, including buses. In addition, longer-term operation of projects and infrastructure facilitated by the RCAP would require permanent grid connections for electricity service to power renewable energy and battery storage facilities, ZEV charging/transmission, public transit/active transportation facilities, and organic waste processing and recycled water facilities. However, the strategies, measures, and actions of the RCAP would facilitate a range of projects that would result in an increase in Countywide renewable energy production, improved energy efficiency, and reduced overall energy use, as further discussed below.

TRANSPORTATION ENERGY USE

The RCAP would result in reduction of VMT and an increase in the use of ZEVs, thus reducing the use of petroleum fuels by the transportation sector. Measure T-3 addresses this issue by emphasizing mixed-use development in designated infill priority areas, in alignment with HCAOG's VROOM 2022-2042 connectivity goals. Encouraging mixed-use development optimizes land use by integrating residential, commercial, and recreational spaces, which can alleviate traffic congestion, lower transportation GHG emissions, and discourage urban sprawl. This measure promotes walkable neighborhoods that provide easy access to essential services and amenities. By aligning with regional transportation priorities outlined in VROOM 2022-2043, the RCAP would reduce VMT and associated transportation fuel use. In addition, RCAP Measures T-1, T-2, T-4, and T-5 would increase the availability of active transportation, mobility hubs, and public transit infrastructure and require

implementation of transportation demand management plans for large employers, further reducing VMT and transportation fuel use.

The RCAP would also reduce non-renewable energy use from the transportation sector through greater adoption of ZEVs in Humboldt. RCAP Strategy 8 aims to boost commercial ZEV adoption across Humboldt, focusing on EVs and hydrogen-powered vehicles by increasing the availability of EV charging infrastructure and hydrogen hubs, as well as increasing the supply of green hydrogen⁵⁰ and biofuels. Specifically, Measure T-10 aims to establish a biofuel network in Humboldt focusing on green hydrogen, renewable diesel, and renewable natural gas production, contributing to California's goal of establishing 200 hydrogen fueling stations by 2025. This network would support the decarbonization of transportation fuels. Due to challenges with electric infrastructure in Humboldt, biofuels serve as a transitional solution, enabling Humboldt to progress towards decarbonization goals. Biofuels reduce GHG emissions by substituting fossil fuels with renewable organic materials, which absorb CO₂ during growth. When combusted, biofuels release biogenic CO₂, minimizing net atmospheric carbon emissions compared to traditional fuels. Hydrogen is also particularly beneficial in rural areas like Humboldt, providing extended travel range for trucking compared to electric options for trucking. Like the traditional oil and gas industry, alternative fuel producers are subject to stringent environmental laws and regulations to minimize their environmental impact. While biofuels and other low-carbon alternative fuels still involve industrial processes and produce some GHGs, these fuels serve as a critical bridge in the transition towards carbon neutrality. By reducing reliance on fossil fuels, these alternatives enable immediate GHG emissions reductions, especially in sectors where electrification may be challenging in the short term. This approach supports long-term decarbonization goals while allowing time for the development of infrastructure and technologies needed for fully zero-emission solutions, ensuring that the transition does not lead to additional environmental challenges.

Therefore, implementation of the RCAP would result in a reduction of petroleum fuel consumption through VMT reductions and a shift to greater use of renewable energy sources, such as electricity from renewable energy projects facilitated by the RCAP and biofuels, through ZEV adoption and infrastructure deployment.

BUILDING ENERGY USE

The RCAP would support increased building energy efficiency through measures that promote decarbonization of existing and new buildings, including residential, commercial, and municipal land uses. These include RCAP Measures BE-3 Urban, BE-3 Rural, BE-4, BE-5, BE-6, and BE-7. These measures would require new construction to install energy-efficient electrical appliances and lighting and eliminate or reduce reliance on natural gas and would also encourage existing building retrofits to increase energy efficiency and replace natural-gas consuming appliances and heating systems with electric counterparts. These measures would minimize the inefficient, wasteful, and unnecessary consumption of building energy throughout Humboldt. Furthermore, Measure BE-1 states that by 2030 the County shall source 90 percent of grid-supplied electricity from renewable and carbon-free sources. This would promote renewable energy projects like wind, hydroelectric and solar) that would reduce the demand for fossil-fuel energy sources, and further supports the goal of increased energy efficiency. Therefore, the RCAP would result in an overall reduction in building energy use and a shift to greater use of renewable energy sources for building electricity needs.

⁵⁰ Green hydrogen is defined the Inflation Reduction Act as having a carbon intensity score of less than 0.45 kg CO₂e for each kg of hydrogen produced.

WATER- AND WASTE-RELATED ENERGY USE

Implementation of the RCAP would result in reduced energy use associated with the water and solid waste sectors via the water use reductions and solid waste generation reduction. Measure WW-2 focuses on promoting water conservation by reducing per capita potable water consumption and increasing access to and use of recycled water. Measure SW-1 would reduce landfilled waste by 75 percent by 2030. This measure would reduce energy use and GHG emissions by reducing truck trips to haul waste, and by implementing new organic waste processing and composting facilities locally, limiting the need for truck trips required to ship waste out of the County and import compost from outside of the County. In addition, Measure WW-1 focuses on expanding regional opportunities for the implementation of wastewater decarbonization technologies, including anaerobic digesters, throughout Humboldt. This measure aims to generate renewable fuel sources that can be used to decarbonize wastewater facility building energy or provide a supply of decarbonized energy to the community. Therefore, the RCAP would result in an overall reduction in energy use associated with the solid waste and water sectors.

Overall, operation of the RCAP would not result in potentially significant environmental effects from wasteful, inefficient, or unnecessary consumption of energy and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

Renewable Energy or Energy Efficiency Standards Consistency

Significance Criterion d: Would the proposed plan conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Impact GHG-3 THE RCAP WOULD BE CONSISTENT WITH APPLICABLE ENERGY EFFICIENCY AND RENEWABLE ENERGY GOALS AND REGULATIONS, INCLUDING RELEVANT PROVISIONS OF CALIFORNIA ENERGY CODE TITLE 24 AND CALGREEN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Policy consistency is limited to operational energy use discussion. No RCAP construction impacts related to consistency with an applicable renewable energy or energy efficiency plan would occur.

Operation

CONSISTENCY WITH STATE RENEWABLE ENERGY PLANS

Relevant State plans and policies that aim to increase the production of renewable energy include SB 1020 and the 2022 California Green Building Standards Code (CALGreen or Title 24 Part 11). SB 1020 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program and requiring that renewable energy and zero-carbon resources supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. CALGreen (Title 24 Part 11) institutes mandatory minimum environmental

performance standards for all ground-up new non-residential and residential structures and major renovations, including requirements for the installation of solar panels on new construction.⁵¹

The RCAP would support the reduced use of nonrenewable energy resources by encouraging consumers to enroll in renewable energy plans through Measure BE-1.⁵² In addition, the RCAP would facilitate increased renewable energy production in Humboldt through RCAP Measures BE-1, BE-2, BE-3 Rural, BE-4, BE-7, and BE-8, including through small-scale rooftop solar projects. Renewable energy projects facilitated by the RCAP, like solar and wind projects, would generate carbon-free electricity that would be provided to the grid and distributed across Humboldt to power regionwide operations. This would support compliance with the SB 1020 requirements for renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. In addition, the increased provisioning of rooftop solar panels encouraged by the RCAP would align with the requirements and goals of CALGreen. The RCAP includes strategies, measures and respective actions to increase production of renewable energy, as discussed above, and would, therefore, align with the overall intent of SB 1020 and be consistent with State renewable energy plans.

CONSISTENCY WITH LOCAL AND REGIONAL RENEWABLE ENERGY PLANS

Relevant local and regional plans and policies that aim to increase the production of renewable energy include RCEA's RePower Humboldt and the General Plans for Humboldt County and the Cities of Arcata, Eureka, and Fortuna. The RCEA RePower Humboldt aims to have 100 percent of RCEA's power mix sourced from a combination of State-designated renewable energy sources (solar, wind, biomass, small hydroelectric, and geothermal) and state-designated net-zero-carbon-emission existing large hydroelectric facilities by 2025. RePower Humboldt also establishes a goal for Humboldt County to be a net exporter of renewable electricity by 2030. Similarly, the County and City General Plans include policies that support increased renewable energy production within Humboldt, including Humboldt County General Plan Policies AQ-P13, AQ-P14, Arcata General Plan Policies PS-8b and RC-8a, Eureka General Plan Policy U-5.5, and Fortuna General Plan Policies H-6.3, NCR-6.2, NCR-6.5, PFS-7.2 and PFS-7.7.

The RCAP would facilitate increased renewable energy production in Humboldt through RCAP Measures BE-1, BE-2, BE-3 Rural, BE-4, BE-7, and BE-8, including through small-scale rooftop solar and utility-scale renewable energy projects. Renewable energy projects facilitated by the RCAP, like solar and wind projects, would generate carbon-free electricity that would be provided to the grid and distributed across Humboldt to power regionwide operations. In addition, RCAP Measure BE-2 calls for the regional enhancement of energy grid capacity by developing micro-grids and energy storage systems, supporting RCEA's goals established in the RePower Humboldt Plan. Micro-grids, which can operate independently from the traditional grid, combined with energy storage, improve grid reliability and resilience by storing excess energy during low demand and supplying it during peak periods. This measure provides increased support to RCEA's goals to facilitate greater energy flexibility, resilience, and allow for future electrification initiatives. Likewise, these measures support policies contained in the County and City General Plans that seek to increase renewable energy production and electrical system reliability within Humboldt. Therefore, through implementation of the RCAP goals and policies, the proposed plan would not conflict with the applicable local and regional plans for renewable energy.

⁵¹ Major renovations are defined as changes to the building envelop or changing equipment, including different components and entire systems.

⁵² Both PG&E and RCEA offer renewable energy plans to customers in Humboldt County.

CONSISTENCY WITH STATE ENERGY EFFICIENCY PLANS

The relevant State plan and policy that aims to increase energy efficiency is the 2022 California Building Energy Efficiency Standards (Title 24 Part 6). The California Building Energy Efficiency Standards (Title 24 Part 6) establish energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. CCR Title 24 (Parts 6 and 11) is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New structures and major renovations must demonstrate their compliance with the current Building Energy Efficiency Standards through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC.

Future infrastructure projects stemming from the RCAP would be designed to comply with the energy efficiency standards of the California Building Energy Efficiency Standards. Future projects would be required to demonstrate compliance with the California Building Energy Efficiency Standards by implementing energy efficiency measures such as high-efficiency lighting and HVAC systems, low-flow water fixtures, dual-paned windows, and water efficient landscaping and irrigation systems. Compliance with these regulations would minimize potential conflicts with State energy efficiency plans. Additionally, the RCAP strategies, measures, and respective actions would further boost the energy efficiency of future projects beyond those captured in the California Building Energy Efficiency Standards. For example, RCAP Measures BE-3 Urban and Rural and BE-4 would reduce existing residential and nonresidential building natural gas consumption and Measures BE-5 through BE-7 would decarbonize 95 percent of new residential and nonresidential buildings as well as 30 percent of municipal buildings. These measures would result in improved energy efficiency in Humboldt and would align with the goals of the California Building Energy Efficiency Standards.

CONSISTENCY WITH LOCAL AND REGIONAL ENERGY EFFICIENCY PLANS

Relevant local and regional plans and policies that aim to increase energy efficiency include RCEA's RePower Humboldt and the General Plans for Humboldt County and the Cities of Arcata, Blue Lake, Eureka, Fortuna, and Rio Dell. RePower Humboldt includes goals and strategies to conserve energy through energy efficient buildings and building decarbonization. Similarly, the County and City General Plans contain policies that emphasize energy efficiency and reduced energy consumption, including Humboldt County General Plan Policy AQ-P15, Arcata General Plan Policies PF-6f, RC-8b, RC-8c and RC-8e, Blue Lake General Plan Policy 6, Eureka General Plan Policies AQ-1.13, U-2.7, U-5.6, U-5.8 and U-5.11, Fortuna General Plan Policies H-5.2, NCR-6.1, NCR-6.4, NCR-6.7 through NCR-6.9, NCR-6.13, NCR-6.14 and PFS-7.1, and Rio Dell General Plan Policies P1.2.5-1 through P1.2.5-3.

As discussed above, the RCAP contains strategies, measures, and respective actions to increase energy efficiency and building decarbonization throughout Humboldt. RCAP Measure BE-1 would promote energy efficiency through educational materials. RCAP Measures BE-3 Urban and Rural and BE-4 would encourage energy efficiency retrofits and building decarbonization for existing residential and nonresidential buildings, while Measures BE-5 through BE-7 seek to decarbonize 95 percent of new residential and nonresidential buildings as well as 30 percent of municipal buildings by 2027. These measures would result in improved energy efficiency in Humboldt and would align with the energy efficiency goals and policies of RePower Humboldt and the County and City General Plans.

OVERALL

The RCAP seeks to encourage the production and storage of local renewable energy, as well as to decrease overall energy consumption via energy-efficiency retrofits, building decarbonization requirements, and energy conservation education programs. As discussed above, these actions are consistent with the goals and policies established by SB 1020, CALGreen, California Building Energy Efficiency Standards, RCEA RePower Humboldt, and County and City General Plans. As such, the RCAP would not conflict with adopted renewable energy or energy efficiency plans or standards. Impacts related to consistency with State and local renewable energy and energy efficiency plans would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

3.5.5 Cumulative Impacts

GHG emissions and global climate change represent cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the GHG emissions from past, present, and future projects and activities have contributed, currently are contributing, and would contribute to global climate change and its associated environmental impacts. The geographic scope of the cumulative energy analysis is the PG&E and RCEA service areas. The cumulative analysis considers impacts throughout Humboldt that would occur from projected long-term growth identified in Table 3-1 of Section 3.0, *Environmental Impact Analysis*.

3.5.5.1

GHG Emissions

Cumulative development across Humboldt would generate GHG emissions from vehicle trips, electricity and water use, and other sources. The analysis of GHG emissions is cumulative in nature, as emissions affect the accumulation of GHGs in Earth's atmosphere. Individual cumulative projects that fall below thresholds are considered to have a less than significant impact, both individually and cumulatively. As indicated under Impact GHG-1, the RCAP would have a less than significant impact related to GHG emissions and would not conflict with GHG reduction plans. The RCAP involves the development and implementation of a climate action plan, outlining methods and policies to meet the long-term 2030 reduction targets set by SB 32 and the 2045 carbon neutrality goal set by AB 1279. Impacts from the RCAP GHG emissions would be less than significant and not represent a cumulatively considerable impact related to GHG emissions. Therefore, the cumulative impact related to GHG emissions would be less than significant.

Energy

Cumulative development across Humboldt would increase demand for energy resources. However, new iterations of the California Building Energy Efficiency Standards and CALGreen would require

increasingly more energy efficient appliances and building materials that reduce energy consumption in new development. In addition, vehicle fuel efficiency is anticipated to continue improving through implementation of the existing Pavley Bill regulations under AB 1493. Nevertheless, the combined increase in energy consumption from cumulative projects would potentially result in a significant cumulative impact related to the wasteful, inefficient, and unnecessary consumption of energy resources. It is conservatively assumed, therefore, that cumulative development could result in a significant impact related to the wasteful, inefficient, or unnecessary consumption of energy resources. However, as described under Impacts GHG-2 and GHG-3, RCAP development would be constructed in accordance with the California Building Energy Efficiency Standards and CALGreen (and potentially beyond based on the proposed RCAP strategies, measures and respective actions). Policies would emphasize alternative means of transportation, such as bicycles and walking, and would promote development in close proximity to transit stations, thereby reducing VMT and associated transportation energy use. In addition, the RCAP includes measures to reduce energy use in buildings and energy use associated with the solid waste and water sector, as well as increased renewable energy production in Humboldt. As the RCAP would not result in a wasteful, inefficient, or unnecessary consumption of energy, its contribution to a significant cumulative energy impact is not cumulatively considerable.

Plans and projects throughout the State are required to adhere to applicable renewable energy and energy efficiency laws, programs, and policies such as the California RPS, AB 1493, and Title 24 standards. Therefore, the cumulative impact related to consistency with renewable energy and energy reduction plans would be less than significant. As discussed under Impact GHG-3, RCAP development would be consistent with the energy-related goals and policies of the Statewide plans and regulations. Therefore, the RCAP would not contribute to a cumulative impact with respect to consistency with renewable energy and energy efficiency plans. Therefore, the cumulative impact related to energy would be less than significant.

Overall Level of Cumulative Significance

Less Than Significant without Mitigation

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3.6 Land Use Planning, Population, and Housing

3.6.1 Introduction

This section summarizes Humboldt's land use characteristics, including the overall land use patterns within the incorporated and unincorporated areas, and analyzes existing plans in order to determine the potential environmental effects of the RCAP and CEQA GHG Emissions Thresholds related to land use planning. Additionally, this section addresses the potential population growth and housing displacement impacts associated with implementation of the RCAP and CEQA GHG Emissions Thresholds.

3.6.2 Environmental Setting

Current Physical Land Use

Unincorporated Humboldt County

Humboldt County covers an approximately 4,050 square-mile area within the northern California coastal area, and the plan area involves all land within unincorporated and incorporated Humboldt County. Humboldt County is bound by Del Norte and Siskiyou Counties to the north, Trinity County to the east, and Mendocino County to the south. The Pacific Ocean is located to the west of Humboldt County, forming a natural barrier to development. Principal regional transportation facilities serving Humboldt County are Highway (Hwy) 101, State Route (SR) 36, SR 299, SR 96, and the Arcata/Eureka Airport.

Humboldt County, including the unincorporated and incorporated areas, currently has a population of 133,100 according to the California Department of Finance (DOF) estimates.¹ 80 percent of the County's 2.3 million acres are forested. Fifty percent of this acreage is private commercial timberland and 35 percent is State of California or federal public land, including Redwood National and State Parks, Six Rivers National Forest, the King Range National Conservation Area, and Humboldt Redwoods State Park. The County also contains several areas of Tribal lands, including the approximately 89,400-acre Hoopa Valley Reservation, 56,370-acre Yurok Reservation, and 76-acre Blue Lake Rancheria. Approximately one-quarter of Humboldt County (634,000 acres) remains agricultural.² The remaining twenty percent of the County's land consists of a mix of residential, commercial, and industrial uses.

Community Planning Areas have been designated in various areas of the County to ensure that development aligns with the broader goals of the General Plan while addressing the unique needs and characteristics of an individual community. These areas include most of the County's population and urban infrastructure. As such, they will continue to be the focus of development activity. Community Planning Areas (CPA) within the County include: Orick CPA, Orleans CPA, Trinidad-Westhaven CPA, Willow Creek CPA, McKinleyville CPA, Fieldbrook-Glendale CPA, Blue Lake CPA, Arcata CPA, Jacoby Creek CPA, Freshwater CPA, Eureka CPA, Fortuna CPA, Hydesville-Carlotta CPA, Rio Dell/Scotia CPA, Avenues CPA – Stafford-Redcrest, Avenues CPA-Weott, Avenues CPA-Myers

¹ California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2021-2024. <https://dof.ca.gov/forecasting/Demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/> (accessed October 2024).

² Humboldt, County of. 2017. Humboldt County General Plan. <https://humboldt.gov.org/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed October 2024)

Flat, Avenues CPA-Miranda, Avenues CPA – Phillipsville, Garberville/Redway/Benbow/
Alderpoint CPA, Shelter Cove CPA.³

In addition to CPAs, there are six Local Coastal Planning Areas (LCPAs) that are a part of the County's Local Coastal Program with the Coastal Commission. The LCPAs are comprehensive land use plans that guide development and protect coastal resources under the Coastal Act. The LCPAs within Humboldt County include the following: Eel River Areal Local Coastal Plan, Humboldt Bay Area Local Coastal Plan, McKinleyville Area Local Coastal Plan, North Coast Area Local Coastal Plan, South Coast Area Local Coastal Plan, and the Trinidad Area Local Coastal Plan.

Incorporated Cities

CITY OF ARCATA

Arcata's land use patterns have been shaped by many factors and reflect more than one-hundred and sixty years of community development. The early settlement of the town, initially called Uniontown, grew around a central plaza. Arcata's Plaza area, including a hotel, storehouse, and other commercial buildings, was originally constructed in the late 1800s and early 1900s and continues to be a major center of the community. California State Polytechnic University, Humboldt (Cal Poly Humboldt) occupies approximately 160 acres east of State Route 101, within walking distance of the downtown area. The northernmost campus in the California State University system is the community's major employer and regional education center.⁴

CITY OF BLUE LAKE

Residential land use in Blue Lake is characterized by a predominance of single-family residences. This single-family character is furthered by a mobile home park and individual mobile homes/"manufactured housing" located throughout the City. Residential use is concentrated in the central and eastern areas of the City. The northwestern section of Blue Lake is less densely populated; most of the vacant residentially designated land is located in north and west Blue Lake. Over one third of all housing units in Blue Lake were constructed prior to 1940 and almost 60% are over 50 years old. The area surrounding Blue Lake is largely rural and sparsely populated. Most commercial and shopping trips require travel to Arcata, McKinleyville, or Eureka. The nearest grocery store is a small supermarket (Murphy's Market) approximately two miles away. The nearest bank is in Arcata, at least five miles away. Industrial Park makes up approximately 15 percent of total city area, or over half of industrially designated land. The south half of the Industrial Park is zoned Industrial (M) which allows heavier industrial uses and the north half of the Industrial Park is zoned Light Industry (ML) which allows lighter industrial/heavy commercial uses. The Industrial Park also includes a portion of Powers Creek, open space buffer areas, and the Mad River Levee. Including the industrial designated properties at the end of Taylor Way, approximately 28 percent of City land area is designated for industrial use. Open spaces in Blue Lake include lands designated for open space/recreational use, agricultural use, and undeveloped land in all the land use categories. Existing open spaces within City limits include Powers Creek, several parcels of land in agricultural

³ Humboldt, County of. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed October 2024)

⁴ Arcata, City of. 2024. DRAFT Land Use Element. Updated May 14, 2024. https://www.cityofarcata.org/DocumentCenter/View/14210/21_Land-Use-20240515 (accessed October 2024).

use, the old lake site, railroad right-of-way, Mad River levee and the School Creek Trail area. Currently undeveloped residential land in the western half of the City also provides open space.⁵

CITY OF EUREKA

Eureka includes a number of “Community Places,” which are distinct areas, neighborhoods, or districts of the City that are recognizable by their geography and general character. The mapping of Community Places significantly influenced the development and mapping of the Land Use Designations within the City of Eureka’s 2040 General Plan.⁶ Existing land uses within the Plan Area include residential, commercial, visitor-serving, industrial, public, and agriculture/timberland. Residential uses dominate the majority of the central, eastern, and southern portions of the city, represented primarily by single-family detached neighborhoods. Commercial and visitor-serving uses are located along U.S. 101 and the Downtown and Old Town areas, with various commercial centers located throughout the city serving adjacent neighborhoods. The Downtown and Old Town areas are commercial/residential mixed-use areas and are home to the highest job density (jobs per acre) in the five-county region. Industrial uses are generally located at the west end of 2nd/3rd/4th Street and west of U.S. 101 along the Bay, with public uses scattered throughout the city with a considerable portion along the Bay. Agricultural/timberland uses are found within the southeastern and most northerly portions of the city. While the Plan Area is mostly built out, vacant and underutilized lands do exist, primarily within the City’s industrial and commercial areas. Outside of the city limits, existing land uses consist primarily of rural residential and agriculture/timberland. Commercial, industrial, and public uses also exist, primarily on the Samoa Peninsula and in portions of Myrtle town, Cutten, King Salmon, and Fields Landing.⁷

CITY OF FERNDALE

The City of Ferndale is comprised of approximately one square mile. The city sits on the edge of the Eel River floodplain that is approximately two miles wide as it nears the Pacific Ocean. The majority of land use surrounding the city, as designated in the Humboldt County General Plan, is agricultural and agricultural exclusive with some timber production to the southeast. Land uses in and around the city reflect rural living characteristics. Large parcels of pastureland surround single family homes on moderately sized lots. Areas such as the Milton Avenue Business District link agriculture lands to the more urbanized setting. The Main Street Historic District provides shopping and dining experiences for residents and visitors.⁸

CITY OF FORTUNA

The City of Fortuna is an urbanized community consisting of several commercial corridors and industrial areas, suburban residential neighborhoods, and outlying rural-residential, agricultural and timber areas. It is generally bounded by slopes and forests to the north and east, agricultural land

⁵ Blue Lake, City of. 2021. Land Use Element. Updated April 27, 2021. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed October 2024).

⁶ Eureka, City of. 2018. 2040 General Plan. Updated October 15, 2018. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed October 2024)

⁷ Eureka, City of. 2018. Draft Environmental Impact Report. Adopted June 12, 2018. <https://www.eurekaca.gov/DocumentCenter/View/3257/Draft-Environmental-Impact-Report-PDF> (accessed October 2024)

⁸ Ferndale, City of. 2023. Ferndale Land Use Element. Updated July 27, 2023. https://www.dropbox.com/scl/fi/x8b8zlmnwbzso4rg92tuw/Ferndale-LUE_draft-7.27.23-CLEAN.pdf?rlkey=74c49rw2hdg5czh6d9gavoaj8&e=1&st=82oyvi1o&dl=0 (accessed October 2024).

and State Highway 36 to the south, and U.S. 101 and the Eel River to the west. The city spans 8,051 acres, including its Sphere of Influence.⁹

CITY OF RIO DELL

The City is two square miles (1,278 acres) in size and is bordered on the north and the east by the Eel River and the south by Dean Creek. The city limits extend to the midpoint of the Eel River channel. The Scotia Bluffs, which make up the eastern bank of the Eel River across from Rio Dell, and the steep, wooded, slopes on the west side of town are the dominant natural features of the City. Highway 101, which bisects the City, is the most prominent manmade feature in the City.¹⁰

CITY OF TRINIDAD

Trinidad was founded in 1850 as a supply center for the gold rush and, being incorporated in 1870, is one of California's oldest cities. Trinidad has only about one square mile of land area, a year-round population of 307 residents (2020 census), and approximately 225 residences, making it one of California's smallest cities as well. Though small in area, the City of Trinidad provides commercial services to surrounding rural areas, in particular the Westhaven area, which has a population of around 1,200 people. Trinidad is somewhat isolated with the closest towns being McKinleyville six miles to the south and Orick 16 miles to the north. Highway 101 divides the city in the northeastern portion of the city limits; there is no east-west access to Trinidad. Trinidad has a high percentage of open space and public land and provides a significant draw to visitors for its beautiful coastline, harbor facilities, and recreational opportunities.

Current Zoning and Land Use Designations

Unincorporated Humboldt County

There are 22 principal zoning districts within the inland area of the County and 19 principal zoning districts within the coastal area of the County as well as several combining zones. A principal zoning district is the first zone designation applied to property which designates the principally permitted uses on a property. Principal zoning districts in the inland area include: Neighborhood Commercial, Community Commercial, Industrial Commercial, Highway Service Commercial, Business Park, Limited Industrial, Heavy Industrial, Airport, Public Facility (Urban), Design Floodway, Flood Plain, Residential Suburban, Residential One-Family, Residential Two-Family, Residential Multiple Family, Apartment Professional, Rural Residential Agricultural, Agriculture Exclusive, Agriculture General, Forestry Recreation, Timberland Production, and Unclassified. Principal zoning districts within the coastal area include: Neighborhood Commercial, Commercial General, Business Park, Light Industrial, Industrial General, Industrial/Coastal-Dependent, Public Facility (Urban), Public Facility (Rural), Public Recreation, Commercial Recreation, Coastal-Dependent Commercial Recreation, Natural Resources, Residential Single Family, Residential Multi-Family, Residential Mixed, Rural Residential Agriculture, Agriculture Exclusive, Commercial Timberland (Coastal), and Timberland Production Zone.

⁹ Fortuna, City of. 2010. Program Environmental Impact Report.

[https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Vol%201%20-%20DPEIR%20\(whole%20doc\).pdf](https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Vol%201%20-%20DPEIR%20(whole%20doc).pdf) (accessed October 2024).

¹⁰ Rio Dell, City of. 2015. 2015 General Plan.

https://www.cityofriodell.ca.gov/sites/g/files/vyhlf8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf (accessed October 2024).

There are 28 land use designations for both inland and coastal areas that are listed within the Humboldt County General Plan: Residential Medium Density, Residential Low Density, Residential Estates, Residential Agriculture, Commercial General, Commercial Services, Commercial Recreation, Mixed-Use, Village Center, Rural Community Center, Urban Reserve, Industrial General, Industrial Resource Related, Industrial Coastal Dependent, Business Park, Conservation Floodway, Natural Resources, Open Space, Public Facility, Public Recreation, Public Lands, Resource Dependent, Tribal Lands, Tribal Trust Lands, Railroad, Timberland, Agriculture Exclusive, and Agricultural Grazing.¹¹

Incorporated Cities

CITY OF ARCATA

There 11 zoning classifications within the City of Arcata. The zoning classifications include Agriculture Residential, Commercial Central, Commercial General, Commercial Visitor Serving, Industrial General, Industrial Limited, Residential High Density, Residential Medium Density, Residential Low Density, Residential Very Low Density, and Public Facility.

There are 12 land use designations listed in the City of Arcata's General Plan: Agriculture Exclusive, Agriculture Residential, Commercial Central, Commercial Mixed, Industrial General, Industrial Limited, Natural Resource, Public Facility, Residential Very Low Density, Residential Low Density, Residential Medium Density, and Residential High Density.¹²

CITY OF BLUE LAKE

There are 16 zoning classifications listed within the City of Blue Lake General Plan: Agriculture Exclusive, Residential One-Family, Residential Two-Family, Residential Multiple Family, Wholesale Commercial/Craft Light Industry, Industrial, Retail Commercial, Service Commercial, Highway Commercial, Planned Development Residential, Mixed Use, Opportunity, Open Space/Recreation, Public Facility, Planned Development – Combining Designation, and Special Building Site – Combining Designation.¹³ There are nine land use designations listed within the City of Blue Lake General Plan: Agriculture, Open Space, Low Density Residential, Moderate Low Density Residential, Multi-Family Residential, Commercial, Mixed Use, Industrial, and Public Facility.

CITY OF EUREKA

There are 18 zoning districts within the inland area of the City of Eureka, and there are 22 zoning districts within the coastal area of the City of Eureka. The inland zoning districts include Residential Estate, Residential Low, Residential Medium, Residential High, Downtown, Downtown West, Neighborhood Commercial, Henderson Center, Wabash Avenue, Office Residential, Hospital Medical, Service Commercial, Hinge Industrial, Light Industrial, Heavy Industrial, Public Facilities, Parks and Recreation, Agricultural, and Natural Resources. The coastal zoning districts include Residential Estate - Coastal, Residential Low - Coastal, Residential Medium – Coastal, Residential High – Coastal, Old Town – Coastal, Bayfront Commercial – Coastal, Library District – Coastal, Marina District – Coastal, Service Commercial – Coastal, Gateway North – Coastal, Bridge District – Coastal, Light Industrial – Coastal, Hinge Industrial – Coastal, Heavy Industrial – Coastal, Coastal Dependent

¹¹ Humboldt, County of. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed October 2024).

¹² Arcata, City of. 2024. DRAFT Land Use Element. Updated May 14, 2024.

https://www.cityofarcata.org/DocumentCenter/View/14210/21_Land-Use-20240515 (accessed October 2024).

¹³ Blue Lake, City of. 2021. Land Use Element. Updated April 27, 2021. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed October 2024).

Industrial, Public Facilities – Coastal, Parks and Recreation – Coastal, Woodley Island – Coastal, Agricultural – Coastal, Natural Resources – Coastal, Water Development – Coastal, and Water Conservation – Coastal.

There are 18 land use designations listed within the City of Eureka General Plan: Estate Residential, Low Density Residential, Medium Density Residential, High Density Residential, General Commercial, Neighborhood Commercial, Old Town Commercial, Downtown Commercial, Bayfront Commercial, Professional Office, Light Industrial, General Industrial, Coastal Dependent Industrial, Public/Quasi-Public, Agriculture, Natural Resource, Water Conservation, and Water Development.

CITY OF FERNDALE

The Ferndale Zoning Ordinance lists sixteen zoning districts of which nine are mapped within the City of Ferndale: Residential-Suburban, Residential One-Family, Residential Two-Family, Apartment-Professional, Neighborhood Commercial, Community Commercial, Public Facility, Agriculture Services Commercial, and Agricultural Exclusive.

There are eight land use designations listed within the City of Ferndale General Plan, Land Use Element Update: Agriculture Exclusive, Neighborhood Commercial, Community Commercial, Natural Resources, Public Facilities, Residential Low Density, Residential Medium Density, and Residential High Density.¹⁴

CITY OF FORTUNA

There are 11 zoning districts listed within the City of Fortuna Zoning Code: Residential Estates, Residential Single-Family, Multifamily Residential, Neighborhood Commercial, Retail Commercial, Commercial Thoroughfare, Freeway Commercial, Light Industrial, Heavy Industrial, Agriculture Exclusive, and Public Facility.

There are 16 land use designations listed within the City of Fortuna General Plan: Residential Rural, Residential Very Low, Residential Low, Residential Medium, Residential High, Commercial, Central Business District, Mill District, Corridor Mixed Use, Riverwalk District, Office, Industrial, Public, Parks, Greenways & Recreation, Agriculture, and Open Space.¹⁵

CITY OF RIO DELL

There are 13 zoning districts listed in the City of Rio Dell's Zoning Code: Suburban Residential, Urban Residential, Residential Multifamily, Town Center, Neighborhood Center, Community Commercial, Rural, Public Facility, Suburban, Industrial, Industrial Commercial, Natural Resource, and Suburban Medium.

There are 12 land use designations listed within the City of Rio Dell General Plan: Rural, Suburban Low, Urban Residential, Suburban Residential, Residential Multifamily, Town Center, Neighborhood

¹⁴ Ferndale, City of. 2023. Ferndale Land Use Element. Updated July 27, 2023.

https://www.dropbox.com/scl/fi/x8b8zlmnwbzso4rg92tuw/Ferndale-LUE_draft-7.27.23-CLEAN.pdf?rlkey=74c49rw2hdg5czh6d9gavoaj8&e=1&st=82oyvi1o&dl=0 (accessed October 2024).

¹⁵ Fortuna, City of. 2010. Draft Program Environmental Impact Report: Fortuna General Plan Update. July 2010.

[https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Vol%201%20-%20DPEIR%20\(whole%20doc\).pdf](https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Vol%201%20-%20DPEIR%20(whole%20doc).pdf) (accessed October 2024).

Center, Community Commercial, Industrial/Commercial, Public Facility, Natural Resources, and Planned Development.¹⁶

CITY OF TRINIDAD

There are nine principal zones listed within the City of Trinidad Zoning Ordinance: Open Space, Special Environment, Resource Production, Suburban Residential, Urban Residential, Planned Development, Visitor Services, Commercial, and Public and Religious.

There are nine land use designations listed within the City of Trinidad General Plan: Suburban Residential, Urban Residential, Commercial, Visitor Services, Mixed Use, Harbor, Open Space, Special Environment, and Public and Community.¹⁷

Humboldt Population, Housing, and Employment

Population

Humboldt (including incorporated and unincorporated areas) experienced approximately a one percent decrease in population between 2020 and 2021; a 0.7 percent decrease in population between 2021 and 2022; a 0.3 increase in population between 2022 and 2023; and a 1.1 percent decrease in population between 2023 and 2024. Overall, Humboldt County experienced an approximately 2 percent decrease in population from 2020 to 2024.¹⁸ Since 2020, the population of Humboldt County decreased by approximately 3,400 people during that timeframe. As of May 2024, the population of Humboldt County is 133,100 persons.¹⁹

Households and Dwelling Units

A household is defined by the DOF and the US Census as a group of people who occupy a dwelling unit. A household differs from a dwelling unit because the number of dwelling units includes both occupied and vacant dwelling units. Not all of a jurisdiction's population lives in households. Rather, a portion of a jurisdiction's population lives in group quarters, such as board and care facilities; others are experiencing homelessness.

Small households, consisting of one to two persons per household, generally reside in units with zero to two bedrooms; family households of three to four persons per household normally reside in units with three to four bedrooms. Large households of five or more persons per household typically reside in units with four or more bedrooms. However, the number of units in relation to the household size may also reflect preference and economics. Many small households obtain larger units, and some large households live in small units for economic reasons.

As of May 2024, there were approximately 63,397 dwelling units in Humboldt (including incorporated and unincorporated areas). Most of Humboldt's households reside in single-family dwelling units, with approximately 70 percent of the Humboldt County current housing stock

¹⁶ Rio Dell, City of. 2015. 2015 General Plan.

https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf (accessed October 2024).

¹⁷ Trinidad, City of. 2022. General Plan 2022. <https://www.trinidad.ca.gov/media/5596>

¹⁸ California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State.

<https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/> (accessed October 2024).

¹⁹ Ibid

Humboldt experiences a housing vacancy rate of 9.2 percent, which is higher than the State average of 6.4 percent.

Employment indicates the number of people who reside in a jurisdiction that have a job within or outside of that jurisdiction. Humboldt (including incorporated and unincorporated areas) has a labor force of 61,500, of which the number of employed persons is 58,500 and the number of unemployed persons is 3,000. The unemployment rate as of October 2024 is 4.8 percent.²⁰

Federal Regulations

State Regulations

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan “for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning.” The California Supreme Court has called the general plan the “constitution for future development.” The general plan expresses the community’s development goals and embodies public policy relative to the distribution of future land uses, both public and private.

California Government Code Section 65301 requires a general plan to address the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may exercise its own judgment in determining what areas outside of its boundaries to include in the Planning Area. The State of California General Plan Guidelines state that the Planning Area for a county or city should include (at minimum) all land within the county or city limits and all land within the county's or city's sphere of influence. The proposed plan applies to the entire Humboldt region (including unincorporated Humboldt County and incorporated cities) and would not facilitate land use changes outside of the Humboldt region and within the sphere of influence; therefore, the plan area for the proposed plan consists of the Humboldt regional boundary.

In counties and general law cities,²¹ zoning provisions must be consistent with the general plan. Humboldt County is a general law county, and the incorporated cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad are general law cities and are, therefore, required to have zoning consistency with their General Plans. Additionally, the County of Humboldt and the cities of

[illegible]

²¹ General law cities are municipalities limited to governmental structures and powers specifically granted by State law.

Arcata, Eureka and Trinidad have areas within the coastal zone and are required to comply with their certified Local Coastal Programs under the Coastal Act.

Local and Regional Regulations

Vroom 2022-2042 and Humboldt County Association of Governments Regional Housing Needs Allocation

The Vroom 2022-2042 (VROOM) Regional Transportation Plan (RTP), adopted in September 2021, integrated transportation and land-use plan for the Humboldt County Association of Governments. VROOM meets all state and federal requirements for a Regional Transportation Plan. The RTP serves both to communicate the regional vision and transportation priorities to state and federal government, and to allow the federal and state governments to track progress toward federal and state goals. The RTP also addressed strategies for promoting good connections and functionality between transportation and land uses.

The Humboldt County Association of Governments Regional Housing Needs Allocation (RHNA) was determined to be 3,390 housing units for the incorporated cities and unincorporated area of Humboldt County. Of the total 3,390 housing units, the very low-income allocation was 829 units, the low-income allocation was 532 units, the moderate-income allocation was 613 units, and the above moderate allocation is 1,416 units. The total RHNA for the unincorporated area is 1,413 units.²²

Humboldt County Airport Land Use Compatibility Plan

The purpose of the Humboldt County Airport Land Use Compatibility Plan (ALUCP) is to establish procedures and criteria by which, in accordance with the California State Aeronautics Act:

- To prepare and adopt an airport land use compatibility plan pursuant to Section 21675.
- To assist local agencies in ensuring compatible land uses in the vicinity of new and existing airports to the extent these areas are not already devoted to incompatible uses.
- To review the plans, regulations, and other actions of local agencies and airport operators pursuant to Section 21676.
- To coordinate planning at the state, regional, and local levels, so as to provide for the orderly development of air transportation, while at the same time protecting the public health, safety, and welfare.

The Humboldt County Airport Land Use Plan applies to physical land use areas surrounding the following airports:

▪ California Redwood Coast – Humboldt County Airport	▪ Murray Field Airport
▪ Dinsmore Airport	▪ Rohnerville Airport
▪ Garberville Airport	▪ Samoa Field Airport
▪ Kneeland Airport	▪ Shelter Cove Airport

Hoopa Airport is a public-use airport also located in Humboldt County; however, the Airport and the area surrounding it are located on the Hoopa Valley Reservation. Airport Land Use Commissions

²² Humboldt, County of. 2019. 2019 Housing Element. Certified October 23, 2019.
<https://humboldt.gov/DocumentCenter/View/78832/2019-Housing-Element---Final-RHNA-Plan-PDF?bidId=> (accessed October 2024).

(ALUCs) have no mandatory duty or authority to review land use on tribal lands. Accordingly, the areas surrounding Hoopa Airport and on tribal land are not subject to this ALUCP. Regardless, general policies applicable to all airports are recommended for areas around Hoopa Airport and the ALUC may provide advisory determinations on land use in the Hoopa Airport area at the request of the Hoopa Valley Tribe.

Humboldt County General Plan

The following Humboldt County General Plan goals and policies related to land use/planning and population/housing are the most applicable to the proposed plan.²³

- **Goal E-G1. Countywide Strategic Energy Planning.** An effective energy strategy based on self-sufficiency, development of renewable energy resources and energy conservation that is actively implemented countywide through Climate Action Plans, General Plans and the Redwood Coast Energy Authority's Comprehensive Energy Action Plan.
- **Policy AQ-P9. County Climate Action Plan.** Through public input and review, develop and implement a multi-jurisdictional Climate Action Plan to achieve reductions in greenhouse gas emissions consistent with the state Global Warming Solutions Act and subsequent implementing legislation and regulations.

Arcata General Plan

The following City of Arcata General Plan²⁴ goals and policies related to land use/planning and population/housing are applicable to the proposed plan.

- **Policy LU-1 Overall Development Pattern Objective.** Establish a pattern of development that concentrates activity and amenities in a pattern of centers, clusters and mixes of uses to support the City's focus on infill development and active transportation. Provide an overall land use arrangement that concentrates city-wide uses and functions in these areas with an emphasis on areas within walking distance of the central Plaza Area, Cal Poly Humboldt, and existing neighborhood and employment centers, which provide a mix of commercial services, residential uses, and community facilities. To the maximum extent feasible, the City shall strive through its land use decisions to promote community health for all neighborhoods, with particular attention to those that have been identified as lacking in transit, clean air, grocery stores, bike lanes, parks, and other components of a healthy community.
 - **LU-1c Prioritization of transit and active transportation.** Eliminate minimum parking requirements citywide.
 - **LU-1d Reduce parking maximums in the most walkable areas of the city.** Reduce maximum allowable parking requirements within Infill Opportunity Zones to promote walkable communities. Minimize vehicle parking requirements and maximize walk, bike, and transit infrastructure.

²³ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

²⁴ Arcata, City of. 2024. 2045 General Plan. <https://www.cityofarcata.org/160/General-Plan> (accessed December 2024).

Blue Lake General Plan

The following City of Blue Lake General Plan²⁵ goals and policies related to land use/planning and population/housing are applicable to the proposed plan.

- **Policy 1.** Site development shall be designed for the pedestrian scale, incorporate amenities and encourage alternative modes of transportation.
- **Policy 3.** Safety and convenience of alternative modes of transportation shall be considered when determining those modes best suited for the community.

Eureka General Plan

The following City of Eureka General Plan²⁶ policies and implementation programs related to land use/planning and population/housing are applicable to the proposed plan.

- **Policy LU-1.2: Compact Form.** Provide for a compact pattern of mixed land uses at densities/intensities consistent with the development patterns Eureka experienced from the 1870s to the 1940s and at densities/intensities that are higher than were allowed in the past three general plan updates. Focus this compact pattern of land uses to radiate out from the Core Area, Employment Areas, Commercial Corridors, and Commercial Centers to make efficient use of the City's limited remaining developable lands and to promote walkability and urban growth.
- **Policy LU-1.19 Pedestrian-oriented Design.** In the downtown, commercial core, mixed use, and neighborhood commercial areas, promote the creation of a strong and appealing pedestrian environment by requiring the use of transparent commercial storefronts (i.e., windows and doors) and continuous and compatible building facades, while prohibiting the creation of blank walls and discontinuity in building facades.
- **Policy LU-6.2 Infill First.** Promote development of vacant infill properties and redevelopment/reuse of economically underutilized sites and buildings to accommodate new growth and internal densification prior to considering potential annexation.
- **Policy M-1.6: Dense Development.** Integrate transportation and land use decisions to enhance opportunities for development that is compact, walkable and transit friendly.
- **Policy U-5.2: Energy Conserving Land Use Practices.** Implement energy conserving land use practices that include compact and mixed use development, provision of bikeways and pedestrian paths, and the incorporation and enhancement of transit routes and facilities.
- **Policy H-2.4: Maximum Density Infill.** Promote and encourage the development of the last remaining vacant lots in the City with housing units at the highest density allowed in each respective zone district.
- **Policy H-2.8: Mixed-Use Residential.** Promote and encourage the development of new residential units in mixed-use zones, with particular emphasis on multi-story buildings, upper floor residential units, and residential units near transit stops.
- **Policy H-1.0: Building Heights and Floor Area Ratios.** Allow multi-story buildings in Mixed Use zones with building heights and floor area ratios in excess of existing buildings in order to promote dense upper-floor residential and mixed-use developments.

²⁵ Blue Lake, City of. 2021. General Plan: Land Use Element. Updated April 27, 2021. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed December 2024).

²⁶ Eureka, City of. 2018. City of Eureka 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed December 2024).

- **Implementation Imp AQ-1:** Prepare a Climate Action Plan (CAP) that provides the framework for the City to reduce greenhouse gas emissions to meet the State targets identified for 2040 through City operations, and existing and future development. Greenhouse gas emission reductions related to land use, mobility, energy, and solid waste will be addressed in the CAP.

Ferndale General Plan

The following City of Ferndale General Plan²⁷ policies related to land use/planning and population/housing are applicable to the proposed plan.

- **Policy LU-1.4–Residential Infill.** The infilling and completion of residential neighborhoods should be encouraged to take full advantage of available public services.
 - **Policy LU-1.8–Multi-Modal Transportation.** Encourage multi-modal travel by increasing bike and pedestrian routes throughout the City enhanced with bike parking, exercise stations, and safe roadway crossings. Actively seek out public access easements and/or right-of-way acquisition for pedestrian creek crossings to better connect Ferndale Housing and potential development on APN 030-091-030(see policy LU-1.7) to Main Street. Potential crossings may include Fern Avenue, Vanston Avenue, E Street, or an alternative location.
 - **Policy LU-1.9 –Right-of-Ways.** Ensure street design and right-of-way acquisition will support pedestrian and bike mobility. This includes seeking acquisitions from willing landowners to develop a broader trail network within the city.
- Policy LU2.1–Commercial Infill.** Promote infill and commercial activity in existing commercial areas in the Main Street Historic District and Milton Avenue area to provide services to residents and visitors and to prevent disturbance of residential neighborhoods.

Fortuna General Plan

The following City of Fortuna General Plan²⁸ policies related to land use/planning and population/housing are applicable to the proposed plan.

- **Policy LU-1.6 Infill Development.** The City shall encourage infill development on vacant sites and reuse of underutilized parcels to minimize outward growth and reduce the cost of providing public services and facilities.
- **Policy LU-1.7 Infill Incentives.** The City shall establish incentives (e.g., streamlined permitting, specific plans, public-private partnerships) to encourage infill site development by private and/or non-profit housing providers.
- **Policy LU-11.7 Pedestrian Environment.** The City shall create a distinctive and active pedestrian environment that supports Downtown as a unique destination.

²⁷ Ferndale, City of. 2023. Ferndale General Plan: Land Use Element. Updated July 2023. https://www.dropbox.com/sc/fi/x8b8zlmnwbzso4rg92tuw/Ferndale-LUE_draft-7.27.23-CLEAN.pdf?rlkey=74c49rw2hdg5czh6d9gavoaj8&e=1&st=82oyvi1o&dl=0 (accessed December 2024).

²⁸ Fortuna, City of. 2010. City of Fortuna General Plan. https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed December 2024).

Rio Dell General Plan

The following City of Rio Dell General Plan²⁹ goals and policies related to land use/planning and population/housing are applicable to the proposed plan.

- **Goal LU -4.** Encourage infill development of vacant and underutilized land in the Town Center before amending the General Plan to allow additional commercial and residential land elsewhere.
- **Policy P1.3.6-2.** Develop new street right-of-way standards that reduce vehicular speeds and enhance bicycle and pedestrian facilities.
- **Policy P1.3.6-3.** Provide greater access to public transit service for neighborhood residents, business owners, employees, and customers.

Trinidad General Plan

The following City of Trinidad General Plan goals and policies related to land use/planning and population/housing are applicable to the proposed plan.

- **Goal LU-2.** Preserve and maintain the natural and community environments by promoting sustainability in development patterns.
- **Policy LU-2.3.** In order to minimize impacts on air quality and greenhouse gasses, the City shall ensure new development: (1) is consistent with State reduction targets; (2) is consistent with any requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development; and (3) minimizes energy consumption and vehicle miles traveled to the extent feasible.
- **Goal LU-3.** Assess, plan for, adapt to, and minimize, to the extent possible, the impacts from climate change through appropriate land use controls to maintain the health and resiliency of the community, residents, businesses and coastal resources.
- **Policy LU-3.4.** Continue to reevaluate and update land use patterns and zoning requirements to minimize energy use and risks from climate change effects, including sea level rise, global warming, precipitation patterns, and wildfire risks.

3.6.4 Impacts and Mitigation Measures

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Land Use Planning, Population, and Housing.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Physically divide an established community?
- b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?
- c) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure?)

²⁹ Rio Dell, City of. City of Rio Dell 2015 General Plan.
https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf
(accessed December 2024)

- d) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Approach to Analysis

Land Use Planning

The evaluation of proposed plan impacts related to land use planning is based on a comparison of the RCAP and CEQA GHG thresholds to the applicable plans, policies, and regulations to determine if development facilitated by the proposed plan would conflict with a plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This section also analyzes whether development facilitated by the proposed plan, or its policies would physically divide communities.

Implementation of the proposed plan could result in a significant impact if it conflicts with applicable land use plans and policies of VROOM, ALUCP, Humboldt County General Plan, Arcata General Plan, Blue Lake General Plan, Eureka General Plan, Ferndale General Plan, Fortuna General Plan, Rio Dell General Plan, or Trinidad General Plan.

A policy inconsistency is considered a significant adverse impact only if the inconsistency would result in a significant adverse physical impact based on the established significance criterion. Consistency of the proposed plan with applicable land use plans and policies is evaluated below.

Population and Housing

Population and housing trends in Humboldt County were evaluated by reviewing the most current data available from the US Census Bureau, DOF, the Humboldt County General Plan, VROOM, and the 2018-2027 HCAOG RHNA. Impacts related to population are generally social or economic in nature. Under CEQA, a social or economic change is not considered a significant effect on the environment unless the changes are directly linked to a physical change.

For purposes of this analysis, substantial population growth is defined as growth exceeding DOF population forecasts for Humboldt County. Substantial displacement would occur if allowed land uses would displace substantially more residences than would be accommodated through any growth facilitated by the proposed plan.

EIR Scoping Comments Consideration

No EIR scoping comments were received that pertain to land use planning or population and housing.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to land use, population, or housing. Therefore, the analysis in this section focuses on the potential for implementation of the RCAP to result in impacts related to land use, population, and housing in Humboldt County.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of land use/planning and population/housing impacts resulting from implementation of the proposed plan:

- Development resulting in physically dividing a community area within the County.
- Development conflicting with any VROOM, ALUCP, or County or respective city general plan land use goal, policy, or code adopted for the purpose of avoiding or mitigating an environmental effect.
- Inducement of permanent population, housing, or employment growth in the County that would exceed the HCAOG RHNA population projections for the County.
- Displacement of existing housing or people.

Impact Evaluation

Established Community Division

Significance Criterion a: Would the proposed plan physically divide an established community?

Impact LU-1 IMPLEMENTATION OF THE RCAP WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. NO IMPACTS WOULD OCCUR.

Construction

Impacts related to physical division of an established community are limited to operational impacts. To the extent that construction activities obstruct roads, it would be temporary and would not constitute a division of an established community. No respective RCAP construction impacts would occur related to potential division of an established community.

Operation

The RCAP contains measures to implement a qualified GHG reduction plan that may be utilized for mitigating and tracking regional GHG emissions as well as for streamlining California Environmental Quality Act (CEQA) GHG analyses for future projects and plans within Humboldt that are required to undergo CEQA review. The RCAP does not include measures, actions, or specific development projects that would divide an established community. Rather, RCAP Measures T-1 through T-4 facilitate the installation of active transportation, public transit, and mobility hub infrastructure and encourage construction of mixed-use infill developments. These measures would facilitate enhanced mobility options within the region. Such improvements would help to increase connectivity within Humboldt. Therefore, no RCAP operational impacts would occur related to potential division of an established community.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

No Impact

Land Use Plans, Policies, and Regulations Consistency

Significance Criterion b: Would the proposed plan cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact LU-2 THE RCAP WOULD BE CONSISTENT WITH APPLICABLE LAND USE PLANS, POLICIES, AND REGULATIONS ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to consistency with applicable land use plans and policies are limited to operational impacts. No respective RCAP construction impacts would occur from infrastructure development facilitated by the proposed plan.

Operation

The RCAP does not propose specific development or changes to land use and zoning. Rather, the RCAP contains strategies and measures for mitigating and tracking regional GHG emissions. In addition, GHG emissions analysis methodologies consistent with the goals established by the RCAP would be enforced during future project CEQA review as well as all future Humboldt CEQA GHG emissions analyses with the intention of reducing GHG emissions associated with operation of future projects and plans within the County or cities. The RCAP includes Measures T-1 through T-4 which emphasize regional coordination to pursue funding to implement modifications to existing street facilities to create a more pedestrian- and bicycle-oriented street network, prioritize transit-oriented development, and expand the public transit network. As described in detail in Section 3.8, *Transportation*, the RCAP would be consistent with HCAOG's VROOM plan as it includes measures that promote connectivity for transit users, bicyclists, and pedestrians, and that would reduce VMT.

Under implementation of the RCAP, improvements and subsequent infrastructure may occur. Should any such development occur on a site located within an airport land use plan or within two miles of a public airport or public use airport, compliance with federal, State, and local regulations, including the Humboldt Airport Land Use Compatibility Plan³⁰, pertaining to projects and infrastructure in proximity to an airport would be required, including but not limited to land use types and compatibility, heights, and siting and design specifications.

Table 3.6-1 provides a consistency analysis of the RCAP with the Humboldt County General Plan and incorporated cities general plans.

³⁰ Humboldt County Airport Land Use Commission. 2021. Humboldt County Airport Land Use Compatibility Plan. <https://humboldt.gov.org/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB> (accessed October 2024).

Table 3.6-1 Consistency with the County and City General Plans

Policy	Consistency
Humboldt County Land Use Element	
Goal E-G1. Countywide Strategic Energy Planning. An effective energy strategy based on self-sufficiency, development of renewable energy resources and energy conservation that is actively implemented countywide through Climate Action Plans, General Plans and the Redwood Coast Energy Authority's Comprehensive Energy Action Plan.	Consistent. The proposed plan would be a Regional Climate Action Plan and would include measures that would support self-sufficiency, development of renewable energy resources, and energy conservation through strategies and measures.
Policy AQ-P9. County Climate Action Plan. Through public input and review, develop and implement a multi-jurisdictional Climate Action Plan to achieve reductions in greenhouse gas emissions consistent with the state Global Warming Solutions Act and subsequent implementing legislation and regulations.	Consistent. The RCAP is being developed through a process involving coordination between multiple agencies and partners and public outreach and input. Implementation of the RCAP would allow Humboldt to achieve GHG reductions consistent with State requirements.
City of Arcata Land Use Element	
Policy LU-1 Overall Development Pattern Objective. Establish a pattern of development that concentrates activity and amenities in a pattern of centers, clusters and mixes of uses to support the City's focus on infill development and active transportation. Provide an overall land use arrangement that concentrates city-wide uses and functions in these areas with an emphasis on areas within walking distance of the central Plaza Area, Cal Poly Humboldt, and existing neighborhood and employment centers, which provide a mix of commercial services, residential uses, and community facilities. To the maximum extent feasible, the City shall strive through its land use decisions to promote community health for all neighborhoods, with particular attention to those that have been identified as lacking in transit, clean air, grocery stores, bike lanes, parks, and other components of a healthy community.	Consistent. The proposed plan includes measures that promote infill development and active transportation including Measures T-1 through T-4.
LU-1c Prioritization of transit and active transportation. Eliminate minimum parking requirements citywide.	Consistent. RCAP Measure T-3 includes actions to develop reduced parking requirements.
LU-1d Reduce parking maximums in the most walkable areas of the city. Reduce maximum allowable parking requirements within Infill Opportunity Zones to promote walkable communities. Minimize vehicle parking requirements and maximize walk, bike, and transit infrastructure.	Consistent. RCAP Measure T-3 includes actions to develop reduced parking requirements. In addition, RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 would promote improvements and expansion of pedestrian, bicycle, and public transit infrastructure.
City of Blue Lake Land Use Element	
Policy 1. Site development shall be designed for the pedestrian scale, incorporate amenities and encourage alternative modes of transportation.	Consistent. The proposed plan includes measures that aim to support walking and other modes of active transportation such as Measures T-1 Urban and Rural.
Policy 3. Safety and convenience of alternative modes of transportation shall be considered when determining those modes best suited for the community.	

Policy	Consistency
City of Eureka Land Use Element	
Policy LU-1.19 Pedestrian-oriented Design. In the downtown, commercial core, mixed use, and neighborhood commercial areas, promote the creation of a strong and appealing pedestrian environment by requiring the use of transparent commercial storefronts (i.e., windows and doors) and continuous and compatible building facades, while prohibiting the creation of blank walls and discontinuity in building facades. (RDR) Policy LU-6.2 Infill First. Promote development of vacant infill properties and redevelopment/reuse of economically underutilized sites and buildings to accommodate new growth and internal densification prior to considering potential annexation. (RDR, JP)	Consistent. The proposed plan includes measures that support pedestrian level development and infill development including Measures T-1 Urban and Rural and T-3.
City of Ferndale Land Use Element	
Policy LU-1.4–Residential Infill. The infilling and completion of residential neighborhoods should be encouraged to take full advantage of available public services. Policy LU2.1–Commercial Infill. Promote infill and commercial activity in existing commercial areas in the Main Street Historic District and Milton Avenue area to provide services to residents and visitors and to prevent disturbance of residential neighborhoods.	Consistent. The proposed plan includes Measure T-3 that encourages mixed-use infill development patterns within areas well-served by transit.
PolicyLU-1.8–Multi-Modal Transportation. Encourage multi-modal travel by increasing bike and pedestrian routes throughout the City enhanced with bike parking, exercise stations, and safe roadway crossings. Actively seek out public access easements and/or right-of-way acquisition for pedestrian creek crossings to better connect Ferndale Housing and potential development on APN 030-091-030 (see policy LU-1.7) to Main Street. Potential crossings may include Fern Avenue, Vanston Avenue, E Street, or an alternative location.	Consistent. The RCAP includes Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 which would promote multi-modal improvements and expansion of pedestrian, bicycle, and public transit infrastructure.
Policy LU-1.9 –Right-of-Ways. Ensure street design and right-of-way acquisition will support pedestrian and bike mobility. This includes seeking acquisitions from willing landowners to develop a broader trail network within the city.	Consistent. The RCAP includes Measures T-1 Urban and Rural which would promote improvements and expansion of pedestrian and bicycle infrastructure.
City of Fortuna Land Use Element	
Policy LU-1.6 Infill Development. The City shall encourage infill development on vacant sites and reuse of underutilized parcels to minimize outward growth and reduce the cost of providing public services and facilities. Policy LU-1.7 Infill Incentives. The City shall establish incentives (e.g., streamlined permitting, specific plans, public-private partnerships) to encourage infill site development by private and/or non-profit housing providers.	Consistent. The proposed plan includes Measure T-3 that encourages mixed-use infill development patterns within areas well-served by transit.
Policy LU-11.7 Pedestrian Environment. The City shall create a distinctive and active pedestrian environment that supports Downtown as a unique destination.	Consistent. The proposed plan includes Measures T-1 Urban and Rural that encourage pedestrian environment improvements and expansion of the active transportation network.

Policy	Consistency
City of Rio Dell Land Use Element	
Goal LU -4 Encourage infill development of vacant and underutilized land in the Town Center before amending the General Plan to allow additional commercial and residential land elsewhere.	Consistent. The proposed plan includes Measure T-3 that encourages mixed-use infill development patterns within areas well-served by transit.
Policy P1.3.6-2 Develop new street right-of-way standards that reduce vehicular speeds and enhance bicycle and pedestrian facilities.	Consistent. The RCAP includes Measures T-1 Urban and Rural which would promote improvements and expansion of pedestrian and bicycle infrastructure.
Policy P1.3.6-3 Provide greater access to public transit service for neighborhood residents, business owners, employees, and customers.	Consistent. The RCAP includes Measures T-2 Urban and Rural and T-4 which would promote improvements and expansion of the public transit network.
City of Trinidad Land Use Element	
Goal LU-2: Preserve and maintain the natural and community environments by promoting sustainability in development patterns.	Consistent. The proposed plan would promote the preservation of the natural and community environment through Measure T-3, which would encourage infill development and the reduction of urban sprawl. RCAP Measures BE-2 through BE-7 would further encourage sustainable development practices through energy conservation and building decarbonization measures. In addition, Measure CS-3 promotes the preservation of Humboldt's forests and wetlands.
Policy LU-2.3 In order to minimize impacts on air quality and greenhouse gasses, the City shall ensure new development: (1) is consistent with State reduction targets; (2) is consistent with any requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development; and (3) minimizes energy consumption and vehicle miles traveled to the extent feasible.	Consistent. The proposed plan is a Regional Climate Action Plan and includes measures that encourage infill, building decarbonization, VMT reductions, and zero-emission vehicle adoption to reduce potential impacts from greenhouse gas emissions and air pollutants.
Goal LU-3. Assess, plan for, adapt to, and minimize, to the extent possible, the impacts from climate change through appropriate land use controls to maintain the health and resiliency of the community, residents, businesses and coastal resources.	Consistent. The proposed plan includes a series of measures and actions to reduce GHG emissions and minimize the impacts of climate change in Humboldt.

The RCAP is a policy document containing measures that are consistent with the applicable goals and policies of the Humboldt County General Plan and the General Plans of the incorporated cities and is designed to reduce environmental impacts associated with climate change. Nonetheless, implementing the RCAP would require some modification of existing policies, including developing and implementing new programs and ordinances or modifying existing ones. For example, RCAP Measure T-3 would encourage development of mixed-use development in infill priority areas, potentially through new ordinances, alterations to parking standards, and permit streamlining processes, and RCAP Measures BE-5 and BE-6 would involve adoption of ordinances to require decarbonization of new residential and non-residential buildings. In order to implement these measures, the Humboldt County Code (HCC), , applicable incorporated City municipal codes, and other applicable County and city documents may need to be amended to reflect new or modified requirements. However, where modifications of existing policies are needed, the RCAP measures would result in greater avoidance or reduction of environmental effects. Therefore, RCAP operational impacts related to consistency with land use plans and policies would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less Than Significant without Mitigation

Unplanned Population Growth and Population or Housing Displacement

Significance Criterion c: Would the proposed plan induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Significance Criterion d: Would the proposed plan displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact LU-3 IMPLEMENTATION OF THE RCAP WOULD NOT RESULT IN SUBSTANTIAL UNPLANNED POPULATION GROWTH IN HUMBOLDT OR THE DISPLACEMENT OF PEOPLE OR HOUSING. THERE WOULD BE NO IMPACT.

The RCAP does not include strategies or measures that would result in new housing, nor would it displace existing people or residences. Therefore, the RCAP would result in no impact related to the displacement of people or housing.

While the RCAP would not result in new habitable development, it could result in job growth within the region. The RCAP includes Measures T-10 and CS-1, which would have the potential to create new jobs related to renewable fuels (e.g., hydrogen, biofuel, and renewable natural gas) and the green jobs industry. According to research on the clean fuels industry, biofuel production facilities require relatively few workers to operate. For example, a commercial-scale grain ethanol plant (i.e., a plant producing 50 million gallons of biofuel per year) will employ approximately 35 to 40 full-time workers. In addition, up to three to four jobs related to biomass production/harvesting and fuel transportation may be generated in the local economy for every direct job created at a biofuel plant.³¹ Humboldt currently experiences an unemployment rate of 4.8 percent, with approximately 3,000 unemployed persons within the labor force. As detailed in Chapter 3, *Environmental Impact Analysis*, Humboldt is expected to add approximately 3,645 jobs between 2022 and 2030. While new jobs would be introduced to the area as a result of RCAP-related projects, these additional jobs would not be anticipated to exceed the planned employment growth for the region. Furthermore, employees would likely be sourced from the existing labor population in the area, including the approximately 3,000 Humboldt residents currently unemployed, and the potential increase in population related to persons relocating to Humboldt from other regions for new employment opportunities would be nominal. In addition, the RCAP does not propose new roadways throughout Humboldt that could indirectly lead to new population growth or development. While the RCAP would facilitate new renewable energy utilities infrastructure pursuant to RCAP Measures BE-1, BE-2, and BE-8, the purpose of such infrastructure would be to serve as replacement for existing non-renewable energy utilities infrastructure and would not include the extension of electrical utilities

³¹ Pace Energy and Climate Center. 2010. Worker Training and Business Research Infrastructure for Biofuel Industry In New York. <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Renewable-Fuels-Roadmap/Renewable-Fuels-Roadmap-Appendix-J.pdf> (accessed January 2025).

infrastructure into new, undeveloped areas. Related unplanned population growth is not anticipated as a result. As such, the RCAP would not directly increase the population, indirectly induce additional unplanned population growth, or displace people or housing. Therefore, the RCAP would result in no impacts related to substantial unplanned population growth.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than Significant Without Mitigation

3.6.5 Cumulative Impacts

The geographic scope of the cumulative land use/planning and population/housing analysis is the population, employment, service population and household growth projected for the Humboldt region through 2030.

Community Division

Since no plan-level impact related to potential to divide an existing community would occur, it is not possible to combine with other cumulative projects with respect to this impact area. Therefore, there would be no cumulative impact related to potential division of an existing community.

Land Use Plan, Policy, or Regulation Consistency

Conflicts regarding compatibility of past, present, and reasonably foreseeable future infrastructure development with the applicable land use plans, policies, or regulations would be localized and addressed on a case-by-case basis, with potential impacts being reduced through compliance with the sustainability measures implemented under the RCAP. Cumulative projects, including future projects facilitated by the RCAP, would be required to adhere to County and individual city development regulations and general plan policies to retain land use character and minimize environmental impacts.

Implementing the RCAP would require some modification of existing policies, including developing and implementing new programs, and projects, or modifying existing ones. The proposed policy changes are consistent with the intent of the applicable goals and policies established within the County and cities General Plans and would not cumulatively contribute to environmental impacts. Future RCAP-related projects and actions would be reviewed for consistency with the Humboldt County or applicable incorporated city general plan, HCC or applicable city municipal code, and other applicable State and federal regulations prior to approval. Therefore, the cumulative impact related to potential conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be less than significant.

Population Growth and Population/Housing Displacement

Since no plan-level impact would occur related to potential direct and indirect population growth or displacement of housing or people, it is not possible to combine with other cumulative projects with respect to these impact areas. Therefore, there would be no cumulative impact related to direct and indirect population growth or displacement of housing or people.

Overall Level of Cumulative Significance

Less Than Significant without Mitigation

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3.7 Noise

3.7.1 Introduction

This section describes the existing conditions related to noise and vibration within the plan area, which encompasses unincorporated and incorporated Humboldt County, as well as the regulatory framework. This section also evaluates the possible impacts related to noise and vibration that could result from implementation of the RCAP and CEQA GHG Emissions Thresholds.

3.7.2 Environmental Setting

Characteristics of Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment.¹ Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of roadway vehicle volume, would increase the noise level by 3 dBA; reducing the energy in half would result in a 3 dBA decrease.²

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud.

Sound changes in both level and frequency spectrum as it travels from the source to the receptor. The most obvious change is the decrease in level as the distance from the source increases. The manner in which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance. The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees). Noise levels may also be reduced by

¹ California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf> (accessed September 2024).

² Crocker, Malcom. 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.

intervening structures. The amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can substantially alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receptor.³ Structures can substantially reduce exposure to noise as well. The FHWA’s guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The effect of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period.

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours; it is also measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA or less. The relationship between the peak-hour L_{eq} value and the L_{dn} /CNEL depends on the distribution of roadway noise during the day, evening, and night. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 60-plus CNEL range. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations.⁴ Table 3.7-1 briefly defines measurement descriptors and other sound terminology used in this section.

³ Federal Highway Administration (FHWA). 2011. *Highway Traffic Noise: Analysis and Abatement Guidance*. (FHWAHEP-10-025). December.
https://www.fhwa.dot.gov/Environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf (accessed September 2024).

⁴ Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. Available at:
https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2022).

Table 3.7-1 Sound Terminology

Term	Definition
Sound	A vibratory disturbance created by a vibrating object which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Ambient Noise	The composite of noise from all sources near and far in a given environment.
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which represents the squared ratio of sound-pressure amplitude to a reference sound pressure. The reference pressure is 20 micropascals, representing the threshold of human hearing (0 dB).
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level that approximates the frequency response of the human ear.
Equivalent Noise Level (L_{eq})	The average sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
Ambient Noise	The composite of noise from all sources near and far in a given environment.
Maximum and Minimum Noise Levels (L_{max} and L_{min})	The maximum or minimum instantaneous sound level measured during a measurement period.
Day-Night Level (DNL or L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10:00 p.m. and 7:00 a.m. (nighttime).
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7:00 p.m. and 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring between 10:00 p.m. and 7:00 a.m.

Characteristics of Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hertz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body is from a low of less than 1 Hertz up to a high of about 200 Hertz.⁵ Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hertz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source.⁶

⁵ Crocker, Malcolm J. (Editor). 2007. *Handbook of Noise and Vibration Control Book*. ISBN: 978-0-471-39599-7, Wiley-VCH. October 2007.

⁶ Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed September 2024).

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.⁷ When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV). The PPV is normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in the monitoring of blasting vibration and other construction activity because it is related to the stresses that are experienced by buildings.⁸ Table 3.7-2 summarizes the vibration damage criteria recommended by the FTA for evaluating the potential for architectural damage to buildings.

Table 3.7-2 Criteria for Vibration Damage Potential

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

in/sec = inches per second; PPV = peak particle velocity

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed September 2024).

Noise- and Vibration-Sensitive Land Uses

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise-sensitive land uses are typically defined as single and multi-family residential; hotels and motels; group homes, hospital and extended medical facilities; churches; schools and other learning institutions; and libraries. Vibration-sensitive receptors, which are similar to noise-sensitive receptors, include residences and institutional uses, such as schools, churches, and hospitals. Vibration-sensitive receptors also include buildings where vibrations may interfere with equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment). Noise- and vibration-sensitive land uses are located throughout Humboldt, with sensitive uses clustered particularly in populated areas such as Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, Trinidad, and McKinleyville.

⁷ Caltrans. 2020 *Transportation and Construction Vibration Guidance Manual*. (CT-HWANP-RT-20-365.01.01) September. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf> (accessed September 2024).

⁸ Caltrans. 2020 *Transportation and Construction Vibration Guidance Manual*. (CT-HWANP-RT-20-365.01.01) September. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf> (accessed October 2022).

Existing Noise Conditions and Sources

Existing noise conditions in Humboldt are generally dominated by transportation sources, with additional noise generated from industrial sources. These sources are described further below.

Transportation Sources

The predominant source of noise in Humboldt County is motor vehicles. Motor vehicle noise is characterized by a high number of individual events that can create a sustained noise level in proximity to noise-sensitive uses. Roadways with the highest roadway vehicle volumes and speeds produce the highest noise levels. In Humboldt County, these roadways would include U.S. 101 and State Highways 36, 96, 211, 255, and 299. Traffic noise contours are included in Table 13-B of the Humboldt County General Plan, with CNEL ranging from 63.1 to 73.4 in areas adjacent to these roadways.⁹

Airport noise is an additional noise source in Humboldt, with noise levels ranging from 50 dB to 75+ dB in the vicinity of the airports. The Humboldt County Airport Land Use Compatibility Plan (ALUCP) contains noise contours for each public airport in the County, which includes:¹⁰

- California Redwood Coast – Humboldt County Airport
- Dinsmore Airport
- Garberville Airport
- Kneeland Airport
- Murray Field Airport
- Rohnerville Airport
- Samoa Field Airport
- Shelter Cove Airport

Rail noise sources have historically been present in Humboldt County through the North Coast Railroad Authority rail corridor. The rail corridor was transferred to the Great Redwood Trail Agency to convert the rail line into a trail network, and trains do not currently run through the Humboldt along this rail corridor.

Industrial Sources

Other noise sources in Humboldt County include industrial uses such as gravel and mining operations. According to the Humboldt County General Plan Noise Element, gravel operations are located in the communities of Blocksburg, Blue Lake, Bridgeville, Capetown, Carlotta, Dyerville, Fortuna, Garberville, Hoopa, Maple Creek, Martin's Ferry, Orleans, Petrolia, Scotia, and Willow Creek. Other sources identified by the Noise Element include shipping operations in Fields Landing, a pulp mill, cogeneration plant, and shipping operations in Samoa, and a mill in Scotia.¹¹ These sources can include mechanical equipment and mobile sources such as heavy trucks hauling material. Local governments typically regulate noise from industrial activities through enforcement

⁹ Humboldt, County of. 2017. General Plan Noise Element. <https://humboldt.gov.org/DocumentCenter/View/61989/Chapter-13-Noise-Element-PDF> (accessed November 2024).

¹⁰ Humboldt County Airport Land Use Commission. 2021. Humboldt County Airport Land Use Compatibility Plan. <https://humboldt.gov.org/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB> (accessed October 2024)

¹¹ Humboldt, County of. 2017. General Plan Noise Element. <https://humboldt.gov.org/DocumentCenter/View/61989/Chapter-13-Noise-Element-PDF> (accessed November 2024).

of noise ordinance standards, implementation of general plan policies and imposition of conditions of approval for building or grading permits. In general, industrial sources tend to be located away from sensitive land uses.

3.7.3 Regulatory Framework

Federal Regulations

Federal Transit Administration Transit and Noise Vibration Impact Assessment Manual

The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual*. For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period.¹²

Code of Federal Regulations Title 14, Part 150

The Federal Aviation Administration (FAA) enforces Title 14, Part 150 of the Code of Federal Regulations, which governs airport noise compatibility programs and identifies land uses that are normally compatible with various levels of noise exposure. The FAA has determined that sound levels up to 45 dB CNEL are acceptable within residential buildings. Flightpaths from the ACV Airport are located over Humboldt County and would require implementation of the FAA standards.

State Regulations

California General Plan Guidelines

State law requires general plans to include a noise element under Government Code Section 65302(f). The California General Plan Guidelines, published by the Governor's Office of Planning and Research, indicate acceptable, specific land use types in areas with specific noise exposure. The guidelines also offer adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. These guidelines are advisory, and local jurisdictions have the authority to set specific noise standards based on local conditions.

California Building Code

California Code of Regulations Title 24, Building Standards Administrative Code, Part 2, Chapter 12, and the California Building Code codify the State noise insulation standards. These noise standards apply to new construction in California to control interior noise levels as they are affected by exterior noise sources and interior noise sources from separate areas. The regulations specify that interior noise levels shall not exceed 45 dB CNEL/ L_{dn} in any habitable room, as well as specifying sound transmission class requirements for walls, floors, and ceilings around sleeping units.

California Green Building Code

California Green Building Standards Code 2019 (CALGreen) Section 5.507.4, Acoustical Control, regulates construction of non-residential uses within the 65 dBA CNEL/ L_{dn} contour of an airport, freeway, expressway, railroad, industrial noise source, or other fixed source. According to Section

¹² FTA. 2018. *Transit Noise and Vibration Impact Assessment* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed September 2024).

5.507.4.1.1 “buildings exposed to a noise level of 65 dB Leq(1-hr) during any hour of operation shall employ sound-resistant assemblies as determined by a prescriptive method (CALGreen Section 5.507.4.1) or performance method (CALGreen Section 5.507.4.2).

Projects may demonstrate compliance through the prescriptive method if wall and roof-ceiling assemblies exposed to the noise source meet a composite sound transmission class (STC) rating of at least 50 or a composite outdoor/indoor transmission class (OITC) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30. Projects may demonstrate compliance through the performance method if wall and roof-ceiling assemblies exposed to the noise source are constructed to provide an interior noise environment that does not exceed 50 dB Leq-1Hr in occupied areas during hours of operations.

California Occupational Safety and Health Administration Worker Safety Requirements

The California Occupational Safety and Health Administration (Cal OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Section 5096 of the California Occupational Safety and Health Administration Cal OSHA regulations pertains to control of harmful exposures in workplaces, including for noise.¹³ The permissible exposure level is that workers should not be exposed to noise levels exceeding 90 dBA averaged over an 8-hour work shift, with a sliding scale for shorter durations (i.e., greater noise exposure is allowed the shorter the noise exposure duration).

Local Regulations

To identify, appraise and remedy noise and vibration problems in local communities, each City and County in the state is required to adopt a noise element as part of its general plan. Local governments use the Governor's Office of Land Use and Climate Innovation's General Plan Guidelines, to prepare general plan noise elements. Each noise element is required to analyze and quantify current and projected noise levels associated with local noise sources, including, but not limited to: highways and freeways, primary arterials and major local streets, rail operations, air traffic associated with the airports; local industrial plants; and other ground stationary sources that contribute to the community noise environment. Beyond statutory requirements, local jurisdictions are free to adopt their own goals and policies in their noise elements, although most jurisdictions have chosen to adopt noise/land use compatibility guidelines that are similar to those recommended by the State. A brief overview of each jurisdiction's noise element and relevant noise policies are described below.

General Plans

HUMBOLDT COUNTY GENERAL PLAN NOISE ELEMENT

The Noise Element of the Humboldt County General Plan contains the following applicable goals, policies, and standards related to noise:

- **N-P1 Minimize Noise from Stationary and Mobile Sources.** Minimize stationary noise sources and noise emanating from temporary activities by applying appropriate standards for average and short-term noise levels during permit review and subsequent monitoring.

¹³ California Occupational Safety and Health Administration (Cal OSHA). Section 5096. Exposure Limits for Noise. [https://www.dir.ca.gov/title8/5096.html#:~:text=%C2%A75096.,Exposure%20Limits%20for%20Noise.&text=\(a\)%20Protection%20against%20the%20effects,level%20meter%20at%20slow%20response](https://www.dir.ca.gov/title8/5096.html#:~:text=%C2%A75096.,Exposure%20Limits%20for%20Noise.&text=(a)%20Protection%20against%20the%20effects,level%20meter%20at%20slow%20response) (accessed November 2024).

- **N-P4 Protection from Excessive Noise.** Protect persons from existing or future excessive levels of noise which interfere with sleep, communication, relaxation, health or legally permitted use of property.
- **N-S4 Noise Study Requirements.** When a discretionary project has the potential to generate noise levels in excess of Plan standards, a noise study together with acceptable plans to assure compliance with the standards shall be required. The noise study shall measure or model as appropriate, Community Noise Equivalent Level (CNEL) and Maximum Noise Level (Lmax) levels at property lines and, if feasible, receptor locations. Noise studies shall be prepared by qualified individuals using calibrated equipment under currently accepted professional standards and include an analysis of the characteristics of the project in relation to noise levels, all feasible mitigations, and projected noise impacts. The Noise Guidebook published by the U.S. Department of Housing and Urban Development, or its equivalent, shall be used to guide analysis and mitigation recommendations.
- **N-S7 Short-term Noise Performance Standards (Lmax).** The following noise standards in Table 3.7-3, unless otherwise specifically indicated, shall apply to all property within their assigned noise zones and such standards shall constitute the maximum permissible noise level within the respective zones.

Table 3.7-3 Humboldt County Short-Term Noise Standards

Zoning Classification	Day (maximum) 6:00 a.m. to 10:00 p.m.	Night (maximum) 10:00 p.m. to 6:00 a.m.
	dBA	dBA
MG, MC, AE, TPZ, TC, AG, FP, FR, MH	80	70
CN, MB, ML, RRA, CG, CR C-1, C-2, C-3	75	65
RM, R-3, R-4	65	60
RS, R-1, R-2, NR	65	60

CITY OF ARCATA GENERAL PLAN – NOISE ELEMENT

The City of Arcata General Plan Noise Element sets an example for business and industry by considering the acoustic concerns and future noise impacts of City operations and business includes. The Noise Element includes the following policies that would be applicable to the proposed plan:¹⁴

- **N-1 Noise Attenuation.** Reduce, or eliminate, noise impacts at their source by providing enclosures, barriers, and other on-site noise attenuation measures for noise generating activities. Monitor noise levels to ensure that acceptable noise levels are maintained on adjacent sites.
 - **N-1a Noise attenuation measures.** Noise attenuation measures, and stationary noise source controls shall include the use of barriers, setbacks, site design, baffles, enclosures, silencers, and improved facade construction techniques.
 - **N-1b Noise attenuation.** Where noise attenuation measures are required, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise attenuation measures have been integrated into the project.

¹⁴ Arcata, City of. 2024. Noise Element. https://www.cityofarcata.org/DocumentCenter/View/14362/General-Plan-204520240717_CI_WEB (accessed November 2024).

- **N-1c Noise level reduction.** To reduce existing, objectionable, and stationary noise levels at the source, the City shall work with local industries to incorporate noise control technology through building and site design and engineering solutions. The City shall make available current acoustical attenuation techniques (Noise Control Manual) for new and retrofitted industrial development.
- **N-1d Noise standards enforcement.** Enforcement of noise standards shall be accomplished through development and implementation of a noise control ordinance, post-project compliance testing, and using mediation.
- **N-1e Mediation of noise conflicts.** Where noise conflicts may occur, all affected parties shall strive to use innovative and positive solutions to solve those disputes, including the use of trained mediators. The City recognizes that many noise issues can be resolved before they get to the complaint stage if there is a procedure for airing the issue with an impartial third party.
- **N-1f Resolution of noise disputes.** The City shall establish positive ways to discuss and resolve noise issues and disputes, including the use of trained mediators. Investment in alternative modes. In order to provide a realistic and cost-effective balance between travel modes, the City shall emphasize investment in alternative modes (bikeways, etc.) as a priority over increasing vehicular capacities of streets.
- **N-2 Stationary Noise Sources and Levels.** Establish acceptable noise levels for land uses and activities that will protect community residents from the harmful effects of excessive noise exposure from stationary noise generators. Maintain interior and exterior noise standards that will achieve land use compatibility with respect to community noise.
 - **N-2a Noise contour maps.** The noise contour map (Figure N-b of the Arcata General Plan) and other estimates of noise source levels shall be used in conjunction with the noise source criteria to evaluate the impacts to and from a proposed project, as well as the attenuation measures that may be necessary.
 - **N-2b New development of noise-sensitive uses.** New noise receptors shall not be allowed where the noise level from non-transportation noise generators will exceed noise level standards (Table 3.7-4 below), unless effective noise attenuation measures that meet City standards are incorporated.

Table 3.7-4 City of Arcata Noise Standards for New Stationary Source Projects and Redevelopment by Receiving Land Use

Noise Level Descriptor	Exterior			Interior		
	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.
Residents, Transient Lodging, Hospitals, Extended Care, and Similar Uses						
Hourly Leq, dBA	55 dBA	50 dBA	45 dBA	45 dBA	40 dBA	35 dBA
Maximum	75 dBA	75 dBA	70 dBA	65 dBA	65 dBA	60 dBA
Auditoriums, Theaters, Libraries, Schools, Churches						
Hourly Leq, dBA	55 dBA	55 dBA	n/a	40 dBA	40 dBA	n/a
Maximum	75 dBA	75 dBA	n/a	60 dBA	60 dBA	n/a

Source: Arcata, City of. 2024. Noise Element. <https://www.cityofarcata.org/DocumentCenter/View/14362/General-Plan-204520240717> Cl WEB (accessed November 2024).

- **N-3 Transportation Noise Sources and Levels.** Establish acceptable noise levels for land uses and activities that will protect community residents from the harmful effects of excessive noise exposure due to transportation noise sources. Maintain interior and exterior noise standards that will achieve land use compatibility with respect to community noise.
 - **N-3b Roadway projects.** To minimize noise impacts, the following criteria may be used as a test of significance for roadway projects:
 1. Where existing traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of noise receptors, a +5 dBA L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.
 2. Where existing traffic noise levels range between 60 and 65 dBA L_{dn} at the outdoor activity areas of noise receptors, a +3 dBA L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.
 3. Where existing traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of noise receptors, a + 1.5 dBA L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.
- **N-4 Acoustical Analysis Requirements.** Establish a consistent procedure and framework for conducting and reviewing acoustical analyses. N-4a Noise-sensitive land uses. Where receptor land uses are potentially exposed to existing or projected exterior noise levels exceeding the levels specified in Table N-2 or the performance standards of Table N-1, an acoustical analysis shall be required as part of the environmental review process, so that noise mitigation may be included in the project design. An acoustical analysis prepared pursuant to the Noise Element shall:
 - Be the financial responsibility of the applicant.
 - Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
 - Include representative noise level measurements, with sufficient sampling periods and locations, to adequately describe local conditions and the predominant noise sources.
 - Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to proper site planning and design over mitigation measures, which require the construction of noise barriers or structural modifications to buildings, which contain noise-sensitive land uses.
 - Estimate noise exposure after prescribed mitigation measures are implemented.
- **N-5 Intrusive and Intermittent Noise Sources.** Protect community residents from the effects of excessive, intrusive, and intermittent noise. Set standards for intrusive and intermittent noise sources for both daytime and nighttime periods. Intrusive noise sources have a qualitative aspect that can be annoying. These sources may contain a tonal component, which is absent from the existing general background noise. They may also be rhythmic, reoccurring, or impulsive in nature, or comprised mainly of music or speech. Intrusive noise can result in annoyance or interference with sleep. These types of noise sources can include, but are not limited to, industrial processes, warning horns, backup alarms, and pressure release devices.
 - **N-5a Intrusive noise.** When intrusive noise sources have been identified, the detrimental effects (sleep interference or the potential for annoyance) shall be disclosed to neighboring receptor properties.
 - **N-5b Noise levels due to non-transportation sources.** Noise levels due to non-transportation sources, which may be intermittent or recurring, impulsive noises, pure

tones, or noises consisting primarily of speech or music, shall be subject to the criteria contained within Table N-1, with a -5 dBA penalty applied to the criteria.

- **N-5c Rhythmic, reoccurring, or impulsive noise sources.** When noise sources have been identified to be rhythmic, reoccurring, or impulsive in nature or comprised mainly of music or speech, they may comply with applicable noise level criteria and still be annoying to individuals. When these types of noise sources have been identified, they may be subject to additional attenuation or mediation.
- **N-5d Construction site tool or equipment noise.** The following shall apply to construction noise from tools and equipment: 1. The operation of tools or equipment used in construction, drilling, repair, alteration or demolition shall be limited to between the hours of 8 a.m. and 7 p.m. Monday through Friday, and between 9 a.m. and 7 p.m. on Saturdays and Sundays. 2. Heavy equipment shall not operate on Sundays and City recognized holidays. This shall apply to construction noise from tools and equipment that are subject to the review of the City and that may affect receptor uses. This policy shall not apply to emergency work of public service utilities, City sponsored and/or grant funded projects, or by variance under a noise ordinance or authorization by the appropriate City review authority.
- **N-5e Stationary and construction equipment noise.** All stationary and construction equipment shall be maintained in good working order, and fitted with factory approved muffler systems.
- **N-5f Noise Ordinance.** The City of Arcata shall enforce its citywide noise ordinance. The City shall periodically review and update its noise ordinance.

CITY OF BLUE LAKE GENERAL PLAN – NOISE ELEMENT

The City of Blue Lake General Plan Noise Element contains recommendations for noise control in the city. The policies are not aimed at the project-level, and instead are recommendations for the city to establish a noise ordinance and provide educational materials on noise hazards.¹⁵

CITY OF EUREKA GENERAL PLAN – NOISE ELEMENT

The City of Eureka’s Noise Element contains goals and policies to regulate noise in the city. The following policies relate to the proposed plan:¹⁶

- **N-1.2 Protect Existing Industries.** Protect established agricultural, fishing and industrial uses from incompatible adjacent uses to reduce the potential for noise complaints and allow their routine operations to continue.
- **N-1.3 Land Use Compatibility.** Consider the compatibility of new development with the existing noise environment when reviewing discretionary proposals.
- **N-1.4 New Noise-Sensitive Development.** Require development of new noise-sensitive land uses (such as hospitals, convalescent homes, schools, churches, and wildlife habitat) that are proposed in areas exposed to existing or projected exterior noise levels in Figure N-2 or interior noise levels exceeding the levels specified in Table N-3 or the performance standards of Table N-4 to mitigate noise impacts.

¹⁵ Blue Lake, City of. 1975. General Plan Noise Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/BL-General-Plan_Public-Safety-Noise-Scenic-Hwy-Elements_1975.pdf (accessed October 2024).

¹⁶ Eureka, City of. 2018. 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed October 2024).

- **N-1.5 New Stationary Noise Sources.** Require new stationary noise sources to mitigate noise impacts on noise-sensitive uses in which exterior level noises exceed the standards in Table N-4 (shown below in Table 3.7-5).

Table 3.7-5 City of Eureka Noise Level Performance Standards for Stationary Noise Sources

Noise Level Descriptor	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Hourly Leq, dBA	55	45
Maximum level, dBA	70	65

Source: Eureka, City of. 2018. 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed October 2024).

- **N-1.6 Noise Mitigation.** Emphasize site planning and project design for all development requiring noise mitigation measures. Consider noise barriers only following the integration of all other practical design-related noise mitigation measures into the project.
- **N-1.7 Frequent, High-Noise Events.** Require development of noise-sensitive uses proposed in areas subject to frequent, high-noise events (such as aircraft overflights, or truck traffic) to adequately evaluate and mitigate the potential for noise-related impacts. Implement mitigation to ensure noise-related annoyance, sleep disruption, speech interference, and other similar effects are minimized using metrics and methodologies appropriate to the effect(s) to be assessed and avoided.
- **N-1.8 Acoustical Analysis.** Require an acoustical analysis as part of the environmental review process for development of noise-sensitive land uses.
- **N-1.11 Roadway Mitigation Measures.** Include noise mitigation measures in the design of any improvements along existing streets and highways. When feasible, measures should consider natural buffers or the use of setbacks between roadways and adjoining noise sensitive uses.
- **N-1.10 High Noise Generating Uses.** Locate new industrial uses or other high noise generating uses away from noise-sensitive land uses and minimize excessive noise through project design features that include noise control and landscape buffers.
- **N-1.13 Construction Noise.** Minimize construction-related noise and vibration by limiting construction activities within 500 feet of noise-sensitive uses to between 7:00 a.m. to 7:00 p.m., unless further restricted through permitting.
- **N-1.14 Vibration.** Require an assessment of vibration-induced construction activities and development near highways and rail lines, in close proximity to historic buildings and archaeological sites, to ensure no damage occurs.

CITY OF FERNDALE GENERAL PLAN – ELEMENT

The City of Ferndale General Plan Final Draft Noise Element contains the following noise policies applicable to the proposed plan:¹⁷

¹⁷ Ferndale, City of. 2016. General Plan Noise & Air Quality Elements. [https://ci.ferndale.ca.us/wp/general-plan/Final%20Draft%20Noise%20%20Air%20Quality%20Elements%20for%20April%2021%202016%20\(rfs\).pdf](https://ci.ferndale.ca.us/wp/general-plan/Final%20Draft%20Noise%20%20Air%20Quality%20Elements%20for%20April%2021%202016%20(rfs).pdf)

- **1.1 Stationary and Mobile Sources.** The City will apply appropriate average and short-term noise level standards during the permit review process and during subsequent monitoring to minimize stationary noise sources and noise emanating from temporary activities.
- **1.2 Noise Compatibility Standards.** The City shall ensure compatibility with adjacent and noise-sensitive land uses by adopting noise standards by land use type.
- **1.3 New Construction.** Amend the Noise Ordinance for residential uses, to limit exterior noise levels to 60 dBA L_{dn} and interior noise levels of 45 dBA L_{dn} .
- **1.4 Noise Attenuation.** If all other practical design-related mitigation measures do not attenuate noise to established standards, the City will consider the use of noise barriers.
- **1.5 Noise Reduction Design.** The City shall incorporate buffers, screening, routing coordination, and other traffic control measures at time of street upgrades and extensions. The City will encourage the use of berms and increased building setbacks in the design of noise-sensitive land uses that are adjacent to collector roads and commercial or industrial areas.

CITY OF FORTUNA GENERAL PLAN – HEALTH AND SAFETY ELEMENT

The City of Fortuna's noise policies are contained in the General Plan Health and Safety Element. The following noise policies relate to the proposed plan:¹⁸

- **HS-4.3 Noise Problem Areas.** The City shall identify and evaluate potential noise problem areas on a continuing basis.
- **HS-4.4 Noise Source Isolation.** The City shall require uses that generate high levels of noise and ground-borne vibration to be separated or shielded from sensitive receptors,
- **HS-4.5 New Construction.** The City shall strive to limit exterior noise levels for existing and future dwellings in residential areas to levels of 60 dBA L_{dn} and interior noise levels of 45 dBA L_{dn} .
- **HS-4.6 Noise Reduction Mechanisms.** The City shall encourage the use of berms and increased building setbacks, or both, in the design of noise-sensitive land uses that are adjacent to major roads, commercial, or industrial areas.
- **HS-4.7 Noise Barriers.** The City shall consider the use of noise barriers (as a means of achieving the noise standards) only if all other practical design-related noise mitigation measures have been insufficient.
- **HS-4.8 Noise Reduction/Design.** The City shall lessen noise increases along the city's arterial and collector roads through project design of streets (including providing buffers to the extent feasible and screening), coordination of routing, and other traffic control measures.

CITY OF RIO DELL GENERAL PLAN – NOISE ELEMENT

The City of Rio Dell Noise Element states that ambient noise levels in the city shall not be allowed to reach annoying or dangerous sound levels. This would occur through the following unnumbered policies applicable to the proposed plan:¹⁹

- Rio Dell shall maintain acceptable noise levels for its residents and business community.

¹⁸ Fortuna, City of. 2010. Health and Safety Element.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed October 2024).

¹⁹ Rio Dell, City of. 2001. Noise Element. https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/noise_element_2001.pdf (accessed October 2024).

- Rio Dell Planning Commission shall consider the noise impact upon nearby residential areas of commercial development.

The Noise Element also states that the city would take appropriate remedial action if dangerous or harmful noise levels appear within the city. City of Rio Dell Noise Element states that ambient noise levels in the city shall not be allowed to reach annoying or dangerous sound levels.

CITY OF TRINIDAD GENERAL PLAN – NOISE ELEMENT

The City of Trinidad General Plan Noise Element contains recommendations for noise control in the city. The policies are not aimed at the project-level, and instead are recommendations for the City to establish a noise ordinance and provide educational materials on noise hazards.

County and Municipal Codes

HUMBOLDT COUNTY CODE

The Humboldt County Code does not contain any relevant noise regulations that would apply to the proposed plan.

CITY OF ARCATA MUNICIPAL CODE

The City of Arcata Land Use Code (Title 9 of the Municipal Code) addresses noise throughout the City in Title III – Planning and Project Design Standards, Section 9.30.050. Section 9.30.050(D) contains the maximum allowable noise levels for stationary sources in the city, as shown in Table 3.7-6.

Table 3.7-6 City of Arcata Maximum Allowable Noise Levels – Stationary Sources

Noise Level Descriptor	Maximum Exterior Noise Level			Maximum Interior Noise Level		
	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.
Dwellings, Transient Lodging, Hospitals, Extended Care, and Similar Uses						
Hourly Leq, dBA	55 dBA	50 dBA	45 dBA	45 dBA	40 dBA	35 dBA
Meeting Facilities, Auditoriums, Theaters, Libraries, Schools, and Similar Uses						
Hourly Leq, dBA	55 dBA	55 dBA	n/a	40 dBA	40 dBA	n/a

Source: Arcata, City of. Municipal Code. <https://www.codepublishing.com/CA/Arcata/> (accessed October 2024).

The City of Arcata Municipal Code does not contain construction noise limits, but does limit construction hours to 8:00 a.m. and 7:00 p.m., Monday through Friday, and between 9:00 a.m. and 7:00 p.m. on Saturdays, and also does not allow construction on Sundays and holidays.

CITY OF BLUE LAKE MUNICIPAL CODE

The City of Blue Lake Municipal Code contains noise standards in Section 17.24.280 that are intended to protect the community health, safety, and general welfare by limiting exposure to the unhealthful effects of noise. Section 17.24.280(C)(3) contains the maximum allowable noise levels in the city, as shown in Table 3.7-7.

Table 3.7-7 City of Blue Lake Maximum Allowable Noise Levels

Noise Level Descriptor	Maximum Exterior Noise Level			Maximum Interior Noise Level		
	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.
Dwellings, Transient Lodging, Hospitals, Extended Care, and Similar Uses						
Hourly Leq, dBA	55 dBA	50 dBA	45 dBA	45 dBA	40 dBA	35 dBA
Meeting Facilities, Auditoriums, Theaters, Libraries, Schools, and Similar Uses						
Hourly Leq, dBA	55 dBA	55 dBA	n/a	40 dBA	40 dBA	n/a

Source: Blue Lake, City of. 2018. Municipal Code. <https://ecode360.com/44213723> (accessed October 2024).

Construction noise is exempt from the noise limits if construction occurs between 8:00 a.m. and 6:00 p.m., Monday through Friday, and between 9:00 a.m. and 5:00 p.m. on Saturdays, and does not occur on Sundays or holidays.

CITY OF EUREKA MUNICIPAL CODE

The City of Eureka does not have a noise ordinance or any relevant noise regulations that would apply to the proposed plan.

CITY OF FERNDALE MUNICIPAL CODE

The City of Ferndale Nuisance Ordinance 06-04 and Traffic Ordinance 04-01 have established regulations for the control of noise. Nuisance Ordinance 06-04, Section 4.03.3.j mandates that property be maintained in such a way that it does not pose a health, safety or fire hazard or an attractive nuisance to children. One prohibited activity is vehicle or vessel repair in a residential zone which might make substantially interferes with the reasonable enjoyment of property by other persons, because of the substances, odors, noise, or visual clutter created by the repair. Section 7.04 of the Nuisance Ordinance outlines activities considered to be unlawful including excessive noise from residences and automobiles. Additionally, Section 7.04.2(d) refers to construction noise within the City. Construction activities are limited to between 7 a.m. and 7 p.m. on weekdays and 8 a.m. to 7 p.m. on weekends with no construction allowed on Federal holidays.

Noise abatement, related to truck noise specifically, at a city level is enforced by the City of Ferndale Traffic Ordinance 04-01. Section 5.20 Truck Routes mandates that motor trucks exceeding a maximum gross weight limit of three tons must follow a specific truck route within the City. The designated truck route starts at the intersection of Wildcat Road and Ocean Avenue, then proceeds easterly along Ocean Avenue until it intersects with Main Street. From there, it continues along Main Street until reaching the easterly boundary line of the City of Ferndale. This carefully planned truck route effectively confines truck-related noise exclusively to the prescribed pathway through town.

CITY OF FORTUNA MUNICIPAL CODE

The City of Fortuna does not currently have a noise ordinance, and the city's existing Zoning Ordinance does not currently address noise.

CITY OF RIO DELL MUNICIPAL CODE

The City of Rio Dell does not currently have a noise ordinance, and the city's existing Zoning Ordinance does not currently address noise except for "Cottage Industry" uses, which are not relevant to the RCAP.

CITY OF TRINIDAD MUNICIPAL CODE

The City of Trinidad Municipal Code does not have a noise ordinance or any relevant noise regulations that would apply to the proposed plan.

Airport Land Use Compatibility Plan

An ALUC is responsible for preparing the region's ALUCPs and ensuring compatible land uses in the vicinity of airports within their jurisdiction. The Humboldt County ALUC prepared the Humboldt County ALUCP that contains noise contours for each public airport in the County, which includes:²⁰

- California Redwood Coast – Humboldt County Airport
- Dinsmore Airport
- Garberville Airport
- Kneeland Airport
- Murray Field Airport
- Rohnerville Airport
- Samoa Field Airport
- Shelter Cove Airport

3.7.4 Impacts and Mitigation Measures

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Noise.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Generate excessive groundborne vibration or groundborne noise levels?
- c) If located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?

²⁰ Humboldt County Airport Land Use Commission. 2021. Humboldt County Airport Land Use Compatibility Plan. <https://humboldt.gov/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB> (accessed October 2024)

Approach to Analysis

Construction Noise

Construction noise levels that could occur with implementation of the RCAP are based on reference noise levels published by the FTA.

Operational Noise

Individual projects that may be implemented under the RCAP would be located in a variety of jurisdictions with varying noise level standards and restrictions. As a result, the analysis does not use specific quantitative thresholds to evaluate plan impacts but rather generally discusses the resultant noise levels that could occur during operation of RCAP-related projects (including but not limited to renewable energy infrastructure such as wind turbines) and the relationship between the types of noise levels likely to be produced during individual future projects under the proposed plan and local jurisdictions' noise level standards.

Groundborne Vibration

Vibration levels that could occur with implementation of the RCAP are based on reference vibration levels published by the FTA.

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to noise and/or vibration.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to noise and vibration. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to noise and vibration in Humboldt.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds of significance are used to evaluate the significance of noise and vibration resulting from implementation of the RCAP.

Construction Noise

As discussed under Section 3.7.3, *Regulatory Framework*, jurisdictions in Humboldt do not have quantitative construction noise thresholds. Development facilitated by the RCAP could have a significant impact if temporary construction noise during permitted daytime hours exposed noise-sensitive receptors to significantly adverse noise levels. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual*.²¹ For residential uses, the daytime noise threshold is 80 dBA $L_{eq(8hr)}$. Construction noise would be significant if it exceeds this threshold.

²¹ FTA. 2018. *Transit Noise and Vibration Impact Assessment*. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2024).

Operational Noise

STATIONARY NOISE

Noise level standards for operational noise for each jurisdiction in Humboldt are described in Section 3.7.3, *Regulatory Framework*. These standards are often used as CEQA significance thresholds for stationary noise, but their applicability can depend on project-specific details, location, and hours of operation. Examples of these standards are contained in Table 3.7-3 (Humboldt County), Table 3.7-4 (City of Arcata Noise Element), Table 3.7-5 (City of Eureka), Table 3.7-6 (City of Arcata Municipal Code), and Table 3.7-7 (City of Blue Lake). Exterior noise standards from these tables range from 45 dBA during nighttime hours to 55 dBA during daytime hours. Ferndale also includes a residential noise standard of 45 dBA during the nighttime hours. Other jurisdictions in Humboldt, such as Ferndale, Rio Dell, Fortuna, and Trinidad, do not specify quantitative stationary noise standards. This analysis broadly considers the potential for operational noise generated by individual projects that may be implemented under the proposed RCAP to exceed noise standards.

TRANSPORTATION NOISE

A project normally has a significant effect on the environment related to noise if it substantially increases the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions. Changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance are used to assess transportation-related operational noise impacts from individual future projects that may be implemented under the RCAP at sensitive receptor locations:

- Greater than 1.5 dBA CNEL increase for ambient noise environments of 65 dBA CNEL and higher
- Greater than 3 dBA CNEL increase for ambient noise environments of 60-64 CNEL
- Greater than 5 dBA CNEL increase for ambient noise environments of less than 60 dBA CNEL

Vibration

Vibration criteria from the FTA are used to evaluate potential construction vibration impacts related to potential building damage from construction.²² Construction vibration impacts from development would be significant if vibration levels exceed the FTA criteria shown in Table 3.7-2 above.

Exposure to Aircraft Noise

For individual future projects that may be implemented under the proposed RCAP located within the vicinity of a private airstrip or an airport land use plan, impacts would be significant if the project exposes people residing or working in the project area to excessive airport noise levels.

²² FTA. 2018. *Transit Noise and Vibration Impact Assessment*. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2024).

Impact Evaluation

Noise Levels

Significance Criterion a: Would the proposed plan generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact NOI-1 CONSTRUCTION AND OPERATIONAL ACTIVITIES ASSOCIATED WITH PROJECTS AND INFRASTRUCTURE UNDER THE RCAP WOULD GENERATE A SUBSTANTIAL TEMPORARY AND PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN EXCESS OF STANDARDS. MITIGATION MEASURES NOI-1 AND NOI-2 WOULD REDUCE CONSTRUCTION AND OPERATIONAL NOISE IMPACTS TO THE EXTENT FEASIBLE, BUT IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

Noise from individual construction projects and infrastructure facilitated by the RCAP may temporarily increase noise levels at nearby noise-sensitive receptors. At this stage of planning, project-level details are not available for future projects that would be carried out under the RCAP; therefore, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects, or construction noise at adjacent properties. Noise estimates for typical construction activities have been provided below in Table 3.7-8. As shown in the table, average noise levels associated with the use of heavy equipment at construction sites can range from about 76 to 101 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and the phase of construction.

Table 3.7-8 Typical Construction Noise Levels (dBA)

Equipment	Typical Level 25 Feet from the Source	Typical Level 50 Feet from the Source	Typical Level 100 Feet from the Source	Typical Level 200 feet from the Source	Typical Level 800 Feet from the Source
Air Compressor	86	80	74	68	56
Backhoe	86	80	74	68	56
Concrete Mixer	91	85	79	73	61
Grader	91	85	79	73	61
Pile driver (Impact)	107	101	95	89	77
Pile driver (Sonic)	101	95	89	83	71
Jack Hammer	94	88	82	76	64
Paver	91	85	79	73	61
Saw	82	76	70	64	52
Scraper	91	85	79	73	61
Truck	90	84	78	72	60

Source: FTA. 2018. *Transit Noise and Vibration Impact Assessment*. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2024).

Noise generated by construction activity would be variable depending on the project and intensity of equipment used. Projects under the RCAP may require the operation of heavy-duty equipment that generate high noise levels, especially those that require significant grading, excavation, soil movement, and/or demolition activities. The loudest equipment included in Table 3.7-8, impact or sonic pile drivers, is typically only used when deep foundations must be placed and are not a common activity. Activities such as building construction and paving tend to use less intensive equipment. Noise levels from point sources such as construction sites typically attenuate at a rate of about 6 dBA per doubling of distance. Therefore, areas within 100 feet of construction site with a single piece of heavy-duty equipment operating, not including pile driving, may be exposed to noise levels exceeding the FTA's daytime construction noise threshold for residential uses of 80 dBA $L_{eq(8hr)}$. Areas within 600 feet of impact pile drivers may also be exposed to noise levels exceeding 80 dBA $L_{eq(8hr)}$.

Many projects facilitated by the RCAP would not require the use of heavy equipment, such as minor energy and water efficiency retrofits or policy-focused measures to encourage adoption and use of ZEVs and decarbonized off-road equipment and, thus, would not be anticipated to result in significant construction noise impacts. However, some projects may involve substantial construction such as renewable energy infrastructure installation promoted by RCAP Measures BE-1 and BE-2, transportation-related infrastructure development promoted by RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4, a new organic waste processing facility facilitated by RCAP Measure SW-1, and new or expanded recycled water facilities facilitated by Measure WW-2. Future projects occurring under these measures would require the use of heavy equipment and have the potential to produce construction noise that exceeds the applicable significance threshold.

The County and Cities of Arcata, Blue Lake, Eureka, and Ferndale include specific regulations in their noise elements, ordinance code, and/or municipal codes that restrict construction activities to specific times and days. Such local policies serve to reduce the impacts of noise on surrounding communities by prohibiting construction during the night when people are engaged in noise-sensitive activities like sleeping. However, sensitive receptors may still be exposed to substantial construction noise since, at this time, project-level details and locations are not known for future projects under the RCAP, including if nighttime construction would be required. Therefore, it is not possible to determine exact noise levels, locations in proximity to sensitive receptors, or time periods for construction of such projects, or construction noise at adjacent properties. Construction noise levels associated with future projects may exceed the FTA daytime construction noise limits or not be consistent with the permitted construction hours for the County or specific Cities, and impacts would be potentially significant.

Implementation of Mitigation Measure NOI-1, which requires various construction best management practices such as compliance with the FTA's 80 dBA threshold for residential land uses, would reduce impacts from construction noise. However, even with application of Mitigation Measures NOI-1, construction noise from projects and infrastructure under the RCAP may not be able to be reduced below applicable FTA, County, and/or City thresholds, and impacts would remain significant and unavoidable.

Operation

STATIONARY EQUIPMENT

Projects under the RCAP that would not install new mechanical equipment or wind turbines, including but not limited to building retrofit projects and bicycle and pedestrian paths per RCAP

Measures BE-3 Urban and Rural, BE-4, BE-7, T-1 Urban and Rural, T-2 Urban and Rural, and T-4, would be expected to generate minor or negligible operational noise compared to existing noise conditions. Additionally, RCAP measures that seek to decarbonize buildings, equipment, and appliances, such as RCAP Measures BE-5 and BE-7, have the potential to reduce stationary noise, such as noise produced by generators.

However, future projects under the RCAP may also install new infrastructure with mechanical equipment that would generate new on-site operational noise. These could include potential solar array, battery storage, wind energy production, and hydrogen projects per RCAP Actions BE-1a, BE-2a, BE-2b, BE-2f, BE-2g, BE-2i, BE-3c, BE-4c, BE-5b, BE-6b, BE-7c, BE-8a, BE-8c, BE-8d, T-6h, T-6i, T-10d, and CS-2f. In addition, new organic waste processing and recycled water facilities promoted by RCAP Measures SW-1 and WW-2 would also include mechanical equipment that would generate new on-site operational noise. Mechanical equipment may include heating, ventilation, and air conditioning (HVAC) equipment, transformers, and generators. Noise levels from mechanical equipment depend on the type and size of unit needed for each individual project. In addition, the orientation and location of the equipment (e.g., if it is placed on a rooftop or ground-level or if there are intervening structures in between the equipment and sensitive receptors) would affect noise levels at nearby sensitive receptors.

Wind energy projects per RCAP Actions BE-2f, BE-8a, BE-8c, BE-8d would generate noise from the “whooshing” noise produced by the blades moving through the air, in addition to typical mechanical equipment described above. Wind turbine operational sound can depend on atmospheric conditions, including air flow patterns and turbulence, as well as nearby topography and intervening structures. According to the U.S. Department of Energy, studies have shown that small-to-medium wind turbines (defined as residential/markets/distributed turbines) generate noise only slightly above ambient wind noise, while large wind turbines (defined as utility-scale) produce noise levels between 35 to 45 dB at a distance of 300 meters.²³

Existing noise sensitive receptors could be affected by operational noise occurring on-site at future project sites that would install new infrastructure with mechanical equipment or wind turbines, as the noise may exceed County and City noise ordinances, which can have limits as low as 45 dBA L_{eq} . Project-level analysis for future projects under the plan would be required to include an evaluation of noise impacts at the nearest sensitive receptors and compare estimated noise levels to the respective County and City noise level standards. The severity of the impacts would vary depending upon the type and intensity of the individual project, its proximity to sensitive receptors, and predicted noise level compared to the applicable County and/or City standards. As a result, it would be speculative to analyze project-level operational noise impacts of individual future projects that may be implemented under the proposed plan, and it cannot be determined at this time if operation of future projects would result in a substantial permanent increase in noise levels or exceedance of the applicable standards. Therefore, it is conservatively assumed that operational activities associated with projects under the RCAP that would install new infrastructure with mechanical equipment or wind turbines could result in potentially significant operational noise impacts.

Implementation of Mitigation Measure NOI-2 would reduce impacts from operational noise, and it is expected that in most cases future project noise could be reduced to the applicable County or City noise standards or lower. However, due to a lack of specific details and location information for future RCAP projects, even with implementation of Mitigation Measure NOI-2, operational noise

²³ U.S. Department of Energy. 2024. Wind Turbine Sound. <https://windexchange.energy.gov/projects/sound> (accessed January 2025).

from projects under the RCAP could impact nearby noise sensitive receptors and exceed acceptable standards. Therefore, it is conservatively concluded that operational noise impacts related to stationary equipment would remain significant and unavoidable.

TRANSPORTATION NOISE – ROADWAY VEHICLES

Operations and maintenance roadway vehicle trips related to individual future projects under the RCAP would be minimal and distributed throughout the plan area. Many of these facilities are expected to require only a few on-site employees or infrequent maintenance trips, resulting in a relatively minor number of average daily trips. In general, a doubling of roadway volume would increase roadway noise in an area by 3 dBA, and a 40 percent increase in roadway volume would increase roadway noise by 1.5 dBA in an area. However, the limited number of RCAP-related operational trips, would not have the potential to increase roadway volume by 40 percent or double traffic roadway volume even on low-volume local roadways. Therefore, roadway vehicle noise levels would not increase greater than 1.5 dBA CNEL for ambient noise environments of 65 dBA CNEL and higher, greater than 3 dBA CNEL for ambient noise environments of 60-64 CNEL, or greater than 5 dBA CNEL for ambient noise environments of less than 60 dBA CNEL. In addition, according to Section 3.7, *Transportation*, there would be an overall net decrease in vehicle trips and associated roadway volume under the RCAP due to RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, T-4, and T-5, that would encourage alternative methods of transportation and decreased vehicle miles traveled. The increased adoption of electric vehicles encouraged by the RCAP through measures such as Measures T-4 and T-6 would also result in reduced roadway vehicle noise. Therefore, the RCAP may have the effect of reducing individual vehicle trips and roadway vehicle noise regionally. Therefore, operational transportation noise impacts from roadway vehicle noise would be less than significant.

TRANSPORTATION NOISE – TRANSIT

RCAP actions related to transit projects include RCAP Actions T-1b Urban, T-2a Urban, T-2c Urban, T-2d Urban, T-2e Urban, T-2a Rural, T-2b Rural, T-2c Rural, T-2e Rural, T-2g Rural, T-4a, T-3a, T-3b, T-3c, T-5b, and T-5f. As the Humboldt area does not have an active passenger rail service, these policies are focused on bus-related services.

The FTA has developed a screening procedure to identify locations where a bus project may cause a noise impact. The screening distances for requiring noise assessments for various types of projects is presented in Table 3-7-9. Transit services within these screening distances along new routes or existing routes with increased service may expose sensitive receptors to new or increased bus noise. Therefore, impacts from transit noise would be potentially significant.

Table 3-7-9 Screening Distances for Noise Assessments – Bus Transit Projects (in feet)

Type of Project		Unobstructed	Intervening Buildings
Busway		500	250
BRT on Exclusive Roadway		200	100
Bus Facilities	Access Roads	100	50
	Transit Mall	225	150
	Transit Center	225	150
	Storage and Maintenance	350	225
	Park and Ride Lots with Buses	225	150

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed September 2024).

Implementation of Mitigation Measure NOI-2 would reduce impacts from transit noise, and it is expected that in most cases future project noise could be reduced to the applicable County or City noise standards or lower. However, due to a lack of specific details and location information for future RCAP projects that involve new or expanded transit services, even with implementation of Mitigation Measure NOI-2, transit noise could impact nearby noise sensitive receptors and exceed acceptable standards. Therefore, it is conservatively concluded that operational noise impacts related to transit projects would remain significant and unavoidable.

Mitigation Measures

The following mitigation measure would apply if a future RCAP-related project would potentially generate a substantial temporary or permanent increase in ambient noise levels during construction and/or operation:

NOI-1 IMPLEMENT CONSTRUCTION NOISE REDUCTION MEASURES

The reviewing agency (County or specific City) shall implement the following noise reduction measures, where applicable, for projects that result in construction noise impacts, and where feasible and necessary based on project and site-specific considerations. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

To reduce construction noise levels to achieve applicable standards, the reviewing agency for a project under the RCAP shall implement the measures identified below, where feasible and necessary.

- The reviewing agency shall ensure that, where residences or other noise sensitive uses are located within 100 feet of construction sites that would use heavy-duty construction equipment, appropriate measures shall be implemented to ensure compliance with the FTA's daytime construction noise threshold for residential uses of 80 dBA $L_{eq(8hr)}$. Specific techniques may include but are not limited to: restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.

- Designate an on-site construction complaint and enforcement manager for projects within 300 feet of sensitive receptors.
- The reviewing agency shall post phone numbers for the on-site enforcement manager at construction sites along with complaint procedures and who to notify in the event of a problem.
- For projects that require pile driving within 600 feet of sensitive receptors, the implementing agencies shall implement caisson drilling or similar techniques as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.
- The reviewing agency shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds.
- The reviewing agency shall ensure that impact equipment (e.g., jack hammers, pavement breakers and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools.
- The following timing restrictions shall apply to RCAP project construction activities located within 1,000 feet of a dwelling unit, except where timing restrictions are already established in local codes or policies, or avoidance of these workhours is infeasible.
 - Monday through Friday: 7 a.m. to 6 p.m.
 - Saturday: 9 a.m. to 5 p.m.
- The reviewing agency shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled.

NOI-2 PREPARE OPERATIONAL NOISE STUDY AND IMPLEMENT IDENTIFIED MEASURES

For projects under the RCAP that install mechanical equipment and/or wind turbines, or that add new or increased transit service within the bus transit project screening distances listed in the FTA's *Transit Noise and Vibration Impact Assessment*, the reviewing agency (County or specific City) shall implement measures identified in a noise study, where applicable, for projects that result in operational noise impacts, and where feasible and necessary based on project and site-specific considerations. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

The reviewing agency of a RCAP project that would install mechanical equipment, wind turbines, and/or new or increased transit service shall complete a detailed noise study based on project-specific details and location. Such a noise study shall identify the ambient noise levels in the project area, characterize the nearest sensitive receptors, estimate the noise levels proximate receptors will experience during operation of the individual project, compare estimated noise levels to the County or specific city noise level standards, outline any measures that are necessary to reduce operational noise levels, and determine the amount of noise reduction that would occur with implementation of these measures. Noise reduction measures may include, but would not be limited to, alternative site design, alternative orientation of noise sources, and construction of permanent berms and/or barriers. Noise reduction measures shall be implemented to reduce noise levels to the noise level standards or below, as feasible.

Level of Significance

Significant and Unavoidable

Groundborne Vibration and Noise

Significance Criterion b: Would the proposed plan result in generation of excessive groundborne vibration or groundborne noise levels?

IMPACT NOI-2 PROJECT AND INFRASTRUCTURE FACILITATED BY THE RCAP COULD GENERATE GROUNDBORNE VIBRATION DURING CONSTRUCTION, POTENTIALLY AFFECTING NEARBY LAND USES. OPERATION OF FUTURE DEVELOPMENT WOULD NOT RESULT IN SUBSTANTIAL VIBRATION. IMPACTS FOR CONSTRUCTION VIBRATION WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Construction of projects and infrastructure facilitated by the RCAP could intermittently generate groundborne vibration that could reach nearby properties. Table 3.7-10 lists groundborne vibration levels from various types of construction equipment at various distances.

Table 3.7-10 Vibration Source Levels for Construction Equipment

Equipment		Approximate Vibration Level (in/sec PPV)			
		25 feet from Source	50 feet from Source	100 feet from Source	200 feet from Source
Caisson Drilling		0.089	0.031	0.011	0.004
Jackhammer		0.035	0.012	0.004	0.002
Large Bulldozer		0.089	0.031	0.011	0.004
Loaded Truck		0.076	0.027	0.010	0.003
Pile Driver (impact)	Upper range	1.519	0.537	0.190	0.067
	Typical	0.644	0.228	0.081	0.028
Pile Driver (sonic)	Upper range	0.734	0.260	0.092	0.032
	Typical	0.170	0.060	0.021	0.008
Small Bulldozer		0.003	0.001	<0.001	<0.001
Vibratory Roller		0.21	0.074	0.026	0.009

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2024).

As shown in Table 3.7-10, buildings and structures could experience the strongest vibration during the use of pile drivers and vibratory rollers. Vibration levels from pile-drivers could approach 1.519 in/sec PPV at a distance of 25 feet and 0.190 in/sec at 100 feet from the source, and vibration levels from vibratory rollers could approach 0.21 in/sec PPV at a distance of 25 feet and 0.026 at 100 feet from the source. The use of pile driving equipment is dictated by site soils and the need for secure or deep foundational pilings based on building height or design, and, thus, cannot be predicted with reasonable certainty during a plan-level analysis.

The vibration criteria for architectural damage to buildings recommended by the FTA, as shown in Table 3.7-2, is 0.12 in/sec PPV for historic structures and 0.2 in/sec PPV for older residential structures. Vibration levels from typical equipment such as bulldozers and jackhammers would not

exceed FTA thresholds for historic structures and residential buildings at a distance of 25 feet or greater. However, vibration levels may exceed FTA thresholds from pile driving equipment and vibratory rollers that could be necessary to construct infrastructure projects, such as those under RCAP Actions BE-1a, BE-2a, BE-2b, BE-2f, BE-2g, BE-2i, BE-3c, BE-4c, BE-5b, BE-6b, BE-7c, BE-8a, BE-8c, BE-8d, T-6h, T-6i, T-10d, and CS-2f. Therefore, impacts from construction of projects and infrastructure under the RCAP that use pile driving equipment or vibratory rollers would be potentially significant.

Impacts associated with vibration from construction would be minimized, including avoidance of damaging an historic resource, through implementation of Mitigation Measure NOI-3. Therefore, construction vibration impacts would be reduced to less than significant levels with mitigation.

Operation

Operation with individual projects proposed under the RCAP would not include sources of substantial vibration such as railroad and subway projects. Therefore, operational groundborne vibration impacts would be less than significant.

Mitigation Measure

The following mitigation measure would apply if a future RCAP-related project would potentially generate excessive groundborne vibration or groundborne noise levels during construction and/or operation:

NOI-3 PREPARE AND IMPLEMENT CONSTRUCTION VIBRATION CONTROL PLAN

Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); or a vibratory roller within 40 feet of fragile historical resources or 25 feet of any other structure, the reviewing agency (County or specific city) for projects under the RCAP shall prepare a groundborne vibration analysis to assess and mitigate potential vibration impacts related to these construction activities. This vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed FTA architectural damage thresholds (e.g., 0.12 in/sec PPV for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving or static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure FTA vibration thresholds are not exceeded.

Level of Significance

Less Than Significant with Mitigation

Airport Activity Noise

Significance Criterion c: For location within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed plan expose people residing or working in the project area to excessive noise levels?

IMPACT NOI-3 PROJECT AND INFRASTRUCTURE FACILITATED BY THE RCAP MAY EXPERIENCE INCREASED NOISE LEVELS FROM NEARBY AIRPORTS. AIRPORTS IN THE PLAN AREA HAVE GENERALLY MINOR NOISE CONTOURS; IN ADDITION, CONSTRUCTION CONTRACTORS AND MAINTENANCE EMPLOYERS WOULD BE REQUIRED TO COMPLY WITH CAL OSHA NOISE REGULATIONS. CONSTRUCTION WORKERS AND MAINTENANCE EMPLOYEES WOULD NOT BE EXPOSED TO EXCESSIVE NOISE LEVELS FROM AIRCRAFT NOISE, AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Airports are located throughout the plan area (see *Existing Noise Conditions and Sources* for a list of airports). Noise contours are provided for each airport in the Humboldt ALUCP.²⁴ The airports are generally small, and their noise contours have a minor reach. The primary airport is the California Redwood Coast – Humboldt County Airport, with a 65 dBA CNEL noise contour that does not extend past the airport property.

Construction workers associated with RCAP projects constructed near the airports may be intermittently exposed to elevated noise levels during aircraft take-off and landing events. Contractors would be required to comply with Cal OSHA regulations related to worker exposure to noise. Section 5096 of these regulations sets duration-based noise exposure limits for workers that require provision of personal protective equipment should exposure exceed the specified limits. The requisite adherence to these regulations would reduce worker exposure to high noise levels such that they would not expose workers to excessive noise levels. In addition, as mentioned above, the airports within the plan area have small noise contours that would be unlikely to overlap with the areas where projects under the RCAP would be constructed. As such, construction workers would not be exposed to excessive noise levels from aircraft noise. Therefore, construction impacts related to consistency with noise land use compatibility standards and effects of airport activity noise would be less than significant.

Operation

As described above, airports in Humboldt are generally small, and their noise contours have a minor reach. The primary airport is the California Redwood Coast – Humboldt County Airport, with a 65 dBA CNEL noise contour that does not extend past the airport property.

Future RCAP projects that would require employees for regular maintenance and operations, would include projects such as renewable energy infrastructure, organic waste processing facilities, and recycled water facilities encouraged by RCAP Measures BE-1, BE-2, T-6, T-10, CS-2, SW-1, and WW-2. Maintenance and operations employees associated with RCAP projects operated near the airports may be intermittently exposed to elevated noise levels during aircraft take-off and landing events. Employers would be required to comply with California Occupational Safety and Health Administration (Cal OSHA) regulations related to worker exposure to noise. Section 5096 of these

²⁴ Humboldt County Airport Land Use Commission. 2021. Humboldt County Airport Land Use Compatibility Plan. <https://humboldt.gov/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB> (accessed October 2024)

regulations sets duration-based noise exposure limits for workers that require provision of personal protective equipment should exposure exceed the specified limits. The requisite adherence to these regulations would reduce employee exposure to high noise levels such that they would not expose employees to excessive noise levels. In addition, as mentioned above, the airports within the plan area have small noise contours that would be unlikely to overlap with the areas where projects under the RCAP would be located and operated. As such, maintenance employees would not be exposed to excessive noise levels from aircraft noise. Therefore, operational impact related to consistency with noise land use compatibility standards and effects of airport activity noise would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

3.7.5 Cumulative Impacts

The geographic scope of the cumulative noise analysis is the unincorporated and incorporated areas of Humboldt County. The cumulative analysis considers the population, employment, service population, and households growth projected for Humboldt County through 2030 included in Table 3-1 (see Chapter 3.0, *Environmental Impact Analysis*).

Construction Noise

Construction noise generated by projects and infrastructure under the RCAP, in combination with construction activities for other cumulative projects that may be constructed simultaneously, could, without mitigation, substantially increase noise levels in the vicinity of sensitive receptors if constructed within close proximity to one another. Mitigation Measure NOI-1 has been identified to help reduce construction noise from projects and infrastructure under the RCAP. However, construction noise may still exceed thresholds after mitigation, and impacts from the proposed plan are significant and unavoidable. Therefore, if construction of cumulative projects occurs in close proximity to each other and simultaneously, noise from individual construction projects have a chance of combining to create significant cumulative impacts. Although this scenario is unlikely, and mitigation measures would be implemented to the extent feasible, the potential remains for a cumulatively considerable increase in construction noise from projects and infrastructure under the RCAP. Therefore, the cumulative impact related to construction noise would be significant and unavoidable.

Operational Noise

Stationary Noise

Projects and infrastructure under the RCAP would introduce new stationary noise sources, including new mechanical equipment and wind turbines, to the ambient noise environment within the plan area. Mitigation Measure NOI-2 has been identified to help reduce operational noise from projects and infrastructure under the RCAP. In addition, the phasing out of gas- and diesel-powered equipment in favor of electric-powered equipment would help to reduce operational noise throughout Humboldt. However, operational noise associated with future RCAP projects may still

exceed thresholds after mitigation, and impacts from the proposed plan are significant and unavoidable. Proposed plan sources may combine with other nearby cumulative projects to result in higher noise levels. Operational noise from these sources is localized and rapidly attenuates due to the effects of intervening structures and topography that block the line of sight and due to other noise sources closer to receptors that obscure project-related noise. However, if operational noise from cumulative projects occurs in close proximity to each other and simultaneously, noise from individual projects have a chance of combining to create significant cumulative impacts. Although this scenario is unlikely, and mitigation measures would be implemented to the extent feasible, the potential remains for a cumulatively considerable increase in operational noise from development under the RCAP. Therefore, the cumulative impact related to operational noise would be significant and unavoidable.

Transportation Noise

Cumulative projects would add additional roadway vehicles to roadways and transit facilities in the plan area that would have the effect of increasing transportation-related noise. However, projects and infrastructure under the RCAP would contribute a minor amount of traffic, with some projects requiring only a few employees or infrequent maintenance trips. In addition, the RCAP would result in a net decrease in vehicle trips regionally and increased adoption of ZEVs, and, therefore, may reduce transportation noise throughout Humboldt. As such, future projects under the RCAP would contribute a minor amount of traffic noise and would not be cumulatively considerable. Therefore, the cumulative impact related to operational transportation noise would be less than significant.

Groundborne Vibration

Although there could be other cumulative projects simultaneously under construction near a project facilitated by the RCAP, the potential for construction groundborne vibration impacts is within relatively close distances (e.g., within approximately 40 feet of a vibratory roller or 135 feet of an impact pile driver). Cumulative construction projects would not be anticipated to be within these close distances, such as having multiple vibratory rollers operating within 40 feet of each other or two impact pile drivers operating within 135 feet of each other and in proximity to a sensitive structure. Furthermore, projects and infrastructure under the RCAP would implement Mitigation Measure NOI-3 to reduce construction vibration impacts to less than significant. Therefore, cumulative groundborne vibration impacts would be less than significant.

Airport Noise

Employees associated with operation of projects and infrastructure under the RCAP would not be exposed to excessive noise levels from aircraft noise. Projects and infrastructure under the RCAP would not increase airport activity and noise, and would not increase cumulative airport noise exposure with cumulative projects in the plan area. Therefore, the cumulative impact related to operational airport noise exposure would be less than significant.

Overall Level of Cumulative Significance

Significant and Unavoidable

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3.8 Transportation

3.8.1 Introduction

This section describes existing conditions related to roadway, transit, bicycle, and pedestrian circulation systems, as well as the relevant regulatory framework. This section also evaluates impacts of the proposed plan and proposed thresholds related to the potential for conflict with existing programs, plans, ordinances, or policies addressing the circulation system; conflict with CEQA Guidelines Section 15064.3(b); increase hazards due to geometric design features; or result in inadequate emergency access.

3.8.2 Environmental Setting

3.8.2.1

Roadway System and Highway Network

Regional Highways

The roadway network in Humboldt includes 1,400 miles of County-maintained roads and City streets, 378 miles of State highways, and numerous roadways on federal lands. These roadways provide for the movement of goods and people on California's north coast. The County-maintained roadway system is primarily made up of two-lane roads that traverse varying degrees of flat, rolling, and mountainous terrain.¹ Major freeways and highways that facilitate circulation in Humboldt include United States Route 101 (U.S. 101), State Route (SR) 299, SR 36, SR 96, SR 169, SR 200, SR 211, SR 253, SR 255, and SR 283.² These routes are depicted in Figure 3.8-1 and brief descriptions of these routes are provided below:

- **United States Route 101.** U.S. 101 functions as the principal north-south route serving interregional and interstate traffic, with relatively high traffic volumes and heavy use by personal vehicles and trucks. In Humboldt, U.S. 101 varies between one and two lanes in each direction for most of its length with some three-lane passing sections.
- **State Route 299.** SR 299 is Humboldt's main east-west corridor connecting the Humboldt Bay area to Willow Creek and Trinity County, and eventually to Redding and Interstate 5 (I-5). SR 299 is a four-lane freeway between Arcata and Blue Lake and becomes a two-lane highway with alternating passing lanes between Blue Lake and the County line.
- **State Route 36.** SR 36 is a two- and one-lane highway that extends from U.S. 101, south of Fortuna to Trinity County following the Van Duzen, Mad and Trinity River valleys and eventually connects with I-5 in Red Bluff.
- **State Route 96.** SR 96 is a two-lane highway that extends north/south along the eastern edge of the Humboldt from Willow Creek to Orleans and eventually connects with I-5 in Siskiyou County.
- **State Route 169.** SR 169 is a one-lane highway that extends northwest from SR 96 at Weitchpec along the Klamath River to Wautech (Johnsons).

¹ Humboldt County. 2017. Humboldt County General Plan Circulation Element.

<https://humboldt.gov/DocumentCenter/View/61999/Chapter-7-Circulation-Element-PDF> (accessed October 2024).

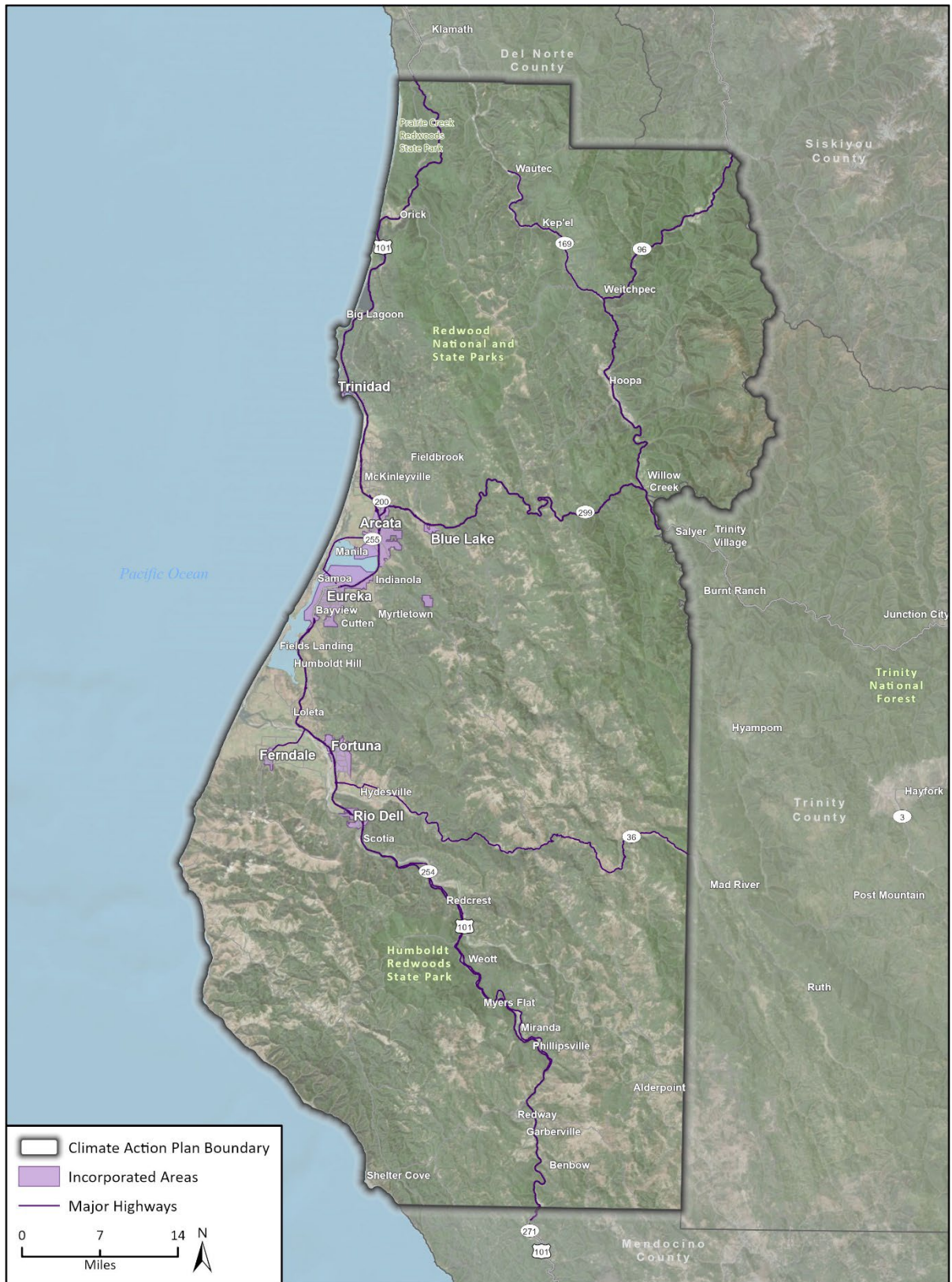
² Humboldt County. 2017. Revised Draft EIR Section 3.5 Transportation. <https://humboldt.gov/DocumentCenter/View/58834/Section-35-Transportation-Revised-DEIR-PDF> (accessed October 2024).

- **State Route 200.** SR 200 is a two-lane highway (also known as North Bank Road) that connects U.S. 101 south of McKinleyville to SR 299 east of Arcata and provides a bypass for trucks that are too tall to cross the Mad River Bridge.
- **State Route 211.** SR 211 is a short two-lane highway that extends from U.S. 101 to the City of Ferndale, crossing the Eel River over historic Fernbridge.
- **State Route 253.** SR 253, also known as Avenue of the Giants, is a two-lane highway that parallels U.S. 101 from approximately five miles north of Redway to approximately three miles south of Stafford. This route provides a scenic bypass to U.S. 101 and provides access to several unincorporated communities and state parks.
- **State Route 255.** SR 255 is a two-lane highway, with a four-lane segment in Arcata, that extends from Arcata to Eureka through Manila and serves as an alternate to U.S. 101.
- **State Route 283.** SR 283 consists of a two-lane highway across the historic Eagle Prairie Bridge that connects Rio Dell and the unincorporated community of Scotia.

Emergency Vehicle Routes

Emergency vehicle routes present throughout Humboldt provide critical transportation facilities in the event of emergency events. Critical transportation facilities for emergency vehicles throughout Humboldt include U.S. 101, SR 299, SR 255, SR 36, and SR 96. These routes provide regional connectivity throughout Humboldt and allow emergency vehicles to travel countywide, including connections to incorporated cities within Humboldt. These routes serve as important emergency vehicle routes in the event that regional emergency vehicle travel is needed, such as if mutual aid to an area is requested.

Figure 3.8-1 Regional Highways in Humboldt



Transit Service Route and Facilities

Rail Transit

Rail service to and within Humboldt County was suspended in 2001 due to the deteriorating condition of railway infrastructure. When operating, it provided freight service three times a week and occasional passenger service on weekends. Rail service provided an alternative to truck transportation, carrying mostly lumber products with the potential for transporting dairy products, fish products, aggregates, and coke and calcified lime used in paper processing. The North Coast Railway Corridor is now part of the Great Redwood Trail multi-use rail-to-trail project which will connect San Francisco and Humboldt bays, and most of the trail will be built on the rail bed of the defunct corridor. The railroad was rail-banked by the Great Redwood Trail Agency in 2022, and if there is opportunity in the future when it is economically feasible, the railroad could be converted back to rail transit use. However, substantial upgrades to existing rail transit infrastructure are required for rail transit in Humboldt.³

Bus Transit

Several different transit agencies provide public bus transit services in Humboldt, including the Humboldt Transit Authority (HTA), Eureka Transit Service, the Arcata & Mad River Transit System, Willow Creek Intercity, Fortuna Transit, Redwood Coast Transit, Trinity Transit, Yurok Tribal Transit Service, and Amtrak. HTA is a Joint Powers Authority between the County of Humboldt and the cities of Arcata, Eureka, Fortuna, Rio Dell and Trinidad, that operates and maintains most of the intercity public transit services that connect communities along highway 101 and between Arcata and Willow Creek, and acts as the Regional Transportation Planning Agency for the county. HTA operates and oversees the following local transit systems: Redwood Transit System, Southern Humboldt Intercity, Willow Creek Intercity, Eureka Transit Service, Arcata & Mad River Transit System, and North State Express. ⁴ These existing transit service routes and facilities are shown in Figure 3.8-2 and briefly described below:

- **Redwood Transit System.** The Redwood Transit System consists of mainline bus commuter service along the U.S. 101 corridor from Scotia to Trinidad. Regular commute service is available to McKinleyville, as well as regional service to the California Redwood Coast – Humboldt County Airport. Service was added to southern Humboldt, now connecting unincorporated communities of Garberville, Redway, Phillipsville, Miranda, Myers Flat, and Weott with the Humboldt Bay area. In addition to the mainline route serving U.S. 101, a separate route on SR 299 provides bus service between Willow Creek and various locations in Arcata and McKinleyville.
- **Eureka Transit Service.** The Eureka Transit Service has four fixed bus routes within Eureka as well as the unincorporated communities of Bayview, Cutten, and Myrtle town.
- **Arcata & Mad River Transit System.** The Arcata & Mad River Transit System provides fixed-route bus service within Arcata.

³ Humboldt County Association of Governments. 2023. Humboldt County Transit Development Plan https://www.hcaog.net/sites/default/files/humboldt_county_transit_development_plan_-_final_report_no_appendices_compressed_0.pdf (accessed January 2025).

⁴ Humboldt County Association of Governments. 2023. Humboldt County Transit Development Plan https://www.hcaog.net/sites/default/files/humboldt_county_transit_development_plan_-_final_report_no_appendices_compressed_0.pdf (accessed January 2025).

- **Fortuna Transit.** Fortuna Transit is a demand-response, curb-to -curb transportation service that provides rides for seniors ages 50 and older or disabled persons who are unable to drive, and operates almost entirely within city limits.
- **Redwood Coast Transit.** Redwood Coast Transit is the public transportation provider for Del Norte County on the northern boarder of Humboldt, and provides service between Del Norte and Humboldt Counties via Route 20, which travels between the communities of Smith River and Arcata. This service is scheduled to allow transfers to and from Amtrak at the Arcata Transit Center.
- **Trinity Transit.** The Trinity Transit is a public transit system in Trinity County, bordered east of Humboldt, and is a fixed route system that consists of four routes that originate in Weaverville and then travel to the north, south, east, and west. The westbound route brings passengers to Willow Creek, where passengers are then able to transfer to the HTA Willow Creek/Arcata service.
- **Yurok Tribal Transit Service.** The Yurok Tribal Transit Service, established in 2013, is a demand-response service operated by the Yurok Tribe Transportation Department and overseen by the Yurok Tribal Council. The service provides transportation primarily between the communities of Klamath and Crescent City (both in Del Norte County) and Wautec, Weitchpec, and Hoopa (all in Humboldt County).
- **Southern Humboldt Intercity.** The Southern Humboldt Intercity service is a fixed route that runs north-south between Eureka and Benbow, traveling through Fortuna, Rio Dell, Redcrest, Weott, Meyers Flat, Miranda, Phillipsville, Redway, and Garberville along the way. While the Southern Humboldt Local service has been discontinued, passengers traveling between Benbow and Redcrest are still eligible for the Southern Humboldt Local service which completes three northbound runs and two southbound runs daily Monday through Saturday.
- **Willow Creek Intercity Transit.** The Willow Creek Intercity Transit service operates three round trips between Arcata and Willow Creek, Monday through Saturday.
- **North State Express.** The North State Express provides transit service between Eureka and Ukiah, and connects to Crescent City on Redwood Coast Transit and to Santa Rosa via Mendocino Transit.
- **Amtrak Thruway Motorcoach.** Amtrak Thruway Motorcoach consists of buses to connect Amtrak train stations to areas not served by Amtrak railroads. Amtrak San Joaquin Route 7 provides a “Thruway” bus service between Arcata in Humboldt County south to Martinez in Contra Costa County. Within Humboldt County, the bus has stops in Arcata (at Cal Poly Humboldt and the Arcata Transit Center), Eureka, Fortuna, and Garberville.

Figure 3.8-2 Transit Service Routes in Humboldt



Pedestrian and Bicycle Routes and Facilities

The region's pedestrian and bicycle networks are expansive and contain a variety of public facilities to facilitate these modes of transportation.

Pedestrian Facilities

Pedestrian facilities are most commonly found in Humboldt's seven cities and larger unincorporated communities such as McKinleyville. Sidewalks and pathways of varying width are found in commercial areas, residential neighborhoods, and near schools. In many cases, existing sidewalks meet the minimum Americans with Disabilities Act (ADA) standards but are often obstructed by utility poles, signposts, and other obstacles.⁵

The Hammond Coastal Trail is one of Humboldt's many existing pedestrian facilities. The trail presently consists of a 2.4-mile hiking/biking/equestrian trail linking Arcata with McKinleyville from the Arcata Bottom to Murray Road in McKinleyville, a hiking/equestrian loop north of Murray Road, and the newest sections from just north of Vista Point on U.S. 101 to Strawberry Creek and the Widow White Creek crossing. Other existing prominent multi-use trails include the Mid-Town Trail in McKinleyville located between Railroad Avenue and Fernwood Drive, and the Elk River Hikshari' Trail.⁶ As well, there is the Waterfront Trail in Eureka, which is a 6.5-mile multi-use trail located along the shore of Humboldt Bay from the south end of the Elk River Estuary Enhancement Project all the way up to the northern and northeastern waterfronts. The Waterfront Trail will eventually connect to Arcata through the Humboldt Bay Trail. Other pedestrian/multi-use trails that are currently being constructed include the Humboldt Bay Trail between Eureka and Arcata along highway 101 and Humboldt Bay, and the Great Redwood Trail which will connect San Francisco Bay and Humboldt Bay through the existing railway corridor.

Bicycle Facilities

Humboldt's bicycle network consists of bikeways designated as the following categories, as defined by the California Department of Transportation (Caltrans):⁷

- **Class I:** A Class I bikeway, or a bike path, is a multi-purpose trail that is completely separated from motor vehicle traffic.
- **Class II:** A Class II bikeway, or a bike lane, is an on-street lane dedicated to one-way bicycle travel adjacent to motorized travel lanes.
- **Class III:** A Class III bikeway, or bike route, are on-street shared facilities. Class III bikeways serve to provide continuity to other bicycle facilities or designate a preferred route through high demand corridors. These routes are typically demarcated using sharrows and/or signage.

A prominent Class I bike paths in Humboldt is the Hammond Coastal Trail, as described above, which provides opportunities for non-motorized travel for both transportation and recreation purposes. The Humboldt Bay Trail and Great Redwood Trail will include Class I bike paths once completed. Multi-use trails throughout the County accessible for bicycle travel also include the Waterfront Trail in Eureka, and the Mid-Town Trail in McKinleyville and 18th Street bridge-U.S. 101 overpass in Arcata. Class II bicycle lanes are located in the Arcata, Eureka, Fortuna, McKinleyville, and Orleans. Class III bicycle lanes are located in Arcata, Eureka, and Fortuna, McKinleyville, and

⁵ Humboldt County. 2017. Revised Draft EIR Section 3.5 Transportation. <https://humboldt.gov.org/DocumentCenter/View/58834/Section-35-Transportation-Revised-DEIR-PDF> (accessed October 2024).

⁶ Ibid

⁷ Ibid

Myrtle town. In addition, the Pacific Coast Bike Route travels north to south through Humboldt, beginning at Prairie Creek Redwoods State Park and traverses through Eureka, eventually travelling parallel to U.S. 101.⁸

Aviation Facilities

The Humboldt region is served primarily by the Redwood Coast-Humboldt County Airport (ACV), Humboldt's sole commercial airport. ACV offers service to San Francisco, Los Angeles, Burbank, and Denver. ACV provides approximately 6 commercial flights per day. ACV is located in the coastal area of unincorporated McKinleyville approximately 8 miles north of Arcata and 16 miles north of Eureka, respectively.⁹

Eight other public airports exist in Humboldt: Dinsmore Airport, located 0.25-mile east of Dinsmore; Garberville Airport, located one-mile south of Garberville; Kneeland Airport, located in Kneeland; Murray Field, located in Eureka; Rohnerville Airport, located 0.8-mile south of Fortuna; Samoa Field, located in Fairhaven; Shelter Cove Airport, located in Shelter Cove; and the Hoopa Airport, located in Hoopa. All but the Samoa Field, Shelter Cove, and Hoopa Airports are owned and operated by the County. Samoa Field is owned by the City of Eureka, Shelter Cove is owned by the Shelter Cove Resort Improvement District No. 1, and Hoopa is owned by the Hoopa Valley Tribal Council. These airports are primarily used for general aviation.¹⁰

3.8.3 Regulatory Setting

3.8.3.1

Federal Regulations

Americans with Disabilities Act of 1990

The ADA of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to ensure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent Federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. The guidelines address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

Fixing America's Surface Transportation Act

The Federal Highway Administration (FHWA) is the agency of the United States Department of Transportation responsible for the federally funded roadway system, including the interstate highway network and portions of the primary State highway network. FHWA funding is provided through the Fixing America's Surface Transportation Act. Federal funds can be used to fund eligible

⁸ Humboldt County Association of Governments (HCAOG). 2022. Variety in Rural Options of Mobility (VROOM) 2022. https://www.hcaog.net/sites/default/files/vroom_2022-2042_full_report_0.pdf (accessed October 2024).

⁹ Humboldt County. 2017. Revised Draft EIR Section 3.5 Transportation. <https://humboldt.gov/DocumentCenter/View/58834/Section-35-Transportation-Revised-DEIR-PDF> (accessed October 2024).

¹⁰ Humboldt County. 2017. Revised Draft EIR Section 3.5 Transportation. <https://humboldt.gov/DocumentCenter/View/58834/Section-35-Transportation-Revised-DEIR-PDF> (accessed October 2024).

local transportation improvements in such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, pedestrian facilities, and transit system upgrades.

State Regulations

Caltrans Transportation Impact Study Guide

The California Department of Transportation (Caltrans) is responsible for the planning, design, construction and maintenance of all interstate freeways and State routes. Caltrans builds, maintains, and operates the State Highway System in California with a goal to facilitate the safe and efficient use of the State transportation system for all users. Caltrans sets standards in its 2020 Transportation Impact Study Guide that focus on the vehicle miles traveled (VMT) metric. The document is intended to be a reference and informational document that aligns with the standards and thresholds established in the Governor's Office of Land Use and Climate Innovation's (LCI), formerly the Governor's Office of Planning and Research, "Technical Advisory on Evaluating Transportation Impacts in CEQA." This document is available to local governments to uniformly review transportation analysis and assess the operational standards of Caltrans-maintained facilities. The "2020 Transportation Impact Study Guide" replaces the "2002 Guide for the Preparation of Traffic Impact Studies" but is only intended to be used with local land use projects and plans, not to be used for transportation projects on the State Highway System.

Statewide Transportation Improvement Plan

The Statewide Transportation Improvement Plan (STIP) is a capital improvement program that plans transportation projects related to State facilities in California for the next five years. The program is updated every two years with new construction projects as more funding is provided. The California Transportation Commission approves the fund estimate and then Caltrans and regional planning agencies submit plans for transportation improvement projects. If the projects are programmed in the STIP, then relevant agencies can begin the implementation process.

Complete Streets Act

The Complete Streets Act was signed into law as Assembly Bill (AB) 1358 in 2008. It requires that cities and other public agencies incorporate "complete street" policies and principles into their General Plans and Updates within the Circulation Elements, so that the plan addresses the needs of all users, including bicyclists and pedestrians. Caltrans Deputy Directive 64 (DD-64-R1 October 2008) embraces the Complete Streets Act and its incorporation into all phases of state highway projects, from planning to construction to maintenance and repair.

Senate Bill 743

Senate Bill (SB) 743, which was signed into law in 2013, directed LCI to develop revisions to the CEQA Guidelines by July 1, 2014 to establish new criteria for determining the significance of transportation impacts and define alternative metrics instead of traffic level of service. SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also states that alternative measures of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." SB 743 changes the way that public agencies evaluate the transportation impacts of projects in accordance with CEQA by

recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see California Public Resource Code, Section 21099[b][2]).

On January 20, 2016, LCI (then called OPR) released the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, which was an update to Updating Transportation Impacts Analysis in the CEQA Guidelines, which had been released on August 6, 2014. Of note was the updated text of the proposed new CEQA Guidelines Section 15064.3 which discusses the determination of the significance of transportation impacts, alternatives, and mitigation measures. Specifically, CEQA Guidelines Section 15064.3 establishes VMT as the most appropriate measure of transportation impacts. In November 2018, the California Natural Resources Agency finalized the updates to the CEQA Guidelines, and the updated guidelines became effective on December 28, 2018. LCI's updated guidelines states the following about transit and active transportation projects:¹¹

Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less than significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development.

Senate Bill 32 and Senate Bill 375

On September 8, 2016, the governor signed SB 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to reach greenhouse gas emissions goals by directing the California Air Resources Board to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations.

Assembly Bill 747 and Senate Bill 99

Assembly Bill (AB) 747 (2019) requires that the safety element be reviewed and updated to identify vehicle evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. This will be a requirement for all safety elements or updates to hazard mitigation plans completed after January of 2022.

SB 99 (2019) requires review and update of the safety element to include information to identify residential developments in hazard areas that do not have at least two vehicle emergency evacuation routes. In essence, this legislation assists in identifying neighborhoods and households within a hazard area that have limited vehicle accessibility. This is intended to assist cities and counties with identifying opportunities to improve connectivity and evacuation capacity.

¹¹ Governor's Office of Land Use and Climate Innovation (LCI). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. https://lci.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf (accessed October 2024).

Assembly Bill 43

AB 43, also known as Traffic Safety, allows local government agencies to reduce vehicle speeds to accommodate vulnerable users such as pedestrians, bicyclists, seniors, and wheelchair users to improve traffic safety. AB 43 took effect in July 2024.

California Department of Transportation Planning Documents

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State highway system. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the highway system, including ramps and access points, within the study area would need to be approved by Caltrans. The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development.

- Smart Mobility 2010: A Call to Action for the New Decade (Smart Mobility Framework)
- Complete Streets Implementation Action Plan
- Strategic Plan 2020-2024
- California Transportation Plan 2050

SMART MOBILITY FRAMEWORK

The purpose of the Smart Mobility Framework, published in February 2010, is to address the State mandate to find solutions to climate change, reduce per capita VMT, and create a safe and equitable transportation system.¹² The Smart Mobility Framework includes 10 implementing themes to achieve its purpose, including integration into Caltrans and other transportation agencies' policy and practice, collection of data and tools to implement the Smart Mobility Framework, undertaking of major cross-functional initiatives, and integration into local government land use and transportation planning.

COMPLETE STREETS IMPLEMENTATION ACTION PLAN

On September 30, 2008, the California Complete Streets Act of 2008 was signed into law. As of January 2011, AB 1358 requires any substantive revision of the circulation/mobility element of a city or county's general plan to identify how they will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

CALTRANS ACTIVE TRANSPORTATION PLAN 2021 – DISTRICT 1

The Caltrans Active Transportation Plan for District 1 is part of a comprehensive effort to identify locations with bicycle and pedestrian needs, and identifies challenges to people's ability to walk, bicycle, and reach transit on the State Highway System. The Plan identifies gaps and barriers on the State Highway System and recommends priorities among need locations.¹³

¹² Caltrans. 2010. Smart Mobility 2010. <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/smf-handbook-062210-a-a11y.pdf> (accessed February 2025).

¹³ Caltrans. 2021. Active Transportation Plan 2021 District 1. <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/active-transportation-complete-streets/district1-finalreport-a11y.pdf> (accessed February 2025).

CALTRANS DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM

In 2001, Caltrans adopted Deputy Directive 64; a policy directive related to non-motorized travel throughout the State. In October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. Deputy Directive 64-R1 states:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."

Successful long-term implementation of this directive is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

DIRECTOR'S POLICY 22: DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all State highways, was adopted by Caltrans in November of 2001. The policy reads:

The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street," that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods," and that "communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality." The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

STRATEGIC PLAN 2020-2024

Caltrans 2020-2024 Strategic Plan weaved sustainability principles through all of its goals. Goals of the Strategic Plan are related to increasing safety, enhancing and connecting the multimodal transportation network, leading climate action, and advancing equity in all communities.¹⁴

¹⁴ Caltrans. 2021. Caltrans 2020-2024 Strategic Plan. <https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/sp-2020-16p-web-a11y.pdf> (accessed February 2025).

CALIFORNIA TRANSPORTATION PLAN 2050

Caltrans completed the California Transportation Plan to comply with Title 23, Code of Federal Regulation Section 450.214 and pursuant to California Government Code Title 7 Division 1 Chapter 2.3. The California Transportation Plan provides a roadmap for making effective, equitable, transparent, and transformational transportation decisions in California. The vision of the California Transportation Plan is: “California’s safe, resilient, and universally accessible transportation system supports vibrant communities, advances racial and economic justice, and improves public and environmental health,” which is supported by goals related to safety, climate, equity, accessibility, public health, economy, environment, and infrastructure.¹⁵

California Encroachment Permits

Any work within the existing right of way would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers.

Regional and Local Regulations

Variety in Rural Options of Mobility 2022-2042

The Variety in Rural Options of Mobility 2022-2042 (VROOM 2022-2042) is a regional transportation plan implemented by the Humboldt County Association of Governments (HCAOG), a Joint Powers Agency comprised of Humboldt County and the seven incorporated Cities within Humboldt. HCAOG is required to adopt and submit an updated regional transportation plan every four years. VROOM 2022-2042 sets forth long-range transportation planning goals describing how the region will meet its transportation needs for the 20-year period from 2022 to 2042. VROOM 2022-2042 incorporates existing and future land use patterns and forecasted job growth to identify and prioritize transportation projects throughout Humboldt.¹⁶

All transportation projects that use State and federal funds, or that could significantly affect transportation in Humboldt must be included in VROOM 2022-2042. VROOM 2022-2042 offers a mix of mobility options and commits to a more sustainable transportation system through investments in public transportation, active transportation, highways, streets, and roads, and system efficiency. VROOM 2022-2042 includes six Objective areas – Active Transportation Mode Share/Complete Streets, Economic Vitality, Efficient & Viable Transportation System, Environmental Stewardship and Climate Protection, Equitable & Sustainable Use of Resources, and Safety and Health – with respective policies and actions to meet each of the objectives. These policies are expected to result in significant benefits to the region, not only with respect to transportation and

¹⁵ Caltrans. 2021. California Transportation Plan 2050. <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf> (accessed February 2025).

¹⁶ Humboldt County Association of Governments (HCAOG). 2022. Variety in Rural Options of Mobility (VROOM) 2022. https://www.hcaog.net/sites/default/files/vroom_2022-2042_full_report_0.pdf (accessed October 2024).

mobility, but also economic activity, safety, and social equity. The following list summarizes the most applicable policies which relate to the proposed plan:¹⁷

- **Policy Climate-1. Carbon-neutral modes:** HCAOG will work and collaborate on efforts to promote non-motorized travel and the rapid transition to zero-emission motorized vehicles.
- **Policy Climate-3. Clean fuels:** HCAOG will support efforts, including through public-private partnerships, to equitably expand transportation electrification, to optimize development and use of the electric grid, and to expand clean-fuel supply infrastructure.
- **Policy Climate-6. Land use-transportation resilience strategies:** HCAOG will support local communities in developing integrated transportation and land use strategies for responding resiliently to climate change, and codifying such strategies in General Plans, Regional Transportation Plans, Local Coastal Programs, and other long-range plans. (*CTP 2040 recommended policy*)
- **Complete Streets and Connected Communities Sub-Objective 2:** Expand and maintain a regional network of inter-connected pedestrian and bicycle facilities. Create safe and effective walking and bicycling facilities that create neighborhood connectivity and continuity.
- **Policy Streets-1. Multi-modal safety & functionality:** HCAOG shall encourage and facilitate local jurisdictions, local Native American Tribes, Caltrans, and non-profits to individually and collaboratively plan, design, install, and maintain roads in Humboldt County to build a transportation system that emphasizes safety over speed, and emphasizes multi-modal functionality over convenience for single-occupancy automobiles.
- **Policy Streets -3. Complete Streets improvements:** HCAOG shall include Complete Streets improvements in regionally-funded transportation system projects to the extent feasible, as consistent with California Complete Streets Act of 2008 (AB 1358) and Caltrans Deputy Directive 64-R2.
- **Policy Streets -4. Sharing Economy:** HCAOG shall pursue efforts to increase shared mobility options in the region, such as car share and bike share programs. HCAOG shall work to make shared mobility programs equitably available to people with low-incomes and other transportation disadvantages.
- **Policy Transit-1** To grow and meet transit demand, fund programs and support services that make public transportation a fast and convenient way for people to get to their destinations. Support funding expanded routes, increased trip frequency, faster travel times (express routes), and first-last mile services including on-demand service. Prioritize programs with the highest potential to increase ridership and reduce the number of single-occupancy-vehicle trips made in Humboldt County.
- **Policy Transit -3** HCAOG supports having an integrated transit network that enables users to conveniently connect transit trips with biking and walking (first-last mile connectivity), such as by accommodating bicycles on transit vehicles, providing secure bicycle parking at transit stops, integrating mobility-on-demand services with transit service (e.g., bikeshare, scootershare, carshare, carpooling), and maximizing walkability and ADA accessibility to bus stops.
- **Policy Transit -4.** Local funding for expansion: HCAOG will help develop local funding sources to afford expanding service to meet demand.

¹⁷ Humboldt County Association of Governments (HCAOG). 2022. Variety in Rural Options of Mobility (VROOM) 2022. https://www.hcaog.net/sites/default/files/vroom_2022-2042_full_report_0.pdf (accessed October 2024).

Humboldt County Transit Development Plan 2023-2028

The Humboldt County Transit Development Plan 2023-2028 (TDP 2023-2028) is a regional plan that was developed and implemented by HCAOG. The TDP 2023-2028 is a short-range plan that analyzes the existing transit system, and proposes service alternatives and a capital plan for transit agencies over a five-year period. HCAOG updates the TDP every five years, which reflects Humboldt County's goal to expand public transit access in the region, and goes beyond existing defined funding levels to include viable service improvements that will require additional funding to achieve the goals outlined.

Humboldt Regional Bicycle Plan

The Humboldt Regional Bicycle Plan (Bicycle Plan) is a regional plan that was implemented by HCAOG in 2018. The Bicycle Plan is intended primarily to facilitate projects and programs that will help build a bikeway system that makes bicycling throughout Humboldt County a safe, convenient, and practical means of transportation for all residents and visitors. Priority infrastructure projects will link adjoining jurisdictions' bicycle routes and thereby build a regional bicycle network. The Bike Plan's recommended projects and programs have the potential to considerably increase the number of bicycle trips in Humboldt County.

Humboldt County General Plan – Circulation Element

The County General Plan Circulation Element identifies existing and proposed major thoroughfares, transportation routes, terminals, and other local transportation facilities of roads, public transportation, bicycle and pedestrian travel, airports, and marine and rail transportation throughout Humboldt. Circulation Element policies apply to all roadways and intersections within unincorporated areas of Humboldt. The following Circulation Element goals and policies relate to the proposed plan:¹⁸

- **C-G4. Access to Active Transportation.** Improved access to non-motorized modes of transportation, including walking, bicycling, horseback riding and hiking.
- **C-P9. Circulation Planning for Bicycles, Pedestrians and Transit.** Circulation planning and project review shall include an assessment for bicycle, pedestrian and public transit access.
- **C-P17. Highway Improvements.** Encourage state and federal highway improvements that promote safety and connectivity for all users, especially for communities with highway arterials. The County supports a strategy for safety and operational improvements to the U.S. Highway 101 Safety Corridor that is implemented in a manner consistent with the General Plan.
- **C-P24. Long Term Transit Plan.** The County shall support HCAOG's long term transit planning with the goal of increasing the percentage of public transit trips compared to automobile trips.
- **C-P36. Bicycle Facilities.** Encourage the planned placement of secure and/or weather-protected bicycle storage facilities at public buildings and bus stops, where appropriate. Incentivize placement of bicycle parking and storage at businesses, new or modified bus stops and multi-family housing.

Humboldt County Code

The County Code contains requirements which set forth standards for transportation. County Code Title IV, Division 1, Chapter 1 requires construction activities occurring on County roads to use lights,

¹⁸ Humboldt County. 2017. Humboldt County General Plan Circulation Element.
<https://humboldt.gov/DocumentCenter/View/61999/Chapter-7-Circulation-Element-PDF> (accessed October 2024).

barriers, warning lights, and other safeguards necessary to minimize roadway hazards. County Code Title III, Division 11, Chapter 2 sets forth design standards for roadways and driveways, including, but not limited to, road widths, grades, and turnouts. These standards are implemented to ensure traffic safety and allow for emergency access.

City of Arcata General Plan – Circulation and Mobility Element

The City of Arcata General Plan Circulation and Mobility Element includes policies to provide a balanced transportation system, increased access to transit, enhanced bicycle and pedestrian facilities, parking management, and rail and freight transportation management. The following Circulation and Mobility Element policies relate to the proposed plan:¹⁹

- **CM-1b Investment in alternative modes.** To provide a realistic and cost-effective balance between travel modes, the City shall emphasize investment in alternative modes (bikeways, etc.) as a priority over increasing vehicular capacities of streets. Support ride-share in various modes (car, bike, etc.) through public and private infrastructure, and encourage systems designed to provide access to shared facilities. Improvements and programs should include public options, such as bike share racks or carpool parking, public-private partnerships for vehicle share, and private facilities or programs, such as project-based car share.
- **CM-2a Land use development patterns.** The City encourages and supports travel demand management efforts. The City shall promote land use and development patterns that encourage walking, bicycling and transit use. In recognition of the link between land use and transportation, the land use plan shall discourage low density, homogenous land-use patterns that foster automobile travel and are impractical to serve with transit. Land use planning shall emphasize high density and mixed land use patterns which translate into higher transit and pedestrian travel in the downtown and neighborhood commercial areas. Infill, redevelopment, and reuse of underutilized property at higher densities shall be encouraged prior to outward expansion of City boundaries. The following land use measures are emphasized:
 1. Mixed-use neighborhood centers within transit corridors which include housing and commercial services near employment.
 2. Land use patterns which maximize linking trip opportunities by assembling uses, thus allowing people to take care of a variety of daily needs with a single trip.
 3. Clustering of higher density housing and incorporation of residential apartments on upper floors of buildings in the downtown area.
 4. Integration of new housing into neighborhood shopping centers, including Sunny Brae, Westwood, and Valley West.
 5. Pedestrian-oriented land use and urban design, including the following elements:
 - a. Pedestrian-scale block patterns.
 - b. Incorporate pedestrian and bicycle amenities into public and private projects.
 - c. Design streets for multi-modal use.
 - d. Integrate transit stop facilities into public and private projects.
 - e. Orient buildings and houses to street.
 - f. Provide attractively landscaped streets and buffers.
 - g. Preserve existing and historic urban fabric.

¹⁹ Arcata, City of. 2024. Circulation and Mobility Element. https://www.cityofarcata.org/DocumentCenter/View/14697/23_Circulation (accessed January 2025).

- h. Eliminate blank wall facades.
 - i. Incorporate bicycle routes and enhancements in public and private projects.
- 6. A fixed urban services boundary to reduce sprawl and infrastructure costs.
- 7. Focused growth along existing or planned transit corridors rather than extension of transit to serve new isolated development.
- 8. Prevention of large areas of single uses. Isolated single-use developments at the edge of the City could encourage automobile travel for commuting and errands.
- 9. Provision of convenience retail and services in ground floor space in the downtown to accommodate the needs of employees and reduce the need for mid-day automobile trips.
- 10. Adopt and maintain zoning regulations that allow for a mix of land uses to reduce vehicle trips and the overall need for automobile use.
- **CM-1d Intercity travel.** The City shall coordinate with Humboldt County and Caltrans to provide adequate facilities for vehicles, buses, and bicycles to serve intercity demand. Joint efforts may include transportation improvements outside of Arcata which serve intercity travel, such as bicycle links, timed-transfer bus stops, park-and-ride lots, and regional transit service and development of park-and-ride lots in Arcata to reduce intercity vehicular travel.
- **CM-5b Bikeway system and pedestrian network standards.** The City of Arcata Pedestrian & Bicycle Master Plan and Humboldt County Association of Governments (Association of Governments) Humboldt Regional Bicycle Plan contain appropriate design standards and guidelines for the proposed bikeway system and pedestrian network improvements in the City of Arcata. Continue to work with regional partners and Association of Governments to plan improvements to the bikeway system and pedestrian network.
 - 1. Right-of-way opportunities. As opportunities arise, the City shall utilize existing or acquire new easements or right-of-way for Class I bikeways. Such opportunities may include connecting dead-end streets in new developments with existing neighborhoods, along streets with excess width and unpaved right-of-way, along drainage channels or creeks, or along abandoned railroad rights of way.
- **CM-5c Bicycle parking facilities.** Secure bicycle parking facilities shall be provided at important activity centers, civic facilities, apartment complexes, employment centers, shopping centers, major bus stops, and schools. Bicycle parking facilities include racks, and lockers. Developers shall be required to provide a minimum number of bicycle parking devices at convenient and visible ground-floor locations within the development. Bicycle parking should be in an interior location near an entrance whenever feasible. The required number of bicycle parking spaces shall be calculated as a proportion of the number of users. Designate locations for public, outdoor bike lockers coordinated with public transit stops accessible in the public right-of-way.
- **CM-5e Pedestrian pathways and multi-use trails.** Pedestrian pathways or multi-use trails for the exclusive use of non-motorized transportation modes and non-auto motorized vehicles, such as electric bikes with appropriate limitations should be provided. Pathways may be long facilities located along corridors or short facilities providing direct access through development projects or connecting areas not directly accessible by streets. Pathways should be planned to serve the full range of mobility needs for people of all ages, races, ethnicities, incomes, and physical abilities. The following shall apply to pedestrian pathways or multi-use trails:
 - 1. Easement or right-of-way dedication. Dedication of easements or rights of way for pathways through new private developments may be required.

2. Cooperation with local and regional agencies and jurisdictions. The City shall cooperate with other agencies to establish and maintain off-street pathways and trails utilizing creek, utility, and railroad right-of-way.
3. Other potential locations for multi-use paths are within the Great Redwood Trail Agency right-of-way from Giuntoli Lane to Samoa Boulevard, along the west side of Samoa Boulevard/Old Arcata Road east of US 101, and along the perimeter of Arcata Bay towards Manila.
4. Create separated walk/bike lanes in multi-use trails with explanatory signage on placement and how to safely pass, as deemed necessary based on increased use in future.
5. Provide sidewalks or multi-modal trails on both sides of all streets.
6. Support ride-share in various modes (car, bike, etc.) through public and private infrastructure, and encourage systems designed to provide access to shared facilities. Improvements and programs should include public options, such as bike share racks or carpool parking, public-private partnerships for vehicle share, and private facilities or programs, such as project-based car share.
7. Retain and expand the current total linear feet of Class I trails within the City, including the L Street segment of the Bay Trail North/Annie Mary Trail. If current facilities must be realigned or relocated to other routes, ensure no net loss of trail length and connectivity. In limited circumstances, the City Council shall retain the discretion to allow removal or relocation of Class I Trail sections if such approval would improve active transportation access and connectivity. Collaborate with the Great Redwood Trail Agency and other landowners and agencies to retain and expand the Class I trail and Class 4 bikeways throughout the City.
8. Reduce vehicle trips from other parts of the City by creating pedestrian and bicycle-friendly corridors that draw residents and visitors to enter the various neighborhoods via means other than motorized vehicles. Fulfill the potential of the existing and planned Class I trails by planning for expanded connections that will draw bikes/peds from between activity centers.

City of Blue Lake General Plan – Circulation Element

The City of Blue Lake Circulation Element identifies circulation facilities and transportation needs to coordinate circulation systems with planned land uses. The following Circulation Element policy relates to the proposed plan:²⁰

- **Policy 18.** The City shall promote the use of bicycles as a convenient, alternate mode of transportation consistent with Blue Lake’s “small town” atmosphere.

Blue Lake Municipal Code

Chapter 12.08 of the Blue Lake Municipal Code sets forth standards for encroachment and requires the protection of traffic via use of lights, barriers, warning lights, and other safeguards. In addition, Chapter 12.08 requires encroachments minimally interfere with traffic, including via the use of flaggers and prohibiting complete road closures.

²⁰ Blue Lake, City of. 1986. General Plan Circulation Element. https://bluelake.ca.gov/wp-content/uploads/2022/05/General-Plan_updated_2009-_10-24-11.pdf (accessed October 2024).

City of Eureka General Plan – Mobility Element

The City of Eureka’s Mobility Element guides the improvement, operation and maintenance of the City’s mobility network. Specifically, the Mobility Element provides goals and policies that integrate improvements to create more complete streets, and promote efficient use of streets and highways, connected pedestrian and bicycle paths to encourage the use of alternative transportation modes, coordinated transit service, adequate parking, efficient goods movement, and adequate water transportation service. The following Mobility Element policies relate to the proposed plan:²¹

- **M-1.1 Complete Streets.** Design and construct both new and reconstructed streets with adequate rights-of way and facilities to support the full range of locally available travel modes, compliant with the City of Eureka Design/Complete Streets Design Guide and the California Complete Streets Act (AB 1358). Consider a layered transportation network approach that distributes a range of facility types across neighborhoods and districts.
- **M-1.2 Investment in Alternative Modes.** Emphasize investment in alternative travel modes to provide a realistic and cost-effective balance between modes.
- **M-1.6 Dense Development.** Integrate transportation and land use decisions to enhance opportunities for development that is compact, walkable and transit friendly.
- **M-1.10 Shared Transportation.** Develop guidelines and incentives to direct how transportation sharing (e.g., bikeshare, carshare, rideshare, e-scooters, bike rentals) would be accommodated in the City, including where docking would be required, what amount and type of parking (e.g., automobile spaces, bike parking, docking stations) would be required, passenger loading zones, and other considerations.
- **M-2.9 Multi-modal Access.** Promote the provision of multi-modal access to activity centers such as commercial and employment uses, Downtown, Old Town, schools, and parks.
- **M-3.2 Extend Facilities.** Provide for the extension of sidewalks, trails, and walking/bicycling facilities throughout the City to allow for convenient and safe pedestrian and cyclist movement and to promote walking and bicycling as viable modes of transportation for all types of trips.
- **M-3.3 Continuous Networks.** Provide continuous pedestrian and bicycle systems that link neighborhoods, parks, schools, commercial centers, major employers, and other frequently-visited destinations and expand access to the gulches and greenways consistent with the City’s Bicycle Plan and street design guidelines.
- **M-3.4 Regional Connectivity.** Provide a bicycle system that is interconnected with the regional bikeway system.
- **M-3.5 Street Design.** Consider the needs of pedestrians and bicyclists in the design of all new or reconstructed streets, with improvements to be provided consistent with the street design guidelines.
- **M-3.10 Enhanced Crossings.** Evaluate need for enhanced crossing treatments, new signals or modified signal operations to promote safety for pedestrians and bicyclists. Coordinate with Caltrans to effect change along the U.S. 101 corridor.
- **M-3.12 Infill Sidewalk Gaps.** Create a plan to infill sidewalk gaps.
- **M-4.1 Transit Services.** Work with local and regional transit providers to maintain and expand services within the City that meet the needs of residents, and are accessible, timely, and

²¹ Eureka, City of. 2018. 2040 General Plan. <https://www.eureka.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed October 2024).

responsive to growth patterns, and design routes with transit stops linking to trails and recreation areas.

- **M-4.5 Transit Use.** Work with Core Area employers, workers, residents, and visitors to encourage public transit use, thereby reducing traffic congestion and parking demand in the Core Area.
- **M-4.8 Safe Routes to Transit.** Implement and maintain a safe routes program that prioritizes pedestrian and bicycle access to transit stops and stations.
- **M-5.5 Alternative Fuel Vehicle Parking.** Support parking for Electric Vehicles (EVs), carpools, and hybrids, including the development of local charging stations in both public and private parking lots and large commercial parking lots.

Eureka Municipal Code

Chapter 56 of the Eureka Municipal Code addresses traffic encroachments. Section 56-10 requires implementation of a traffic control plan if roadway encroachment would occur during construction activities. Section 56-10 specifies no disruption of traffic is permitted after 4:00pm or before 8:00am.

City of Eureka Other Plans and Policies

The City of Eureka also has adopted Engineering Standards Details for transportation infrastructure (typical pavement section for roadways, sidewalk widths, driveway design, street tree installation, etc.) and an adopted Eureka Bike Plan (adopted in September 2024). Council also adopted a Complete Streets policy in January 2023. And the City is working on Old Town/Downtown Parking Management Improvements, implementing a recent Parking Study conducted for the area.

City of Fortuna General Plan - Transportation and Circulation Element

The City of Fortuna's Transportation and Circulation Element promotes more efficient travel to reduce air pollution, reduce the need for costly roadway improvements, and facilitate the travel of those who cannot or do not wish to use automobiles. The following Transportation and Circulation Element policies relate to the proposed plan:²²

- **TC-1.1 Reducing Mode Conflicts.** The City shall seek to minimize conflicts between pedestrians, automobiles, and bicycles.
- **TC-3.2 Fixed-Route Transit.** The City shall work with HCAOG, the Humboldt Transit Authority, and Redwood Transit Service to expand fixed-route transit service to serve new development areas, including direct connections to employment, residential, and commercial areas.
- **TC-3.4 Alternative Transportation Linkages.** The City shall link other modes of transportation (e.g., pedestrian and bike routes) with public transportation to further facilitate their use.
- **TC-4.4 Regional Pedestrian Needs Assessment Update.** The City shall implement the projects identified in the Humboldt County Association of Governments (HCAOG) Regional Pedestrian Needs Assessment study.
- **TC-5.1 Bicycle Transportation Plan.** The City shall prepare a Bicycle Transportation Plan that incorporates the bicycle facilities plan for the City included in HCAOG's 2009 Humboldt County Regional Trails Master Plan. A copy of the route plan is shown on page 4-4 for reference. The

²² Fortuna, City of. 2010. Transportation and Circulation Element.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed October 2024).

City shall strive to fully implement the proposed facilities to fill in gaps in the existing bicycle network, improve existing bicycle facilities, improve motor vehicle and bicycle interactions, and increase bicyclist safety. The City shall also identify the locations of planned bicycle parking facilities in the plan linked to schools, government buildings, shopping centers and transit stops, establish bicycle parking standards, and strive to coordinate Class II bikeway striping with surfacing of city streets.

Fortuna Municipal Code

Chapter 12.08 of the Fortuna Municipal Code sets forth provisions for encroachment during construction. Chapter 12.08 requires traffic control methods to be approved by the City engineer prior to the start of construction.

City of Rio Dell General Plan – Circulation Element

The City of Rio Dell Circulation Element identifies the guiding principles for moving people and goods within the City and identifies the infrastructure necessary to assure that the transportation network will serve the City at General Plan buildout. The following Circulation Element policies relate to the proposed plan: ²³

- **Policy CE 1-2.** Design street systems in residential areas to minimize through traffic, to encourage internal movement by bicycling and walking, to provide safer and quieter neighborhoods, to minimize vehicular conflicts at intersections and to ensure that the impact of recreational traffic on local residents is minimized.
- **Policy CE 3-1:** Provide an extensive network of pedestrian, including the physically disabled and bicycle pathways to support community health and provide safe alternatives to automobile use.
- **Policy CE 4-1:** Participate in efforts to maintain and enhance public transit opportunities within the City.

City of Trinidad General Plan

The City of Trinidad Circulation Element describes the existing rural character of the city streets and identifies the need for supporting the regional bus system serving the Trinidad area. The following Circulation Element policies relate to the proposed plan: ²⁴

- **Policy 41.** The city should support the continuation of regional bus service in the Trinidad area.

Trinidad Municipal Code

Chapter 12.04 of the Trinidad Municipal Code sets forth the standards for encroachments during construction and requires continuous vehicle and pedestrian access to be maintained. In addition, Chapter 12.04 requires all signs, flags, lights, and safety devices to conform to the Caltrans current Manual of Traffic Control Warning Signs, Lights and Other Devices for Use in Performance of Work Upon Highways.

²³ Rio Dell, City of. 2013. Circulation Element. https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/rio_dell_circulation_element_january_2013.pdf (accessed October 2024).

²⁴ Trinidad, City of. 2021. Circulation Element. <https://www.trinidad.ca.gov/media/5491> (accessed January 2025).

3.8.4 Impacts and Mitigation Measures

3.8.4.1

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Transportation.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- c) Substantially increase traffic-related hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d) Result in inadequate emergency access?

Approach to Analysis

VTM Impact Methodology and Assumptions

Since SB 743 eliminated the use of level of service for CEQA impact analysis purposes, level of service is not discussed in this analysis. The analysis in this document examines potential roadway transportation impacts under current CEQA criteria. The primary quantitative measure of roadway impacts is VMT. The County and cities within Humboldt have not formally adopted thresholds to determine impacts based on VMT. The City of Arcata, in their General Plan Update Environmental Impact Report, utilized an interim ordinance for SB 743, which assessed VMT impacts based on Arcata's land diversity index in comparison to the Humboldt regional land diversity index.²⁵ However, this VMT threshold was not formally adopted, and would not be applicable to the RCAP, which covers the entire Humboldt region. Therefore, the VMT analysis methodology utilizes the LCI Technical Advisory on Evaluating Transportation Impacts in CEQA for guidance to evaluate the proposed plan's potential impact related to VMT. The LCI Technical Advisory on Evaluating Transportation Impacts in CEQA states that a plan or project resulting in residential- and office-related VMT exceeding a level of 15 percent below existing regional VMT per capita or an increase in total retail-related VMT may indicate a significant VMT impact.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to transportation. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to transportation in Humboldt.

²⁵ Arcata, City of. 2024. General Plan Update Draft Environmental Impact Report.
https://www.cityofarcata.org/DocumentCenter/View/13935/Arcata-GP-DEIR_20240126 (accessed January 2025).

EIR Scoping Comments Consideration

Comments received during the EIR scoping period include those which express concern regarding the potential of the RCAP to result in VMT impacts (see Table 1-1 in Chapter 1.0, *Introduction*). Specifically, EIR scoping comments discuss potential inconsistency with LCI guidance. These comments are addressed under Impact TRA-2.

Specific Thresholds of Significance

The County and incorporated cities have not adopted quantitative thresholds for the evaluation of VMT, transit facilities, bicycle and pedestrian facilities, design feature hazards, or emergency access. However, the County and cities apply the qualitative transportation thresholds described below.

VMT

The RCAP was assessed for VMT to comply with SB 743 requirements and CEQA Guidelines section 15064.3, subdivision (b). The County and incorporated cities have not adopted guidelines or thresholds for VMT analysis. To determine impact findings for the RCAP, the analysis is based on LCI guidance. According to the LCI Technical Advisory on Evaluating Transportation Impacts in CEQA, a plan or project resulting in residential- and office-related VMT exceeding a level of 15 percent below existing regional VMT per capita or an increase in total retail-related VMT may indicate a significant VMT impact. .

Roadway Facilities

Generally, a plan/project causes a significant impact to roadway facilities if an element of it conflicts with existing or planned roadways. The evaluation of roadway facilities considers whether:

- A plan or project or related mitigation disrupts existing roadway facilities, such as by creating safety issues or resulting in temporary or permanent closure of roadways;
- A plan or project or related mitigation conflicts with a planned roadway facility; or
- A plan or project or related mitigation conflicts with roadway policies adopted by the County or incorporated cities for their respective facilities.

Transit Facilities

Generally, a plan/project causes a significant impact to transit facilities and services if an element of it conflicts with existing or planned transit services. The evaluation of transit facilities considers whether:

- A plan or project creates demand for public transit services above the capacity that is provided, or planned;
- A plan or project or related mitigation disrupts existing transit services or facilities;
- A plan or project or related mitigation conflicts with an existing or planned transit facility; or
- A plan or project or related mitigation conflicts with transit policies adopted by the County or incorporated cities for their respective facilities.

Bicycle and Pedestrian Facilities

The County or incorporated cities' general plans describe the related policies necessary to ensure that pedestrian and bicycle facilities are safe and effective for all users. Using the general plans as a guide, significant impacts to these facilities would occur if a plan or project:

- Creates a hazardous condition that currently does not exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or
- Conflicts with policies related to bicycle and pedestrian activity adopted by the County or incorporated cities.

Design Feature Hazards

The impact would be significant if a plan/project results in transportation facilities that do not conform to applicable County or incorporated cities and industry design standards for roadways, bicycle facilities, and pedestrian facilities.

Emergency Access

The County and incorporated cities do not have significance thresholds related to emergency access. The County and City Municipal Codes adopt the California Building Code and California Fire Code and amend the code to address local conditions. Therefore, this EIR evaluates the RCAP using the significance threshold provided by the California Fire Code as follows: provide a fire apparatus access road that has a minimum width of 20 feet with turning radii of 25 feet inside and 45 feet outside.

In addition, the following factors determine whether a plan or project has sufficient access for emergency vehicles, including:

- Location of closest fire stations
- Number of access points (both public and emergency access only)
- Width, height, and turning radius of access points
- Width, height, and turning radius of roadways

Impact Evaluation

Conflicts With Transportation Policies

Significance Criterion a: Would the proposed plan conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact TRA-1 IMPLEMENTATION OF THE RCAP WOULD NOT CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES. NO IMPACT WOULD OCCUR.

Construction

ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

RCAP Measures T-1 Urban and Rural and T-2 Urban and Rural, would directly affect roadway, transit, bicycle, and pedestrian facilities through the addition of new pedestrian and bicycle infrastructure, public transit service expansion, and improvements to public transit facilities. Construction activities related to these measures have the potential to affect the circulation system. In addition, future sustainable infrastructure projects and infill development facilitated by the RCAP could also result in construction impacts to the roadway, transit, bicycle, and pedestrian facilities surrounding individual project sites. Construction activities related to implementation of the RCAP could create potential conflicts with other roadway, transit, bicycle, and pedestrian users. For example, construction-related activities resulting in lane, bicycle path, or sidewalk closures along the frontages of individual projects facilitated by the RCAP, construction vehicles queuing within the public right-of-way waiting entry to the site, construction worker parking in non-designated parking areas, or construction debris on public streets could all result in potential impacts to the circulation system.

Most construction facilitated by the RCAP would occur along local streets, transit routes, bicycle paths, sidewalks, and in existing parking areas, though some future projects could also affect state routes in Humboldt. Construction impacts would be temporary in nature and encroachment permits from Caltrans would be required for facilities under its administration, such as SR 299, SR 36, SR 36, and other state routes listed in Section 3.8.2, *Environmental Setting*. Future projects affecting local roadways in unincorporated Humboldt County would be subject to the regulations of County Code Title IV, Division 1, Chapter 1, which require the implementation of safeguards necessary to protect roadway, transit, bicycle, and pedestrian facilities users. These include, but are not limited to, the use of barriers, warning lights, flaggers, and prohibition of complete road closure unless authorized by the Director of Public Works. Similar local regulations requiring traffic control during construction within incorporated cities, such as Chapter 56-10 of the Eureka Municipal Code, Chapter 12.08 of the Blue Lake Municipal Code, Chapter 12.08 of the Fortuna Municipal Code, and Chapter 12.04 of the Trinidad Municipal Code, would apply on a project-by-project basis to minimize construction-related impacts on roadway, transit, bicycle, and pedestrian facilities. Through compliance with these existing regulations and permit requirements, the RCAP would result in less than significant impacts related to conflicts with circulation system policies.

Operation

ROADWAY FACILITIES

RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-3 include actions which emphasize regional coordination to pursue funding to implement modifications to existing street facilities to create a more pedestrian- and bicycle-oriented street network. These modifications could cause existing and future local and regional roadway vehicles to circulate differently. The expected influence on existing and future traffic would be minimal, because roadway modifications would conform to State and local standards and generally be implemented to improve circulation. Overall, RCAP-related bicycle and pedestrian improvements would not conflict with existing or planned roadway facilities, because related street changes would be additions of pedestrian and bicycle facilities and do not specifically propose roadway closures.

RCAP measures and actions would support projects and infrastructure consistent with applicable plans, such as VROOM and County and City General Plans. As demonstrated in Table 3.8-1 below, implementation of the below RCAP measures would ensure consistency with circulation system policies related to roadway facilities:

Table 3.8-1 Proposed Plan Consistency with Long Range Planning Documents – Roadway Facilities

Policy	Consistency
Humboldt County Circulation Element	Finding
C-P17. Highway Improvements. Encourage state and federal highway improvements that promote safety and connectivity for all users, especially for communities with highway arterials. The County supports a strategy for safety and operational improvements to the U.S. Highway 101 Safety Corridor that is implemented in a manner consistent with the General Plan.	Consistent. The proposed plan includes measures that promote safety and connectivity for roadway users throughout Humboldt, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
City of Arcata Transportation Element	Finding
CM-1d Intercity travel. The City shall coordinate with Humboldt County and Caltrans to provide adequate facilities for vehicles, buses, and bicycles to serve intercity demand. Joint efforts may include transportation improvements outside of Arcata which serve intercity travel, such as bicycle links, timed-transfer bus stops, park-and-ride lots, and regional transit service and development of park-and-ride lots in Arcata to reduce intercity vehicular travel.	Consistent. The proposed plan includes measures that promote adequate facilities to serve intercity roadway demand, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
City of Eureka Mobility Element	Finding
M-1.1 Complete Streets. Design and construct both new and reconstructed streets with adequate rights-of way and facilities to support the full range of locally available travel modes, compliant with the City of Eureka Design/Complete Streets Design Guide and the California Complete Streets Act (AB 1358). Consider a layered transportation network approach that distributes a range of facility types across neighborhoods and districts.	Consistent. The proposed plan includes measures that aim to support a full range of travel modes on roadways, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
M-1.10 Shared Transportation. Develop guidelines and incentives to direct how transportation sharing (e.g., bikeshare, carshare, rideshare, e-scooters, bike rentals) would be accommodated in the City, including where docking would be required, what amount and type of parking (e.g., automobile spaces, bike parking, docking stations) would be required, passenger loading zones, and other considerations.	Consistent. RCAP Measures T-1 Urban and Rural, T-2 Rural, and T-4 include actions to promote the expansion of e-bike and car share programs in the region.
M-2.9 Multi-modal Access. Promote the provision of multi-modal access to activity centers such as commercial and employment uses, Downtown, Old Town, schools, and parks.	Consistent. The proposed plan includes measures that aim to support multi-modal access, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
M-3.5 Street Design. Consider the needs of pedestrians and bicyclists in the design of all new or reconstructed streets, with improvements to be provided consistent with the street design guidelines.	Consistent. The proposed plan includes measures that aim to support multi-modal access, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
M-3.10 Enhanced Crossings. Evaluate need for enhanced crossing treatments, new signals or modified signal operations to promote safety for pedestrians and bicyclists. Coordinate with Caltrans to effect change along the U.S. 101 corridor.	Consistent. The proposed plan includes measures that promote safety and connectivity for roadway users throughout Humboldt, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.

Policy	Consistency
M-3.12 Infill Sidewalk Gaps. Create a plan to infill sidewalk gaps.	Consistent. The proposed plan includes measures that aim to increase sidewalks and pedestrian infrastructure, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
City of Fortuna Transportation and Circulation Element	Finding
TC-1.1 Reducing Mode Conflicts. The City shall seek to minimize conflicts between pedestrians, automobiles, and bicycles.	Consistent. The proposed plan includes measures that aim to promote safety and minimize conflicts for pedestrians and bicyclists, including Measures T-1 Urban and Rural and T-2 Urban and Rural.
City of Rio Dell Circulation Element	Finding
Policy CE 1-2. Design street systems in residential areas to minimize through traffic, to encourage internal movement by bicycling and walking, to provide safer and quieter neighborhoods, to minimize vehicular conflicts at intersections and to ensure that the impact of recreational traffic on local residents is minimized.	Consistent. The proposed plan includes measures that encourage development patterns that encourage walking and bicycling, as well as traffic minimization and alternative transportation on roadways. These include Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.
VROOM 2022-2042	Finding
Policy Climate-6. Land use-transportation resilience strategies: HCAOG will support local communities in developing integrated transportation and land use strategies for responding resiliently to climate change, and codifying such strategies in General Plans, Regional Transportation Plans, Local Coastal Programs, and other long-range plans. <i>(CTP 2040 recommended policy)</i>	Consistent. HCAOG is listed as a partner on several proposed plan Actions, ensuring HCAOG is involved during implementation of roadway-related Actions in the proposed plan. These Actions include T-1d Urban, T-1e Urban, and T-1b Rural.
Policy Streets-1. Multi-modal safety & functionality: HCAOG shall encourage and facilitate local jurisdictions, local Native American Tribes, Caltrans, and non-profits to individually and collaboratively plan, design, install, and maintain roads in Humboldt County to build a transportation system that emphasizes safety over speed, and emphasizes multi-modal functionality over convenience for single-occupancy automobiles.	Consistent. HCAOG is listed as a partner on several proposed plan Actions, ensuring collaboration between local jurisdictions and other agencies. These Actions include T-1d Urban, T-1e Urban, and T-1b Rural.

TRANSIT FACILITIES

RCAP Measures T-2, T-3 and T-4 would encourage mixed, in-fill development and modifications and expansions to transit facilities to increase transit ridership and decrease dependence on motor vehicles. RCAP implementation would not obstruct existing transit services or facilities, nor would it conflict with existing or planned facilities. All transportation-related projects and infrastructure promoted by the RCAP would be subject to County and/or city review to ensure that project designs would not interfere with transit operations. RCAP implementation could increase the number of potential transit users on the various transit systems serving Humboldt. Increased users would result in a correlated increase in demand for transit. However, the RCAP also includes measures and actions to obtain funding for and increase transit services and transit facilities within the region, thereby offsetting increased demands.

RCAP measures and actions would support transit projects and infrastructure consistent with applicable plans, such as VROOM, the Humboldt Transit Plan, and County and City General Plans. Implementation of the RCAP measures below would ensure consistency with circulation system policies related to transit facilities, as demonstrated in Table 3.8-2 below:

Table 3.8-2 Proposed Plan Consistency with Long Range Planning Documents – Transit Facilities

Policy	Consistency
Humboldt County Circulation Element	Finding
C-P24. Long Term Transit Plan. The County shall support HCAOG’s long term transit planning with the goal of increasing the percentage of public transit trips compared to automobile trips.	Consistent. HCAOG is listed as a regional partner in the Draft RCAP and is specifically included in several proposed plan Actions, ensuring HCAOG is involved during implementation of transportation-related measures and actions in the proposed plan. RCAP Measures would support the HCAOG goal of increasing public transit trips through Measures T-2 Urban and Rural, T-3, and T-4.
City of Arcata Transportation Element	Finding
CM-2a Land use development patterns. The City encourages and supports travel demand management efforts. The City shall promote land use and development patterns that encourage walking, bicycling and transit use. In recognition of the link between land use and transportation, the land use plan shall discourage low density, homogenous land-use patterns that foster automobile travel and are impractical to serve with transit. Land use planning shall emphasize high density and mixed land use patterns which translate into higher transit and pedestrian travel in the downtown and neighborhood commercial areas. Infill, redevelopment, and reuse of underutilized property at higher densities shall be encouraged prior to outward expansion of City boundaries. The following land use measures are emphasized: 1. Mixed-use neighborhood centers within transit corridors which include housing and commercial services near employment. 2. Land use patterns which maximize linking trip opportunities by assembling uses, thus allowing people to take care of a variety of daily needs with a single trip. 3. Clustering of higher density housing and incorporation of residential apartments on upper floors of buildings in the downtown area. 4. Integration of new housing into neighborhood shopping centers, including Sunny Brae, Westwood, and Valley West. 5. Pedestrian-oriented land use and urban design, including the following elements: a. Pedestrian-scale block patterns. b. Incorporate pedestrian and bicycle amenities into public and private projects. c. Design streets for multi-modal use. d. Integrate transit stop facilities into public and private projects. e. Orient buildings and houses to street. f. Provide attractively landscaped streets and buffers. g. Preserve existing and historic urban fabric. h. Eliminate blank wall facades.	Consistent. The proposed plan includes several actions,, including Action T-3b, T-3c, T-3d, and T-3e, that promote infill and mixed-use patterns for future development in the region.

Policy	Consistency
i. Incorporate bicycle routes and enhancements in public and private projects. 6. A fixed urban services boundary to reduce sprawl and infrastructure costs. 7. Focused growth along existing or planned transit corridors rather than extension of transit to serve new isolated development. 8. Prevention of large areas of single uses. Isolated single-use developments at the edge of the City could encourage automobile travel for commuting and errands. 9. Provision of convenience retail and services in ground floor space in the downtown to accommodate the needs of employees and reduce the need for mid-day automobile trips. 10. Adopt and maintain zoning regulations that allow for a mix of land uses to reduce vehicle trips and the overall need for automobile use.	
City of Eureka Mobility Element	Finding
M-4.5 Transit Use. Work with Core Area employers, workers, residents, and visitors to encourage public transit use, thereby reducing traffic congestion and parking demand in the Core Area.	Consistent. The proposed plan includes Action T-5a which requires commercial and industrial employers with 25 or greater employees to implement a Transportation Demand Management Plan, including emphasis on transit use. In addition, Measure T-2 Urban and T-4 promotes coordination with HCAOG to prioritize transit projects in urban areas and the creation of mobility hubs.
M-1.6 Dense Development. Integrate transportation and land use decisions to enhance opportunities for development that is compact, walkable and transit friendly.	Consistent. The proposed plan includes several actions, including Action T-3b, T-3c, T-3d, and T-3e, that promote infill and mixed-use patterns for future development in the region.
M-4.1 Transit Services. Work with local and regional transit providers to maintain and expand services within the City that meet the needs of residents, and are accessible, timely, and responsive to growth patterns, and design routes with transit stops linking to trails and recreation areas.	Consistent. The proposed plan includes Measures T-2 Urban and T-2 Rural, which promote coordination with HCAOG to improve public transit opportunities in Humboldt.
City of Fortuna Transportation and Circulation Element	Finding
TC-3.2 Fixed-Route Transit. The City shall work with HCAOG, the Humboldt Transit Authority, and Redwood Transit Service to expand fixed-route transit service to serve new development areas, including direct connections to employment, residential, and commercial areas.	Consistent. HCAOG is listed as a partner on several proposed plan Actions, ensuring HCAOG is involved during implementation of transit-related Actions in the proposed plan. These Actions include T-2c Urban, T-2d Urban, T-2e Urban, and T-2f Urban.
TC-3.4 Alternative Transportation Linkages. The City shall link other modes of transportation (e.g., pedestrian and bike routes) with public transportation to further facilitate their use.	Consistent. The proposed plan includes Measure T-3 which aims to increase mixed-use and infill development that provides multiple methods of travel, including proximity to public transportation and bicycle routes. In addition, Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 would increase pedestrian facilities, bicycle routes, and mobility hubs in Humboldt, linking active transportation to public transit facilities.

Policy	Consistency
M-4.8 Safe Routes to Transit. Implement and maintain a safe routes program that prioritizes pedestrian and bicycle access to transit stops and stations.	Consistent. The proposed plan includes Measure T-3 that aims to increase mixed-use and infill patterns for future development in the region and that provides multiple methods of travel, including proximity to public transportation and bicycle routes. In addition, Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 would increase pedestrian facilities, bicycle routes, and mobility hubs in Humboldt, linking active transportation to public transit facilities.
City of Rio Dell Circulation Element	Finding
Policy CE 4-1: Participate in efforts to maintain and enhance public transit opportunities within the City.	Consistent. The proposed plan includes Measures T-2 Urban and T-2 Rural which promote coordination with HCAOG to improve public transit opportunities in Humboldt.
City of Trinidad Circulation Element	Finding
Policy 41. The city should support the continuation of regional bus service in the Trinidad area.	Consistent. The proposed plan includes Measures T-2 Urban and T-2 Rural, which promote improvements to public transit infrastructure in Humboldt.
VROOM 2022-2042	Finding
Policy Transit-1 To grow and meet transit demand, fund programs and support services that make public transportation a fast and convenient way for people to get to their destinations. Support funding expanded routes, increased trip frequency, faster travel times (express routes), and first-last mile services including on-demand service. Prioritize programs with the highest potential to increase ridership and reduce the number of single-occupancy-vehicle trips made in Humboldt County.	Consistent. HCAOG is listed as a partner on several proposed plan Actions, ensuring HCAOG is involved during implementation of transit-related measures and actions in the proposed plan. RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 support this policy by including actions to obtain grants and funding to implement new first-last mile infrastructure, additional public transit services, and mobility hubs in the region.
Policy Transit -3 HCAOG supports having an integrated transit network that enables users to conveniently connect transit trips with biking and walking (first-last mile connectivity), such as by accommodating bicycles on transit vehicles, providing secure bicycle parking at transit stops, integrating mobility-on-demand services with transit service (e.g., bikeshare, scootershare, carshare, carpooling), and maximizing walkability and ADA accessibility to bus stops.	Consistent. RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 would expand access and opportunities for active transportation and public transit use in the region. In addition, the proposed plan includes Measure T-3 to encourage mixed-use and infill development with accommodations to increase transit travel. In addition, Action T-23 aims to expand first and last mile access to transit facilities.
Policy Transit -4. Local funding for expansion: HCAOG will help develop local funding sources to afford expanding service to meet demand.	Consistent. RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 direct the regional climate coalition to collaborate to obtain grant funding for transit service expansion and improvements and active transportation facility improvements, particularly in underserved and marginalized areas.

BICYCLE FACILITIES

RCAP Measures T-1 Urban and Rural, T-3, and T-5 would encourage mixed-use, in-fill development patterns, bicycle transportation, and modifications to the existing circulation system accommodate increased bicycle demands. RCAP implementation would not create roadway hazards for cyclists, obstruct existing bicycle services or facilities, or conflict with existing or planned facilities. All RCAP projects and infrastructure would be subject to County and/or city review to ensure that project designs would not interfere with bicycle operations. RCAP implementation could increase the

number of potential bicycle users on the various bicycle routes serving Humboldt. Increased users would result in a correlated increase in demand for bicycle facilities. However, the RCAP also includes measures and actions to obtain funding for and improve bicycle facilities and connectivity within the region, thereby offsetting increased demands.

RCAP measures and actions would support projects and infrastructure consistent with applicable plans, such as VROOM and County and City General Plans. Implementation of the below RCAP measures would ensure consistency with circulation system policies related to bicycle facilities, as demonstrated in Table 3.8-3 below:

Table 3.8-3 Proposed Plan Consistency with Long Range Planning Documents – Bicycle Facilities

Policy	Consistency
Humboldt County Circulation Element	Finding
C-G4. Access to Active Transportation. Improved access to non-motorized modes of transportation, including walking, bicycling, horseback riding and hiking.	Consistent. The proposed plan includes measures that promote non-motorized transportation, including Measures T-1 Urban and Rural, T-3, T-4, and T-5.
C-P9. Circulation Planning for Bicycles, Pedestrians and Transit. Circulation planning and project review shall include an assessment for bicycle, pedestrian and public transit access.	Consistent. The proposed plan includes measures requiring feasibility studies for bicycle, pedestrian, and public transit access, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
C-P36. Bicycle Facilities. Encourage the planned placement of secure and/or weather-protected bicycle storage facilities at public buildings and bus stops, where appropriate. Incentivize placement of bicycle parking and storage at businesses, new or modified bus stops and multi-family housing.	Consistent. The proposed plan includes measures that aim to expand bicycle infrastructure, including Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.
City of Arcata Transportation Element	Finding
CM-1b Investment in alternative modes. To provide a realistic and cost-effective balance between travel modes, the City shall emphasize investment in alternative modes (bikeways, etc.) as a priority over increasing vehicular capacities of streets. Support ride-share in various modes (car, bike, etc.) through public and private infrastructure, and encourage systems designed to provide access to shared facilities. Improvements and programs should include public options, such as bike share racks or carpool parking, public-private partnerships for vehicle share, and private facilities or programs, such as project-based car share.	Consistent. The proposed plan includes measures that promote alternative transportation, including T-1c Urban, T-1d Urban, T-1a Rural, T-1c Rural, T-1f, T-1i Rural, and T-3c.
CM-5b Bikeway system and pedestrian network standards. The City of Arcata Pedestrian & Bicycle Master Plan and Humboldt County Association of Governments (Association of Governments) Humboldt Regional Bicycle Plan contain appropriate design standards and guidelines for the proposed bikeway system and pedestrian network improvements in the City of Arcata. Continue to work with regional partners and Association of Governments to plan improvements to the bikeway system and pedestrian network.	Consistent. The proposed plan includes measures that aim to expand bicycle and pedestrian infrastructure, including Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.
1. Right-of-way opportunities. As opportunities arise, the City shall utilize existing or acquire new	

Policy	Consistency
easements or right-of-way for Class I bikeways. Such opportunities may include connecting dead-end streets in new developments with existing neighborhoods, along streets with excess width and unpaved right-of-way, along drainage channels or creeks, or along abandoned railroad rights of way.	
CM-5c Bicycle parking facilities. Secure bicycle parking facilities shall be provided at important activity centers, civic facilities, apartment complexes, employment centers, shopping centers, major bus stops, and schools. Bicycle parking facilities include racks, and lockers. Developers shall be required to provide a minimum number of bicycle parking devices at convenient and visible ground-floor locations within the development. Bicycle parking should be in an interior location near an entrance whenever feasible. The required number of bicycle parking spaces shall be calculated as a proportion of the number of users. Designate locations for public, outdoor bike lockers coordinated with public transit stops accessible in the public right-of-way.	Consistent. The proposed plan includes measures that aim to expand bicycle infrastructure and facilities, including Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.
City of Blue Lake Circulation Element	Finding
Policy 18. The City shall promote the use of bicycles as a convenient, alternate mode of transportation consistent with Blue Lake’s “small town” atmosphere.	Consistent. RCAP Measures T-1 Urban and Rural aim to expand bicycle infrastructure and promote the use of active transportation.
City of Eureka Mobility Element	Finding
M-1.2 Investment in Alternative Modes. Emphasize investment in alternative travel modes to provide a realistic and cost-effective balance between modes.	Consistent. The proposed plan includes measures that promote alternative transportation, including T-1 Urban and Rural, T-2 Urban and Rural, T-3, T-4, and T-5.
M-3.2 Extend Facilities. Provide for the extension of sidewalks, trails, and walking/bicycling facilities throughout the City to allow for convenient and safe pedestrian and cyclist movement and to promote walking and bicycling as viable modes of transportation for all types of trips.	Consistent. The proposed plan includes measures to increase bicycle and pedestrian facilities in the region, including T-1 Urban and Rural, T-2 Urban and Rural, T-3, T-4, and T-5.
M-3.3 Continuous Networks. Provide continuous pedestrian and bicycle systems that link neighborhoods, parks, schools, commercial centers, major employers, and other frequently-visited destinations and expand access to the gulches and greenways consistent with the City’s Bicycle Plan and street design guidelines.	Consistent. The proposed plan includes measures to increase bicycle and pedestrian connectivity in the region, including T-1 Urban and Rural, T-2 Urban and Rural, T-3, T-4, and T-5.
M-3.4 Regional Connectivity. Provide a bicycle system that is interconnected with the regional bikeway system.	Consistent. The proposed plan includes measures to increase bicycle connectivity in the region, including T-1 Urban and Rural, T-2 Urban and Rural, T-3, T-4, and T-5.
City of Fortuna Transportation and Circulation Element	Finding
TC-5.1 Bicycle Transportation Plan. The City shall prepare a Bicycle Transportation Plan that incorporates the bicycle facilities plan for the City included in HCAOG’s 2009 Humboldt County Regional Trails Master Plan. A copy of the route plan is shown on page 4-4 for reference. The City shall strive to fully implement the proposed facilities to fill in gaps in the existing bicycle network, improve existing bicycle facilities, improve motor vehicle and bicycle interactions, and increase bicyclist safety. The City	Consistent. The proposed plan includes measures that aim to expand access to bicycle infrastructure and improve linkages to public transit and destinations, including Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.

Policy	Consistency
shall also identify the locations of planned bicycle parking facilities in the plan linked to schools, government buildings, shopping centers and transit stops, establish bicycle parking standards, and strive to coordinate Class II bikeway striping with surfacing of city streets.	
City of Rio Dell Circulation Element	Finding
Policy CE 3-1: Provide an extensive network of pedestrian, including the physically disabled, and bicycle pathways to support community health and provide safe alternatives to automobile use.	Consistent. The proposed plan includes measures that aim to expand access to pedestrian and bicycle infrastructure, including Measures T-1 Urban and Rural, T-3, and T-4.
VROOM 2022-2042	Finding
Policy Streets-1. Multi-modal safety & functionality: HCAOG shall encourage and facilitate local jurisdictions, local Native American Tribes, Caltrans, and non-profits to individually and collaboratively plan, design, install, and maintain roads in Humboldt County to build a transportation system that emphasizes safety over speed, and emphasizes multi modal functionality over convenience for single-occupancy automobiles.	Consistent. HCAOG is a regional partner on the RCAP, ensuring collaboration between local jurisdictions and other agencies. RCAP measures that support multi-modal safety and functionality include Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.
Policy Streets -3. Complete Streets improvements: HCAOG shall include Complete Streets improvements in regionally-funded transportation system projects to the extent feasible, as consistent with California Complete Streets Act of 2008 (AB 1358) and Caltrans Deputy Directive 64-R2.	Consistent. The proposed plan includes measures that aim to expand access to pedestrian, bicycle, and public infrastructure and thereby create more complete streets. These include Measures T-1 Urban and Rural, T-2 Urban and Rural, T-3, and T-4.
Policy Streets -4. Sharing Economy: HCAOG shall pursue efforts to increase shared mobility options in the region, such as car share and bike share programs. HCAOG shall work to make shared mobility programs equitably available to people with low-incomes and other transportation disadvantages.	Consistent. RCAP Measures T-1 Urban and Rural, T-2 Rural, and T-4 include actions to promote the expansion of e-bike and car share programs in the region.

PEDESTRIAN FACILITIES

RCAP Measures T-1 Urban and Rural and T-3 would encourage mixed-use and infill development and improvements to the pedestrian environment to encourage increased walking and other forms of active transportation. RCAP implementation would not obstruct existing pedestrian services or facilities, nor would it conflict with existing or planned facilities. Transportation-related projects and infrastructure promoted by the RCAP would be subject to County and/or city review to ensure that project designs would not result in hazards to pedestrians or substantially interfere with pedestrian circulation. RCAP implementation could increase the number of potential pedestrians on the various pedestrian paths serving Humboldt. Increased users would result in a correlated increase in demand for pedestrian facilities. However, the RCAP also includes measures and actions to obtain funding for and improve pedestrian facilities and connectivity within the region, thereby offsetting increased demands.

RCAP measures and actions would support projects and infrastructure consistent with applicable plans, such as VROOM and County and City General Plans. Implementation of the below RCAP measures would ensure consistency with circulation system policies related to pedestrian facilities, as demonstrated in Table 3.8-4 below:

Table 3.8-4 Proposed Plan Consistency with Long Range Planning Documents – Pedestrian Facilities

Policy	Consistency
Humboldt County Circulation Element	Finding
C-G4. Access to Active Transportation. Improved access to non-motorized modes of transportation, including walking, bicycling, horseback riding and hiking.	Consistent. The proposed plan includes measures that promote non-motorized transportation, including Measures T-1 Urban and Rural, T-3, T-4, and T-5.
C-P9. Circulation Planning for Bicycles, Pedestrians and Transit. Circulation planning and project review shall include an assessment for bicycle, pedestrian and public transit access.	Consistent. The proposed plan includes measures requiring feasibility studies for bicycle, pedestrian, and public transit access, including Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4.
City of Arcata Transportation Element	Finding
CM-1b Investment in alternative modes. To provide a realistic and cost-effective balance between travel modes, the City shall emphasize investment in alternative modes (bikeways, etc.) as a priority over increasing vehicular capacities of streets. Support ride-share in various modes (car, bike, etc.) through public and private infrastructure, and encourage systems designed to provide access to shared facilities. Improvements and programs should include public options, such as bike share racks or carpool parking, public-private partnerships for vehicle share, and private facilities or programs, such as project-based car share.	Consistent. The proposed plan includes measures that promote alternative transportation, including T-1c Urban, T-1d Urban, T-1a Rural, T-1c Rural, T-1f, T-1i Rural, and T-3c.
CM-5e Pedestrian pathways and multi-use trails. Pedestrian pathways or multi-use trails for the exclusive use of non-motorized transportation modes and non-auto motorized vehicles, such as electric bikes with appropriate limitations should be provided. Pathways may be long facilities located along corridors or short facilities providing direct access through development projects or connecting areas not directly accessible by streets. Pathways should be planned to serve the full range of mobility needs for people of all ages, races, ethnicities, incomes, and physical abilities. The following shall apply to pedestrian pathways or multi-use trails: 1. Easement or right-of-way dedication. Dedication of easements or rights of way for pathways through new private developments may be required. 2. Cooperation with local and regional agencies and jurisdictions. The City shall cooperate with other agencies to establish and maintain off-street pathways and trails utilizing creek, utility, and railroad right-of-way. 3. Other potential locations for multi-use paths are within the Great Redwood Trail Agency right-of-way from Giuntoli Lane to Samoa Boulevard, along the west side of Samoa Boulevard/Old Arcata Road east of US 101, and along the perimeter of Arcata Bay towards Manila. 4. Create separated walk/bike lanes in multi-use trails with explanatory signage on placement and how to safely pass, as deemed necessary based on increased use in future.	Consistent. The proposed plan includes measures that aim to expand access to pedestrian and bicycle infrastructure, including Measures T-1 Urban and Rural, T-3, and T-4.

Policy	Consistency
5. Provide sidewalks or multi-modal trails on both sides of all streets. 6. Support ride-share in various modes (car, bike, etc.) through public and private infrastructure, and encourage systems designed to provide access to shared facilities. Improvements and programs should include public options, such as bike share racks or carpool parking, public-private partnerships for vehicle share, and private facilities or programs, such as project-based car share. 7. Retain and expand the current total linear feet of Class I trails within the City, including the L Street segment of the Bay Trail North/Annie Mary Trail. If current facilities must be realigned or relocated to other routes, ensure no net loss of trail length and connectivity. In limited circumstances, the City Council shall retain the discretion to allow removal or relocation of Class I Trail sections if such approval would improve active transportation access and connectivity. Collaborate with the Great Redwood Trail Agency and other landowners and agencies to retain and expand the Class I trail and Class 4 bikeways throughout the City. 8. Reduce vehicle trips from other parts of the City by creating pedestrian and bicycle-friendly corridors that draw residents and visitors to enter the various neighborhoods via means other than motorized vehicles. Fulfill the potential of the existing and planned Class I trails by planning for expanded connections that will draw bikes/peds from between activity centers.	
CM-2a Land use development patterns. The City encourages and supports travel demand management efforts. The City shall promote land use and development patterns that encourage walking, bicycling and transit use. In recognition of the link between land use and transportation, the land use plan shall discourage low density, homogenous land-use patterns that foster automobile travel and are impractical to serve with transit. Land use planning shall emphasize high density and mixed land use patterns which translate into higher transit and pedestrian travel in the downtown and neighborhood commercial areas. Infill, redevelopment, and reuse of underutilized property at higher densities shall be encouraged prior to outward expansion of City boundaries. The following land use measures are emphasized: 1. Mixed-use neighborhood centers within transit corridors which include housing and commercial services near employment. 2. Land use patterns which maximize linking trip opportunities by assembling uses, thus allowing people to take care of a variety of daily needs with a single trip.	Consistent. The proposed plan includes Action T-5a which requires commercial and industrial employers with 25 or greater employees to implement a Transportation Demand Management Plan. Furthermore, several additional actions promote infill and mixed-use patterns for future development in the region, including Action T-3b, T-3c, T-3d, and T-3e.

Policy	Consistency
3. Clustering of higher density housing and incorporation of residential apartments on upper floors of buildings in the downtown area. 4. Integration of new housing into neighborhood shopping centers, including Sunny Brae, Westwood, and Valley West. 5. Pedestrian-oriented land use and urban design, including the following elements: a. Pedestrian-scale block patterns. b. Incorporate pedestrian and bicycle amenities into public and private projects. c. Design streets for multi-modal use. d. Integrate transit stop facilities into public and private projects. e. Orient buildings and houses to street. f. Provide attractively landscaped streets and buffers. g. Preserve existing and historic urban fabric. h. Eliminate blank wall facades. i. Incorporate bicycle routes and enhancements in public and private projects. 6. A fixed urban services boundary to reduce sprawl and infrastructure costs. 7. Focused growth along existing or planned transit corridors rather than extension of transit to serve new isolated development. 8. Prevention of large areas of single uses. Isolated single-use developments at the edge of the City could encourage automobile travel for commuting and errands. 9. Provision of convenience retail and services in ground floor space in the downtown to accommodate the needs of employees and reduce the need for mid-day automobile trips. 10. Adopt and maintain zoning regulations that allow for a mix of land uses to reduce vehicle trips and the overall need for automobile use.	
City of Eureka Mobility Element	Finding
M-1.2 Investment in Alternative Modes. Emphasize investment in alternative travel modes to provide a realistic and cost-effective balance between modes.	Consistent. The proposed plan includes measures that promote alternative transportation, including T-1 Urban and Rural, T-2 Urban and Rural, T-3, T-4, and T-5.
City of Fortuna Transportation and Circulation Element	Finding
TC-3.4 Alternative Transportation Linkages. The City shall link other modes of transportation (e.g., pedestrian and bike routes) with public transportation to further facilitate their use.	Consistent. The proposed plan includes Measure T-3 which aims to increase mixed-use and infill development that provides multiple methods of travel, including proximity to public transportation and bicycle routes. In addition, Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4 would increase pedestrian facilities, bicycle routes, and mobility hubs in Humboldt, linking active transportation to public transit facilities.

Policy	Consistency
TC-4.4 Regional Pedestrian Needs Assessment Update. The City shall implement the projects identified in the Humboldt County Association of Governments (HCAOG) Regional Pedestrian Needs Assessment study.	Consistent. The proposed plan includes Measures T-1 Urban and Rural, that would implement pedestrian projects identified by HCAOG in their existing transportation plans.
City of Rio Dell Circulation Element	Finding
Policy CE 3-1: Provide an extensive network of pedestrian, including the physically disabled and bicycle pathways to support community health and provide safe alternatives to automobile use.	Consistent. The proposed plan includes measures that aim to expand access to pedestrian and bicycle infrastructure, including Measures T-1 Urban and Rural, T-3, and T-4.
VROOM 2022-2042	Finding
Complete Streets and Connected Communities Sub-Objective 2: Expand and maintain a regional network of inter-connected pedestrian and bicycle facilities. Create safe and effective walking and bicycling facilities that create neighborhood connectivity and continuity.	Consistent. The proposed plan includes measures that aim to expand access to pedestrian and bicycle infrastructure and improve regional connectivity, including Measures T-1 Urban and Rural and T-4. In addition, the proposed plan includes Measure T-3 that aims to increase mixed-use and infill development that provides multiple methods of travel, including pedestrian proximity to public transportation and bicycle routes.

As illustrated in the above subsections, operation of the RCAP would result in less than significant impacts with respect to conflicts with circulation system policies related to roadway, transit, bicycle, and pedestrian facilities.

Mitigation Measure

No mitigation is required.

Level of Significance

Less Than Significant Without Mitigation

Vehicle Miles Traveled

Significance Criterion b: Would the proposed plan conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Impact TRA-2 IMPLEMENTATION OF THE RCAP WOULD RESULT IN REDUCED VMT AND, THEREFORE, WOULD NOT CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES SECTION 15064.3, SUBDIVISION (B). THERE WOULD BE NO IMPACT.

Construction

Impacts related to CEQA Guidelines Section 15064.3, subdivision (b) are limited to operational impacts. No respective construction impacts would occur, because construction is temporary in nature and, while it may marginally generate VMT from construction worker trips or road detours, it would not substantially impact regional VMT.

Operation

The transportation measures and actions contained in the RCAP focus on transitioning residents and visitors out of single-occupancy vehicles and into active transportation mode options (i.e., walking

and biking) and public and shared transit options (e.g., public buses, carpools) by improving these mode options and safety and adopting policies to discourage single-occupancy vehicle commutes. Additionally, land use changes such as promoting jobs and amenities to be located near residents can help reduce the region's average trip length as well as encourage mode shifts to active or public transit. In addition to measures described under Impact TRA-1 above that encourage alternate modes of transportation, the proposed plan would implement the following actions that would reduce VMT:

- **T-1e Urban:** Increase inter-connectivity across the region working with HCAOG and the Regional Climate Committee representatives to:
 - Evaluate and prioritize land use projects and transportation projects, including active transportation projects, for their impact on increased regional connectivity
 - Identify hurdles limiting connectivity and use, such as last-mile commute limitations
 - Facilitate coordination across jurisdictions and rural and urban areas to plan development in a coordinated and most strategic manner
 - Apply for regional funding opportunities focused on increased inter-connection and VMT reduction
 - Implement the VMT mitigation measures associated with VMT thresholds
- **T-3a:** Work with the Regional Climate Committee to develop template land use and development policy to enable and encourage infill development and streamline zoning changes that allow for higher density housing development. Work with urban areas to rezone for higher residential density and mixed use, reduced parking requirements, and expedited planning and permitting processes in the downtown core, along transit corridors, and within future planned development areas that is compact, pedestrian friendly, and transit oriented where applicable.
- **T-3b:** Leverage feasibility studies conducted by HCAOG to identify opportunities for mixed-use and infill development, map current and future planned transit networks, and establish a priority list of development that encourages regional growth to be in alignment with HCAOG and HTA transit goals. If not already included in previously conducted HCAOG studies, assess equity considerations with regards to location and distribution of developments, and potential transit access equity impacts.
- **T-3c:** Work with HCAOG, HTA, RCEA and CBOs to plan prospective mixed-use and infill projects so that they include design considerations with regards to alternative energy access/generation, EV charging infrastructure, and local public transit facilities. Promote development that increases walkability and is bikeable in neighborhoods.

According to the LCI Technical Advisory on Evaluating Transportation Impacts in CEQA, transit and active transportation projects generally reduce VMT and are, therefore, presumed to result in less than significant impacts related to transportation. LCI applies this presumption to passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. The proposed plan's actions promote active transportation development and transit improvements that, accordingly, would be presumed to have less than significant VMT impacts. Overall, the RCAP would result in reduced regional VMT, and, therefore, the proposed plan would result in no operational impact in terms of consistency with CEQA Guidelines Section 15064.3(b).

Mitigation Measure

No mitigation is required.

Level of Significance

No Impact

Roadway Design Safety Hazards

Significance Criterion c: Would the proposed plan substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Impact TRA-3 IMPLEMENTATION OF THE RCAP WOULD NOT SUBSTANTIALLY INCREASE HAZARDS BECAUSE OF A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT). IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Implementation of some proposed plan Actions may cause intermittent and temporary traffic hazards due to construction. However, existing State, County, and City regulations minimize the potential to introduce roadway hazards. For example, temporary construction barricades or other obstructions that could impede emergency access on State highway systems/routes would be subject to the standards set forth in the California Manual of Uniform Traffic Control Devices (Manual).²⁶ The Manual requires the creation and approval of temporary traffic control plans to be used for minimizing roadway hazards. Pursuant to County Code Title IV, Division 1, Chapter 1, construction activities occurring on County roads would require the use of lights, barriers, warning lights, and other safeguards necessary to minimize roadway hazards. Projects occurring in the incorporated Cities would be required to comply with similar City-specific regulations regarding encroachment and construction safety, such as Chapter 56-10 of the Eureka Municipal Code, Chapter 12.08 of the Blue Lake Municipal Code, Chapter 12.08 of the Fortuna Municipal Code, and Chapter 12.04 of the Trinidad Municipal Code. Compliance with these existing encroachment and construction safety regulations would ensure that construction would not result in substantial traffic hazards. Therefore, construction impacts related to roadway design safety hazards would be less than significant.

Operation

Future RCAP projects that would introduce new facilities on roadways, such as bicycle and pedestrian infrastructure, would be required to be designed in accordance with applicable State, County and/or City standards, such as Caltrans' bikeway design criteria, to ensure these facilities would not be designed to avoid the creation of dangerous curvature, slopes, or intersections. Future RCAP-related projects would be reviewed by County or City staff to ensure consistency with applicable design standards, such as those contained in County Code Title III, Division 11, Chapter 2, including standards for roadway width, grade, sight lines, turnarounds, driveways, and roadway modifications. Accordingly, design and regulatory review would minimize the potential for RCAP-related projects to result in hazards due to geometric design features. Furthermore, future RCAP-

²⁶ California Department of Transportation. 2024. CA Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd> (accessed October 2024).

related projects for the transportation sector would primarily be related to increasing alternative transportation facilities, such as bike lanes, pedestrian access, and increased public transit, and would not introduce incompatible uses such as farm equipment to roadways. Therefore, operational impacts related to roadway design safety hazards would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant Without Mitigation

Emergency Vehicle Access

Significance Criterion d: Would the proposed plan result in inadequate emergency access?

Impact TRA-4 IMPLEMENTATION OF THE RCAP WOULD NOT RESULT IN INADEQUATE EMERGENCY ACCESS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Implementation of some proposed plan Actions may cause intermittent and temporary traffic interferences due to construction. However, as described in Impact TRA-3, construction on State Highways must adhere to the Manual, which requires the creation and approval of temporary traffic control plans to be used for facilitating road users through a work zone.²⁷ Furthermore, pursuant to County Code Title IV, Division 1, Chapter 1, construction activities occurring on County roads must minimize interference with traffic, which includes emergency response traffic. Accordingly, existing regulations would minimize the potential for construction to result in inadequate emergency access. Therefore, the construction-related emergency vehicle access impact would be less than significant.

Operation

Future RCAP related-projects would be required to adhere to State, County and/or City standards, such as the California Fire Code and County Code Title III, Division 11, Chapter 2, and would be subject to review on a project-by-project basis by the applicable fire protection district. Standards include those that address minimum driveway width, signage and addressing, and emergency access. Furthermore, in accordance with standard development review procedures, plans for projects and infrastructure promoted by the RCAP would be submitted to the County or respective City for review and approval to ensure adequate emergency access and escape routes in compliance with existing fire protection district regulations. RCAP-related projects would be reviewed by County or City staff to ensure consistency with all applicable design standards, including turning radii, vertical clearance, and provision of multiple access points for emergency vehicles. Additionally, RCAP projects would be required to comply with the applicable requirements of the California Fire Code, such as providing two separated and approved fire apparatus access roads that have a minimum width of 20 feet with turning radii of 25 feet inside and 45 feet outside. Through adherence to applicable regulations, the proposed plan would not introduce projects and

²⁷ California Department of Transportation. 2024. CA Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd> (accessed October 2024).

infrastructure that would result in inadequate emergency access. Therefore, the RCAP would result in less than significant impacts related to emergency access.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than significant Without Mitigation

3.8.5 Cumulative Impacts

3.8.5.1

Regional Cumulative Impacts

Regional cumulative impacts consider impacts throughout Humboldt that would occur from projected long-term growth identified in Table 3-1 of Section 3.0, *Environmental Impact Analysis*. The general approach to cumulative impact analysis used in this EIR is discussed in Section 3.0, *Environmental Impact Analysis*.

Compatibility with Programs, Plans, Ordinances, and Policies Related to Circulation

Cumulative development resulting from long-term growth throughout Humboldt would be subject to the same circulation-related programs, plans, ordinances, and policies as future projects promoted by the proposed plan. Cumulative development would be required to demonstrate consistency with the HCAOG regional transportation plan (i.e., VROOM) as well as County and/or City General Plan policies that guide the continued development and improvement of the transportation system in Humboldt. Therefore, cumulative development would not result in a significant impact related to a program, plan, ordinance, or policy addressing the circulation system.

Vehicle Miles Traveled

Cumulative development resulting from long-term growth throughout Humboldt would be evaluated for the potential to result in VMT-related impacts in accordance with the project-level guidance within the LCI Technical Advisory on Evaluating Transportation Impacts in CEQA. On a project-level, cumulative development that results in VMT exceeding a level of 15 percent below existing VMT per capita would be required to implement mitigation for VMT-related impacts. Nonetheless, overall growth throughout Humboldt could result in a substantial overall VMT increase. As such, cumulative impacts related to VMT would be potentially significant. However, as discussed under Impact TRA-2, the proposed plan includes measures that require coordination with HCAOG and other regional planning agencies for the purpose of reducing regional VMT by increasing mixed-use development in infill priority areas and promoting active transportation and public transit use. Accordingly, the proposed plan would reduce VMT throughout Humboldt. Therefore, the proposed plan would not contribute to cumulative VMT impacts and, thus, would represent a less than significant cumulative impact.

Roadway Safety and Emergency Vehicle Access

Roadways and public right-of-way modifications constructed as part of the cumulative development resulting from long-term growth throughout Humboldt would be constructed to meet State, County,

and/or City design and regulatory requirements to prevent transportation hazards associated with geometric hazards or incompatible uses. Similarly, State, County, and/or City design and regulatory requirements would require cumulative development to provide adequate emergency access to a specific project site. Transportation hazards and emergency access impacts are site-specific and would not be affected by or contributed to by cumulative development. Therefore, no cumulative impacts related to roadway safety hazards and emergency vehicle access would occur.

Overall Level of Cumulative Significance

Less Than Significant Without Mitigation

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3.9 Utilities and Service Systems

3.9.1 Introduction

This section describes the existing conditions related to utilities and service systems (water supply, wastewater, stormwater, solid waste, electric power, natural gas, and telecommunications) within the respective utility service areas covering unincorporated and incorporated portions of Humboldt County, as well as the relevant regulatory framework. This section also evaluates the impacts related to such utilities and service systems that could result from implementation of the RCAP and CEQA GHG Emissions Thresholds.

3.9.2 Environmental Setting

Water Source, Treatment, Demand, and Use

Within Humboldt, community water supply services are provided by 29 water supply providers, including the following:

▪ Alderpoint County Water District (CWD)	▪ Loleta CSD
▪ Big Lagoon Community Services District (CSD)	▪ Manila CSD
▪ Briceland CSD	▪ McKinleyville CSD
▪ City of Arcata	▪ Miranda CSD
▪ City of Blue Lake	▪ Orick CSD
▪ City of Eureka	▪ Orleans CSD
▪ City of Fortuna	▪ Palmer Creek CSD
▪ City of Rio Dell	▪ Phillipsville CSD
▪ City of Trinidad	▪ Redway CSD
▪ Del Oro Water Company	▪ Resort Improvement District #1
▪ Fieldbrook-Glendale CSD	▪ Riverside CSD
▪ Garberville Sanitary District	▪ Scotia CSD
▪ Humboldt Bay Municipal Water District	▪ Weott CSD
▪ Humboldt CSD	▪ Westhaven CSD
▪ Hydesville CWD	▪ Willow Creek CSD
▪ Jacoby Creek CWD	

The service area boundaries for the water supply providers are shown in Figure 3.9-1 through Figure 3.9-4. A description of each of these providers is provided below.

Figure 3.9-1 Water Districts in Humboldt County

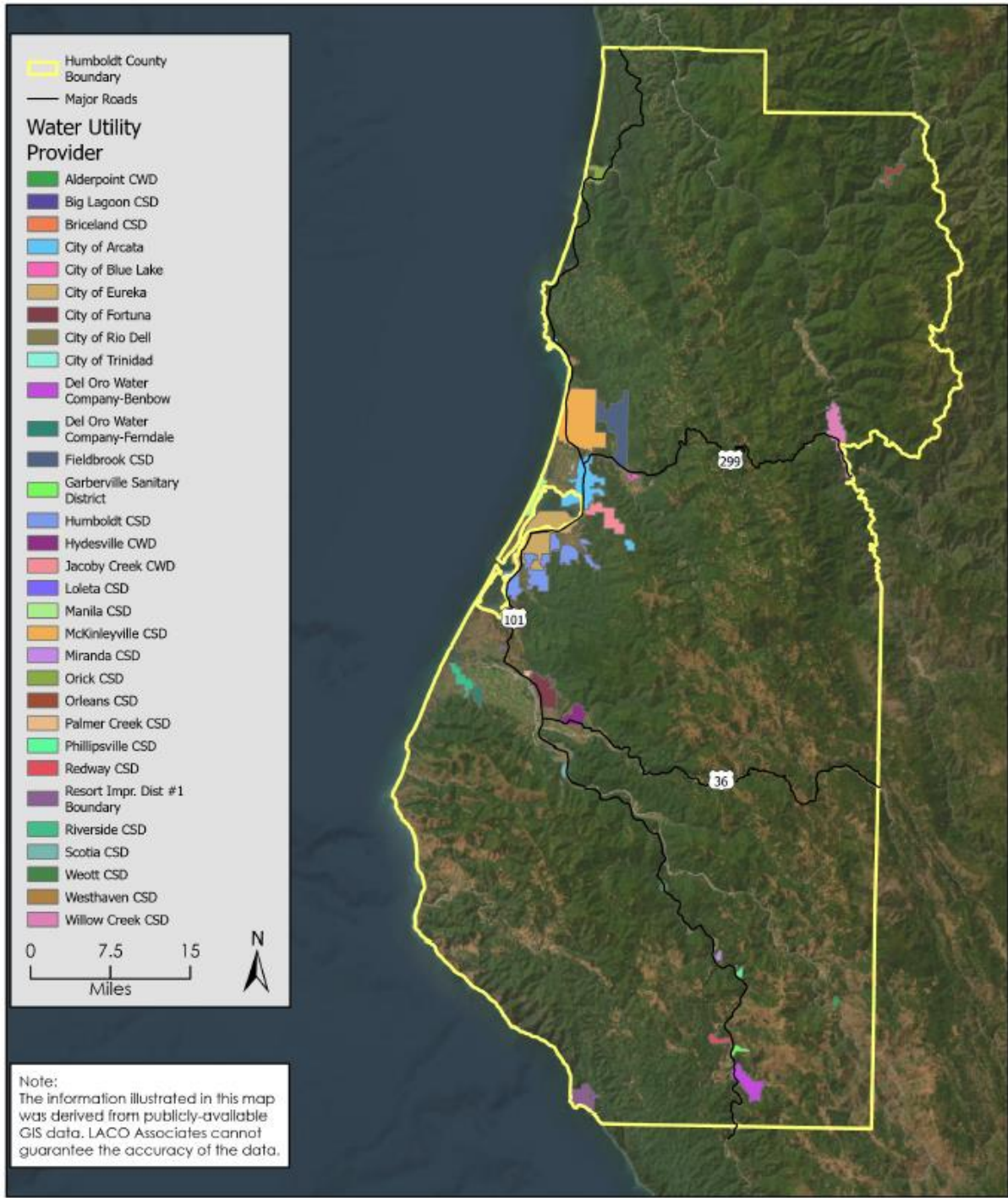


Figure 3.9-2 Water Districts in Humboldt County (Northern Humboldt County)

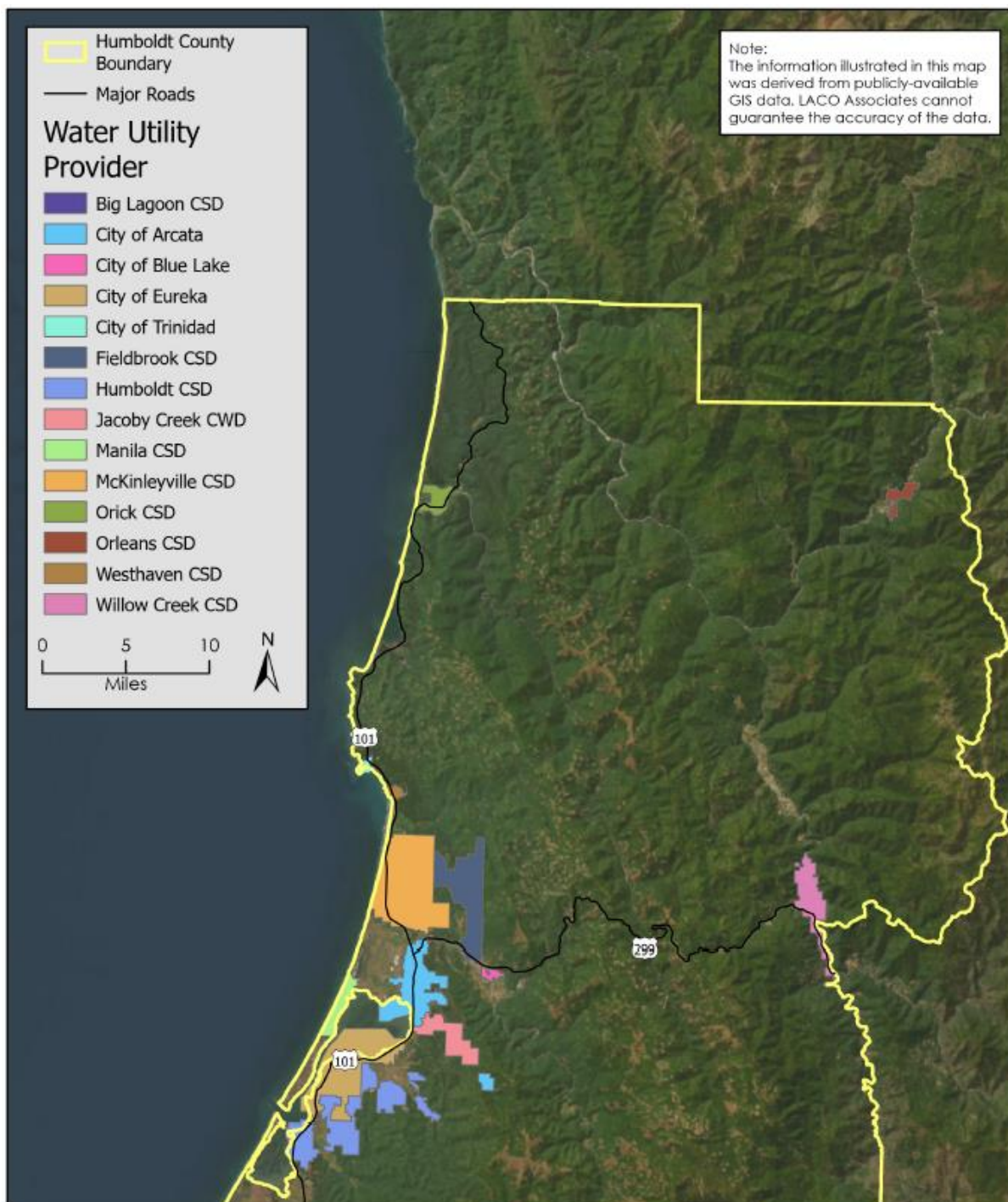


Figure 3.9-3 Water Districts in Humboldt County (Central Humboldt County)

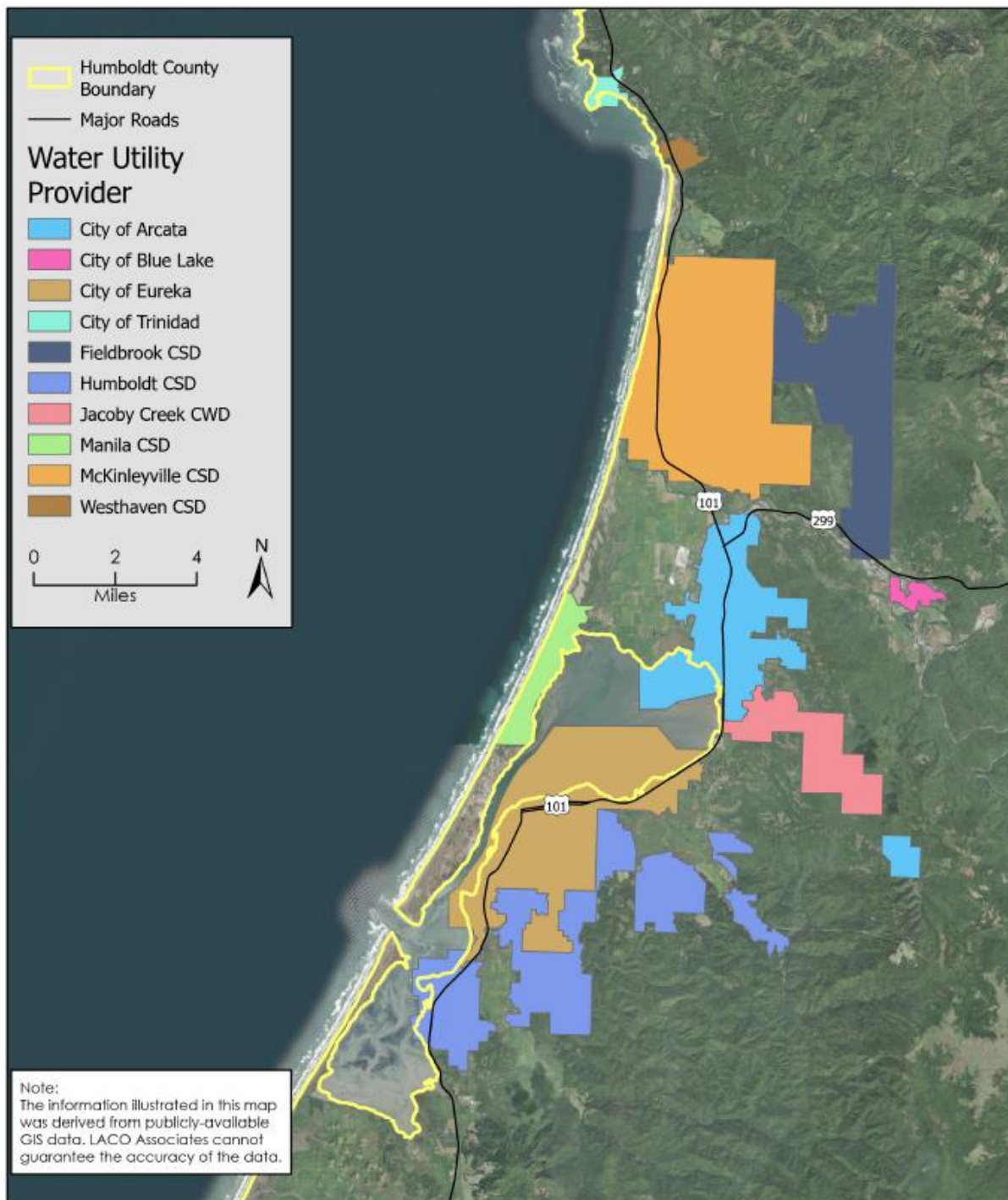
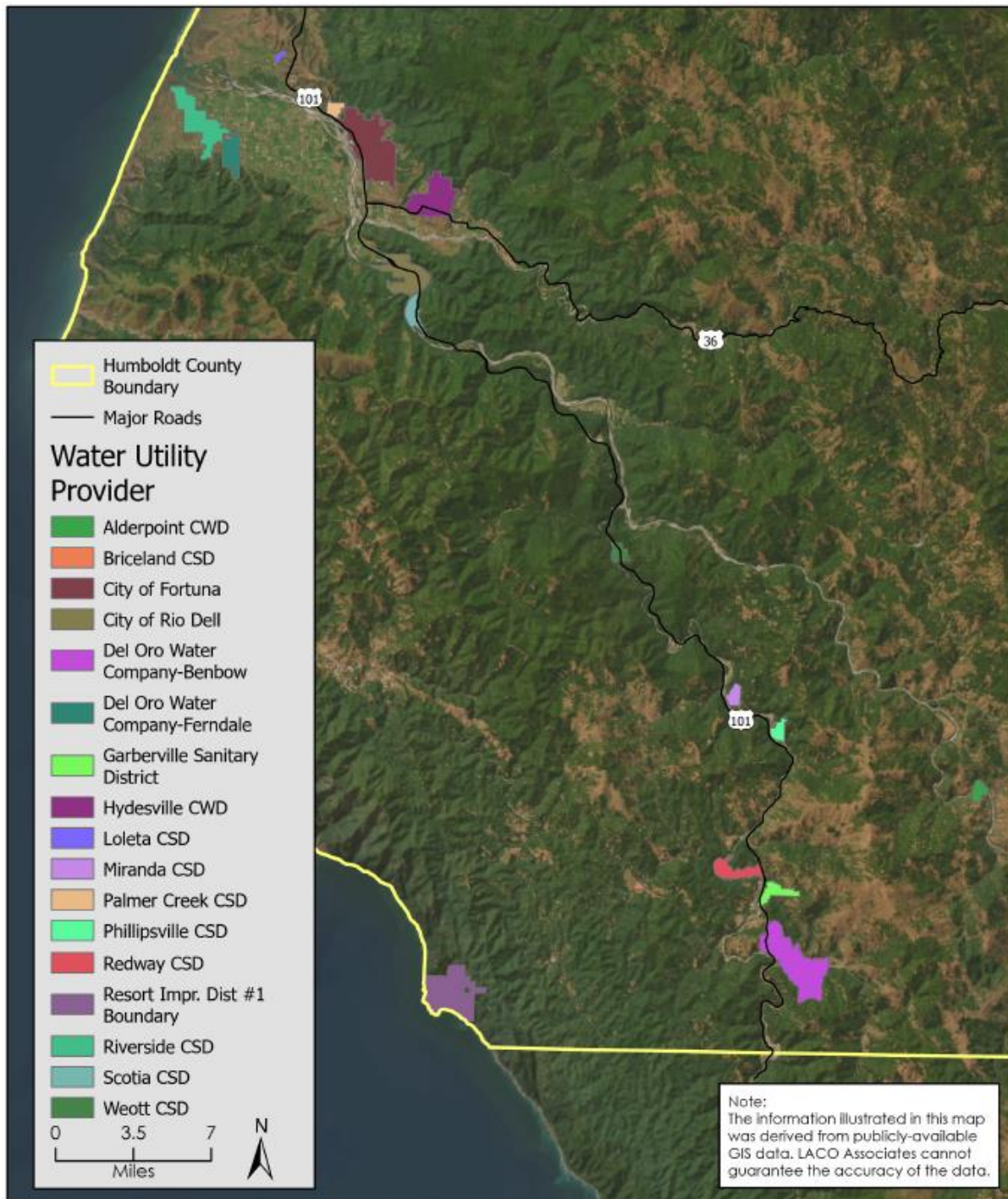


Figure 3.9-4 Water Districts in Humboldt County (Southern Humboldt County)



Unincorporated Humboldt County

ALDERPOINT COUNTY WATER DISTRICT

The Alderpoint County Water District's (Alderpoint CWD) service boundary and adjacent Sphere of Influence encompass a total of 311 acres (0.49 square miles), with a total population served

estimated at approximately 283 residents in 2017 (87 total connections). Primarily the Alderpoint CWD serves small single-family residences, although larger agricultural parcels are also served.¹

Water for the Alderpoint CWD is derived from the Eel River via an infiltration gallery and wet well. The Alderpoint CWD has four storage tanks and one post-filter chlorine contact time tank, totaling 186,725 gallons. The main storage tank (welded steel), totaling 160,000 gallons, was constructed in 2016. The distribution system comprises asbestos cement (AC) and polyvinyl chloride (PVC) pipe. While the pipes are considered to be in fair condition, they are likely nearing the end of their useful life. The Alderpoint CWD is seeking funding to begin a full replacement of its distribution system.²

The Alderpoint CWD is permitted to divert up to 0.25 cubic feet per second (cfs) with a maximum annual diversion of 116 acre-feet per year (AFY) [approximately 3.78 million gallons per year (mgy)] per year. The Alderpoint CWD's maximum treatment capacity is limited to 100 gpm [144,000 gallons per day (gpd)]. As of the year 2020, the Alderpoint CWD had a reported annual usage of 57.33 acre-feet (18.68 mgy) with a maximum diversion of 110.30 gpm with an average of 71.88 gpm. Based on the source capacity of 0.25 cfs, Alderpoint CWD has the ability to pump up to 161,582 gallons in a 24-hour period. Based on these values, Alderpoint CWD is utilizing approximately 72 percent of its treatment capacity and 64 percent of its source capacity on average. At maximum demand, the Alderpoint CWD is exceeding its treatment capacity and utilizing 98 percent of its source capacity. These values indicate that Alderpoint CWD has adequate water to support current and future average demand but has reached its capacity for maximum demand. This combined with a past drought curtailment order issued by the State in 2014 indicates that there is a need for a secondary source of water to support emergency drought needs and high demand time periods.³

BIG LAGOON COMMUNITY SERVICES DISTRICT

Big Lagoon Community Services District (Big Lagoon CSD) serves 43 households and Big Lagoon School with municipal water service. Water is derived primarily from a single groundwater well. Although Big Lagoon CSD's system comprises three wells, only one of the wells primarily supports the water supply. An additional 8-inch well (Well 2) is available for emergency standby. The original 12-inch well (Well 1) is currently used as a monitoring well. Groundwater is treated through a chlorination process and stored in two 5,000-gallon plastic tanks which provide water to the community. It is noted that the Big Lagoon CSD's system is currently and has previously experienced water loss issues. The Big Lagoon CSD's treatment plant has the ability to process up to 24 gpm, which equates to approximately 33,900 gpd and 12.4 mgy. During 2019, the total amount of water pumped from the treatment plant to the storage tanks was reported at 1,792,500 gallons. Additionally, in 2019, average water use was approximately 121 gpd per household, which equates to 0.4 percent of Big Lagoon CSD's daily treatment capacity. These values indicate that Big Lagoon CSD's water system has ample capacity to serve additional demand should it arise.⁴

BRICELAND COMMUNITY SERVICES DISTRICT

The Briceland Community Services District (Briceland CSD) serves approximately 25 existing service connections and a population of approximately 75 residents. Briceland CSD's water supply is derived

¹ Humboldt Local Agency Formation Commission (LAFCo). 2023. South County Regional Water and Wastewater Municipal Services Review and Sphere of Influence Update. <https://humboldtlafo.org/south-county-water-wastewater-msr-soi-update-2023/> (accessed November 2024).

² Ibid.

³ Ibid.

⁴ LAFCo.2022. Big Lagoon Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Big-Lagoon-MSR_Adopted-3-17-21-Modified-Nov-2022.pdf (accessed November 2024).

from a spring located on private property through agreement with the landowner and deeded access. The Briceland CSD receives 90 percent of the spring's flow. Although the spring's flow varies and is dependent on rainfall, the spring typically produces between 5 to 7 gpm (7,200 to 10,080 gpd) during the summer months. In 2005, approximately 3.88 million gallons of drinking water were produced by the Briceland CSD in 2005, with average daily use estimated at 10,630 gpd and peak daily use estimated at 40,000 gpd.⁵

Water treatment for the Briceland CSD uses two sand filter bays with an intermediate settling basin. The distribution system consists of two pressure zones that are supplied from a single 42,000-gallon concrete storage tank. The storage tank is connected to the distribution system via approximately 1,600 feet of AC pipe.⁶

The Briceland CSD Municipal Services Review (MSR) notes several deficiencies associated with the current system, including:

- Source capacity is unable to meet current maximum day demands;
- The treatment system is unable to meet turbidity performance standards during winter months;
- Storage capacity barely meets one day of maximum day demands; and
- Recommended fire suppression storage is not available.⁷

Existing peak daily use is approximately 400 percent of available source capacity during dry periods. While source capacity has been identified as a significant problem, Briceland CSD has no other options for additional sources of water. The Briceland CSD currently has a moratorium on new connections.⁸

GARBERVILLE SANITARY DISTRICT

The Garberville Sanitary District (GSD) provides water service to approximately 420 active service connections. Water is sourced from surface water from the South Fork Eel River and a shallow well in downtown Garberville. The well has a limited capacity and is only used as a backup source. Total storage capacity for the system is 260,000 gallons, with a maximum daily demand for water reported at 427,780 gallons. As noted in the MSR for GSD, the California Department of Public Health has identified deficiencies in the GSD water system, including a lack of redundancy in pumping and filtration, and limited emergency power during power outages. GSD has identified five major capital improvement projects over the next twenty years to address these deficiencies.⁹

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

The Humboldt Bay Municipal Water District (HBMWD) provides wholesale water to seven (7) municipalities within Humboldt County, including the Cities of Arcata, Blue Lake, and Eureka; Fieldbrook-Glendale CSD; Humboldt Community Services District (HCSD); Manila CSD; and McKinleyville CSD. Water supplied by HBMWD is derived from the Mad River. The HBMWD has appropriative water rights permits for surface water storage and diversion through 2029, with a total water right of 75 million gallons per day (MGD) (84,000 AFY). The HBMWD currently delivers

⁵ LAFCo. 2008. Briceland Community Services District Municipal Services Review. <https://humboldtlafo.org/wp-content/uploads/Briceland-CSD-ADOPTED-MSR-September-2008.pdf> (accessed November 2024).

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ LAFCo. 2013. Garberville Sanitary District Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/Adopted-MSR-SOI_03-20-2013.pdf (accessed November 2024).

an average of 11 MGD of treated water to its customers, with a peak daily use of 17 MGD. The HBMWD's water quality is consistently high. Additionally, HBMWD has devised a 20-year Capital Improvement Plan (CIP) to guide infrastructure improvements and ensure reliable water service.¹⁰

HUMBOLDT COMMUNITY SERVICES DISTRICT

The HCSD provides water service to 7,526 service connections, in which approximately 97 percent are residential and 3 percent are commercial customers. Water is derived from the Mad River and groundwater. The HCSD's infrastructure includes three wells, 426 fire hydrants, 13 booster pumping stations, 10 storage reservoirs with a total capacity of 5 MG, 87 miles of water mains, and three trailer-mounted generators. Approximately one-third of HCSD's potable water is purchased from HBMWD, another third from the City of Eureka, and the remaining third is pumped from HCSD-owned wells. The HCSD's peak daily water consumption is reported as 3.20 MG with an average daily consumption of 2.58 MG. While the HCSD water system has no significant deficiencies, some storage and fire flow improvements are anticipated to accommodate future development. The HCSD is also limited by treatment and disposal capacity at its Elk River Wastewater Treatment Plant (WWTP).¹¹

HYDESVILLE COUNTY WATER DISTRICT

The Hydesville County Water District (HCWD) supplies water to approximately 450 service connections, which equates to a population of approximately 1,200 residents. HCWD water is derived from two wells and HCWD's distribution system spans a total of 14 miles. The wells pump water into two storage tanks with a combined capacity of 600,000 gallons, enough to meet approximately seven days of normal usage. The HCWD typically operates one well at a time, keeping the second as a backup. Average daily water usage is around 100,000 gpd, with peak demand reaching 300,000 gpd. It is noted that the current system is operating at approximately 58 percent capacity, which would allow for an additional 326 connections. However, it is noted in the 2008 MSR that increasing demand may necessitate drilling a third well to maintain sufficient reserves.¹²

JACOBY CREEK COUNTY WATER DISTRICT

Jacoby Creek Community Water District (JCCWD) serves the community of Jacoby Creek, which includes a population of 326 residents, with 323 residential and 7 commercial/institutional connections. The JCCWD relies on the City of Arcata for water supply, distribution, and maintenance. Arcata purchases wholesale water from HBMWD. The JCCWD system includes four water storage tanks totaling 189,000 gallons, which can support water needs for up to three days in case of an emergency. It is noted that water infrastructure is primarily gravity-fed and consists of approximately 7.8 miles of water mains, 73 percent of which are asbestos concrete pipes that need to be replaced.¹³

¹⁰ LAFCo. 2014. Municipal Service Review for the Humboldt Community Services District Sphere of Influence Report. https://humboldtlafo.org/wp-content/uploads/Humboldt_CSD_Final-MSR.pdf (accessed November 2024).

¹¹ SHN Consulting Engineers & Geologists, Inc. 2014. Municipal Service Review for the Humboldt Community Services District Sphere of Influence Report. https://humboldtlafo.org/wp-content/uploads/Humboldt_CSD_Final-MSR.pdf (accessed November 2024).

¹² LAFCo. 2008. Hydesville County Water District Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Hydesville-CWD-Adopted-MSR.pdf> (accessed November 2024).

¹³ LAFCo. 2020. Jacoby Creek County Water District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Jacoby-Creek-MSR_Adopted-9-16-2020.pdf (accessed November 2024).

LOLETA COMMUNITY SERVICES DISTRICT

The Loleta Community Services District (LCSD) provides water service to approximately 226 homes, 11 businesses, and 2 industrial sites. Water is derived from two wells with a total production capacity of 369,600 gpd, with a target production rate of 144,000 gpd. The current estimated peak usage is 157,000 gpd. The LCSD has a total storage capacity of 225,000 gallons, which provides approximately 1.4 days of storage based on peak daily usage. It is estimated that the LCSD has capacity to accommodate approximately 60 to 70 additional homes.¹⁴

MANILA COMMUNITY SERVICES DISTRICT

The Manila Community Services District (Manila CSD) serves approximately 357 water service connections, primarily residential. Potable water is obtained from the HBMWD. Manila CSD's current peak rate allocation is currently 0.15 MGD. Within its service area, the Manila CSD maintains approximately 6 miles of water mains, some of which are in need of repair or replacement. Water storage consists of a 100,000-gallon redwood tank, which is planned for replacement due to its age and inadequate capacity. It is noted the Manila CSD faces potential contamination risks from nearby industrial sites and has advocated for increased funding for remediation efforts to protect its drinking water source.¹⁵

MCKINLEYVILLE COMMUNITY SERVICES DISTRICT

The McKinleyville Community Services District (MCSD) provides community water to McKinleyville and Patrick's Creek. Potable water is purchased from HBMWD. MCSD currently has a peak demand allocation of 2.6 MGD from HBMWD, with average daily demand reported at approximately 1.23 MGD and total annual water demand of 450 MG in 2020, equating to approximately 47 of the total allocation from HBMWD. The water is transported to MCSD via a single 18-inch transmission line that is buried under the Mad River. Due to the seismic activity in the region, this line poses a risk of rupture in the event of a large earthquake. MCSD is working to mitigate this risk by developing additional emergency storage. MCSD maintains approximately 88 miles of distribution mains over four pressure zones. The system is generally in good condition, but portions were installed in the 1970s and are nearing the end of their useful life. MCSD's *Water Main Line Replacement and Rehabilitation Master Plan* outlines a 100-year plan to replace aging infrastructure within its service area.¹⁶

MIRANDA COMMUNITY SERVICES DISTRICT

The Miranda Community Services District (Miranda CSD) provides water for domestic needs, irrigation, sanitation, and fire protection. Their current water supply comes from two wells which draw from underground streams flowing through sand and gravel layers beneath the South Fork of the Eel River and have a combined capacity of 225 gpm. The Miranda CSD's infrastructure also includes distribution pipes and a 200,000-gallon water storage tank. Miranda CSD serves a population of approximately 300 and 135 service connections. Average daily water use is reported at approximately 55,000-60,000 gpd, with a maximum of 200,000 gpd during the late summer. While the existing system is sufficient for the current population, it is noted that the existing well

¹⁴ LAFCo. 2008. Loleta Community Services District Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Loleta-CSD-ADOPTED-MSR-September-2008.pdf> (accessed November 2024).

¹⁵ LAFCo. 2022. Manila Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Manila-CSD-MSR_Adopted-01-19-22_reduced.pdf (accessed November 2024).

¹⁶ LAFCo. 2021. McKinleyville Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/McKinleyville-CSD-Adopted-MSR-SOI_11-17-21.pdf (accessed November 2024).

capacity of the Miranda CSD may not be enough to accommodate anticipated future growth. Infrastructure maintenance and upgrades generally occur on an as-needed basis.¹⁷

ORICK COMMUNITY SERVICES DISTRICT

The Orick Community Services District (Orick CSD) serves approximately 450 individuals through 143 connections with community water. The Orick CSD operates two wells with a combined maximum production capacity of 415 gpm (597,600 gpd). Water storage includes two 100,000-gallon redwood storage tanks that are aging and experiencing leaks. The distribution system consists of approximately 4.1 miles of pipes made of various materials, including ductile iron, PVC, and asbestos-cement. Average annual water demand is approximately 40,979 gpd, with peak daily use reported at 68,700 gpd. The Orick CSD currently has sufficient water supply to meet current and projected demand. As noted in the July 2024 MSR, the Orick CSD has several planned improvements, including replacing both storage tanks, upgrading the water and electrical lines, installing a SCADA system, and replacing existing water meters, valve boxes, and curb stops.¹⁸

ORLEANS COMMUNITY SERVICES DISTRICT

The Orleans Community Services District (Orleans CSD) serves approximately 149 active connections, which includes large water users such as orchards, vineyards, and the U.S. Forest Service. The Orleans CSD infrastructure includes a 10,000-gallon water storage tank, filters, pipes, meters, pumps, and a fire hydrant system. Average daily water use is estimated at 71,000 gpd. The Orleans CSD is currently operating at approximately 79 percent of available treatment capacity but notes there are no available connections within the existing system due to treatment capacity, which is estimated at 49,500 gpd. The Orleans CSD plans to upgrade its water system by adding a new water tank, filter, and apparatuses, and extending the main water line to install three new fire hydrants. Additionally, approximately one mile of the water pipes within the Orleans CSD have been identified as undersized for adequate fire flows and needing to be replaced.¹⁹

PALMER CREEK COMMUNITY SERVICES DISTRICT

The Palmer Creek Community Services District (PCCSD) provides water services to a population of approximately 400 residents within the community of Palmer Creek, with a total of 133 residential service connections. PCCSD obtains water from two groundwater wells. Total water storage is 210,000 gallons. The PCCSD's treatment plant can process up to 80 gpm or 115,200 gpd. Average daily water use is approximately 16,700 gpd. PCCSD has several planned projects for the system, including installing new SCADA and SCADA telemetry in addition to 150 new water meters.²⁰

PHILLIPSVILLE COMMUNITY SERVICES DISTRICT

The Phillipsville Community Services District (Phillipsville CSD) serves approximately 300 residents.²¹ The Phillipsville CSD relies on a 140-foot deep well as its primary source of water, with a backup

¹⁷ LAFCo. 2009. Miranda Community Services District Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Miranda-CSD-Approved-MSR-2009.pdf> (accessed November 2024).

¹⁸ LAFCo. 2024. Orick Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Orick-CSD-MSR_Adopted_July-17-2024.pdf (accessed November 2024).

¹⁹ LAFCo. 2008. Orleans Community Services District Municipal Services Review. https://humboldtlafo.org/wp-content/uploads/Orleans-CSD-MSR-Sept-2008_v2.pdf (accessed November 2024).

²⁰ LAFCo. 2020. Palmer Creek Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Palmer-Creek-MSR_7-15-2020-Adopted.pdf (accessed November 2024).

²¹ California State Water Resources Control Board. 2024. *CA Drinking Water Watch Water System Details*. https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=1024&tinwsys_st_code=CA (accessed November 2024).

spring serving as a secondary source. The Phillipsville CSD's facilities include a well treatment plant, a storage tank, and a distribution system that extends throughout the community. While the Phillipsville CSD's water supply has historically been sufficient to meet demand, recent droughts and increased population growth have raised concerns about future water availability. To address these concerns, the Phillipsville CSD has implemented water conservation measures and is exploring options for expanding its water supply, such as drilling additional wells or purchasing water from neighboring agencies.²²

REDWAY COMMUNITY SERVICES DISTRICT

The Redway Community Services District (Redway CSD) operates a public water system that serves approximately 600 customers. The system relies on two water sources (an infiltration gallery sourced from the South Fork of the Eel River and an unnamed spring), a conventional filter water treatment plant, two storage facilities (totaling 375,000 gallons), two pressure reduction vaults, one booster pump station, and approximately 25 miles of distribution piping consisting of iron, cement, and plastic piping. The infiltration gallery has a capacity of 550 gpm (792,000 gpd) with a total source capacity of 838,000 gpd; however, the water treatment plant can only process up to 770,000 gpd. The system faces challenges such as undersized piping and aging infrastructure but is able to meet water demand. Average daily use is approximately 175,000 gpd with a peak daily use of 475,000 gpd. The Redway CSD is currently developing a long-term plan to address infrastructure deficiencies and improve the water system.²³

RESORT IMPROVEMENT DISTRICT #1

The Resort Improvement District #1 (RID) serves approximately 577 water connections within Shelter Cove. Water is primarily sourced from Telegraph Creek and secondarily from one ground water well, Rick Spring, and two active surface water creek intakes from Upper Telegraph Creek. The RID is permitted to withdrawal up to 0.775 cubic feet per second (cfs). The RID's water treatment plant has a capacity of 0.350 mgd and the RID maintains approximately 2.1 million gallons of storage in 12 storage tanks. The distribution system consists of approximately 44 miles of water main, primarily AC pipe. In 2008, peak daily use was reported at 166,082 gpd. Based on current usage and capacity of the system, RID estimates it has capacity to serve a total of 900 service connections. The RID is evaluating multiple new well sources to supplement its primary source and prepare for future growth.²⁴

RIVERSIDE COMMUNITY SERVICES DISTRICT

The Riverside Community Services District (Riverside CSD) provides service to approximately 99 connections and an approximate population of 219 residents and daily demand of approximately 29,000 gpd. The primary water source is a well that supplies 30 gpm of water. It is reported that the treatment plant produced 5,996,470 gallons of water in 2018. Based on the primary well's capacity, it is estimated that the Riverside CSD is utilizing approximately 44 to 68 percent of its capacity. While there is adequate water to support the current and future demand of the service area, the

²² Phillipsville Community Services District. 2021. Phillipsville Community Services District Water System Improvements Initial Study/Mitigated Negative Declaration. https://files.ceqanet.opr.ca.gov/269022-1/attachment/56zvmAwPvg3mL_k8JrDSWW6w5_YfmvCdeCYHIN9tjzbsYJvOAVFx4CJW5TM2Dmtwv3B-Ftcj5k27Uh_I0 (accessed November 2024).

²³ LAFCo. 2008. Redway Community Services District Municipal Service Review. <https://humboldtlaico.org/wp-content/uploads/Redway-CSD-ADOPTED-MSR-July-2008.pdf> (accessed November 2024).

²⁴ LAFCo. 2009. Resort Improvement District #1 Municipal Service Review. <https://humboldtlaico.org/wp-content/uploads/RID-No1-Adopted-MSR-2009.pdf> (accessed November 2024).

Riverside CSD does not have a reliable back-up source of water supply. The Riverside CSD has been unable to secure funding to construct a new well. The Riverside CSD faces several challenges, including a limited water supply, insufficient funding, and regulatory compliance issues.²⁵

SCOTIA COMMUNITY SERVICES DISTRICT

The Scotia Community Services District (Scotia CSD) was formed in 2014 to provide water, wastewater, parks and recreation, streets and street lighting, and storm drainage services to the unincorporated community of Scotia.²⁶ The water system includes a domestic Water Treatment Facility (WTF), a distribution system, and a fire suppression system. Water is sourced from the Eel River, with existing diversion entitlements of approximately 4.59 million gpd for drinking water, mill processes, and fire supply. Maximum daily water usage is approximately 601,000 gpd, with an average of 484,400 gpd, indicating sufficient capacity for any reasonably foreseeable development within the service boundary. However, it is noted that the existing water system experiences a significant unaccounted water loss, with over 40 percent (or approximately 192,000 gpd) of its average treated water production of 405,350 gpd going unaccounted for. Several upgrades are proposed, including replacement of over 9,500 feet of main water lines and installation of meters at every residential and commercial service connection in the domestic water system. It is expected that the proposed upgrades will result in decreased water loss, therefore adding additional capacity within the system.²⁷

WEOTT COMMUNITY SERVICES DISTRICT

The Weott Community Services District (Weott CSD) has an approximate population of 288 residents and provides service to approximately 143 connections. Water supply is sourced from two springs within Humboldt Redwoods State Park. Total water storage is 169,000 gallons in two water storage tanks. Due to the seasonal nature of the springs, the Weott CSD has experienced water supply fluctuations in the past, particularly during dry summer months. Source capacity is estimated at 253,000 gpd if pumps operate 24 hours per day and treatment capacity is limited to 113,000 gpd if the filters operate 22 hours per day. Average daily water use is approximately 129,000 gpd. Recent conservation efforts implemented by the Weott CSD, including installation of water meters and repairs to leaks, have dramatically reduced average daily water use to 25,000-30,000 gpd. It is further noted that the Weott CSD's water distribution system does not meet current fire flow standards set by the California Fire Code.²⁸

WESTHAVEN COMMUNITY SERVICES DISTRICT

The Westhaven Community Services District (Westhaven CSD) serves 232 connections (229 are residential and three are public facility/commercial), which includes an approximate population of 517. Westhaven CSD's water source includes a combination of surface water and groundwater sources, including two unnamed springs, an unnamed stream, and a well. Water is treated through slow sand filtration and disinfection and stored in a 100,000-gallon storage reservoir and a 95,000-gallon glass-fused bolted steel tank. The Westhaven CSD has a permitted supply of 34.4 mgd. In 2020, 7.7 million gallons of water was delivered to customers, with another 2 million gallons lost (20

²⁵ LAFCo. 2022. Riverside Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Riverside-MSR_Adopted-5-18-2022.pdf (accessed November 2024).

²⁶ Scotia Community Services District. 2024. Welcome Scotia Residents. <https://scotiabcd.com/> (accessed November 2024).

²⁷ LAFCo. 2010. Town of Scotia Community Services District Municipal Services Review. <https://humboldtlafo.org/wp-content/uploads/MSR-October-2010-wo-Attachments.pdf> (accessed November 2024).

²⁸ LAFCo. 2012. Weott Community Services District Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Weott-CSD-Adopted-MSR.pdf> (accessed November 2024)

percent of total produced). The Westhaven CSD has had a waitlist of 70 homes since formation of the CSD in 1988 due to the system's limited supply, and has a moratorium on new connections. However, the Westhaven CSD is working to increase its water supply, including drilling of new wells. Additionally, the District is exploring additional options, such as possible connection to the City of Trinidad water system and/or connecting to the HBMWD water line, should this be extended to the Trinidad area in the future.²⁹

WILLOW CREEK COMMUNITY SERVICES DISTRICT

The Willow Creek Community Services District (WCCSD) serves a total of approximately 1,710 residents and 930 service connections, comprising 792 residential connections, 13 multi-family connections, 82 commercial connections, 32 agricultural connections, ten (10) landscape connections, and one (1) industrial connection. There are also 79 inactive connections. Water is sourced from Willow Creek, a tributary of the Trinity River. The WCCSD's treatment facility can produce up to 3 mgd of water at peak production. Total water storage is 1.08 million gallons in three storage tanks. In 2019, the monthly average demand for water was approximately 18.13 million gallons. Total water use in 2019 was reported as 667.8-acre feet, which equates to 28 percent of the WCCSD's permitted diversion amount.³⁰

FLDDBROOK-GLLENDALE COMMUNITY SERVICES DISTRICT

The Fieldbrook-Glendale CSD currently provides water services to approximately 536 customers. Water is purchased from Humboldt Bay Municipal Water District (HBMWD), in which the contract allows for up to 430,000 mgd. The water system includes two booster pump stations and two water storage tanks totaling 420,000 gallons. In 2014, the CSD reports that an average of 159,000 gpd, with a peak of 240,000 gpd, was utilized. The CSD currently uses about 56 percent of its contracted water allotment during peak demand. It is noted that some customers have experienced localized pressure issues.³¹

City of Arcata

The City of Arcata Environmental Services Department (Arcata ESD) provides municipal water service to the areas mapped within the Urban Services and Water Services Only boundaries, which extends beyond the city limits and includes the Jacoby Creek area. Specifically, in addition to serving the City of Arcata (Arcata), the Arcata ESD also operates, maintains, and provides water to the Jacoby Creek County Water District's (JCCWD) water distribution system. The Arcata ESD's Water Service Area includes approximately 6,567 total service connections, of which 6,237 are located within Arcata limits and 330 within Jacoby Creek. The Arcata ESD's water system includes 87 miles of transmission mains, fire hydrants, valves, and the water services from the mains to individual water meters. The Arcata ESD has approximately 4.4 million gallons of storage capacity spread over 17 tanks ranging in size from 15,000- to 1.5 million gallons.³²

The primary source of water for Arcata is water purchased from the Humboldt Bay Municipal Water District (HBMWD) as well as a groundwater source (Heindon Well). Several interconnections are also

²⁹ LAFCo. 2021. Westhaven Community Services District Municipal Service Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Westhaven-MSR_Adopted-05-19-2021.pdf (accessed November 2024).

³⁰ LAFCo. 2021. Willow Creek Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Willow-Creek-MSR_Adopted-5-19-21.pdf (accessed November 2024).

³¹ LAFCo. 2015. Fieldbrook Glendale Community Services District Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/FGCSD-Final-MSR_Adopted-07-15-15.pdf (accessed November 2024).

³² LAFCo. 2020. City of Arcata Municipal Services Review. https://humboldtlafo.org/wp-content/uploads/Arcata-MSR_Adopted-11-18-20.pdf (accessed November 2024).

maintained with other nearby water service providers to allow water to be shared in the event of an emergency.³³

According to the Arcata's 2020 Urban Water Management Plan³⁴, the Service Area population in 2020 is estimated at 20,095 residents and is expected to increase by a rate of 0.81 percent per year; by the year 2045, the Service Area population is anticipated to increase to 24,572 residents. Total demand for water in 2020 was noted as 583 MG and is expected to increase to 800 MG by the year 2045 (a 37 percent increase). The Arcata ESD has a peak rate allocation of 3.25 MGD from HBMWD. In 2020, the Arcata ESD utilized 615 MG (52 percent of its allocation). In 2045, when projected demand is anticipated to reach 800 MG, it is expected the City of Arcata will be utilizing less than 70 percent of its peak rate allocation (see Table 3.9-1, below). Additionally, the Arcata ESD has determined that they can safely withdrawal 0.5 MGD from the groundwater basin through use of the Heindon Well.³⁵

Table 3.9-1 City of Arcata and Jacoby Creek CWD Projected Water Use and Supply (2020-2040)³⁶

Year	2020	2025	2030	2035	2040
Usage (MGY)	730	786	815	847	880
Supply	1,369	1,369	1,369	1,369	1,369

City of Blue Lake

The City of Blue Lake (Blue Lake) obtains all of its domestic water supply through a contract with HBMWD. The City's daily use allotment is currently 400,000 gallons. During fiscal year 2017-18, Blue Lake reported an average usage of 204,712 gpd (51 percent of their daily allotment from HBMWD), with peak usage reported for the same year in the month of August at 244,900 gpd (61 percent of the daily allotment).³⁷

Water is delivered to Blue Lake via a booster pump station northwest of Blue Lake on Glendale Drive, which is owned and operated by Blue Lake. The system includes two redwood water storage tanks with a total storage capacity of 900,000 gallons, in addition to transmission mains, fire hydrants, valves, and the water services from the mains to individual water meters. The distribution system consists of 51,050 feet of pipeline (predominately AC pipe), which was installed in 1973. Blue Lake has two redwood storage tanks with a total storage capacity of 900,000 gallons.³⁸

City of Eureka

The City of Eureka (Eureka) provides water to customers within the city limits of Eureka, as well as a few customers located outside of the city boundary. Eureka obtains its potable water from HBMWD. As Eureka maintains an 8 MGD water right on the Mad River, HBMWD is authorized to deliver up to 8 MGD of water, if needed. Per the City of Eureka MSR, average annual daily system demand is 4.0

³³ Ibid.

³⁴ City of Arcata. 2021. City of Arcata Urban Water Management Plan 2020. <https://www.cityofarcata.org/DocumentCenter/View/10965/City-of-Arcata-2020-Urban-Water-Management-Plan> (accessed November 2024).

³⁵ Ibid.

³⁶ LAFCo. 2020. City of Arcata Municipal Services Review. https://humboldtlafo.org/wp-content/uploads/Arcata-MSR_Adopted-11-18-20.pdf (accessed November 2024).

³⁷ LAFCo. 2019. City of Blue Lake Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Blue-Lake-MSR-ADOPTED-7-17-19.pdf> (accessed November 2024).

³⁸ Ibid.

MGD (50 percent of total water right allotment), with average peak month daily demand reported at 5.23 MGD (approximately 65 percent of the City's total allotment).³⁹

Water received from HBMWD is filtered and chlorinated by HBMWD before it is distributed via a pipeline to the Eureka's water storage and treatment complex. Total storage capacity of the Eureka's system is 22.3 MG, comprised of a 20-MG raw water storage reservoir, a 1-MG ground-level steel tank, a 500,000-gallon ground-level steel tank, a 500,000-gallon elevated steel tank, and a 300,000-gallon clear well. Eureka's distribution system is noted to have normal deficiencies for a system of its age, including an aging piping system and low-pressure and fire-flow issues.⁴⁰

City of Fortuna

As provided in the City of Fortuna MSR and Sphere of Influence Update, the City of Fortuna (Fortuna) serves approximately 12,000 individuals and 5,727 service connections (5,170 residential and 557 commercial/other) with water from five Fortuna-owned and operated groundwater wells. Fortuna's Public Works Department maintains and operates the water pumping and treatment facilities and equipment. Current water rights allow Fortuna to extract up to 1,642 acre-feet of groundwater (approximately 535.1 million gallons) per year. Average daily demand is approximately 1.16 MGD (42 percent of the total daily treatment capacity). Usage has increased by approximately 7 percent from 395.3 MG in 2015 to 423.54 MG in 2019. Fortuna is using approximately 79 percent (1,300-acre feet) of its total annual groundwater allocation. It is anticipated Fortuna's yearly demand could increase to 457 MG (or approximately 85 percent of the Fortuna's water rights allocation) by the year 2025 (see Table 3.9-2, below). The City is also noted to be supported by adequate fire flow capacity.⁴¹

³⁹ LAFCo. 2014. City of Eureka Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/Eureka-Adopted-MSR_1-15-14.pdf (accessed November 2024).

⁴⁰ Ibid.

⁴¹ LAFCo. 2021. City of Fortuna Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Fortuna-MSR-Adopted_1-20-21.pdf (accessed November 2024).

Table 3.9-2 City of Fortuna Projected Water Demand (2019-2025)⁴²

Year	Demand (MG)	
	Monthly	Annually
2019	35.30	423.60
2021	35.86	430.32
2022	36.42	437.04
2023	36.99	443.88
2024	37.55	450.60
2025	38.12	457.44

Fortuna’s distribution system includes 40 miles of piping, four reservoirs with a total storage capacity of 8.25 million gallons of water, and eight pump stations. The system comprises both new and old piping, with a mix of older AC and cast-iron pipe, and newer PVC pipe. The Fortuna-owned reservoirs and pump stations are inspected on a daily basis. Based on the average daily demand (detailed above), it is anticipated that Fortuna’s reservoirs could provide up to seven days of water in the event water supply is interrupted.⁴³

City of Rio Dell

The City of Rio Dell’s (Rio Dell) water system serves approximately 1,450 customers and includes a network of water mains, valves, and storage tanks that deliver treated water from the Rio Dell’s plant. Rio Dell currently produces approximately 90 MG of potable water annually. Average daily use is estimated at 0.267 MGD, with peak daily use estimated at approximately 0.474 MGD.⁴⁴

Raw (untreated) water is pumped from infiltration galleries under the Eel River to the Rio Dell’s water treatment plant. The production capacity of the gallery is tied to water levels within the river. Specifically, in the winter months, the pumps can deliver around 700 GPM; however, during the summer, production falls to about 550 GPM (0.792 MGD). Water is pumped to treatment for filtration and disinfection before entering Rio Dell’s distribution system. The distribution system includes almost 20 miles of pipes, as well as valves, fire hydrants, and water meters. Aging lines are noted to be an ongoing challenge for Rio Dell, some of which are of insufficient size to provide adequate fire protection. Rio Dell’s water storage includes four tanks, ranging in size from 100,000 gallons to 500,000 gallons, for a combined total of 1.1 million gallons of storage capacity.⁴⁵

City of Trinidad

The City of Trinidad (Trinidad) supplies water to residential and commercial customers within city limits, as well as several rural residential properties outside the city limits. In total, Trinidad currently serves 252 service connections within city limits and 102 connections outside city limits, equating to approximately 1,000 residents. Trinidad has an average annual demand of 36,325 gpd with a peak demand of 57,779 gpd. Water is supplied via a surface water diversion from Luffenholtz Creek. Trinidad also has water rights associated with Mill Creek, although water from this creek is

⁴² LAFCo. 2021. City of Fortuna Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Fortuna-MSR-Adopted_1-20-21.pdf (accessed November 2024).

⁴³ LAFCo. 2021. City of Fortuna Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Fortuna-MSR-Adopted_1-20-21.pdf (accessed November 2024).

⁴⁴ LAFCo. 2018. City of Rio Dell Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/City-of-Rio-Dell-MSR-SOI_Adopted-11.14.18.pdf (accessed November 2024).

⁴⁵ Ibid.

not currently utilized and additional water infrastructure would be required. Trinidad's water system infrastructure includes an infiltration gallery, water treatment plan, storage tanks totaling 285,000 gallons, and water distribution piping. Under Trinidad's water right, Trinidad is allowed to extract a maximum of 0.56 cubic feet per second (cfs) (or 251 gpm) from Luffenholtz Creek. In total, Trinidad can produce 252,000 gpd as long as there is sufficient flow in Luffenholtz Creek to meet the demand and bypass requirements. It is noted that complete built-out of the entire water service area as allowed under the General Plan would create a total average demand of 88,980 gpd and a total peak demand of 143,486 gpd which exceeds the current treatment capacity of the water system; however, full build-out during the 20-year planning horizon of the Trinidad's General Plan is not anticipated, since Trinidad has averaged about one new house every two years over the last 10 years.⁴⁶

City of Ferndale

As provided in the City of Ferndale MSR, the Del Oro Water Company (Del Oro) provides water service to 19 districts in California⁴⁷, and currently services the City of Ferndale as well as the unincorporated community of Benbow. It is understood that Del Oro acquired the Benbow Water Company in 2016.⁴⁸

The Del Oro Ferndale District serves approximately 759 customers in the City of Ferndale (Ferndale) and adjacent areas. Ferndale's system comprises a well, a 990,000-gallon concrete storage tank, a distribution system comprising 65,155 feet of mains, and a water treatment plant. Ferndale has capacity to supply 518,000 gpd. In 2012, maximum daily demand was reported at approximately 208,000 gpd, or approximately 40 percent of the system's capacity.⁴⁹ At this time, details pertaining to Benbow's water system, capacity, and current demand are unknown.

Wastewater Generation, Infrastructure, Collection, and Treatment

Within Humboldt, community wastewater service is provided by the following wastewater utility providers (18 in total):

▪ City of Arcata	▪ Manila CSD
▪ City of Blue Lake	▪ McKinleyville CSD
▪ City of Eureka	▪ Miranda CSD
▪ City of Ferndale	▪ Palmer Creek CSD
▪ City of Fortuna	▪ Redway CSD
▪ City of Rio Dell	▪ Resort Improvement District #1
▪ Garberville Sanitary District	▪ Scotia CSD
▪ Humboldt Community Services District (CSD)	▪ Weott CSD
▪ Loleta CSD	

⁴⁶ Humboldt Local Agency Formation Commission (LAFCo). Adopted March 17, 2021. *City of Trinidad Municipal Services Review and Sphere of Influence Update*. https://humboldtlafo.org/wp-content/uploads/Trinidad-MSR-SOI-Adopted_03-17-2021.pdf.

⁴⁷ Humboldt Local Agency Formation Commission (LAFCo). Adopted November 14, 2018. *City of Ferndale Municipal Service Review*. https://humboldtlafo.org/wp-content/uploads/City-of-Ferndale-MSR-SOI_Adopted-11-14-18.pdf.

⁴⁸ California Water Association. November 1, 2016. *Del Oro Water Company Improves Newly Acquired Water Districts*. <https://calwaterassn.com/del-oro-water-company-improves-newly-acquired-water-districts/>.

⁴⁹ Humboldt Local Agency Formation Commission (LAFCo). Adopted November 14, 2018. *City of Ferndale Municipal Service Review*. https://humboldtlafo.org/wp-content/uploads/City-of-Ferndale-MSR-SOI_Adopted-11-14-18.pdf.

The areas not within a community wastewater service district, typically the more rural areas within the County, are generally served by individual on-site septic systems. Although the Orick Community Services District (Orick CSD) does not currently provide wastewater services to the community of Orick, a community wastewater system is planned for the area. However, as of May 2024, negotiations were still underway regarding potential land acquisitions for the treatment and disposal systems. Once this process is complete, assessment of potential treatment and disposal options can continue as well as design of the proposed wastewater treatment system.⁵⁰ Additionally, properties located within the service boundaries of the Fieldbrook Glendale CSD utilize on-site septic systems in Fieldbrook and a wastewater collection system in Glendale, with effluent then treated by the City of Arcata. While the Fieldbrook area's septic systems are currently operational, the soil conditions pose challenges to their long-term effectiveness due to poor soil leaching characteristics.⁵¹ The Willow Creek Community Services District (WCCSD) does not currently provide wastewater services to the community of Willow Creek. However, a wastewater treatment system is being planned for the community and the treatment plant will be a recirculating gravel filter. Furthermore, the City of Trinidad does not have a community wastewater system, with existing development supported by individual on-site wastewater treatment systems (septic).⁵²

The service area boundaries for the wastewater utilities are shown in Figure 3.9-5 through Figure 3.9-7. A description of each of these providers is provided below.

⁵⁰ LAFCo. 2024. Orick Community Services District Municipal Services Review and Sphere of Influence Update.

https://humboldtlafo.org/wp-content/uploads/Orick-CSD-MSR_Adopted_July-17-2024.pdf (accessed November 2024).

⁵¹ LAFCo. 2015. Fieldbrook Glendale Community Services District Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/FGCSD-Final-MSR_Adopted-07-15-15.pdf (accessed November 2024).

⁵² LAFCo. 2021. City of Trinidad Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Trinidad-MSR-SOI-Adopted_03-17-2021.pdf (accessed November 2024).

Figure 3.9-5 Wastewater Providers in Humboldt County

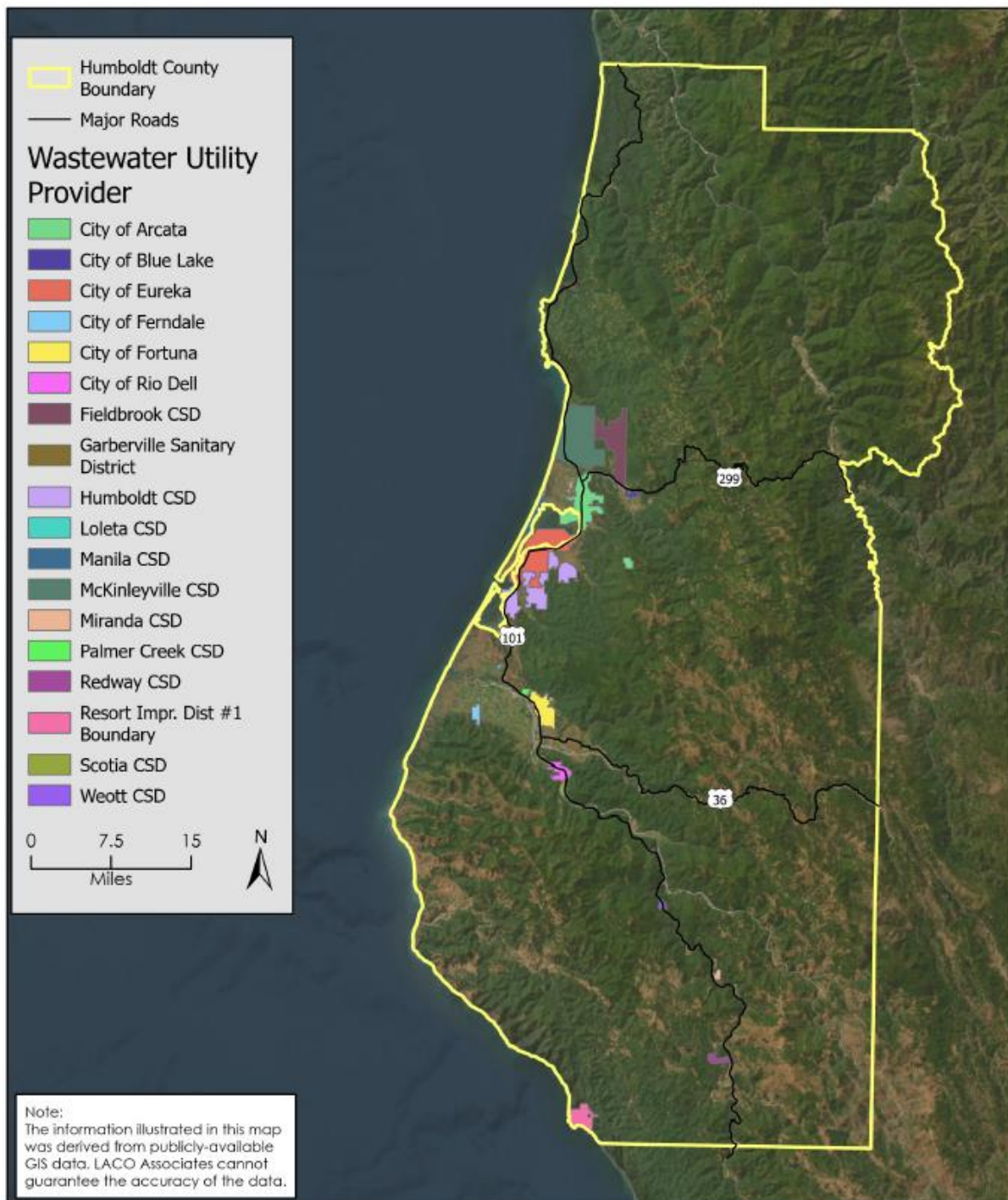


Figure 3.9-6 Wastewater Providers in Humboldt County (Central Humboldt County)

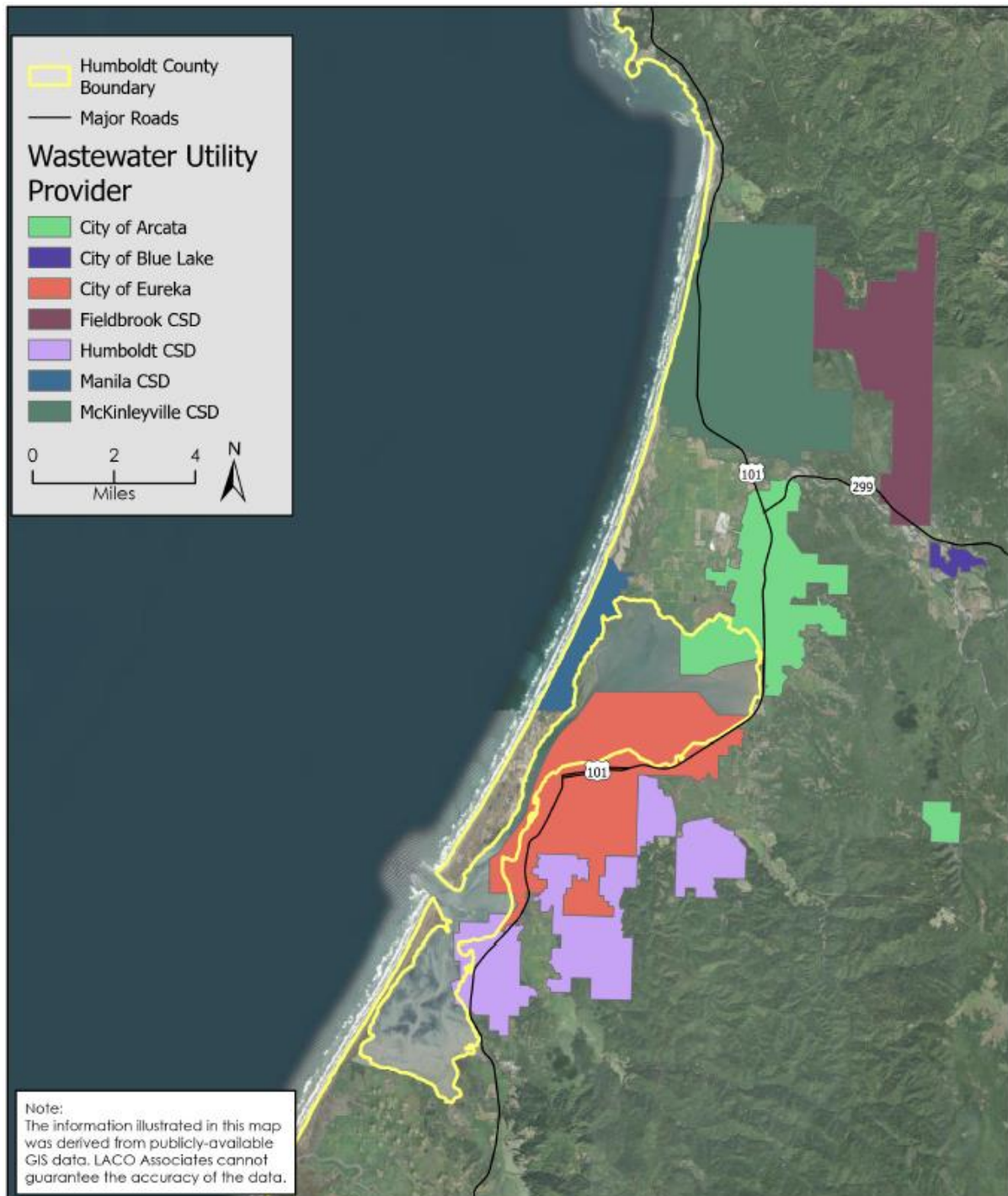
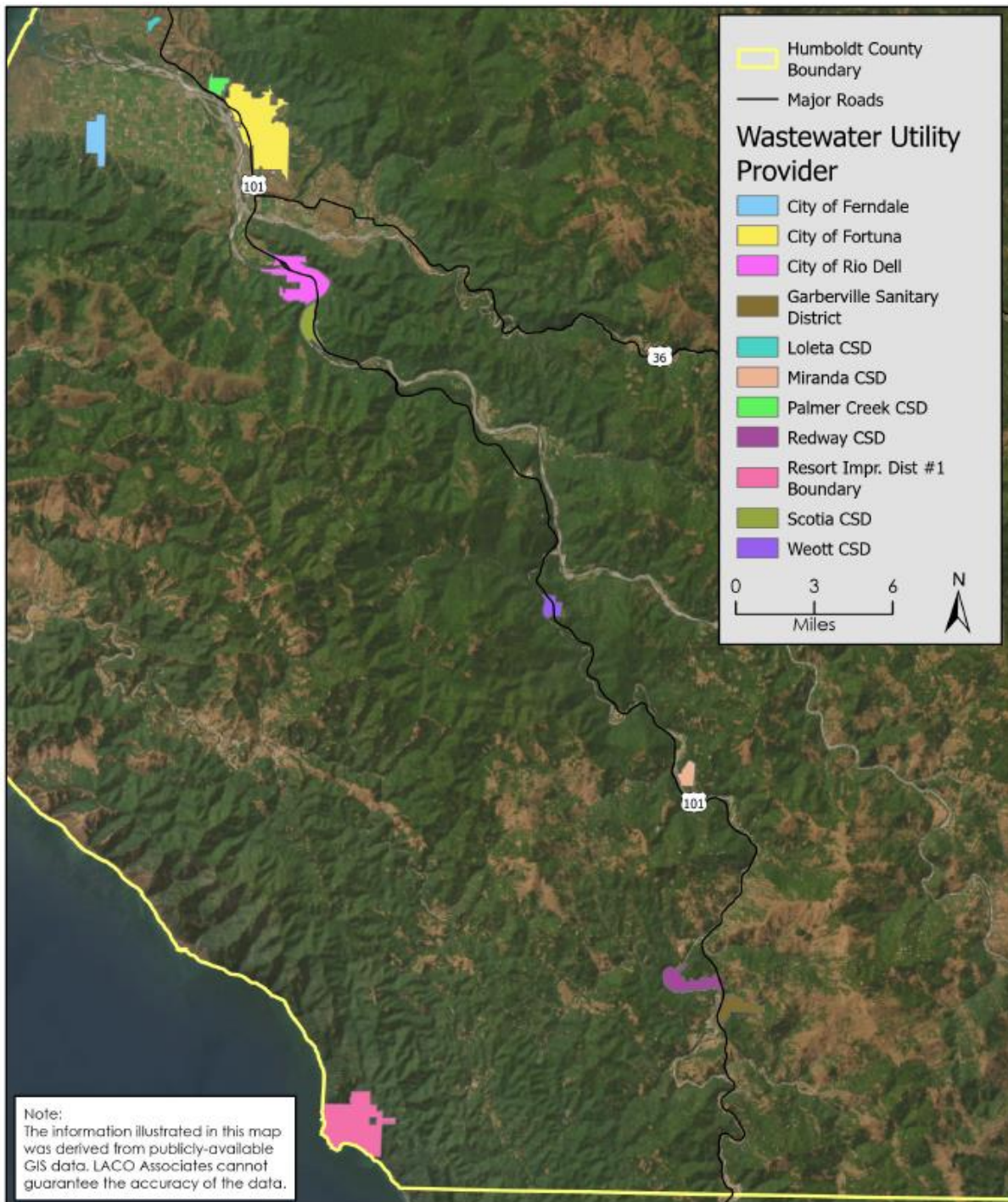


Figure 3.9-7 Wastewater Providers in Humboldt County (Southern Humboldt County)



Unincorporated Humboldt County

GARBERVILLE SANITARY DISTRICT

The Garberville Sanitary District (GSD) provides wastewater collection, treatment, and disposal for the unincorporated community of Garberville, serving approximately 353 existing connections.

GSD's wastewater system includes collection and transmission lines, two headworks stations, two pumping stations, and a WWTP, which utilizes natural processes). Major upgrades to the system occurred in 2003 and 2011, enhancing the facility's capacity and efficiency, as well as addressing inflow and infiltration issues. It is noted that GSD's wastewater system has the capacity to treat 160,000 gpd (dry weather day) and 250,000 gpd (wet weather day) and currently treats an average dry weather flow (ADWF) of approximately 59,000 gpd and an average wet weather flow of approximately 130,000 gpd.⁵³

HUMBOLDT COMMUNITY SERVICES DISTRICT

The HCSD provides wastewater service to approximately 6,326 connections, of which 97 are commercial and 6,229 are residential uses. HCSD's wastewater system encompasses 29 pump stations and approximately 78 miles of sewer mains. Peak daily wastewater flow is approximately 1.92 MG, with an annual average of 0.92 MG. Treated wastewater is discharged to the City of Eureka's Elk River WWTP, where the HCSD has ownership of 30 percent of the Elk River WWTP's capacity. The HCSD wastewater system is noted to not have significant deficiencies, although HCSD is limited by treatment and disposal capacity at the WWTP. Additionally, the District has been working to reduce inflow and infiltration in the collection system.⁵⁴

LOLETA COMMUNITY SERVICES DISTRICT

The Loleta Community Services District (Loleta CSD) serves the unincorporated community of Loleta (population of approximately 750 residents) with wastewater service. The system includes a WWTP and approximately 4.1 miles of pipe. Wastewater is conveyed through gravity to the WWTP. Sludge is hauled away for disposal and treated wastewater is pumped to a local ranch for irrigation. The WWTP has a design capacity of 100,000 gpd. However, the average daily flow reported in December 2022 was 222,000 gpd, exceeding the design capacity of the WWTP. During the dry season, the average daily flow decreases to 55,000 gpd.⁵⁵

MANILA COMMUNITY SERVICES DISTRICT

The Manila Community Services District (Manila CSD) utilizes a Septic Tank Effluent Pump (STEP) system, developed in 1995, for wastewater management. The system extracts liquid effluent from residential septic tanks, channeling it through a force main to a centralized treatment facility, which utilizes three free surface wetlands, two surface aerated facultative ponds, and four percolation ponds for effluent disposal. The system has a dry weather design capacity of 0.14 MGD. The system currently treats an ADWF of 0.052 MGD and a wet weather flow of 0.066 MGD, which indicates the system is operating well below its capacity. Manila CSD currently serves 444 connections and, based upon existing capacity, it is anticipated the system could accommodate an additional 500 connections. However, such expansion is unlikely due to constraints such as available buildable land and land use regulations.⁵⁶

⁵³ LAFCo. 2013. Garberville Sanitary District Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/Adopted-MSR-SOI_03-20-2013.pdf (accessed November 2024).

⁵⁴ SHN Consulting Engineers & Geologists, Inc. 2014. Municipal Service Review for the Humboldt Community Services District Sphere of Influence Report. https://humboldtlafo.org/wp-content/uploads/Humboldt_CSD_Final-MSR.pdf (accessed November 2024).

⁵⁵ LAFCo. 2008. *Loleta Community Services District Municipal Service Review*. <https://humboldtlafo.org/wp-content/uploads/Loleta-CSD-ADOPTED-MSR-September-2008.pdf> (accessed November 2024).

⁵⁶ LAFCo. 2022. Manila Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Manila-CSD-MSR_Adopted-01-19-22_reduced.pdf (accessed November 2024).

McKINLEYVILLE COMMUNITY SERVICES DISTRICT

The McKinleyville Community Services District (MCSD) provides wastewater service to approximately 6,280 service connections, which includes residential, commercial, and business properties. The system includes a WWTP and approximately 73 miles of sewer mains. The WWTP was last upgraded in 2017 and has a current dry weather capacity of 1.37 MGD, wet weather capacity of 1.69 MGD, and peak capacity of 3.08 MGD. Demand varies seasonally, with peak demand occurring during the wet weather months (February – April). In 2019, a total of 356.7 MG of effluent was treated by the WWTP, with the month of March (the highest reported month) having 41.023 MG of treated effluent. MCSD indicates there is sufficient capacity to handle current and future demand within its service area. Additionally, much of the system is reported to be in good condition, although some sections, including those constructed in the 1970s, are nearing the end of their useful life. Per MCSD's *Sanitary Sewer Main Line Replacement and Rehabilitation Master Plan*, there is a need for annual investments of approximately \$1 million to maintain adequate service levels and prevent major system issues.⁵⁷

MIRANDA COMMUNITY SERVICES DISTRICT

The Miranda Community Services District (Miranda CSD) serves approximately 88 residents. Its wastewater treatment system collects and treats effluent from individual septic tanks within the community. Collected effluent is conveyed to community septic tanks, is treated, then is chlorinated and stored in a settling pond, where the treated effluent seeps into the underlying gravel layers of the Eel River. Miranda CSD's system has a design capacity of 46,000 gpd ADWF, of which approximately 44 percent (26,400 gallons) is currently being utilized. As such, it is anticipated the system could accommodate an additional 112 sewer connections. Additionally, there are no known infrastructure needs or deficiencies, and the Miranda CSD has not planned upgrades to its system. All septic tanks are inspected annually and pumped as necessary. Replacements and upgrades are implemented on an as-needed basis.⁵⁸

PALMER CREEK COMMUNITY SERVICES DISTRICT

The Palmer Creek Community Services District (PCCSD) wastewater collection system was established in the late 1980s to mitigate pollution issues arising from individual on-site septic systems. Collected wastewater is transported to the City of Fortuna's WWTP via a network of collection pipes and a lift station. It is noted that the system currently serves 166 connections, with a moratorium on new connections due to the agreement with the City of Fortuna. Wastewater flows associated with the PCCSD average 13,000 gpd in dry weather and 32,000 gpd in wet weather. In 2019, a total of 6.996 MG of wastewater from the PCCSD was conveyed to Fortuna for treatment, which equates to approximately 46 percent of the contracted capacity for dry months. Based on this, PCCSD's system has sufficient capacity to accommodate existing connections. Regular maintenance and minor projects are ongoing and occur as needed and funding permits.⁵⁹

⁵⁷ LAFCo. 2021. McKinleyville Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/McKinleyville-CSD-Adopted-MSR-SOI_11-17-21.pdf (accessed November 2024).

⁵⁸ LAFCo. 2009. Miranda Community Services District Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Miranda-CSD-Approved-MSR-2009.pdf> (accessed November 2024).

⁵⁹ LAFCo. 2020. Palmer Creek Community Services District Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Palmer-Creek-MSR_7-15-2020-Adopted.pdf (accessed November 2024).

REDWAY COMMUNITY SERVICES DISTRICT

The Redway Community Services District's (Redway CSD) wastewater system serves approximately 545 residential connections and 15 commercial establishments. The collection system is comprised of gravity mains, lift stations, and an aerial crossing, and treatment occurs at the Redway WWTP. Treated effluent is primarily discharged to percolation ponds, but excess flow during winter is diverted to the Eel River. Sludge is buried on Redway CSD-owned land. On average, Redway CSD treats an average flow that ranges from 140,000 gpd in dry weather to 430,000 gpd in wet weather. The facility's permitted design flow is 186,000 gpd for dry weather and 615,000 gpd for peak wet weather. As such, the WWTP is currently operating at approximately 75 percent capacity.⁶⁰

RESORT IMPROVEMENT DISTRICT #1

The Resort Improvement District #1 (RID) serves the unincorporated community of Shelter Cove, with a total service area of approximately 2,640 acres. RID provides wastewater service, including collection, treatment, and disposal, to approximately 89 percent of homes within its service area. In total, RID provides wastewater service to 464 connections (95 percent are residential and 5 percent are commercial). RID's system includes gravity mains, nine lift stations, and a WWTP. Year-round, treated effluent is discharged into the Pacific Ocean. In the spring and summer, RID supplies treated wastewater for irrigation of RID's golf course. Sludge is transported to the Humboldt County solid waste transfer station for landfill disposal.⁶¹

The WWTP has a design capacity to support an ADWF of 0.17 MGD, an average wet weather flow of 0.27 MGD, and a peak wet weather flow of 0.77 MGD. Currently, wastewater flows within the service area range between 0.1 MGD (dry weather) and 0.5 MGD (wet weather), indicating that RID's system is operating at approximately 59 percent of its dry weather capacity and 78 percent of its wet weather capacity. RID notes its collection system experiences inflow and infiltration during winter storms.⁶²

WEOTT COMMUNITY SERVICES DISTRICT

The Weott Community Services District's (Weott CSD) wastewater system, constructed between 1989 and 1991, currently serves most areas within its jurisdiction, providing service to approximately 134 residential connections. The wastewater system includes a network of gravity mains, lift station, and centralized septic tank. Disposal of treated wastewater is through a community leach field and direct discharge into the South Fork Eel River, when necessary. Generated sludge is transported to the Humboldt County solid waste transfer station for landfill disposal. The system's permitted dry weather capacity is 30,000 gpd, with average flows ranging from an average of 14,000 gpd during dry weather to 30,000 gpd during wet weather. Significant upgrades were made to the wastewater system in 2000 under a USDA grant. The system is operating well and does not require any planned upgrades currently.⁶³

⁶⁰ LAFCo. 2008. Redway Community Services District Municipal Service Review. <https://humboldtlaico.org/wp-content/uploads/Redway-CSD-ADOPTED-MSR-July-2008.pdf> (accessed November 2024).

⁶¹ LAFCo. 2009. Resort Improvement District #1 Municipal Service Review. <https://humboldtlaico.org/wp-content/uploads/RID-No1-Adopted-MSR-2009.pdf> (accessed November 2024).

⁶² LAFCo. 2009. Resort Improvement District #1 Municipal Service Review. <https://humboldtlaico.org/wp-content/uploads/RID-No1-Adopted-MSR-2009.pdf> (accessed November 2024).

⁶³ LAFCo. 2012. Weott Community Services District Municipal Service Review. <https://humboldtlaico.org/wp-content/uploads/Weott-CSD-Adopted-MSR.pdf> (accessed November 2024).

City of Arcata

The City of Arcata (Arcata) owns and operates their wastewater collection, treatment, and disposal system, which serves a total population of approximately 16,800 residents. Arcata's wastewater system consists of approximately 63 miles of pipe, ranging from 6 inches to 22 inches in diameter and eight sewage lift stations, with processing occurring at the Arcata WWTP. Much of the sewer collection system was installed in the late 1950s and consists primarily of asbestos cement pipe with some vitrified clay pipe. Over the past decade, Arcata has proactively rehabilitated portions of the collection system.⁶⁴

The Arcata WWTP employs a multi-stage treatment process involving headworks, primary clarification, oxidation ponds, treatment wetlands, enhancement wetlands, and chlorine disinfection. Solids extracted during primary clarification are further processed in anaerobic digesters and solids drying beds. The system discharges treated wastewater to Humboldt Bay, which has occurred since 1949. The Arcata WWTP faces challenges due to stormwater inflow and infiltration (inflow and infiltration), rainfall in the treatment ponds, and potential impacts associated with sea level rise. The latter is expected to affect the WWTP's capacity and treatment effectiveness in the coming decades.⁶⁵

Additionally, while the Fieldbrook-Glendale CSD owns and operates a wastewater collection and conveyance system in Glendale, Arcata provides wastewater treatment and disposal services under a contract with the Fieldbrook-Glendale CSD. It is noted that the Glendale area has approximately 177 wastewater connections. The current contract with Arcata allows for a maximum average dry weather flow of 71,200 gpd. On average, the Glendale area's wastewater flow averages 31,600 gpd (approximately 44 percent of current contract) in dry weather and increases to 62,400 gpd (approximately 88 percent of contract) during wet conditions. No deficiencies have been identified in Fieldbrook-Glendale CSD's existing wastewater collection and conveyance infrastructure. To accommodate future development in the area, the Fieldbrook-Glendale CSD would need to explore alternative treatment and disposal solutions or increase its allocation from Arcata; however, Arcata is not interested in expanding its contract for additional treatment. The Fieldbrook-Glendale CSD has approached the City of Blue Lake regarding potential interconnection.⁶⁶

City of Blue Lake

The City of Blue Lake's (Blue Lake) wastewater system serves approximately 1,255 customers within a 0.6-square-mile service area, including within the city limits, as well as 45 customers located outside the city limits. The system encompasses a WWTP, sewer mains, manholes, lift stations, two pump stations, and over 16 miles of pipe.⁶⁷ Blue Lake's WWTP includes a 4-cell secondary treatment lagoon system, a chlorine disinfection system, and two effluent disposal percolation ponds. The WWTP's treatment capacity is 1 MGD, designed for average flows of 0.25 MGD and peak flows of 1.54 MGD. On average, the City's WWTP has an ADWF of 0.18 MGD. In 2023, the City determined its sewer system has a remaining capacity to support an additional 100 residential equivalent units allocations.⁶⁸

⁶⁴ LAFCo. 2020. City of Arcata Municipal Services Review. https://humboldtlafo.org/wp-content/uploads/Arcata-MSR_Adopted-11-18-20.pdf (accessed November 2024).

⁶⁵ Ibid.

⁶⁶ LAFCo. 2015. Fieldbrook Glendale Community Services District Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/FGCSD-Final-MSR_Adopted-07-15-15.pdf (accessed November 2024).

⁶⁷ LAFCo. 2019. City of Blue Lake Municipal Service Review. <https://humboldtlafo.org/wp-content/uploads/Blue-Lake-MSR-ADOPTED-7-17-19.pdf> (accessed November 2024).

⁶⁸ Ibid.

City of Eureka

The City of Eureka's (Eureka) wastewater infrastructure comprises approximately 125 miles of sewer mains, 9,500 service laterals, 18 lift stations, four major pump stations, and ancillary components, and handles between 1.6 and 1.8 billion gallons of wastewater annually. The Elk River WWTP, developed in 1981, serves the residents of Eureka, as well as the surrounding unincorporated areas under the purview of the HCSD, and is estimated to serve approximately 45,000 total residents. The Elk River WWTP was designed to treat 6 MGD but is currently permitted to treat 5.24 MGD. Treated wastewater is released into Humboldt Bay during low tide, and excess wastewater is temporarily held in a pond and marsh during heavy rains. The sludge from the wastewater is treated and stored in lagoons before being processed and used as a soil conditioner. It is reported that Eureka's wastewater collection system experiences certain age-related deficiencies, including inflow and infiltration, pipe deterioration, aging pumping systems, and occasional capacity limitations during heavy rainfall.⁶⁹

City of Ferndale

The City of Ferndale (Ferndale) provides community wastewater service to approximately 660 connections (638 residences and 33 commercial customers), including 31 connections outside of the city limits in Arlynda Corners. Ferndale's WWTP, built in 2012, employs tertiary treatment utilizing extended aeration, nutrient removal, filtration, and ultraviolet disinfection. Ferndale's system has a treatment capacity of up to 1.0 MGD; however, with use of a holding storage pond, Ferndale's WWTP can manage a total flow of up to 6.0 MGD. Ferndale implements a water recycling program and while treated wastewater is discharged into Francis Creek during specific periods, treated wastewater is also sometimes utilized for agricultural irrigation.⁷⁰

City of Fortuna

The City of Fortuna's (Fortuna) wastewater system comprises eight pumping stations, a collection system, and a WWTP. Fortuna's wastewater system primarily serves residential and commercial users, accounting for approximately 90 percent of connections, while industrial users comprise the remaining 10 percent. Fortuna's wastewater collection system is generally considered adequate to meet existing needs. In 2007, the WWTP underwent upgrades and expansion, which increased overall capacity and added new equipment. The Fortuna WWTP can treat 1.5 MGD (average annual flow) and 421.3 MGD (maximum monthly flow). In 2019, ADWF was 0.827 MGD, while the average influent flow during the wet season was 1.498 MGD. Fortuna has also implemented a long-term solid handling plan, which includes composting biosolids for reuse as a soil conditioner by residents and agricultural producers.⁷¹

City of Rio Dell

The City of Rio Dell (Rio Dell) provides wastewater collection, treatment, and disposal services to approximately 1,448 connections. Rio Dell's wastewater system comprises a network of pipes, manholes, cleanouts, and pumps that convey to Rio Dell's WWTP. In 2013, upgrades were conducted to the WWTP, which included replacing the old conventional WWTP with a modern

⁶⁹ LAFCo. 2014. City of Eureka Municipal Services Review. https://humboldtlafo.org/wp-content/uploads/Eureka-Adopted-MSR_1-15-14.pdf (accessed November 2024).

⁷⁰ LAFCo. 2018. City of Ferndale Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/City-of-Ferndale-MSR-SOI_Adopted-11-14-18.pdf (accessed November 2024).

⁷¹ LAFCo. 2021. City of Fortuna Municipal Services Review and Sphere of Influence Update. https://humboldtlafo.org/wp-content/uploads/Fortuna-MSR-Adopted_1-20-21.pdf (accessed November 2024).

activated sludge process to address nutrient removal, in addition to construction of a flood irrigation field. The WWTP has a design capacity of 2 MGD with an average daily flow of 0.25 MGD. Under Rio Dell's treatment process, sewage sludge is separated from the liquid. Once treated, the liquid portion is discharged into the Eel River (October-May) or the flood irrigation fields (May-October). The separated sludge is dried on-site and made available to residents as a soil amendment. Rio Dell has identified several wastewater facility improvement projects, including addressing high amounts of inflow and infiltration, and is seeking grant funding for the improvements.⁷²

City of Trinidad

The City of Trinidad does not offer community wastewater service. Existing development is supported by individual on-site wastewater treatment systems (septic).

Stormwater Generation, Infrastructure, and Collection

Stormwater drainage facilities within Humboldt generally include curbs, gutters, drop-inlets, culverts, underground drainage conduit, and roadside ditches. Such constructed drainage facilities are typically provided within city cores, including the Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. Stormwater drainage within Humboldt County primarily follows or is directed to natural drainage courses (without treatment or filtration), including creeks, streams, and rivers, infiltrates, or is retained on-site.

Electric Power Source, Supply, Demand, and Use

Unincorporated County and Incorporated Cities

PACIFIC GAS AND ELECTRIC COMPANY

Pacific Gas and Electric Company (PG&E) provides electric power and natural gas service to northern and central California, including unincorporated and incorporated portions of Humboldt County. PG&E's service area totals approximately 70,000 square miles, bounded by Eureka in the north, Bakersfield in the south, the Pacific Ocean in the west, and the Sierra Nevada. The company supports approximately 16 million people, including 5.5 million electric customer accounts system-wide, and maintains approximately 106,700 circuit miles of electric distribution lines and 18,500 circuit miles of transmission lines.⁷³

PG&E produces and purchases energy from multiple sources, including both conventional and renewable sources. PG&E produces power through hydropower, gas-fired steam, and nuclear energy. PG&E also acquires electricity from more than 400 power facilities owned by independent power producers or qualified facilities, which is then transmitted and sold to its customers.⁷⁴ Based on PG&E's 2024 Corporate Sustainability Report, PG&E owns 7,820 mega-watts of hydroelectric, nuclear, natural gas, battery energy storage, and solar generation to serve their customers, with

⁷² LAFCo. 2018. City of Rio Dell Municipal Service Review. https://humboldtlafo.org/wp-content/uploads/City-of-Rio-Dell-MSR-SOI_Adopted-11.14.18.pdf (accessed November 2024).

⁷³ Pacific Gas and Electric Company (PG&E). 2024. Company Profile. <https://www.pge.com/en/about/company-information/company-profile.html#:~:text=The percent20company percent20provides percent20natural percent20gas,in percent20northern percent20and percent20central percent20California> (accessed November 2024).

⁷⁴ PG&E. 2024. PG&E's Electric System. <https://www.pge.com/assets/pge/docs/about/pge-systems/pge-electric-system.pdf>. (accessed November 2024).

over 3.5 giga-watts of energy storage capacity.⁷⁵ In addition, PG&E notes it delivered 100 percent greenhouse gas (GHG)-free electricity (comprised of 53 percent nuclear, 33 percent renewable sources, and 14 percent large hydroelectric) in 2023 to its residential and commercial customers to whom they directly sell power. PG&E has a goal for achieving a net-zero energy system by 2040 (5 years before the State of California's current carbon neutrality goal) and exceeded its annual GHG reduction goals for 2023. PG&E also offers numerous programs to support sustainability and climate resiliency, including but not limited to a variety of electrification programs, rebate programs, and programs which allow customers to purchase up to 100 percent of their electricity from renewable resources. It is further reported that as of mid-2021, PG&E is working to increase wildfire safety of its systems, including undergrounding of 10,000 miles of its electric distribution power lines. In 2023, PG&E exceeded its target of undergrounding 350 line miles, in which 364 line miles were undergrounded, with a target for 2024 to underground another 250 line miles of electric lines.⁷⁶

Additionally, PG&E works with several Community Choice Aggregation (CCA) programs within their service area, which allow cities and counties to purchase and/or generate electricity for residents and businesses in the territories they serve. Specifically, PG&E partners with CCAs to deliver the electricity over PG&E's transmission and distribution system, while also continuing to provide meter reading, billing, maintenance, and outage response services. There are currently 12 CCAs operating within PG&E's jurisdiction, including the Redwood Coast Energy Authority, a joint powers agency located in Humboldt County, described below.⁷⁷

It is important to note that power deficiencies have been identified within the County, particularly within southern Humboldt, including the Cities of Fortuna and Rio Dell and unincorporated community of Garberville. In August 2022, PG&E identified electric power capacity concerns for southern Humboldt, noting that areas within Fortuna, Rio Dell, and the Garberville areas had or nearly reached capacity for further development. It was further noted that necessary transmission, substation, and distribution line work required to address the identified issues would take a minimum of seven years to address.⁷⁸ In a statement issued by PG&E in September 2022, it was noted that projects including a line reconductoring project and upgrades to the Rio Dell substation and transmission and distribution system line reconductoring and upgrades at the Garberville substation would increase capacity for Fortuna, Rio Dell, and Garberville. Further, it was confirmed that shorter-term projects would ensure the new planned Jerold Phelps Community Hospital project in Garberville (comprising an approximately 30,000 square foot hospital and 15,000 square foot community clinic, anticipated to be completed in late 2028⁷⁹) could be adequately served and able to move forward.⁸⁰

⁷⁵ PG&E. 2024. 2024 Corporate Sustainability Report. https://www.pgecorp.com/sustainability/corporate-sustainability/corporate_sustainability_report_2024.html (accessed November 2024).

⁷⁶ Ibid.

⁷⁷ PG&E. 2024. Community Choice Aggregation (CCA). <https://www.pge.com/en/account/alternate-energy-providers/community-choice-aggregation.html#accordion-1d9bb84ce2-item-ad8b92cacf> (accessed November 2024).

⁷⁸ Humboldt County. 2022. Board of Supervisors Staff Report – File No.: 22-1444.

<https://humboldt.legistar.com/View.ashx?M=F&ID=11368710&GUID=1FCCA9D5-DC4C-438C-8F71-3161A356172A> (accessed November 2024).

⁷⁹ Lost Coast Outpost. 2024. Behold! SoHum Health Reveals Draft Architectural Designs for New Garberville Hospital and Clinic. <https://lostcoastoutpost.com/2024/aug/23/behold-sohum-health-reveals-draft-architectural-de/> (accessed November 2024).

⁸⁰ Lost Coast Outpost. 2022. PG&E Releases Statement Addressing Electricity Transmission Lines, Says Short-Term Improvements Will Allow Garberville Hospital Project to Proceed. <https://lostcoastoutpost.com/2022/sep/20/pge-releases-statement-addressing-electricity-tran/> (accessed November 2024).

REDWOOD COAST ENERGY AUTHORITY

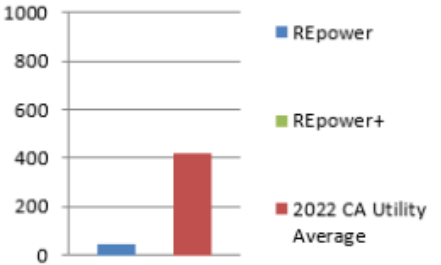
Redwood Coast Energy Authority (RCEA) is a local government Joint Powers Agency located in Humboldt County. Members include the County of Humboldt; the Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad; the Blue Lake Rancheria; the Yurok Tribe; and the Humboldt Bay Municipal Water District (HBMWD). The purpose of RCEA is to “develop and implement sustainable energy initiatives that reduce energy demand, increase energy efficiency, and advance the use of clean, efficient and renewable resources available in the region for the benefit of the Member agencies and their constituents.”⁸¹

Power supplied by RCEA is sourced primarily from wind, solar, and hydropower from California and the Pacific Northwest, in addition to local biomass. RCEA offers two electric power sources: Repower, which is partially derived from renewable sources, with a goal of being 100 percent renewable by 2030; and Repower+, which is entirely derived from renewable and carbon-free energy sources. Table 3.9-3 provides a breakdown of RCEA’s energy program sources, compared to the statewide average power source mix.⁸²

⁸¹ Redwood Coast Energy Authority (RCEA). 2024. About RCEA. <https://redwoodenergy.org/about-rcea/> (accessed November 2024).

⁸² RCEA. 2024. Power Resources. <https://redwoodenergy.org/power-resources/> (accessed November 2024).

Table 3.9-3 RCEA Power Source Information (2022)⁸³

2022 POWER CONTENT LABEL						
Redwood Coast Energy Authority						
Redwoodenergy.org						
Greenhouse Gas Emissions Intensity (lbs CO₂e/MWh)			Energy Resources	REpower	REpower+	2022 CA Power Mix
REpower	REpower+	2022 CA Utility Average	Eligible Renewable ¹	50.0%	100.0%	35.8%
49	0	422	Biomass & Biowaste	20.4%	0.0%	2.1%
			Geothermal	0.0%	0.0%	4.7%
			Eligible Hydroelectric	1.0%	33.3%	1.1%
			Solar	21.5%	33.3%	17.0%
			Wind	7.1%	33.3%	10.8%
			Coal	0.0%	0.0%	2.1%
			Large Hydroelectric	45.0%	0.0%	9.2%
			Natural Gas	0.0%	0.0%	36.4%
			Nuclear	0.0%	0.0%	9.2%
			Other	0.0%	0.0%	0.1%
			Unspecified Power ²	5.0%	0.0%	7.1%
			TOTAL	100.0%	100.0%	100.0%
Percentage of Retail Sales Covered by Retired Unbundled RECs³:				0%	0%	
¹ The eligible renewable percentage above does not reflect RPS compliance, which is determined using a different methodology.						
² Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.						
³ Renewable energy credits (RECs) are tracking instruments issued for renewable generation. Unbundled renewable energy credits (RECs) represent renewable generation that was not delivered to serve retail sales. Unbundled RECs are not reflected in the power mix or GHG emissions intensities above.						
For specific information about this electricity portfolio, contact:			Redwood Coast Energy Authority (707) 279-1700			
For general information about the Power Content Label, visit:			https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure-program			

Since May 2017, RCEA reports their Community Choice Energy (CCE) program has served approximately 63,000 customers with approximately 700 million kilowatt-hours of annual load.⁸⁴

Natural Gas Supply, Demand, and Use

In addition to electric power, Pacific Gas and Electric Company (PG&E) provides natural gas service to its approximately 70,000-square-mile service area within northern and central California, including Humboldt.⁸⁵ PG&E's natural gas system includes approximately 44,200 miles of gas distribution pipelines and 6,400 miles of gas transmission pipelines, in addition to three gas storage facilities and nine compression stations, which support approximately 4.6 million accounts system-wide.⁸⁶ On average, PG&E reports they provide approximately 970 billion cubic feet of natural gas to its customers, which equates to about 2.6 billion cubic feet per day. Currently, approximately 27 percent of PG&E's power source is derived from natural gas.⁸⁷

⁸³ RCEA. 2024. About RCEA. <https://redwoodenergy.org/about-rcea/> (accessed November 2024).

⁸⁴ RCEA. 2024. Power Procurement. <https://redwoodenergy.org/power-procurement/> (accessed November 2024).

⁸⁵ PG&E. 2024. Gas Systems – Discover the Basics of Our System by the Numbers. <https://www.pge.com/en/about/pge-systems/gas-systems.html#tabs-fc6b80548f-item-94036063d6-tab> (accessed November 2024).

⁸⁶ PG&E. 2024. 2024 Corporate Sustainability Report. https://www.pgecorp.com/sustainability/corporate-sustainability/corporate_sustainability_report_2024.html (accessed November 2024).

⁸⁷ PG&E. 2024. Gas Systems – Discover the Basics of Our System by the Numbers. <https://www.pge.com/en/about/pge-systems/gas-systems.html#tabs-fc6b80548f-item-94036063d6-tab> (accessed November 2024).

In its 2024 Sustainability Report, it is noted that PG&E continues to “invest in the safety and reliability of our gas transmission pipeline system.”⁸⁸ Between 2011 and 2023, safe operating pressure testing has occurred on 1,614 miles of gas pipeline; 285 miles of gas transmission pipeline has been replaced; 405 valves have been automated, allowing for automatic or remote-control shut-off of gas in an emergency; and 2,237 miles of gas transmission lines have been retrofitted to allow for in-line inspections with technologically-advanced tools.⁸⁹

Telecommunications Demand, Infrastructure, and Distribution

Telecommunication services include telephone service (both landlines and mobile service) and community internet service. Telecommunications providers in Humboldt include several nationwide and local service providers, including the following:

Landline Phone Service

- Spectrum
- 101Netlink
- Stewart Telecommunications
(business/office phone systems)

Mobile Phone Service

- AT&T
- Optimum
- T-Mobile
- US Cellular
- Verizon

Internet Service

- Access Universal
- AT&T
- HughesNet
- Optimum
- Renaissance Internet
- Starlink
- T-Mobile
- US Cellular
- 101Netlink
- Vero

Telecommunications infrastructure within Humboldt includes underground optical fibers, cell towers, and standard phone equipment and internet routers owned and operated by telecommunications providers.

Solid Waste Generation, Collection, and Disposal

Humboldt is served by several solid waste service providers, including the following:

▪ Recology Humboldt County	▪ Tom’s Trash
▪ Eel River Recology	▪ Blue Lake Garbage
▪ Humboldt Sanitation	

A description of these providers, existing solid waste generation and collection in Humboldt, and solid waste disposal facilities serving the County and cities are provided below.

⁸⁸ PG&E. 2024. 2024 Corporate Sustainability Report. https://www.pgecorp.com/sustainability/corporate-sustainability/corporate_sustainability_report_2024.html (accessed November 2024).

⁸⁹ Ibid.

Unincorporated Humboldt County

HUMBOLDT SANITATION

Humboldt Sanitation provides community solid waste collection from McKinleyville to Orick, including the communities of Trinidad, Westhaven, and Big Lagoon. Additionally, between McKinleyville and Big Lagoon, residential recycling collection is also provided. For residential services, garbage collection occurs weekly, while recycling collection occurs on a bi-weekly basis. North of Big Lagoon, automated service is not available, and customers must provide their own garbage can. Curbside recycling service is not available for customers residing north of Big Lagoon. Commercial refuse collection also occurs weekly, with commercial cardboard collection also available in McKinleyville and Trinidad (3 times per week, weekly, bi-weekly, or monthly).⁹⁰

Humboldt Sanitation also operates a full-service recycling center in McKinleyville (Humboldt Recycling) at its McKinleyville Transfer Station. Humboldt Recycling accepts a variety of recyclable materials, including aluminum, glass, plastics, cardboard, newspaper, shredded office paper, mixed paper, mattress and box springs, oil, batteries, sharps/needles, and electronic waste.⁹¹

The McKinleyville Transfer Station accepts most forms of non-hazardous waste, including but not limited to residential, commercial, construction, e-waste, and green waste, bulky items, metals, tires, and automotive products. Humboldt Sanitation also operates four additional transfer stations within the county, located in Orick, Orleans, Willow Creek, and Redwood Valley.⁹²

HUMBOLDT WASTE MANAGEMENT AUTHORITY

Humboldt Waste Management Authority (HWMA) was established by a Joint Powers Agreement comprised of the County of Humboldt and the Cities of Arcata, Blue Lake, Eureka, Ferndale, and Rio Dell in 1999. Several solid waste and recycling facilities are operated with the county. Solid waste transfer sites within Humboldt County are located in Alderpoint, Blocksburg, Eureka, Fortuna, Fruitland, McKinleyville, Orick, Orleans, Petrolia, Redway, Redwood Valley, Shelter Cove, Whitethorn, and Willow Creek. In addition, HWMA operates the Hawthorne Street Transfer State, Eureka Recycling Center, and Household Hazardous Waste Facility within Eureka. Additionally, HWMA is responsible for the 30-year post-closure maintenance and monitoring activities associated with the Cummings Road Landfill, which ceased landfill operations in June 2000, with construction closure activities completed in 2016. HWMA does not provide or oversee curbside pick-up services, previously described under the prior subsection.

No operational landfills are currently located within Humboldt. After waste is collected and sent to respective transfer stations and/or solid waste is taken to transfer stations by individuals, solid waste collected within Humboldt is hauled out of the area to two landfills, including the Potrero Hills Landfill in Solano County, California and the Dry Creek Landfill near Medford, Oregon. An overview of the landfills that accept waste from Humboldt is summarized in Table 3.9-4, below.

⁹⁰ Humboldt Sanitation. 2024. Curbside Collection. <https://humboldtsanitation.com/curbside-collection/> (accessed November 2024).

⁹¹ Humboldt Sanitation. 2024. Humboldt Recycling. <https://humboldtsanitation.com/recycling-information/> (accessed November 2024).

⁹² Humboldt Sanitation. 2024. Transfer Station. <https://humboldtsanitation.com/transfer-station/> (accessed November 2024).

Table 3.9-4 Estimated Humboldt Landfill Capacities and Closure Dates

Facility Name	Estimated Remaining Life (years)	Maximum Permitted Capacity (cubic yards)	Estimated Remaining Capacity (tons)	Permitted Daily Intake (tpd)
Potrero Hills Landfill ¹ (Suisun City, CA)	24	83,100,000	13,872,000	4,330
Dry Creek Landfill ² (White City, Oregon)	76	90,090,201	*	*

* = Information not available; tpd = tons per day

Sources:

¹ California Department of Resources Recycling and Recovery (CalRecycle). 2024. Solid Waste Information System (SWIS) Facility/Site Activity Details: Potrero Hills Landfill (48-AA-0075). <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1194?siteID=3591> (accessed November 2024).

² U.S. Environmental Protection Agency. 2023. GHG Facility Details – Dry Creek Landfill. <https://ghgdata.epa.gov/ghgp/service/facilityDetail/2023?id=1005652&ds=E&et=&popup=true> (accessed November 2024).

Approximately one-third of Humboldt County’s waste is trucked north to the Dry Creek landfill near Medford, Oregon, with two-thirds of the County’s solid waste hauled by Solid Waste of Willits to the Potrero Hills landfill in Solano County, California.⁹³

TOM’S TRASH

Tom’s Trash offers community solid waste collection service to Willow Creek and Hoopa, as well as areas within Trinity County. Additionally, weekly curbside recycling service is also available to Willow Creek and the areas served within Trinity County.⁹⁴

City of Arcata

The City of Arcata provides a universal curbside solid waste and recycling collection program. Garbage, recycling, and yard waste is collected curbside weekly by Recology Arcata.⁹⁵

City of Blue Lake

Blue Lake Garbage company provides weekly garbage and bi-weekly recycling pick up within the Blue Lake area.⁹⁶

City of Eureka

Recology Humboldt County has provided residential and commercial solid waste, recycling, and yard waste collection services within the City of Eureka and outlying areas for over 45 years.⁹⁷

⁹³ Humboldt County. 2017. General Plan. <https://humboldt.gov/205/General-Plan> (accessed November 2024).

⁹⁴ Tom’s Trash. 2024. Commercial & Residential Trash Service. <https://tomstrash.com/#> (accessed November 2024).

⁹⁵ City of Arcata. 2024. Arcata General Plan Update Draft Environmental Impact Report. https://www.cityofarcata.org/DocumentCenter/View/13935/Arcata-GP-DEIR_20240126 (accessed November 2024).

⁹⁶ City of Blue Lake. Not Dated. *Garbage Pick-Up & Curbside Recycling*. <https://bluelake.ca.gov/city-services/new-residents/>.

⁹⁷ Recology Humboldt County. 2024. Your Carts. <https://www.recology.com/recology-humboldt-county/eureka/your-carts/> (accessed November 2024).

City of Ferndale

Eel River Resource Recovery provides weekly curbside garbage pickup and bi-weekly curbside recycling and green waste pickup.⁹⁸

City of Fortuna

Eel River Recology (formerly known as Eel River Disposal) serves the City of Fortuna with solid waste and recycling services through a franchise agreement. Such services have been provided since the 1990s. Collection services are offered weekly. Recology Eel River also provides curbside single-stream recycling and green waste totes. Pick-up for recycling and green waste totes alternate weeks.⁹⁹

City of Rio Dell

Eel River Recology provides solid waste, recycling, and green waste hauling services to Rio Dell on a weekly basis. Residents may also elect to self-haul waste to the Eel River Recology transfer station in Fortuna.¹⁰⁰

City of Trinidad

Humboldt Sanitation provides solid waste services in Trinidad. For residential services, garbage collection occurs weekly, while recycling collection occurs on a bi-weekly basis. Commercial refuse collection also occurs weekly, with commercial cardboard collection also available (3 times per week, weekly, bi-weekly, or monthly).¹⁰¹

3.9.3 Regulatory Framework

Federal Regulations

Clean Water Act

The federal Clean Water Act (CWA), enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The CWA established the basic structure for regulating discharges of pollutants into the waters of the United States and regulates surface water quality standards. Under the CWA, it is unlawful to discharge any pollutant from a point source (e.g., pipes, man-made ditches, etc.) into navigable waters unless a permit is first obtained.

At the federal level, the Clean Water Act is administered by the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACE), where the U.S. EPA is primarily responsible for controlling water pollutants, while USACE regulates dredged and fill material. At the State and regional levels in California, the Act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB), including the

⁹⁸ City of Ferndale. 2024. Info for Residents. [https://ci.ferndale.ca.us/documents/info-for-residents/#~:text=Eel%20River%20Resource%20Recovery%2C%20\(707,other%20week%20of%20each%20month](https://ci.ferndale.ca.us/documents/info-for-residents/#~:text=Eel%20River%20Resource%20Recovery%2C%20(707,other%20week%20of%20each%20month). (accessed November 2024).

⁹⁹ City of Fortuna. 2024. Solid Waste – Recology Eel River. https://www.friendlyfortuna.com/departments/public_works/general_services_department/solid_waste/index.php (accessed November 2024).

¹⁰⁰ City of Rio Dell. 2024. Recycling. <https://www.cityofriodell.ca.gov/recycling> (accessed November 2024).

¹⁰¹ Humboldt Sanitation. 2024. Curbside Collection. <https://humboldtsanitation.com/curbside-collection/> (accessed November 2024).

North Coast Regional Water Quality Control Board (NCRWQCB; Region 1), which comprises Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity Counties.

SECTION 303(D)

Section 303(d) of the CWA requires states to periodically prepare a list of surface waters in the state for which beneficial uses of the water – such as drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These are estuaries, lakes, streams, and groundwater basins that fall short of state surface water quality standards and are not expected to improve within the next two (2) years. States are also required to develop Total Maximum Daily Loads (TMDLs) for the contaminant(s) of concern, specifying the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and allocating pollutant loadings among point and non-point pollutant sources.

SECTION 401

Section 401 of the CWA addresses water quality by regulating the discharge of dredged or fill materials to waters of the State. In California, the EPA has delegated authority of Section 401 of the CWA to the SWRCB and the nine RWQCB. If a project may result in a discharge of dredged or fill material to waters of the State, an application for a 401 Water Quality Certification must be submitted to the State or Regional Water Board prior to initiating construction.

SECTION 402

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) permit program in 1972 to address water pollution by regulating point sources that discharge pollutants to waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. Section 402 of the CWA requires that all construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater or stormwater directly from a point source, such as a pipe, ditch, or channel, into a surface water of the United States must obtain permission under the NPDES permit. All NPDES permits are written to ensure that the surface water receiving discharges will achieve specified water quality standards. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

SECTION 404

Section 404(e) of the CWA regulates activities that involve discharging dredged or fill materials to waters of the United States, including wetlands. The U.S. Army Corps of Engineers (USACE) issues permits to authorize such activities. Activities proposed below the mean high tide line in tidal waters or below the ordinary high-water mark in fresh waters are considered waters of the United States, as defined by USACE, and, therefore, are subject to a permit review process under Section 404 of the CWA.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA; 42 U.S.C. §300f et seq.) was passed by Congress in 1974 and amended in 1986, 1996, and 2018 to protect the quality of drinking water in the United States. Specifically, the SDWA regulates public drinking water systems that serve at least 15 service connections or 25 persons. Public drinking water supplies are regulated through the Public Water System Supervision (PWSS) program, which establishes, implements, and enforces health protection standards. In California, the SWRCB Division of Drinking Water (DDW) regulates public drinking water systems.

Energy Policy Act

The U.S. Department of Energy (DOE) is the federal agency responsible for establishing policies regarding energy conservation, domestic energy production, and infrastructure. The Federal Energy Regulatory Commission (FERC), created under the Department of Energy Organization Act of 1977, is an independent federal agency, officially organized as part of the DOE, which is responsible for regulating interstate transmission of natural gas, oil, and electricity; reliability of the electric grid; and approving of construction of interstate natural gas pipelines and storage facilities. The Energy Policy Act of 2005 granted FERC additional responsibilities, including overseeing the reliability of the nation's electricity transmission grid and supplementing state transmission siting efforts in national interest electric transmission corridors.

FERC has authority to oversee mandatory reliability standards governing the nation's electricity grid. FERC has established rules on certification of an Electric Reliability Organization which establishes, approves, and enforces mandatory electricity reliability standards. The North American Electric Reliability Corporation has been certified as the nation's Electric Reliability Organization by FERC to enforce reliability standards in all interconnected jurisdictions in North America. Although FERC regulates the bulk energy transmission and reliability throughout the United States, the areas outside of FERC's jurisdictional responsibility include State-level regulations and retail electricity and natural gas sales to consumers which falls under the jurisdiction of State regulatory agencies.

The Federal Communications Commission requires all new cellular tower construction to be approved by the State or local authority for the proposed site and comply with Federal Communications Commission rules involving environmental review. Additionally, the Telecommunications Act of 1996 requires construction of new cellular towers to comply with the local zoning authority.

Resource Conservation and Recovery Act

The Resource and Recovery Act (RCRA) [Part 258, Subtitle D of Title 40 of the Code of Federal Regulations (CFR)] is the principal federal law governing solid and hazardous waste disposal. The RCRA contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code, Section 7) was enacted in 1969 and serves as the primary law governing water quality regulation in California. The Act includes

provisions to address requirements of the federal Clean Water Act (CWA), including National Pollutant Discharge Elimination System (NPDES) permitting, dredge and fill programs, and civil and administrative penalties. The Porter-Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the State. Additionally, the Porter-Cologne Act states that the quality of all the waters of the State, including groundwater and surface water, must be protected for the use and enjoyment by the people of the State.

In California, the NPDES program is administered by the SWRCB through the nine (9) RWQCBs and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. The federal Clean Water Act prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California, and adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, otherwise known as the Construction General Permit (Order 2009-0009, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Construction General Permit requires that the landowner and/or contractor file permit registration documents (including notice of intent, risk assessment, site map, SWPPP, and signed certification statement) prior to commencing construction and then pay a fee annually through the duration of construction. The Construction General Permit also specifies minimum BMP requirements for stormwater control based on the risk level of the site.

California Sustainable Groundwater Management Act

In September 2014, Governor Brown signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act (SGMA; AB 1739, SB 1168, and SB 1319) gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins.

California Senate Bills 610 and 221 (Water Supply Assessment and Verification)

Senate Bills (SB) 610 and 221 amended State law, effective January 1, 2002, to improve the link between the information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large development projects with greater than 500 dwelling units or 500,000 square feet of commercial space. Both statutes also require this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Under SB 610 water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects as defined in Water Code 10912 subject to CEQA. Under SB 221 approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

California Water Plan

The California Department of Water Resources (DWR) is responsible for preparing and updating the California Water Plan, which is a policy document that guides the development and management of State water resources. The plan was last updated in December 2023 and is updated every five years

to reflect changes in resources and urban, agricultural, and environmental water demands. The California Water Plan suggests ways of managing demand and augmenting supply to balance water supply with demand.

California Urban Water Management Planning Act

In 1983, the California Legislature enacted the California Urban Water Management Planning Act (CUW; Water Code Section 10610–10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act requires that urban water suppliers adopt an urban water management plan (UWMP) at least once every five years and submit them to the Department of Water Resources. Noncompliant urban water suppliers are ineligible to receive funding pursuant to Division 24, commencing with Section 78500, or Division 26, commencing with Section 79000, or receive drought assistance from the State until the UWMP is submitted and deemed complete pursuant to the Urban Water Management Planning Act.

Water Conservation Act of 2009 (Senate Bill X7-7)

In November 2009, the California State Legislature passed, and the Governor approved, a comprehensive package of water legislation, including the Water Conservation Act of 2009 (SB X7-7; CA Water Code Sections 10608-10688.44) addressing water conservation. In general, SB X7-7 required a 20 percent reduction in per capita urban water use by 2020, with an interim 10 percent target in 2015. California exceeded the required per capita reduction, in which per capita urban water use was reduced by 32 percent¹⁰². The legislation also requires urban water users to develop consistent water use targets and to use those targets in their UWMPs.

State Water Resources Control Board General Waste Discharge Requirement

The SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to the nine RWQCBs to enforce these requirements within their region. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The North Coast RWQCB issues and enforces NPDES permits in Humboldt County.

¹⁰² California Department of Water Resources. 2023. Status of 2020 Urban Water Management Plans – A Report to the Legislature pursuant to Section 10644 of the California Water Code. <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Legislative-Reports/Status-of-2020-Urban-Water-Management-Plans-Report-to-Legislature.pdf> (accessed November 2024).

Senate Bill 1389

Senate Bill 1389 (Public Resources Code Sections 25300–25323), adopted in 2002, requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Under the bill, the California Energy Commission must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years and update every other year. An Integrated Energy Policy Report (IEPR) was last prepared in 2023 (adopted in February 2024), with updates currently in progress for 2024. The 2023 IEPR¹⁰³ provides an update on the current status of renewable energy supply and infrastructure, what is still needed, and recommendations for how to achieve the State’s target of 100 percent renewable and zero-carbon electricity by 2045.

Senate Bill 1020

Senate Bill 1020 (SB 1020), signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. All State agencies facilities must be served by 100 percent renewable and zero-carbon resources by 2030. SB 1020 also requires the Public Utilities Commission, Energy Commission, and California Air Resources Board to issue a joint progress report outlining the reliability of the electrical grid with a focus on summer reliability and challenges and gaps. Additionally, SB 1020 requires the Public Utilities Commission to define energy affordability and use energy affordability metrics to develop protections, incentives, discounts, or new programs for residential customers facing hardships due to energy or gas bills.

Senate Bills 529 and 1174

SB 529 and SB 1174 included measures to streamline transmission system upgrade approvals, with the intent to reduce obstacles related to bringing new clean energy supply into operation.

California Integrated Waste Management Act (Assembly Bill 939)

The California Integrated Waste Management Act (CIWMA), also known as AB 939 (Public Resources Code 41780), requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements as part of their integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

California's Short-Lived Climate Pollutant Reduction Strategy (Senate Bill 1383)

SB 1383 was adopted in September 2016 and aims to reduce methane and other GHG emissions statewide. SB 1383 establishes targets to achieve a 75 percent reduction from 2014 levels in the amount of organic waste across the State sent to landfills by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025. Specifically, SB 1383 requires entities that provide food donate excess food instead of simply discarding. In addition, SB 1383 regulations require that

¹⁰³ The 2023 California Energy Commission’s (CEC) Integrated Energy Policy Report (IEPR) as well as previous years’ reports and updates are available for review at the CEC’s website at the following link: <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report>.

jurisdictions conduct education and outreach on organics recycling to all residents, businesses, haulers, solid waste facilities, and local food banks and other food recovery organizations.

Assembly Bill 1826

AB 1826 requires jurisdictions to implement an organic waste recycling program for businesses, including outreach, education, and monitoring of affected businesses. AB 1826 defines “organic waste” as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. It also defines a “business” as a commercial or public entity, including, but not limited to, a firm, partnership, proprietorship, joint stock company, corporation, or association that is organized as a for-profit or nonprofit entity, or a multi-family residential dwelling consisting of five or more units. As of January 1, 2017, businesses that generate 4 cubic yards or more of organic waste per week are subject to this requirement. Commencing January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week also are required to arrange for organic waste recycling services. In September 2020, CalRecycle reduced this threshold to 2 cubic yards of solid waste (i.e., total of trash, recycling, and organics) per week generated by covered businesses.

Regional and Local Regulations

Redwood Coast Energy Authority (RCEA) Repower Humboldt Action Plan for Energy

The RCEA 2019 Update to the Comprehensive Action Plan for Energy (also known as “RePower Humboldt”) is a plan focused on the development and implementation of sustainable energy initiatives in Humboldt. RCEA will help address Humboldt’s supply-side energy needs through its existing Community Choice Energy (CCE) program and development of new programs and initiatives. RePower Humboldt includes the following goals:

- By 2025: 100 percent of RCEA’s power mix will be from a combination of State-designated renewable energy sources (solar, wind, biomass, small hydroelectric, and geothermal) and state-designated net-zero-carbon-emission existing large hydroelectric facilities.
- By 2030: Humboldt County will be a net exporter of renewable electricity and the RCEA power mix will consist of 100 percent net-zero-carbon-emission renewable sources.

Humboldt County General Plan

The Humboldt County General Plan contains the following goals and policies related to utilities and service systems¹⁰⁴:

- **Policy FR-P16: Public Utilities on TPZ Lands.** Where feasible avoid locating federal, state, or local public improvements and utilities in TPZ where the project or land acquisition will have a significant adverse effect on the production of timber or ecosystem services.
- **Goal IS-G1: Adequate Infrastructure and Services.** Well maintained public infrastructure and services supporting existing development.
- **Policy IS-P1: Coordination with Service Providers.** The County shall work cooperatively with cities and service providers to identify needs and service limitations, secure funding, and implement infrastructure and public service projects consistent with this Plan and capital improvement plans.

¹⁰⁴ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

- **Policy IS-P2: Public Infrastructure and Service Standards.** Use objective public infrastructure and service standards to:
 - Assess service conditions;
 - Identify deficiencies; and
 - Rank priorities.
- **Policy IS-P4: Fiscal Impact Assessment.** The fiscal impacts of discretionary development (i.e. projects that require the preparation of an Environmental Impact Report that may have significant impacts on existing and planned public infrastructure and services) shall be considered during the project review process. Significant adverse effects shall be mitigated to the extent feasible.
- **Policy IS-P5: Mitigation of Cross-jurisdictional Impacts.** The County shall work with the cities to ensure impacts associated with new development are mitigated for each affected jurisdiction.
- **Policy IS-P6: Infrastructure and Services Capacity.** In coordination with service providers, the County shall periodically monitor the capacities of infrastructure and services in relation to existing and planned demand.
- **Policy IS-P7: Capacity of Facilities and Land Use Decisions.** The County shall evaluate the capacity and sizing of road and drainage facilities in coordination with water and wastewater service providers to determine adequacy for proposed land uses and discretionary development.
- **Policy IS-P8: State and Federal Advocacy.** Coordinate with local service providers' efforts to influence legislation or regulations to achieve outcomes consistent with the goals and policies of this Plan.
- **Policy IS-P9: District Boundaries, Spheres of Influence, and Community Plans.** District boundaries, spheres of influence, municipal service reviews, and community plans shall be mutually compatible and support the orderly development and timing of infrastructure and services.
- **Policy IS-P10: Changes in District Boundaries.** Support the adjustment of service district or city boundaries to eliminate service area gaps, align district boundaries with already served areas, consolidate districts, improve service delivery, or to address an existing or impending threat to the public health or safety of the residents of the affected territory, consistent with this Plan.
- **Policy IS-P12: Road and Drainage System Funding Sources.** Develop funding mechanisms and sources to support the construction and maintenance of road and drainage facilities consistent with the policies and standards of the Circulation and Water Resources elements.
- **Policy IS-P13: Drainage and Flood Control.** Develop and maintain a countywide drainage and flood control plan to guide capital improvements and maintenance and serve as a basis for long-term sustainable funding mechanisms.
- **Policy IS-P16: Water and Wastewater System Capital Improvement Programs.** Support the efforts of service providers to develop and maintain capital improvement programs for construction of water and wastewater systems.
- **Policy IS-P17: On-Site Sewage Disposal Requirements.** Maintain regulations governing construction and maintenance of on-site sewage disposal systems to protect health and safety and to reflect changes in state law and advances in treatment technologies. Recognize and allow the use of alternative onsite sewage disposal systems that meet state standards.

- **Policy IS-P21: County Facilities.** Proposed County capital projects and facilities shall be analyzed for consistency with this Plan and applicable city general plans.
- **Goal T-G1: Deployment and Availability.** Communications, including high speed broadband, available to every resident, business, and institution in Humboldt County at a level of service and at a price comparable to urban communities.
- **Goal T-G2: Broadband Access.** A broadband internet infrastructure that reliably connects Humboldt to national networks and extends throughout urbanized areas to our most rural communities.
- **Goal T-G4: Communication Facilities.** Orderly planning and appropriate development of communication facilities within the County to achieve reliable access while protecting public health and safety; minimizing visual blight; and preserving the County's rural character including the protection of scenic, natural, and cultural resources.
- **Policy T-P6: Communications Facilities Within County Rights of Way.** Strongly encourage communications service providers to size underground and overhead facilities to accommodate future expansion, changes in technology, and, where possible, the facilities of other communications providers.
- **Policy T-P14: Joint Telecom Planning.** Work with local governments, utilities, schools, medical facilities, communications and other service providers, neighboring counties, tribes, state and federal entities to unify and coordinate communication infrastructure planning on a local, regional, and global basis.
- **Goal ED-G9: Telecommunications.** Reliable, redundant and modern telecommunications infrastructure and services that can attract and retain businesses.
- **Goal ED-G10: Public Water and Wastewater.** Adequate public water and wastewater facilities to accommodate the needs of the community. Utilize available industrial water resources to provide jobs, revenue, economic resources, and economic enhancement to the county.
- **Policy ED-P8: Public Infrastructure.** Assist local service providers in the pursuit of state and federal funding and development of land use assessment, rates and connection fee programs to upgrade and enhance infrastructure, including water, wastewater and recreational facilities.
- **Goal WM-G1: Comprehensive System.** A flexible system for the management of solid wastes and waste resources on a countywide basis, which encompasses storage, collection, separation, processing, reduction, reuse and repair, recycling, recovery, marketing, and, when necessary, landfill disposal.
- **Goal WM-G2: Environment, Health, and Safety.** A solid waste management system that protects and improves the county's environment, public health, safety, and economy.
- **Goal WM-G4: Management Strategy Hierarchy.** An integrated waste management hierarchy that first emphasizes source reduction, followed by reuse and repair, recycling, composting, materials recovery, environmentally safe energy recovery, environmentally safe transformation, and, as a last resort, landfill disposal.
- **Goal WM-G5: Maximize Achievement of Objectives.** Successful achievement or exceedance of integrated waste management objectives through education, economic incentives, and increased participation in waste reduction programs.
- **Goal WM-G6: Convenient, Widespread Participation.** High participation rates of recycling and waste diversion programs by making options convenient and widely available, such as through curbside recycling collection.

- **Goal WM-G7: Recovered Materials for Local Industry.** Growth in local businesses using previously discarded materials as a resource for value added manufacturing.
- **Goal WM-G8: Coordination.** An integrated waste management strategy emphasizing cooperation and coordination among local jurisdictions, waste haulers, and recyclers consistent with state and federal regulations and programs.
- **Goal WM-G9: Self-sufficient Disposal Practices.** Disposal capacity within the county or a contingency plan to develop local disposal capacity in order to achieve self-sufficiency and to hedge against increasing transportation, or waste export costs, and deal with catastrophic events.
- **Policy WM-P1: Implementation of Waste Reduction Programs.** Waste reduction, re-use and recycling programs should be implemented countywide on a continuous basis to achieve the maximum possible waste diversion rate using the following criteria for program prioritization and selection:
 - Achieves the maximum feasible reduction in volume and/or weight of waste requiring landfill disposal;
 - Supports regional efforts that maximize the reduction and diversion of additional materials in a consistent fashion for affected parties; such as local bans on the use of plastic bags or mandatory recycling of construction and demolition debris;
 - Ensures the feasibility of expanding diversion programs by requiring that, in addition to solid waste collection bins, new commercial and multifamily land use plans include on-site space for diversion collection bins, such as recycling and organics;
 - Maximizes the economic value of materials heretofore discarded;
 - Benefits the environment and health and safety of county citizens;
 - Is able to be implemented on a timely, practical, and cooperative basis;
 - Is supported by and is sustainable over the long-term by residents, businesses, and jurisdictions; and
 - Allows cost-effective achievement of the above criteria.
- **Policy WM-P3: Joint Facility Planning.** Facilities that are intended to serve all county residents should be jointly planned and implemented by all affected stakeholders. Priority facilities recommended for joint planning are:
 - County disposal facility: local new landfill, expansion, or export;
 - Centralized composting facility: materials to be processed, size, location, design, and cost; and,
 - Household hazardous waste transfer facility: ownership, operation, funding, and liability issues.
 - Centralized organic waste processing facility: reliable feedstock sources, design, size and cost.
- **Policy WM-P7: Countywide Integrated Waste Management Plan (IWMP).** The County shall abide by and participate in revisions to the CIWMP lead by the HWMA, per HMWA's current contract with the County, and consider the need to amend this General Plan to maintain consistency.
- **Policy WM-P8: Support for Waste Diversion and Recycling Operations.** The County shall recognize the importance of siting waste diversion and recycling operations within the County to attain state mandated waste reduction goals. Permitting processes and decisions should

balance this public interest with the health, safety and welfare of those living in the vicinity of proposed facilities.

- **Goal WR-G6: Public Water Supply.** Public water systems able to provide adequate water supply to meet existing and long-term community needs in a manner that protects other beneficial uses and the natural environment.
- **Goal WR-G10: Storm Drainage.** Storm drainage utilizing onsite infiltration and natural drainage channels and watercourses, while minimizing erosion, peak runoff, and interference with surface and groundwater flows and storm water pollution.
- **Policy WR-P3: Proactive Protections.** Focus regulatory attention and educational efforts in specified watersheds where limited water supply or threats to water quality have potentially significant cumulative effects on the availability of water for municipal or residential water uses or the aquatic environment.
- **Policy WR-P4: Critical Municipal Water Supply Areas.** The Board of Supervisors shall designate all or portions of watersheds as “Critical Water Supply Areas” if cumulative impacts from land uses within the area have the potential to significantly impact the quality or quantity of municipal water supplies. Water resources within Critical Water Supply Areas shall be protected by the application of specific standards for such areas.
- **Policy WR-P10: Erosion and Sediment Discharge.** Ministerial and discretionary projects requiring a grading permit shall comply with performance standards adopted by ordinance and/or conditioned to minimize erosion and discharge of sediments into surface runoff, drainage systems, and water bodies consistent with best management practices, adopted Total Maximum Daily Loads (TMDLs), and non-point source regulatory standards.
- **Policy WR-P11: County Facilities Management.** Design, construct, and maintain County buildings, roads, bridges, drainages, and other facilities to minimize erosion and the volume of sediment in stormwater flows.
- **Policy WR-P13: Small and Micro Hydroelectric.** Encourage small and micro hydroelectric development when impacts to surface water flows, aquatic species, and habitat have been adequately mitigated and are in conformance with state and federal permits and standards.
- **Policy WR-P26: Sufficient Water Supply.** Support the actions and facilities needed by public water systems to supply the water demands projected in this Plan.
- **Policy WR-P27: Critical Water Supply Areas.** Coordinate with public water systems in the designation and regulation of water resources in Critical Water Supply areas.
- **Policy WR-P28: Conservation and Re-use Strategy.** Promote the use of water conservation and re-use as a strategy to lower the cost, minimize energy consumption, and maximize the overall efficiency and capacity of public and private water systems. Encourage the installation of water storage, rain catchment and graywater systems to support domestic and outdoor water needs. Encourage and support conservation for agricultural activities that increase the efficiency of water use for crop irrigation and livestock. Support the use of treated water for irrigation, landscaping, parks, public facilities, and other appropriate uses and coordinate with cities and other wastewater treatment entities in planning uses and minimizing impacts for treated water in unincorporated areas. Avoid water reuse that could adversely affect the quality of groundwater or surface water.
- **Policy WR-P36: Natural Stormwater Drainage Courses.** Natural drainage courses, including ephemeral streams, shall be retained and protected from development impacts which would alter the natural drainage courses, increase erosion or sedimentation, or have a significant

adverse effect on flow rates or water quality. Natural vegetation within riparian and wetland protection zones shall be maintained to preserve natural drainage characteristics consistent with the Biological Resource policies. Stormwater discharges from outfalls, culverts, gutters, and other drainage control facilities that discharge into natural drainage courses shall be dissipated so that they make no significant contribution to additional erosion and, where feasible, are filtered and cleaned of pollutants.

- **Policy WR-P37: Downstream Stormwater Peak Flows.** Peak downstream stormwater discharge shall not exceed the capacity limits of off-site drainage systems or cause downstream erosion, flooding, habitat destruction, or impacts to wetlands and riparian areas. New development shall demonstrate that post-development peak flow discharges will mimic natural flows to watercourses and avoid impacts to Beneficial Uses of Water.
- **Policy WR-P38: New Drainage Facilities.** Where it is necessary to develop additional drainage facilities, they shall be designed to be as natural in appearance and function as is feasible. All drainage facilities shall be designed to maintain maximum natural habitat of streams and their streamside management areas and buffers. Detention/retention facilities shall be managed in such a manner as to avoid reducing stream flows during critical low-flow periods.
- **Policy WR-P43: Storm Drainage Design Standards.** Drainage design standards for new development shall be adopted by ordinance. The design standards shall ensure that storms of specified intensity, frequency, and duration can be accommodated by engineered drainage systems and natural drainage courses.
- **Policy WR-P44: Storm Drainage Impact Reduction.** Develop and require the use of Low-Impact Development (LID) standards consistent with Regional Water Board requirements to reduce the quantity and increase the quality of stormwater runoff from new development and redevelopment projects in areas within the County's MS4 boundary or as triggered under other Regional Water Board permits. For all other watersheds, develop storm drainage development guidelines with incentives to encourage LID standards to reduce the quantity and increase the quality of stormwater runoff from new developments.
- **Policy WR-P45: Reduce Toxic Runoff.** Minimize chemical pollutants in stormwater runoff such as pesticides, fertilizers, household hazardous wastes, and road oil by supporting education programs, household hazardous waste and used oil collection, street and parking lot cleaning and maintenance, use of bioswales and other stormwater best management practices described in the California Stormwater Best Management Practices Handbooks or their equivalent.
- **Goal E-G1: Countywide Strategic Energy Planning.** An effective energy strategy based on self-sufficiency, development of renewable energy resources and energy conservation that is actively implemented countywide through Climate Action Plans, General Plans and the Redwood Coast Energy Authority's Comprehensive Energy Action Plan.
- **Goal E-G2: Increase Energy Efficiency and Conservation.** Decrease energy consumption through increased energy conservation and efficiency in building, transportation, business, industry, government, water and waste management.
- **Goal E-G3: Supply of Energy from Local Renewable Sources.** Increased local energy supply from a distributed and diverse array of renewable energy sources and providers available for local purchase and export.
- **Policy E-P3: Local Renewable Energy Supply.** The County shall support renewable energy development projects including biomass, wind, solar, "run of the river" hydroelectric, and ocean energy, consistent with this Plan that increases local energy supply.

- **Policy E-P4: Transportation Energy Conservation and Alternative Fuels Substitution.** Support revitalization and infill projects within Urban Development Areas as a means to reduce long-term vehicle miles traveled as an energy conservation strategy. Support the development and implementation of Electric Vehicle (EV) charging stations and other alternative fueling infrastructure.
- **Policy E-P5: Regional Energy Authority.** Recognize the Redwood Coast Energy Authority (RCEA) as the regional energy authority, which will foster, coordinate, and facilitate countywide strategic energy planning, implementation and education through a Comprehensive Action Plan for Energy.
- **Policy E-P6: County Government Energy Consumption.** The County government shall reduce building and transportation energy consumption by implementing energy conservation measures and purchasing renewable energy and energy efficient equipment and vehicles whenever cost-effective. Conservation and renewable energy investments should be planned and implemented in accordance with performance-based action plans and County Greenhouse Gas Emission Reduction goals.
- **Policy E-P7: County Building Design Standards.** Design, construct and operate all new and renovated County-owned facilities to U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) "Silver" or better energy efficiency standards consistent with State Executive Order S-20-04, or to similar California Green Building Standards.
- **Policy E-P8: Electrical Transmission.** Promote PG&E funded capacity upgrades to electric distribution lines to facilitate distributed renewable energy production and electricity export from the county.
- **Policy E-P9: Electricity Buyback.** Support revisions to the electricity buyback program that encourages more distributed local generation and more equitably compensates such generation.
- **Policy E-P13: Incentives for Using Alternative Energy.** Encourage the use of renewable energy and environmentally preferable distributed energy generation systems in the county.
- **Policy E-P15: Land Use Planning and Compatibility.** Coordinate with local agencies, communities, and landowners to assess potential wind and offshore renewable energy development. Such an assessment shall consider site suitability, energy potential, and potential impacts to biological and cultural resources.
- **Policy E-P16: Sustainable Biomass Energy Production.** Coordinate with local agencies, communities, and landowners to develop biomass energy plans that are consistent with forest management, hazardous fuels reduction, and restoration needs and priorities.

Eureka General Plan

The Eureka General Plan contains the following goals and policies related to utilities and service systems¹⁰⁵:

- **Goal E-5.** Infrastructure to meet the needs of existing and future businesses and industries.
- **Policy E-5.1: Access, Infrastructure and Services.** Ensure that convenient access to major transportation facilities, adequate utility and telecommunications infrastructure, high speed

¹⁰⁵ City of Eureka. 2018. 2040 General Plan. <https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed December 2024).

broadband, and sufficient public services are available and/or programmed to support commercial and industrial areas.

- **Policy E-5.7: Wastewater Treatment Capacity.** Ensure that the City's Wastewater Treatment Plant has sufficient capacity to meet the needs of industrial and agricultural users. Wastewater capacity shall be sufficient to support the planned growth of breweries, dairy manufacturing, and other high impact users.
- **Policy E-5.9: Support for Open Broadband.** Encourage and support the expansion and delivery of redundant, open broadband internet service throughout the City, and support the use of public resources to serve as community anchors such as court houses, schools, libraries, civic and media access centers, public safety and health care facilities.
- **Policy NR-1.7 Groundwater Protection.** Continue to encourage septic system users to connect to City services, and prevent onsite disposal of toxic substances per local and State regulations to reduce groundwater contamination.
- **Policy AQ-1.2: GHG Reduction.** Continue to work with Redwood Coast Energy Authority to implement appropriate measures to reduce regional greenhouse gas emissions in Eureka, such as incentivizing the use of alternative energy sources, and periodically update the City's greenhouse gas inventory and reduction plan, consistent with State reduction targets and regulations.
- **Policy AQ-1.4: Off-Street Parking.** Encourage and incentivize premium parking spaces for carpool, vanpool, and alternative energy vehicles, and encourage the development and addition of electric vehicle charging stations in parking lots.
- **Policy CS-2.2: Facility Standards.** Ensure that water main size, water flow, fire hydrant spacing, and other fire facilities meet City standards.
- **Goal U-1.** Availability of an adequate, safe, and sustainable water supply and maintenance of an efficient water system for all residents and visitors.
- **Goal U-2.** Sustainable and adequate wastewater collection, treatment, and disposal for existing and future development.
- **Goal U-3.** A comprehensive stormwater collection and conveyance system that reduces or prevents flooding, and protects public safety and the environment.
- **Goal U-4.** Safe and efficient disposal or recycling of solid waste generated in Eureka.
- **Goal U-5.** Increased renewable energy provision and overall energy efficiency and conservation throughout the City.
- **Goal U-6.** Safe, efficient, and accessible communication systems that help catalyze economic development, government services, and an informed citizenry.
- **Policy M-5.5. Alternative Fuel Vehicle Parking.** Support parking for Electric Vehicles (EVs), carpools, and hybrids, including the development of local charging stations in both public and private parking lots and large commercial parking lots.
- **Policy U-1.1: Water Access and Distribution.** Continue to provide high quality water through a cost-effective distribution system, satisfying both normal and emergency water demands, for all segments of the community.
- **Policy U-1.2: Adopted Plans.** Regularly review and update the City's Urban Water Management Plan, along with capital improvement plans, to ensure adequate provision of water supply, infrastructure, maintenance, rehabilitation, funding and conservation strategies.

- **Policy U-1.5: Green Infrastructure.** Continue to encourage the use of green infrastructure that promotes efficient water use and reduced water demand by requiring water-conserving design and equipment in new construction and encouraging the retrofitting of existing development with water-conserving devices.
- **Policy U-1.6: Water Conservation Programs.** Collaborate with federal, State, and local water agencies and providers to create and enhance long-term water conservation programs as necessary to address drought conditions affecting the Mad River watershed.
- **Policy U-2.1: Adequate Infrastructure.** Continue efforts to maintain and improve the City's wastewater collection and treatment system capacity for all segments of the community to satisfy dry and wet weather conditions while also detecting and correcting infiltration/inflow (I/I) issues, in accordance with applicable discharge standards. Continue to explore the feasibility of relocation of the wastewater outfall.
- **Policy U-2.2: Sewer System Management Plan.** Regularly review and update the City's Sewer System Management Plan and other wastewater planning tools and capital improvement plans to ensure adequate wastewater collection, treatment, infrastructure, maintenance, rehabilitation, and funding.
- **Policy U-2.5: On-Site Sewage Treatment.** Except in Natural Resource and Agricultural lands, continue to prohibit the development of new on-site sewage treatment and disposal systems within the City limits, but encourage the development of on-site pre-treatment systems, especially for industrial facilities.
- **Policy U-2.6: Extension of Sewer Services.** Prohibit extension of sewer service outside of the City limits or sphere of influence, except in limited circumstances to resolve a public health hazard resulting from existing development, or where there is a substantial overriding public benefit.
- **Policy U-2.7 Best Management Practices.** Identify and implement, where feasible, best practices and technologies for wastewater collection and treatment, including strategies that reduce wastewater demand, maintain maximum energy efficiency, and reduce costs and greenhouse gas emissions.
- **Policy U-3.1: Adequate Infrastructure.** As funding allows, continue efforts to maintain and improve the City's storm drainage system throughout Eureka to adequately accommodate stormwater runoff and prevent flooding.
- **Policy U-3.2: Storm Drain Master Plan.** Regularly review and update the City's Storm Drain Master Plan and capital improvement plans to ensure adequate capacity, infrastructure, treatment, maintenance, and, as available, funding.
- **Policy U-3.4: Natural Drainage.** Encourage and maintain the use of natural stormwater drainage systems in a manner that preserves and enhances natural features such as the sloughs, greenways and gulches, and along the rivers and creeks, while also allowing for maximum water reclamation and reuse.
- **Policy U-3.5: Manmade Drainage.** Allow manmade drainage systems to be dredged, cleared, and maintained to preserve the drainage capacity for which they were designed, even those classified as wetlands, consistent with State and federal regulations.
- **Policy U-3.7: Stormwater Flows along the Waterfront.** Continue to use best available information to identify any necessary improvements to drainage or water control structures to effectively manage stormwater flows and quality in Old Town and along the waterfront.

- **Policy U-3.8: New Development.** Require new development to prepare drainage studies and to retain and infiltrate stormwater runoff in compliance with City and regional regulations, plans and standards. Ensure that new development constructs, dedicates and/or pays its fair share contribution to the storm drainage system necessary to serve the demands created by the development.
- **Policy U-3.11: Stormwater Quality.** Require new development and redevelopment to minimize stormwater runoff and pollutants entering drainage facilities and drainage courses by incorporating Low Impact Development (LID) measures and appropriate Best Management Practices (BMPs) consistent with the City's NPDES permit and the North Coast Regional Quality Control Board regulations.
- **Policy U-3.12: Minimize Drainage Through Design.** Encourage new project designs that minimize impervious surfaces and maintain, to the extent feasible, natural site drainage conditions, while also employing techniques aimed at retaining and reusing runoff and other water used onsite.
- **Policy U-3.13: Runoff Damage Management.** Cooperate with Humboldt County, affected landowners, and other stakeholders to minimize potential damage and economic loss arising from stormwater runoff, consistent with other policies of this General Plan.
- **Policy U-4.1: Adequate Services.** Continue to support solid waste facility operators and service providers in local solid waste collection, disposal, and recycling efforts.
- **Policy U-4.3: Increase Waste Diversion.** Promote maximum use of solid waste source reduction, recycling, composting, and environmentally-safe transformation of wastes, maximizing solid waste diversion opportunities.
- **Policy U-4.4: Composting Programs.** Support programs and facilities that divert residential, commercial, and industrial food, vegetation, and other organic waste from the landfill and continue to work with regional composting facilities to continue and increase composting services for residents and businesses.
- **Policy U-4.5: Solid Waste Management per State Mandated Diversion Goals.** Continue to partner with Humboldt Waste Management Authority and City-designated franchise hauler to further plan for and document compliance with State-mandated source reduction, diversion, and recycling requirements.
- **Policy U-4.6 Recycling for Residential Uses.** Continue to encourage residential uses to increase the solid waste diversion from landfills through participation in recycling programs and organic waste diversion, consistent with State-mandated diversion goals and the City's goals to reduce greenhouse gas emissions.
- **Policy U-4.7: Recycling for Commercial and Industrial Uses.** Continue to encourage the development of regional and community-based recycling facilities in heavy industrial areas while also establishing more waste reduction requirements for commercial and industrial uses.
- **Policy U-4.8 Reduced Materials Consumption.** Conserve natural resources through reduced materials consumption and regularly update the City's Zero Waste Action Plan.
- **Policy U-5.1: Energy Conservation.** Promote energy conservation, and development of alternative, nonpolluting, renewable energy sources for community power in both the public and private sectors
- **Policy U-5.2: Energy Conserving Land Use Practices.** Implement energy conserving land use practices that include compact and mixed-use development, provision of bikeways and pedestrian paths, and the incorporation and enhancement of transit routes and facilities.

- **Policy U-5.5: Renewable Energy.** Encourage new development to install renewable energy systems and facilities (e.g., solar and wind energies) consistent with the City’s greenhouse gas emission reduction goals.
- **Policy U-5.6: Community Energy Efficiency.** Identify and promote programs, funding opportunities, and rebates from utility providers to increase energy conservation in existing buildings and require new buildings to implement additional energy efficient measures that are consistent with the City’s greenhouse gas emission reduction goals.
- **Policy U-5.7: Community Aggregation.** Encourage property owners and residents to participate in Community Choice Aggregation programs to allow lower electric rates and local control of energy sources.
- **Policy U-5.8: City Energy Efficiency.** Promote energy conservation for all City-owned facilities, vehicles, and equipment, and implement additional energy efficient measures that are consistent with the City’s goal of reducing greenhouse gas emissions.
- **Policy U-5.9: Green Buildings and Businesses.** Explore providing incentives for development that generates renewable energy and uses sustainable and energy-efficient technologies that result in minimized carbon footprints.
- **Policy U-5.10: Underground Utilities.** Continue promoting the undergrounding of overhead utility lines whenever feasible, particularly in recreational facilities, the Core Area, and new residential development, working closely with electricity and telecommunication providers. Identify new Underground Utility Districts, evaluate the feasibility of undergrounding utilities during street and road construction projects, and continue to require the undergrounding of overhead utility lines in existing Underground Utility Districts.
- **Policy U-5.11: Energy Education and Outreach.** Encourage a public understanding of the importance of renewable energy and energy efficiency through partnerships with energy-related organizations.
- **Policy U-6.1: Access.** Coordinate with local internet, cellular, and other telecommunications service providers to ensure access to and availability of a wide range of high-quality telecommunication systems and services, including internet redundancy within the City and County.
- **Policy U-6.2: Service Equity.** Work with local telecommunications service providers to retrofit areas currently lacking telecommunication technologies and pursue strategic long-range planning of facilities for new development.
- **Policy U-6.4: Co-location.** Require co-location of telecommunication facilities in a manner that maximizes compatibility and minimizes visual impacts on surrounding uses.

Arcata General Plan

The Arcata General Plan contains the following goals and policies related to utilities and service systems¹⁰⁶:

- **Policy LU-5: Public Facilities - Objective.** Provide appropriate locations and sites for water storage and delivery; wastewater collection and treatment; drainage; solid waste management; fire protection; parks and recreation; civic and institutional uses; and education (public and private) facilities.

¹⁰⁶ City of Arcata. 2024. General Plan 2045, <https://www.cityofarcata.org/160/General-Plan> (accessed December 2024).

- **Policy GM-4: Urban Services and Urban Services Boundary - Objective.** Define the boundary of City services and urban uses, within the City's incorporated area and Sphere of Influence. Extend City services only when they will not exceed the City's planned system capacities.
- **Policy PF-1: Water Supply and Delivery – Objective.** Manage the City's potable water resources to ensure adequate quantities for community use, to promote water conservation, to maintain water quality, and not to deplete source supplies.
- **Policy PF-2: Wastewater Collection, Treatment, and Disposal – Objective.** Collect and treat wastewater to achieve safe water quality standards, utilizing the City's internationally renowned marsh treatment facility.
- **Policy PF-3: Stormwater Management – Objective.** Implement the City's Drainage Master Plan and abide by the Municipal Separate Storm Sewer System (MS4) Permit to utilize natural drainage systems; minimize increases in stormwater runoff, flooding, and erosion; maintain the integrity of stream hydrology; and reduce pollutant loads.
- **Policy PF-4: Integrated Waste Management – Objective.** Reduce solid waste generation at the source; maximize re-use and repair of appropriate items and material; promote composting and recycling; and properly transport non-recyclable solid waste to approved disposal sites. Coordinate with regional bodies to develop effective regional solid waste management systems. Ensure new development is adequately sited and designed, including adequate physical space for solid waste bins.
- **Policy PF-1a: Water Supply.** Surface and subsurface water quantities that supply the City are dependent on rainfall and adequate upstream storage. The City shall continually monitor the water quantity and quality in its system and adhere to the Humboldt Bay Municipal Water District's rationing system to ensure that adequate supplies reach all users.
- **Policy PF-1b: Capacity and Management of City Water Delivery System.** The City shall update its Urban Water Management Plan at least every five years to maintain current projections, management, and contingency programs for water delivery. The City water system shall not be extended beyond the Urban Services Boundary (except as provided for in Policy GM-4b of the Growth Management Element). The City shall continue to assess through its annual Capital Improvement Program update needed water delivery system improvements and storage capacity to meet demand and capacity to respond to emergencies including fire and disruption in water service from Humboldt Bay Municipal Water District.
- **Policy PF-1c: Water Conservation.** The City shall use a combination of economic incentives, educational programs, and auditing to promote water conservation and shall remain in compliance with Humboldt Bay Municipal Water District policy regarding its Five Stage Water Rationing System. Continue to encourage the use of infrastructure and practices that promote efficient water and energy use such as rain barrels, green roofs, and retention structures. Encourage reduced water demand by requiring water conserving design and equipment in new construction and encouraging the retrofitting of existing development with water-conserving devices, along with water capture and conservation practices.

Water rates will continue to be higher for consumption above baseline usage. Information about conservation devices such as flow restrictors and practices such as off-peak irrigation will be made available to the public. Building and site development permits that require connections to the City's water system shall incorporate water conservation design features and best management practices.

The City shall also implement water conservation measures through the water, wastewater, and drainage master plans, and through leak detection and inflow and infiltration reduction programs.

In response to water shortages, the City will work cooperatively with the regional water supplier and the supplier's other municipal customers to implement an effective water shortage contingency plan that defines response actions based on the severity of the water shortage. End use prohibitions shall be determined based on current conditions, recommendations of a regional task force, and historic water use data and trends, and will be considered for mandatory penalties, charges and other escalating enforcement actions including education and outreach, issuing a verbal/written warning, penalty assessment, and water service termination. The City may consider imposing sharply graduated excessive use rates and/or excessive use fines, additional forms of water rationing, warnings, and physical flow restrictions to water users who fail to respond to less severe sanctions.

Continue to encourage the use of infrastructure and practices that promote efficient water and energy use such as rain barrels, green roofs, and retention structures. Encourage reduced water demand by requiring water-conserving design and equipment in new construction and encouraging the retrofitting of existing development with water-conserving devices, along with water capture and conservation practices.

- **Policy PF-1e: Water Loss.** The City shall perform annual water loss audits to identify and better understand the type of and quantity of water losses occurring in the water distribution system. The City shall ensure that it meets any water conservation/water loss standards promulgated by the State Water Resources Control Board.
- **Policy PF-2a: Capacity and Management of City Wastewater Collection System.** The wastewater collection system is designed to transport community sewage to the treatment plant. The City shall update its Sewer System Management Plan (last updated in 2023) at least every five years, to maintain current projections, management, and contingency programs for wastewater collection. The Plan shall identify needed collection system improvements and anticipated extensions, so that they can be budgeted for in the City's Capital Improvement Program. The City shall continue to monitor groundwater infiltration and surface water inflow and take necessary action to ensure that these sources do not cause the collection system or the treatment plant to exceed capacity. The City shall also consider adopting building and land use code policies that provide incentives for design, operation, and technology for buildings and sites to minimize wastewater as well as stormwater loads. The City wastewater collection system shall not be extended beyond the Urban Services Boundary except as provided in Policy GM-4b.
- **Policy PF-2b: Arcata Wastewater Treatment System.** The City shall review and update its Arcata Wastewater Treatment Facility Operations and Maintenance Manual at least every five years to evaluate the entire system; reflect any changes in treatment standards; ensure wastewater treatment is meeting current standards; verify that there is adequate treatment system capacity; and ensure adequate water flows to maintain habitat. The City shall ensure ongoing treatment system planning and investments are consistent with mid- and long-range climate change adaptation goals, which balance preserving the City's existing investments with habitat restoration and sea level adaptation priorities. Goals, priorities, planning assumptions, and the best available science on which they are based, shall be reviewed publicly through City committees and the Planning Commission at the discretion of the City Council.

- **Policy PF-3a: Utilization of City Streams and Watercourses as Natural Drainage Systems.** Arcata's network of creeks provides a natural drainage system; however, this system is very susceptible to damage from urban pollutants carried by stormwater runoff, and from drainage facilities that alter creek flows and natural functions. The City shall utilize creeks for urban drainage only when the basic natural functions of the creeks will not be degraded.
- **Policy PF-3b: Control of Stormwater Runoff, Flooding, and Erosion.** Stormwater runoff, especially at peak flows, can cause significant flooding and erosion if adequate precautions have not been taken. As stated in the Drainage Master Plan, the City shall manage the storm and surface water system in Arcata to maintain a hydrologic balance to protect water quality, prevent property damage, provide for the safety and enjoyment of citizens, and preserve and enhance habitat and sensitive areas.
- **Policy PF-3c: Stormwater Quality.** Implement the City's Phase II MS4 Permit to reduce the discharge of pollutants to the maximum extent practicable and protect water quality. Manage surface water controls, facilities such as detention basins and natural infiltration areas, and education programs to protect surface and ground-water quality
- **Policy PF-3d: City Drainage System.** The City shall take a comprehensive approach to drainage system management to effectively control the quantity of stormwater runoff, protect water quality, and reduce potential flood damage from peak flows. As stated in the City Drainage Master Plan, the City shall gradually expand the City managed drainage system to:
 - Continue maintenance of all drainage facilities within public right-of-way regardless of size.
 - Extend responsibility onto private property only when permanent easements are dedicated or otherwise available from the private property owner, and need is established based on technical criteria.
 - Define service limits upstream of the City as the point at which runoff from a publicly (not County) dedicated street enters the drainage system, or when a drainage feature needs repairs/improvements which have public benefits that exceed the cost of said repairs/improvements.
 - Integrate green stormwater infrastructure into streets and public spaces to create attractive public areas while also capturing and treating runoff to meet water quality requirements. In this context "Green Infrastructure" is defined as the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspiration stormwater and reduce flows to sewer systems or to surface waters.
- **Policy PF-3e: Easements and Properties for Drainage Management.** The City shall secure the easements and properties necessary to complete and maintain the drainage system identified in the Drainage Master Plan
- **Policy PF-4a: Source Reduction.** Source reduction and materials re-use are the most cost-effective ways to minimize solid waste. Source reduction, or waste prevention, reduces the growing costs of collection, recycling, and disposal systems. Source reduction and reuse shall be promoted through educational programs and incentives. Examples of effective source reduction and re-use activities that shall be promoted are:
 - Backyard composting, landscaping with low water needs, and grass mulching.
 - Purchasing durable re-usable goods instead of disposable items (e.g., cloth diapers, rechargeable batteries).
 - Repairing equipment and appliances.

- Purchasing goods from second-hand stores, flea-markets and swap meets.
- Reducing the use of packaging by buying in bulk or purchasing fresh food at farmers markets.
- Eliminating paper copies for as much City business as possible by working with electronic mail, forms, and agendas, and re-using scrap paper, if possible, when copying is necessary.
- Reusable coffee cups and beverages provided in dispensers.
- Termination of unwanted mail.
- Incentives such as on-call garbage collection and differential solid waste fees shall be used to encourage source reduction.
- **Policy PF-4b: Recycling.** The City’s recycling program shall continue and expand unless a more efficient and cost-effective method of collecting and reusing materials is identified. The City shall continue to contract for recycling, collection, and processing to help meet and exceed the State diversion goal. The following programs shall also be promoted:
 - Collection of commercial corrugated cardboard.
 - Collection of office paper.
 - Collection of organic waste.
 - City procurement policies and practices reflecting State requirements for purchasing recycled content paper products.
 - Implementation of density bonuses for buildings designed to promote recycling.
 - The City’s active involvement in the Humboldt County Recycling Market Development Zone.
 - Public education to “close the loop” and buy locally made products with recycled content.
 - Public education on recycling which includes self-haul services for recyclable materials not collected curbside.
 - Support for development and expansion of recycling-based manufacturing.
 - To minimize increases in solid waste volumes and maximize the amount of material returned to productive use, the City shall continue these programs with a target of reducing landfill volumes as specified in the Zero Waste Action Plan.
- **Policy PF-4c: Collection, Transport and Disposal of Non-Recyclable Solid Waste.** The City shall continue to contract for solid waste and recycling collection, transport, and disposal and will amend relevant Franchise Agreements to include the collection and transport of organic waste in the future to comply with state waste and organics regulations (e.g. SB 1383). The City is supportive of organic processing and will work with regional partners to develop an in-County organics processing facility. The City will provide educational materials about proper use and disposal of household hazardous waste, non-toxic alternatives to household hazardous waste, and recycling of materials (e.g., motor oil, anti-freeze, paint, batteries) in conjunction with local governmental and businesses partners.
- **Policy PF-6d: Telecommunications Facilities.** Telecommunication towers, commercial dishes and antenna, monopoles, and other transmitting and receiving facilities shall be co-located (grouped together) to minimize the number of facilities and shall be screened to reduce impacts. Placement of commercial (serving more than a single user) telecommunication facilities shall require a use permit and shall be limited to the zoning designations outlined in the City’s Zoning Ordinance. These facilities shall be screened from view and associated equipment rooms and switching devices shall be designed and landscaped to blend with their surroundings. In approving a use permit, findings must be made that the proposed location is the most

appropriate for the neighborhood, that the facility is of the minimum size necessary for the intended use, and that it is set back and screened to reduce visual and safety impacts. Any proposed city construction projects involving trenching shall be reviewed for opportunities to extend high speed networking infrastructure.

- **Policy PF-6f: Energy Conservation and Decarbonization of City Facilities.** Continue reducing City facility energy consumption, including conservation and weatherization measures exceeding building code standards, electric only appliances, HVAC, water heating systems and renewable energy sources. Consider Greenhouse Gas Reduction measures in all new facility, renovations, site design and connectivity decisions. Develop and implement City practices to increase electrification equity and affordability for all residents.
- **Policy PF-6g: Align Utility Infrastructure within Circulation System.** To the degree possible, locate new utility infrastructure within existing and planned circulation system rights-of-way.
- **Policy PF-6h: Plan Utility Infrastructure to Accommodate Envisioned Growth.** In planning for improvements to the overall utility infrastructure, including wastewater and electrical demand, design the systems to accommodate the planned amount of growth outlined in other policies and consider the impacts of locating new infrastructure on potential future habitat restoration sites. Plan for future infrastructure needs due to conversion of uses (e.g., electrification). Infrastructure will be developed over time as needed, and the City's Capital Improvements Program (CIP) will reflect near term infrastructure needs through the annual update process.
- **Policy RC-2g: Maintenance of Streams as Natural Drainage Systems.** Arcata's creeks carry a significant amount of the City's stormwater runoff. Drainage controls shall be enforced through implementation of the Drainage Master Plan, to protect water quality, and to minimize erosion, sedimentation, and flood impacts to City creeks. A comprehensive stream maintenance program shall be prepared to augment stormwater utility rehabilitation projects designed to maintain or improve flow capacity, trap sediment and other pollutants that impair water quality, minimize channel erosion, prevent new sources of pollutants from entering the stream, and enhance instream and riparian habitat.
- **Policy D-1e: Promote Energy Efficiency and Solar Access.** Site and building design shall emphasize energy efficiency, solar orientation and consider shading of adjacent structures, balancing development needs with solar access.
- **Policy D-1i: Renewable Green Building.** Site and building design shall incorporate green building concepts including recycled materials use, energy efficiency, solar access, insulation, energy efficiency, use of toxic-free materials, natural lighting, native landscaping, permeable surfaces around structures, and minimizing construction waste disposal.
- **Policy D-1l: Utility Screening.** Minimize visual impacts from utility boxes, utility meters, backflow preventers, and other similar devices. Utility devices must be underground or located to the side or rear of buildings and screened from public view by landscaping. Exceptions may be granted through a discretionary review process.
- **Policy D-8l: Incentivize Energy Efficiency and Electrification as Community Amenities.** Through the community benefit program, allow increased development intensity and simplified development processes for projects that exceed Title 24 and other State or local energy efficiency requirements and all new construction to be electric only, with limited commercial cooking exceptions.

Blue Lake General Plan

The Blue Lake General Plan Land Use Element contains the following goals and policies related to utilities and service systems¹⁰⁷:

- **Utilities and Services Policy 1:** The City shall make provision of the following services a priority: police protection, fire protection, water service, sewer service, public transit to Arcata, garbage service, maintenance of City property, [and] adequate circulation system (streets and trails).
- **Utilities and Services Policy 3:** Solid waste, whether public or private, shall be properly collected, stored and transported to protect public health and safety and to ensure a clean community appearance.
- **Utilities and Services Policy 4:** The City shall not allow development which would exceed the City's sewage treatment capacity; nor shall the City knowingly allow development which could adversely affect water quality in the Mad River.
- **Utilities and Services Policy 5:** Development should be encouraged to achieve efficient use of existing public utilities and services.
- **Utilities and Services Policy 7:** The City shall provide adequate supply of good quality water to all current users; new users shall be accommodated without diminishing existing levels of service.
- **Utilities and Services Policy 11:** Due to limited remaining sewer capacity, large water users/dischargers shall be required to use alternative treatment/pre-treatments, where feasible, rather than the City sewage treatment system.
- **Utilities and Services Policy 13:** Undergrounding of utility lines shall be required for all new development.
- **Environmental Protection Policy 4:** The City shall encourage site design that maximizes on-site retention of stormwater and minimizes discharge to the City's storm water system.

Fortuna General Plan

The Fortuna General Plan contains the following goals and policies related to utilities and service systems¹⁰⁸:

- **Policy ED-4.6: Energy Distribution Capacity.** The City shall identify and seek resolution of bottlenecks in the electricity and natural gas distribution network that limit economic development in and around Fortuna.
- **Policy ED-6.2: Telecommunications Infrastructure.** To encourage and attract e-commerce, non-store retail, and broadband-dependent businesses, the City shall pursue installation of current and emerging technological infrastructure in new and existing development.
- **Policy H-6.3.** Encourage the use of solar energy within the City.
- **Policy NCR-6.1: Site Design Standards.** The City shall strive to incorporate cost-effective, energy-efficient construction techniques and materials.
- **Policy NCR-6.4: Energy Education and Training.** The City shall support the Redwood Coast Energy Authority (RCEA) in its effort to provide community education on energy issues,

¹⁰⁷ City of Blue Lake. 2021. General Plan Land Use Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed December 2024).

¹⁰⁸ City of Fortuna. 2010. General Plan.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed December 2024).

including the benefits of reduced energy consumption and increased energy efficiency. This includes collaborating with schools and colleges on energy-related research, education, and management practices.

- **Policy NCR-6.5: Solar Access.** The City shall encourage maximized solar access (active and passive) in site planning and design. Where possible, lots and buildings in subdivisions and new development should be oriented and designed to maximize and protect solar exposure.
- **Policy NCR-6.6: Municipal Purchasing and Procurement.** The City shall purchase and use administrative supplies and building materials made from recycled materials and renewable resources.
- **Policy NCR-6.7: Energy Star® Equipment.** The City shall purchase or operate Energy Star® electrical equipment (considering life-cycle costs) to follow principles of energy-efficient source reduction and resource recovery for its own operations and promote these principles in the community.
- **Policy NCR-6.9: Retrofitting for Energy Efficiency.** The City shall promote retrofitting of existing energy-inefficient buildings to meet or exceed the most-current energy efficiency standards (i.e., LEED certification).
- **Policy NCR-6.10: Energy Recovery Systems.** The City shall require, whenever economically and physically feasible, the use of energy recovery systems in projects greater than one single-family residential unit.
- **Policy NCR-6.11: Recycling and Waste Diversion.** The City shall comply with all mandatory State Recycling and waste diversion standards.
- **Policy NCR-6.12: Construction and Waste Diversion.** In order to meet State's mandated waste diversion requirements, the City shall promote the diversion of construction waste by requiring contractors to recycle as much construction debris as feasible.
- **Policy NCR-6.14: Explore Energy Efficiency Standards for Existing Buildings.** Explore and, if appropriate, adopt energy efficiency standards for existing residential and commercial buildings upon substantial remodel.
- **Goal PFS-1.** To ensure the efficient and cost effective delivery of services and well maintained infrastructure systems, commensurate with the City's ability to finance and operate.
- **Goal PFS-2.** To ensure that adequate facility and service standards are achieved and maintained through equitable funding methods.
- **Goal PFS-3.** To ensure the adequate, reliable, and safe provision of water to all existing and future development within the city.
- **Goal PFS-4.** To ensure adequate wastewater collection, treatment, and disposal to protect the public health, safety, and welfare.
- **Goal PFS-5.** To collect and dispose of stormwater in a manner that protects the city's residents, businesses, and property from the hazards of runoff and flooding, manages stormwater in a manner that is safe and environmentally sensitive, and enhances the environment.
- **Goal PFS-6.** To ensure the safe and efficient disposal or recycling of solid waste generated in Fortuna, protect the public health and safety, and reduce impacts on landfills.
- **Goal PFS-7.** To promote adequate private utility service levels and to ensure they do not adversely impact surrounding development.
- **Goal PFS-8.** To expand the use of information technology as a communication tool in order to improve personal convenience, reduce dependency on nonrenewable resources, take

advantage of the ecological and financial efficiencies of new technologies, and develop a better-informed citizenry.

- **Policy PFS 1.1: Public Facility Monitoring.** The City shall monitor water, wastewater and storm drain system capacities on an annual basis, and make capacity improvements as needed.
- **Policy PFS-1.2: Adequate Public Facilities to Serve New Development.** The City shall ensure through the development review process that adequate public facilities and services are available to serve new development when required. The City shall not approve new development where existing facilities are inadequate to support the project, unless the applicant can demonstrate that all necessary public facilities (including water, sewer, storm drainage, transportation, police and fire protection services) will be installed or adequately financed and maintained (through fees, special taxes, assessments, or other means).
- **Policy PFS-1.3: Infrastructure Coordination.** The City shall ensure that the provision of streets, sewer, water, drainage, and other necessary infrastructure is coordinated in a logical manner, so as to reduce design, construction, and maintenance costs.
- **Policy PFS-1.4: Ultimate Capacity Needs.** The City shall ensure through the development review process that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs, pursuant to a master plan, to avoid the need for costly retrofitting.
- **Policy PFS-1.5: Necessary Infrastructure.** The City shall require all new development and major modifications to existing development to construct necessary on-site infrastructure to serve the project in accordance with City standards.
- **Policy PFS-1.6: Project Impacts on Infrastructure.** When reviewing applications for land use designation changes (i.e., General Plan amendments, specific plan), the City shall analyze the impacts of the proposed land use designation changes on all aspects of the infrastructure system within the city and require mitigation as legally required. This shall include consultation with other service providers who have infrastructure within the city.
- **Policy PFS-1.8: Water Rights Allocation.** The City of Fortuna shall monitor its water use on an annual basis. At such time as annual water use equals annual permitted water allocation, additional water supply must be obtained by the city prior to approving new development in the city.
- **Policy PFS-1.9: City Service Extensions to Annexation Areas.** Upon LAFCo approval, City water, wastewater conveyance and treatment, storm drainage and police service shall be extended to the Riverwalk, Strongs Creek, Carson Woods, and Rohnerville annexation areas. The City shall not approve new development in these areas until services are available.
- **Policy PFS-3.1: Water Main Extensions.** The City will comply with State law regarding extension of water utilities beyond the City's boundaries.
- **Policy PFS-3.2: Efficient Water Use.** The City shall promote efficient water use and reduced water demand by:
 - Requiring all new construction to comply with State and local water conservation requirements;
 - Encouraging water-conserving landscaping and other conservation measures; and
 - Encouraging retrofitting of existing development with water-conserving devices.
- **Policy PFS-3.3: Regulatory Compliance.** The City shall construct, operate, and maintain its municipal water system to meet all County Department of Environmental Health regulatory requirements including employment of certified operators.

- **Policy PFS-3.4: Completion of Water System Improvements.** The City through its Capital Improvements Program (CIP), shall complete the recommended water system improvements as identified and prioritized in the most recent Water System Improvements Study.
- **Policy PFS-3.5: Water System Production, Treatment and Distribution Facilities and Components.** The City shall continue to identify through its Capital Improvement Program, significant components of the water system that will require replacement or improvement during their useful lifecycle.
- **Policy PFS-3.6: Water System User Rate Structure.** The City shall continue to review and analyze the full operational, maintenance, and capital improvement costs as well as the cost of developing future capacity of the municipal water system. The City shall maintain a rate and fee structure that is sufficient to generate sufficient revenues to offset these costs, thereby assuring future viability of the system.
- **Policy PFS-3.7: Water System Capacity.** The City shall maintain an adequate water system capacity to meet domestic and commercial water demands, including adequate fire flow capacity and water storage reserves.
- **Policy PFS-3.8: Water Rights Allocation.** The City shall renew or amend existing permitted water right allocations to accommodate existing and projected future municipal water usage.
- **Policy PFS-4.1: Public Sewer Infrastructure.** The City shall require all new urban development to construct sewer infrastructure according to the City's municipal standards and incorporate it into the city's sewer collection system.
- **Policy PFS-4.4: Sewer Capacity.** The City shall maintain sufficient wastewater collection treatment and disposal capacity to serve the residents of Fortuna.
- **Policy PFS-4.5: Wastewater System Collection and Treatment Facilities and Components.** The City shall continue to identify through the Capital Improvement Program all significant components of the wastewater system that will need to be replaced or improved during the useful life cycle.
- **Policy PFS-4.9: Regulatory Compliance.** The City shall construct, operate, and maintain the City's municipal wastewater system to meet all regulatory requirements of the North Coast Regional Water Quality Control Board and the City's NPDES permit, including the employment of appropriately certified operators.
- **Policy PFS-5.1: Drainage Facilities Maintenance.** The City shall require the regular inspection and maintenance of all drainage facilities, including detention basins and both natural and manmade channels, to ensure that their full carrying capacity is not impaired.
- **Policy PFS-5.2: Natural Drainage.** The City shall encourage the use of natural stormwater drainage systems in a manner that preserves and enhances natural features.
- **Policy PFS-5.3: Adequate Drainage Facilities to Avoid Flooding.** The City shall ensure that adequate drainage facilities are provided in new development to adequately convey 25-year storm event runoff without on-site or downstream flooding.
- **Policy PFS-5.6: Future Drainage Compliance.** The City shall require future drainage system to comply with applicable State and Federal non-point source pollutant discharge requirements.
- **Policy PFS-5.7: On-Site Drainage Treatment.** The City shall implement on-site storm drainage treatment facilities in City projects wherever feasible.
- **Policy PFS-5.8: Detention Facilities.** The City shall use stormwater detention facilities to mitigate drainage impacts and reduce stormwater drainage system costs. To the extent practical, stormwater detention facilities should be designed for multiple purposes, including

environmental, recreational, and/or stormwater quality improvement and the City shall provide low impact development (LID) drainage models for private development to follow.

- **Policy PFS-5.13: Storm Drain Master Plan Implementation.** The City shall monitor the implementation of the Storm Drain Master Plan as development occurs, to ensure that the improvements are not being oversized nor undersized.
- **Policy PFS-5.14: Drainage Studies.** The City shall require site-specific studies including erosion control, watershed management, and flooding for all major developments that have the potential to create erosion, watershed, or flooding problems.
- **Policy PFS-5.16: County Developments.** The City shall monitor development in the County to ensure that drainage impacts from new projects do not impact the City's drainage system. If any impacts are projected to occur from developments in the County, the City shall require, as feasible, the County or developer to install adequate improvements to mitigate the anticipated impacts.
- **Policy PFS-5.19: Peak Runoff Detention.** The City shall require any increase in runoff beyond the peak 25-year event resulting from new development to be retained or detained on-site or mitigated through off-site improvements to other streams or outlets.
- **Policy PFS-5.20: Low Impact Development Techniques.** The City shall encourage neighborhood parks, subdivisions, commercial development, and redevelopment to incorporate Low Impact Development (LID) techniques, such as bioswales and permeable pavement, to minimize stormwater runoff in the city and comply with the NPDES permit.
- **Policy PFS-6.1: Waste Disposal Reduction.** The City shall promote maximum use of solid waste reduction, recycling, composting, and environmentally-safe transformation of wastes and strive for an annual reduction in commercial and industrial waste disposal.
- **Policy PFS-6.2: Recycled Materials.** Where economically feasible, the City shall use recycled materials and products.
- **Policy PFS-6.3: New Development.** The City shall ensure that all new development has appropriate provisions for solid waste storage, handling, and collection.
- **Policy PFS-6.4: City-County Coordination.** The City shall work with the County to eliminate litter and other illegal solid waste disposal practices.
- **Policy PFS-6.5: Industrial Recycling Facilities.** The City shall encourage the development of regional and community-based recycling facilities in industrial areas.
- **Policy PFS-6.6: Construction Waste Recycling.** The City shall require the recycling of construction waste, to reduce the impact on landfills in accordance with State regulatory requirements.
- **Policy PFS-7.1: Energy Conservation.** The City shall require that new construction take advantage of energy conservation techniques and that buildings are oriented and designed to take advantage of solar heating.
- **Policy PFS-7.2: Renewable Energy.** The City shall support the use of renewable energy sources, such as solar, in residential, commercial, and industrial developments and municipal facilities.
- **Policy PFS-7.3: Utility Companies.** The City shall communicate its major development plans to utility companies and coordinate planning for the extension of those utilities.
- **Policy PFS-7.5: Underground Utilities.** The City shall require underground installation of electrical distribution utility lines in new developments and areas that are redeveloped, except where infeasible for operational reasons.

- **Policy PFS-7.6: Environmental Impacts.** The City shall coordinate with electricity service providers to locate and design gas and electric systems to minimize impacts to current and future residents.
- **Policy PFS-7.7: Alternative Energy Sources.** The City shall encourage the use of alternative energy technologies as they become commercially available and demonstrate reduced operating costs throughout the life cycle of the technology.
- **Policy PFS-8.4: Regional Telecommunication Infrastructure.** The City shall work with the County and other pertinent agencies to coordinate telecommunication infrastructure planning on a regional basis for both telephone and data.
- **Policy PFS-8.5: Wireless Communication Facilities.** To minimize the visual impact of wireless communication facilities (e.g., cell towers), the City shall require that they meet the following conditions:
 - Are located away from residential and open space areas;
 - Are not visibly intrusive to residential neighborhoods or public rights-of-way;
 - When possible, are co-located with other wireless facilities on existing buildings, towers, poles, or other existing support structures; and
 - Are painted, camouflaged, or textured in a manner as to reduce their visual impacts.

Ferndale General Plan

The Ferndale General Plan Land Use and Unique Resources Element contains the following goals and policies related to utilities and service systems¹⁰⁹:

- Energy efficient design should be encouraged for subdivisions, new construction, and retrofitting of existing residences, commercial structures and public buildings.
- Utility lines serving new buildings and utility connections to existing poles should be undergrounded for all new construction where appropriate.

Trinidad General Plan

The Trinidad General Plan contains the following goals and policies related to utilities and service systems¹¹⁰:

- Evidence that adequate water is available should be required before new parcels are created for development purposes.
- The City should promote an active, on-going water conservation program to help keep user charges as low as possible. The City conservation program should extend to upgrading outdated portions of the system to eliminate leakage.
- The City shall continue to monitor water consumption. In addition, the City should pursue a program to monitor water quality and quantity both within the City system and in Luffenholtz Creek. The City shall implement well-defined, quality programs of operation and maintenance.
- The City shall plan on regular maintenance and occasional upgrading of the water system, as feasible. The City shall develop a program to periodically upgrade existing distribution lines to current standards. To keep the City up to date on the condition of the water system, need for

¹⁰⁹ City of Ferndale. 1986. General Plan Land Use and Unique Resources Element. <https://ci.ferndale.ca.us/wp/general-plan/Land%20Use%20Element%201986.PDF> (accessed December 2024).

¹¹⁰ City of Trinidad. 2021. General Plan. <https://www.trinidad.ca.gov/media/5491> (accessed December 2024).

improvements and level of uses, an annual water report shall be prepared and presented to the City Council

- In the event of a proposal to expand the City water system, prospective customers shall provide by agreement with the City the necessary funds in whole or in part to defer the cost of system improvements. This policy shall be implemented by provisions of the City Water Ordinance.
- Water service extensions shall not remove water system capacity needed to serve Coastal Act priority uses within the North Trinidad Service Area described in policy 26.
- The General Plan should be based on the use of individual wastewater disposal systems throughout the planning area. Subdivision and development proposals throughout the planning area should be carefully reviewed and adequate standards should be used to ensure that water quality and public health are protected.
- The city and Humboldt County should undertake a joint wastewater facilities study in the developed area between Mill Creek and McConnahas Ffill Creek to determine if septic tanks are presently creating pollution problems and what sewage disposal method is the most feasible long-term method for the area.
- Individual waste treatment systems shall be consistent with Water Quality Control Board standards. Existing lots which are smaller than the prescribed minimum lot size may be considered developable provided an acceptable individual waste treatment system can be provided.
- Utility lines serving new buildings and utility connections to existing power poles should be undergrounded for all new construction within the Planned Development, Commercial and Special Environment categories. Undergrounding of utility lines should be encouraged in other areas particularly where scenic views are involved. If undergrounding is not proposed in such areas the design review committee shall require reasonable conditions on the nature and location of overhead utility lines and supports to minimize the visual impact.
- Proceed with a study of septic tank pollution and long-range septic tank feasibility within the intensive development area in cooperation with Humboldt County. Ordinance 150 Section 1B should be amended if septic tanks are to be considered the long-range waste disposal system for the city. If the recommendations of the study are otherwise inconsistent with Ordinance 150 or supporting resolution 375A appropriate amendments to these adopted policies should be considered.
- Develop a water conservation program to reduce unnecessary summertime consumption.
- Periodically review water consumption data to determine when no additional hookups should be allowed. Provide those interested in increasing the capacity of the system with current cost estimates.
- Establish review criteria to determine when annexation should be a prerequisite to provision of water service outside the city.
- Review all proposed subdivisions in the intensive growth areas to ensure that street and drainage improvements are adequate and will not involve unnecessary public maintenance.

Rio Dell General Plan

The Rio Dell General Plan Land Use Element contains the following goals and policies related to utilities and service systems¹¹¹:

- **Goal:** To improve public facilities and systems to maintain a safe and efficient system of public services, including emerging technologies as a component of the City's infrastructure.
- **Goal:** To provide an adequate, consistent, and safe supply of water to meet our domestic, commercial, and fire safety requirements.
- **Policy LU-30:** Require all new development within the City boundaries to connect to existing city services and infrastructure.
- **Policy LU-31:** Explore additional techniques for reducing solid waste-and complying with AB 939 waste diversion goals.
- **Policy LU-32:** Periodically evaluate water supply and demand, and water conservation measures, to plan for future water needs of the community, using a combination of incentives, educational programs, and ongoing system audits to promote water conservation.
- **Policy LU-33:** Periodically evaluate the wastewater system to plan for future wastewater needs of the community.
- **Policy LU-34 and P1.3.3-9:** Require underground utilities throughout the neighborhoods as public improvements and new developments are planned and approved.
- **Policy P1.2.2-2:** Identify improvements that can be made to municipal drainage facilities so they can better convey runoff and minimize flood impacts.
- **Policy P1.2.2-3:** Require new development projects to incorporate on-site drainage features such as retention and infiltration systems to reduce runoff and maximize infiltration.
- **Policy P1.2.2-4:** Use a combination of incentives, educational programs, and ongoing system audits to promote water conservation.
- **Policy P1.2.5-1:** Coordinate with energy suppliers and agencies to educate residents, property owners, and business operators about the need for and benefits of conserving energy.
- **Policy P1.2.5-2:** Maintain and distribute current information about building insulation, energy efficient appliances, lighting, and heating; other conservation measures and materials; and home power alternatives.
- **Policy P1.2.5-3:** Require that new construction and retrofits comply with energy efficient construction codes including high-energy windows, water heaters, and furnaces, to reduce energy consumption.
- **Policy P1.3.3-6:** Evaluate water supply and demand, and water conservation measures, to plan for future water needs of the community.
- **Policy P1.3.3-7:** Evaluate the wastewater system to plan for future wastewater needs of the community.
- **Policy P1.3.3-8:** Use a combination of incentives, educational programs, and ongoing system audits to promote water conservation.

¹¹¹ City of Rio Dell. 2015. 2015 General Plan Land Use Element.
https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/city_of_rio_dell_2015_general_plan_intro_and_land_use_0.pdf
(accessed December 2024).

Humboldt County Code

Humboldt County Code (HCC) Division 1 *Sewage and Onsite Wastewater Treatment* of Title VI *Water and Sewage* provides policies and standards regarding sewage and on-site wastewater treatment systems within the County. Chapter 1 *Codes: Building, Plumbing, Electrical and Others* of Division 3 *Building Regulations* of the HCC includes policies pertaining to water supply requirements. Section 326-5 *Utilities Placement* of Chapter 2 *Subdivision Requirements* of Division 2 *Subdivision Regulations* of Title III *Land Use and Development* includes standards pertaining to the placement of utilities, specifically requiring that utilities shall be placed as directed by the affected utility companies and approved by the Department of Public Works. Requirements pertaining to drainage facilities are included in Section 10 *Drainage Facilities* of Title III Division 2 of the HCC. Standards pertaining to solid waste are included in Division 2 *Solid Waste and Source Separated Materials* of Title V *Health and Safety* of the HCC.

Arcata Municipal Code

The City of Arcata Municipal Code Chapter 5400 *Solid Waste Management* provides policies and controls regarding collection and processing of solid waste. Title VII *Public Works* includes policies and controls regarding utilities and service systems. Sewer collection, development and on-site wastewater treatment systems policies are described in Section 7400. Water policies are described in Section 7600. Underground utilities policies and controls are described in Section 7980. Finally, stormwater management policies are described in Section 7993.

Blue Lake Municipal Code

The City of Blue Lake Chapter 13 provides policies and controls regarding solid waste, water service, cross-connection control, sewer, floodplain, well standards, solar energy program, cable systems and open video systems, and underground utility districts.

Eureka Municipal Code

The City of Eureka Municipal Code Title V *Public Works* includes policies and controls regarding utilities and service systems. Sewer collection, development and on-site wastewater treatment systems policies are described in Section 50. Chapter 51 *Solid Waste* provides policies and controls regarding collection and processing of solid waste. Underground utility district policies and controls are described in Section 52. Water policies are described in Section 53. Storm water quality management and discharge control policies are described in Section 54. Finally, Section 55 *Energy* describes policies and controls regarding energy, specific to community choice aggregation.

Trinidad Municipal Code

The City of Trinidad Municipal Code Chapter 13, Sections 3.04 *Water Service Systems*, 3.08 *Water Rationing*, and 3.12 *On-site Wastewater Treatment System*, provide policies and controls regarding water service, water rationing and on-site wastewater treatment systems.

Ferndale Code of Ordinances

The City of Ferndale Ordinance Number 94-01 provides policies and controls regarding the City's drainage systems. Additionally, the City of Ferndale Ordinance Number 03-05 provides policies and controls regarding the City's sewer system.

3.9.4 Impacts and Mitigation Measures

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Utilities and Service Systems.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?
- c) Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- d) Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Approach to Analysis

Environmental impacts to utilities and service systems have been assessed using impact significance criteria from federal, State, and local regulations. The impact analysis is based on available literature regarding the existing plans, policies, and resources in Humboldt County. Methodological approaches used for this analysis are described below:

Water Supply

The water service providers in Humboldt were identified and the MSRs for each water supplier were reviewed to identify water source, existing infrastructure, total number of service connections served, available water supply, current water use, system deficiencies, and planned upgrades in order to assess ability for each water service provider to provide service.

Wastewater

The wastewater service providers in Humboldt were identified and the MSR for each wastewater service provider were reviewed to identify existing infrastructure, total number of service connections served, service amounts provided, system deficiencies, and planned upgrades in order to assess ability for each wastewater service provider to provide service.

Stormwater

MSRs and webpages for the local jurisdictions, as well as street view imagery, were reviewed to determine existing stormwater infrastructure and potential deficiencies within the Planning Area.

Electric Power

Several publicly available resources, including PG&E and RCEA websites and local news outlets, were reviewed for information such as service area, persons served, current usage and demand, ability to serve, identified deficiencies, and planned upgrades.

Natural Gas

PG&E's website was reviewed to gather information pertaining to service area, persons served, current usage and demand, ability to serve, identified deficiencies, and planned upgrades.

Telecommunications

The telecommunications providers in Humboldt were identified and ability to provide service verified.

Solid Waste

Publicly available information was reviewed to determine current solid waste providers in Humboldt, status and location of solid waste and recycling facilities within the County, and remaining capacity of landfills which serve the County. Such resources included local jurisdictions' General Plans, websites, and MSRs; local solid waste provider, Humboldt Waste Management Authority (HWMA), and Humboldt County Solid Waste Local Task Force websites; and CalRecycle's Solid Waste Information System (SWIS).

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to utilities and service systems.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to utilities and service systems. Therefore, the analysis in this section focuses on the potential for the RCAP to result in impacts related to utilities and service systems in Humboldt County.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of utilities and service systems impacts resulting from implementation of the RCAP:

- Create a need for relocated, new, or expanded water supply, wastewater treatment, stormwater drainage facilities, electric power, natural gas, or telecommunications facilities, the construction of which would result in significant construction-related environmental impacts (e.g., aesthetics, air quality, biological resources, agriculture/forestry resources, cultural/tribal cultural resources, GHG emissions, energy, noise, and transportation). If new or altered facilities are proposed or determined to be needed, then determination of significance of construction-related environmental impacts is based on the respective specific thresholds of significance listed in Section 3.1, *Aesthetics*, through Section 3.8, *Transportation*;

- Result in insufficient water supply to serve the proposed plan's potable water demand during normal, dry, and multiple dry years;
- Result in inadequate capacity at the wastewater treatment and conveyance facilities serving the County and cities;
- Result in insufficient daily capacity or permitted daily capacity at the landfills serving the County and cities; or
- Conflict with the solid waste policies and objectives of the State or the General Plans of Humboldt County or Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad.

Impact Evaluation

Water, Wastewater, Stormwater, Electric Power, Natural Gas, and Telecommunication Facilities

Significance Criterion a: Would the proposed plan require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact UTL-1 IMPLEMENTATION OF THE PLAN IS NOT ANTICIPATED TO REQUIRE THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED STORMWATER, NATURAL GAS, OR TELECOMMUNICATION FACILITIES, BUT MAY REQUIRE THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED WATER SUPPLY, WASTEWATER, AND/OR ELECTRIC POWER INFRASTRUCTURE AND FACILITIES WITHIN HUMBOLDT, WHICH WOULD INVOLVE GROUND DISTURBING ACTIVITIES THAT COULD RESULT IN SIGNIFICANT ENVIRONMENTAL EFFECTS. MITIGATION MEASURES WOULD LIMIT THESE IMPACTS, BUT ELECTRIC POWER IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

WATER

Measure WW-2 of the RCAP specifically seeks to reduce per capita potable water consumption by 15 percent by 2030, and would encourage expansion of the recycled water network in the region. Construction activities associated with recycled water expansion may include installing purple pipe when constructing new buildings or completing major remodels, expanding existing water treatment facilities with recycled water infrastructure, and installing recycled water pipelines throughout Humboldt. Implementation of mitigation measures included throughout this Draft EIR, including for aesthetics (Mitigation Measures AES-1 through AES-3), air quality (Mitigation Measures AQ-1 through AQ-3), biological resources (Mitigation Measures BIO-1 to BIO-7), cultural and tribal cultural resources (Mitigation Measures CR-1 to CR-3), and noise (Mitigation Measures NOI-1 and NOI-3) as well as implementation of Best Management Practices (BMPs) required by State, regional, and local policies would minimize the potential for impacts associated with construction of infrastructure facilitated by Measure WW-2. However, without specific water infrastructure plans and project sites proposed, it cannot be concluded with certainty that the mitigation included in this Draft EIR would fully reduce all potential impacts associated with construction or expansion of the recycled water system to a less than significant level. Subsequent environmental review would be required at the time future discretionary water infrastructure projects or plans are developed to

assess the related environmental impacts and need for additional mitigation, if applicable. Therefore, the RCAP construction impacts related to water infrastructure and facilities would be significant and unavoidable.

WASTEWATER

RCAP Measure WW-1 specifically seeks to expand regional opportunities for installation of wastewater decarbonization technologies, such as anaerobic digesters at existing facilities. While these technologies would not reduce current demand on the existing wastewater treatment facilities within Humboldt, the technologies would be expected to reduce GHG emissions associated with wastewater treatment processes and generate renewable fuel sources. It is further noted that the technologies could even expand wastewater treatment capabilities to process organic waste that would otherwise be sent to a landfill for disposal, thereby increasing solid waste diversion away from landfills and further reducing GHG emissions.

Construction associated with Measure WW-1 may involve the addition of anaerobic digesters at existing wastewater processing facilities and home septic system upgrades for areas not served by community wastewater. Implementation of mitigation measures included throughout this Draft EIR, including for aesthetics (Mitigation Measures AES-1 through AES-3), air quality (Mitigation Measures AQ-1 through AQ-3), biological resources (Mitigation Measures BIO-1 to BIO-7), cultural and tribal cultural resources (Mitigation Measures CR-1 to CR-3), and noise (Mitigation Measures NOI-1 and NOI-3) as well as implementation of BMPs required by State, regional, and local policies would minimize the potential for impacts associated with construction of infrastructure facilitated by Measure WW-1. However, without specific wastewater infrastructure plans and project sites proposed, it cannot be concluded with certainty that the mitigation included in this Draft EIR would fully reduce all potential impacts associated with construction or expansion of the recycled water system to a less than significant level. Subsequent environmental review would be required at the time future discretionary water infrastructure projects or plans are developed to assess the related environmental impacts and need for additional mitigation, if applicable. Therefore, the RCAP construction impacts related to wastewater infrastructure and facilities would be significant and unavoidable.

STORMWATER

Implementation of the RCAP is not anticipated to result in the construction of new or expanded stormwater drainage facilities. Therefore, no RCAP construction impacts related to stormwater infrastructure and facilities would occur.

ELECTRIC POWER

RCAP Measures BE-1, BE-2, BE-3 Urban and Rural, BE-4, BE-6, BE-7, and BE-8 would expand regional opportunities for implementation of renewable energy generation, microgrids, battery energy storage, electrical transmission, and other technologies to improve grid capacity and reliability in Humboldt. Implementation of such improvements would enable Humboldt to achieve goals related to decarbonization of buildings and vehicles, as well as increase the procurement and use of carbon-free electricity. While measures and actions have been identified in the RCAP related to electric power improvements within Humboldt, no specific details or locations have been identified. The size and scale of the anticipated future electric power system improvements, including utility-scale renewable energy projects, renewable fuel production facilities, and grid expansion projects, would

ultimately determine the amount of ground disturbance necessary to construct these upgrades and improvements.

Implementation of mitigation measures included in various sections of this Draft EIR, including for aesthetics (Mitigation Measures AES-1 through AES-3), air quality (Mitigation Measures AQ-1 through AQ-3), biological resources (Mitigation Measures BIO-1 to BIO-7), cultural and tribal cultural resources (Mitigation Measures CR-1 to CR-3), and noise (Mitigation Measures NOI-1 and NOI-3) as well as implementation of BMPs required by State, regional, and local policies during construction of the anticipated improvements would reduce the potential for impacts. However, the size, magnitude, and locations of future projects associated with utility scale renewable energy generation systems, renewable fuel production facilities, and other electrical system improvements may make it infeasible for future individual projects to fully reduce impacts to a less than significant level. Subsequent environmental review would be required at the time future projects are developed to assess the related environmental impacts and need for additional mitigation, if applicable. Therefore, RCAP construction impacts related to electric power utilities and infrastructure would remain significant and unavoidable.

NATURAL GAS

As described in the RCAP, 13 percent of Humboldt's overall GHG emissions from 2022 were from natural gas usage in buildings (including heating and usage associated with appliances). It is further noted in the RCAP that approximately 92 percent of GHG emissions from building energy usage are related to natural gas consumption. As shown in Table 3.9-3, above, approximately 36 percent of California's electricity was derived from natural gas in 2022.

RCAP Measures BE-1 through BE-8 would increase the development and use of renewable and carbon-free energy sources within the RCAP area, as well as reduce natural gas consumption through building electrification. As such, there would be no need for the construction of new or expanded natural gas facilities. Therefore, no RCAP construction impact related to natural gas infrastructure and facilities would occur.

TELECOMMUNICATIONS

Implementation of the RCAP is not anticipated to result in the construction of new or expanded telecommunications facilities. No RCAP construction impact related to telecommunications infrastructure and facilities would occur.

Operation

WATER SUPPLY, WASTEWATER, STORMWATER, NATURAL GAS, AND TELECOMMUNICATIONS

While there would be no habitable development associated with implementation of the RCAP, new renewable energy, renewable fuel production, and organic waste processing facilities per RCAP Measures BE-1, BE-2, T-10, and SW-1 may require the use of water, wastewater, stormwater, natural gas, and telecommunications infrastructure during operation. However, future projects would be anticipated to be served by existing utilities in the area and not require the need for the ongoing expansion of water supply, wastewater, stormwater, natural gas, or telecommunications infrastructure. In addition, implementation of water efficiency upgrades and recycled water infrastructure per RCAP Measure WW-2 would reduce potable water use. Furthermore, RCAP Measures BE-1 through BE-8 would reduce natural gas consumption. Therefore, RCAP operational

impacts related to potential need for new or expanded water, wastewater, stormwater, natural gas, and telecommunications facilities and infrastructure would be less than significant.

ELECTRIC POWER

The RCAP includes measures to aid Humboldt in achieving electric power-related targets consistent with SB 1020. Such targets require renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. As previously discussed, Humboldt's electric service providers (PG&E and RCEA) currently provide options for its customers in which the power purchased is derived from various levels of renewable sources. As discussed under Section 3.9.2, *Environmental Setting*, PG&E has a goal for achieving a net-zero energy system by 2040 (5 years before the State of California's current carbon neutrality goal), with RCEA on track to provide all customers with 100 percent renewable sources by 2030 (15 years before the State's 2045 target).

Related measures of the RCAP seek to increase carbon-free electricity, increase building electrification to decarbonize existing buildings and new construction, and increase infrastructure to support zero-emissions vehicles. Specific measures include the following:

- Measure BE-1: By 2030, source 90 percent of grid-supplied electricity from renewable and carbon-free sources.
- Measure BE-2: Increase the development of micro-grids and energy storage across the region to support RCEA's RePower Humboldt goals of enhancing grid capacity and facilitating the electrification of buildings and transportation.
- Measure BE-5: Decarbonize 95 percent of new residential building construction by 2027.
- Measure BE-6: Decarbonize 95 percent of new nonresidential building construction by 2027.
- Measure BE-7: Decarbonize 30 percent municipal buildings and facilities by 2030.
- Measure BE-8: Advocate for Off-shore Wind developers and PG&E to build electrical infrastructure to supply Humboldt with energy produced by the future off-shore wind project which will increase regional supply and resilience.
- Measure T-6: Decarbonize 15 percent of passenger vehicle miles traveled by 2030 and 100 percent by 2045 through increased adoption of low and zero-emission vehicles and development of a regional electric vehicle charging and hydrogen fueling network.
- Measure T-7: Increase commercial zero-emission vehicle use and adoption to 10 percent by 2030 and 100 percent by 2045 through a regional charging network and development of hydrogen hubs.
- Measure T-8: Electrify or otherwise decarbonize 12 percent of applicable small off-road engines (SOREs) off-road equipment by 2030 and 100 percent by 2045 and replace fossil diesel consumption with renewable diesel in 55 percent of applicable large diesel in alignment with EO N-79-20 by 2030.
- Measure T-10: Work with the State and renewable fuel industry to establish a renewable fuel network within Humboldt thereby funding new green industry and job growth to support the decarbonization of the transportation sector.
- Measure T-11: Lead by example and electrify or otherwise decarbonize 50 percent of municipal fleets by 2030 in alignment with the State's Advanced Clean Fleet Rule.

Electric power and infrastructure deficiencies have been identified within the southern portions of the County (namely, the Cities of Fortuna and Rio Dell and unincorporated community of Garberville), where these areas have been identified as having or nearly reaching capacity for further development. PG&E notes that transmission, substation, and distribution line work would be required to address the identified issues, and such upgrades are expected to require a minimum of seven years to address.¹¹²

It is anticipated that extensive investment and improvements would need to be made to the current electrical system in Humboldt in order to achieve the building and transportation decarbonization targets and measures within the RCAP. For example, as described in the California Independent System Operator's (ISO) 2023-2024 Transmission Plan¹¹³, the need for additional electrical generation in California over the next 10 years "has escalated rapidly". In the report, 26 new reliability and policy related transmission projects, anticipated to generate an additional 85 gigawatts (GW)¹¹⁴ of energy by 2035, have been identified, totaling \$6.1 billion in investment, to meet projected load demands associated with electrification and increased electric vehicle use. Notably, several projects are proposed within the North Coast region, to integrate off-shore wind, including: 1) a new 500-kilovolt (kV) substation in Humboldt; 2) a new high-voltage direct current line to interconnect the new Humboldt 500 kV substation to the Collinsville 500 kV substation (approximately 260 miles); 3) a new 500 kV alternating current line to interconnect new Humboldt 500 kV substation to the Fern Road 500 kV substation (approximately 140 miles); 4) a 115 kV line from the new Humboldt 500 kV to existing Humboldt 115 kV substation, and a 115 kV/115 kV phase shifting transformer at Humboldt 115 kV substation; and 5) smaller upgrades improving supply of load and access to other smaller resource zones.¹¹⁵

Overall, an extensive amount of operational electric power generation and distribution need is not anticipated to be covered by the existing electric power system, and the ongoing improvement and expansion of electrical infrastructure would be required as energy demands increase in Humboldt due to increased electrification of buildings and vehicles under the RCAP. Implementation of mitigation measures included in various sections of this Draft EIR, including for aesthetics (Mitigation Measures AES-1 through AES-3), air quality (Mitigation Measures AQ-1 through AQ-3), biological resources (Mitigation Measures BIO-1 to BIO-7), cultural and tribal cultural resources (Mitigation Measures CR-1 to CR-3), and noise (Mitigation Measure NOI-2) as well as implementation of BMPs would reduce the potential for impacts. However, the size, magnitude, and locations of projects associated with energy utility improvements may make it infeasible for future individual projects to fully reduce impacts to a less than significant level. Therefore, RCAP operational impacts related to potential need for new or expanded electric power facilities and infrastructure would be significant and unavoidable.

Mitigation Measures

Implement Mitigation Measures AES-1 through AES-3, AQ-1 through AQ-3, BIO-1 to BIO-7, CR-1 to CR-3, and NOI-1 through NOI-3.

¹¹² Humboldt County. 2022. , Board of Supervisors. Staff Report – File No.: 22-1444. <https://humboldt.legistar.com/View.ashx?M=F&ID=11368710&GUID=1FCCA9D5-DC4C-438C-8F71-3161A356172A> (accessed December 2024).

¹¹³ California Independent System Operator (ISO). 2024. 2023-2024 Transmission Plan. <https://www.caiso.com/documents/iso-board-approved-2023-2024-transmission-plan.pdf> (accessed December 2024).

¹¹⁴ A gigawatt equates to 1,000 megawatts (MW) or 1 million watts. On average, one MW of energy has the ability to power approximately 1,000 homes for a year.

¹¹⁵ California Independent System Operator (ISO). 2024. 2023-2024 Transmission Plan. <https://www.caiso.com/documents/iso-board-approved-2023-2024-transmission-plan.pdf> (accessed December 2024).

Level of Significance

Significant and Unavoidable

Water Supply Availability

Significance Criterion b: Would the proposed plan have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact UTL-2 **IMPLEMENTATION OF THE PLAN WOULD NOT BE ANTICIPATED TO SUBSTANTIALLY INCREASE POPULATION IN HUMBOLDT OR THE DEMAND FOR WATER SERVICES DURING NORMAL, DRY, AND MULTIPLE DRY YEARS. THE RCAP WOULD RESULT IN AN OVERALL REDUCTION IN WATER DEMAND, AND AS SUCH, THERE WOULD BE NO IMPACT.**

Construction

While the projects and infrastructure facilitated by the RCAP could necessitate the occasional use of limited quantities of water for dust control, mixing concrete, and washing equipment and vehicles, impacts related to water supplies are primarily limited to operational effects. Therefore, RCAP construction impacts related to the need for new water supply as a result of water demand would be less than significant.

Operation

The RCAP does not include site-specific infrastructure designs or project proposals that would be expected to significantly impact or increase the demand on existing water supplies. As discussed under Section 3.9.2 *Environmental Setting*, above, most of the local water providers within Humboldt are able to adequately meet current water demands within their respective services areas, many of which have the capacity to serve additional service connections. However, it is important to note there are several smaller districts (including but not limited to Alderpoint CWD, Briceland CSD, Miranda CSD, Orleans CSD, and Westhaven CSD) that have either reached service capacity limits or have nearly reached capacity, a few of which have current moratoriums in place for new service connections. For those located outside of service district boundaries and not supplied by community water services, it is the responsibility of the respective landowner to ensure they have the appropriate infrastructure and/or water rights to obtain an adequate supply of water.

New renewable energy, renewable fuel production, and organic waste processing facilities per RCAP Measures BE-1, BE-2, T-10, and SW-1 would require the use of water during operation. However, RCAP Measure WW-2 seeks to reduce per capita potable water consumption by 15 percent by 2030 by encouraging water conservation, as well as increasing access to and use of recycled water within the Planning Area. By encouraging reduced water consumption and increasing use of recycled water, the RCAP would be anticipated to reduce the overall demand on potable water supplies and local water service providers within Humboldt. As such, projects and infrastructure facilitated by the RCAP are expected to result in overall benefits related to water supply when considered with the overall RCAP water use reductions. Therefore, no RCAP operational impact related to the need for new water supply would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

Wastewater Treatment Capacity

Significance Criterion c: Would the proposed plan result in a determination by the wastewater treatment provider, which serves or may serve the plan, that it has adequate capacity to serve the plan's projected demand in addition to the provider's existing commitments?

Impact UTL-3 IMPLEMENTATION OF THE PLAN WOULD NOT BE ANTICIPATED TO SUBSTANTIALLY INCREASE WASTEWATER TREATMENT DEMAND WITHIN HUMBOLDT SUCH THAT THE RESPECTIVE WASTEWATER TREATMENT PROVIDERS WOULD NOT HAVE SUFFICIENT CAPACITY TO SERVE THE PLAN'S PROJECTED DEMAND IN ADDITION TO THE PROVIDERS' EXISTING COMMITMENTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to adequate wastewater treatment capacity are limited to operational impacts. No RCAP construction impacts related to wastewater treatment capacity would occur.

Operation

As discussed under Section 3.9.2 *Environmental Setting*, above, there are 18 individual wastewater treatment providers within Humboldt, the majority of which have additional capacity within their existing systems for additional connections (although the Loleta CSD indicated wet weather flows exceeded the design capacity of its WWTP in 2022 by over 200 percent). For those areas not located within an existing community wastewater service district, properties are generally served by individual onsite septic systems.

While there would be no habitable development associated with implementation of the RCAP, new renewable energy, renewable fuel production, and organic waste processing facilities per RCAP Measures BE-1, BE-2, T-10, and SW-1 may produce wastewater requiring treatment by one of the sanitary districts described in Section 3.9.2 *Environmental Setting*, above, or by onsite wastewater treatment (e.g., septic). However, RCAP Measure WW-2 includes several actions to increase water conservation and greywater use, which would result in a decrease in the overall amount of wastewater requiring treatment in Humboldt. In addition, RCAP Measure WW-1 seeks to expand regional opportunities for implementation of wastewater decarbonization technologies, such as anaerobic digesters, and wastewater treatment improvements and upgrades. While these technologies would not reduce demand on the existing wastewater treatment facilities within Humboldt, the technologies would be expected to reduce GHG emissions associated with wastewater treatment processes and generate renewable fuel sources. It is further noted that the technologies could even expand wastewater treatment capabilities to process organic waste that would otherwise be sent to a landfill for disposal, thereby increasing solid waste diversion and further reducing GHG emissions. As such, implementation of the RCAP is not anticipated to result in significant increases in wastewater generation or wastewater treatment within Humboldt. Therefore, RCAP operational impacts related to adequate wastewater treatment capacity would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

Landfill Capacity and Solid Waste Reduction Regulations Consistency

Significance Criterion d: Would the proposed plan generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Significance Criterion e: Would the proposed plan comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Impact UTL-4 IMPLEMENTATION OF THE PLAN WOULD NOT BE ANTICIPATED TO SUBSTANTIALLY INCREASE SOLID WASTE GENERATION SUCH THAT STATE OR LOCAL STANDARDS OR CAPACITY OF LOCAL INFRASTRUCTURE WOULD BE EXCEEDED, OR OTHERWISE IMPACT THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS. ADDITIONALLY, THERE IS NO ELEMENT OF THE PLAN THAT WOULD RESULT IN NONCOMPLIANCE WITH FEDERAL, STATE, AND LOCAL MANAGEMENT AND REDUCTION STATUTES AND REGULATIONS RELATED TO SOLID WASTE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction facilitated by the RCAP would involve the development of energy, renewable fuel, organic waste processing, recycled water, and transportation infrastructure per RCAP Measures BE-1, BE-2, T-10, WW-2, SW-1, T-1 Urban and Rural, T-2 Urban and Rural, and T-4. This would result in the generation of solid waste from construction activities. Future projects developed under the proposed plan that would entail construction and generate solid waste would be subject to County and cities municipal code policies, as well as CALGreen Code Section 5.408. 1, which require the diversion of a minimum of 65 percent of construction waste. Compliance with existing regulations would ensure that construction-generated solid waste is not in excess of State or local standards or the capacity of local landfills, or otherwise impair the attainment of solid waste reduction goals. Therefore, RCAP construction impacts related to landfill capacity and solid waste reduction goals consistency would be less than significant.

Operation

As noted in the RCAP, approximately two percent of Humboldt's regional GHG emissions is associated with solid waste, primarily associated with the decomposition of organic material in landfills. Under the RCAP, the primary strategy for reducing GHG emissions attributable to solid waste generation is diversion from landfills and reuse of materials. Section 3.9.2 *Environmental Setting*, above, discusses the current solid waste providers and facilities located within Humboldt, as well as the capacity of the out-of-area landfills where waste from Humboldt is currently transported. As Humboldt does not currently have a local organic waste processing facility, RCAP Measure SW-1 includes actions to develop such a facility with the goal to reduce the amount of waste sent to landfills by 75 percent by 2030. The establishment of such a facility would allow for organic waste to be sorted and then further produced into other usable materials, such as compost

and/or green energy. In addition, RCAP Measure SW-1 includes actions to reduce waste production within Humboldt, minimize food waste, and explore options for processing organic waste at existing wastewater treatment facilities to produce green energy. With less waste going to landfill, Humboldt would be able to achieve SB 1383 requirements that require a 75 percent reduction in organic waste disposal by 2025 and donating at least 20 percent of currently disposed surplus food. The reduction of solid waste production and increased solid waste diversion would also align with the County and individual city general plan goals related to solid waste. Furthermore, operation of the organic waste processing facility, as well as continued operation of existing solid waste facilities within Humboldt, would be required to comply with federal, State, and local regulations pertaining to solid waste, including those summarized in Section 3.9.3, *Regulatory Framework*, above. As the RCAP would reduce the production of solid waste in Humboldt and aid in the region's overall solid waste reduction goals, the RCAP would result in no operational impacts related to solid waste.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

3.9.5 Cumulative Impacts

The geographic scope of the cumulative utilities and service systems analysis includes the entirety of Humboldt, including the service boundaries of the individual service districts that serve Humboldt. Because of differences in the nature of the utility and service system topical areas, they are discussed separately. The cumulative analysis considers the population, employment, households, and service population forecasts identified in the RCAP through 2030 (refer to Cumulative Scenario Setting in Chapter 3.0, *Environmental Impact Analysis*).

Water Supply Infrastructure and Facilities

As discussed under Section 3.9.2, *Environmental Setting*, above, most of the local water providers within Humboldt are able to adequately meet current water demands within their respective services areas, many of which have the capacity to serve additional service connections. However, it is important to note there are several smaller districts (including but not limited to Alderpoint CWD, Briceland CSD, Miranda CSD, Orleans CSD, and Westhaven CSD) that have either reached service capacity limits or have nearly reached capacity, a few of which have current moratoriums in place for new service connections. Therefore, cumulative development occurring within the service districts with water supply capacity limits would result in cumulative impacts related to water supply infrastructure and facilities.

Projects facilitated by the RCAP have the potential to encourage and result in construction of new water supply infrastructure and facilities to achieve water conservation and recycling goals within Humboldt. Implementation of the RCAP is anticipated to lessen per capita water consumption and increase use of recycled water within the region. Nonetheless, construction and/or expansion of water and/or water recycling facilities is anticipated to occur under the RCAP, which has the potential to result in significant and unavoidable environmental impacts as addressed under Impact UTIL-1. Although mitigation measures would be implemented to reduce impacts to the extent feasible, the potential remains for cumulatively considerable environmental impacts from future

water infrastructure-related RCAP projects. Therefore, the cumulative impact related to water supply infrastructure and facilities would be significant and unavoidable.

Wastewater Infrastructure and Facilities

As discussed under Section 3.9.2, *Environmental Setting*, above, there are 18 individual wastewater treatment providers within Humboldt, the majority of which have additional capacity within their existing systems for additional connections (although the Loleta CSD indicated wet weather flows exceeded the design capacity of its WWTP in 2022 by over 200 percent). Therefore, cumulative development occurring within the Loleta CSD would result in cumulative impacts related to wastewater supply infrastructure and facilities.

Projects facilitated by the RCAP have the potential to encourage and result in construction of new wastewater infrastructure and facilities to achieve water conservation and recycling goals within Humboldt. While implementation of the RCAP is anticipated to lessen wastewater generation within Humboldt, construction and/or expansion of wastewater treatment and/or recycling facilities is anticipated to occur, which has the potential to result in significant and unavoidable environmental impacts as addressed under Impact UTIL-1. Although mitigation measures would be implemented to reduce impacts to the extent feasible, the potential remains for cumulatively considerable environmental impacts from future wastewater infrastructure-related RCAP projects. Therefore, the cumulative impact related to wastewater infrastructure and facilities would be significant and unavoidable.

Stormwater Infrastructure and Facilities

Cumulative development within Humboldt would be served by existing municipal storm drainage systems in urbanized areas, and natural stormwater management and drainage features in rural areas. Consistent with measures in the Humboldt County Code and City Municipal Codes, cumulative development would be required to incorporate stormwater control plans, LID features, and/or stormwater collection systems that would in turn reduce the volume and velocity of stormwater runoff that cumulative development would generate. As addressed under Impact UTIL-1, implementation of the Plan is not anticipated to require the relocation or construction of new or expanded stormwater drainage facilities within Humboldt. Therefore, the cumulative impact related to stormwater infrastructure and facilities would be less than significant.

Electric Power Infrastructure and Facilities

Existing electric power infrastructure and supply deficiencies have been identified by PG&E in Humboldt. Implementation of the RCAP is anticipated to increase electrification and use of renewable and carbon-free energy within the County, which in turn would exacerbate electric power infrastructure demands. The RCAP would be expected to result in and require the construction and/or expansion of electric power infrastructure and facilities. Construction and/or expansion of such facilities has the potential to result in environmental impacts. Although mitigation measures would be implemented to reduce impacts to the extent feasible, the potential remains for cumulatively considerable environmental impacts from future electric power-related RCAP projects. Therefore, the cumulative impact related to electric power infrastructure and facilities would be significant and unavoidable.

Natural Gas Infrastructure and Facilities

Cumulative development within Humboldt has the potential to result in increased natural gas demand. However, as described in Section 3.9.2, *Environmental Setting*, above, PG&E maintains extensive natural gas facilities, supply, and infrastructure within Humboldt. Therefore, cumulative development is not anticipated to result in the need for substantial new or expanded natural gas facilities in Humboldt. In addition, implementation of the RCAP is expected to result in a decrease in natural gas usage, thereby reducing the need for the relocation or construction of new or expanded natural gas facilities. As such, the cumulative impact related to natural gas infrastructure and facilities would be less than significant.

Telecommunications Infrastructure and Facilities

Cumulative development within Humboldt has the potential to result in increased demand for telecommunications services. However, as described in Section 3.9.2 *Environmental Setting*, above, existing telecommunications providers maintain extensive infrastructure and facilities within Humboldt. Therefore, cumulative development is not anticipated to result in the need for substantial new or expanded telecommunications facilities in Humboldt. Implementation of the Plan is not anticipated to require the relocation or construction of new or expanded telecommunications infrastructure or facilities within Humboldt, as addressed under Impact UTIL-1. As such, the cumulative impact related to telecommunications infrastructure and facilities would be less than significant.

Solid Waste Generation and Facilities

Cumulative development in Humboldt would increase the generation of solid waste and the demand on solid waste facilities to receive, process, and store solid waste. Humboldt is currently served by two landfills: Potrero Hills Landfill and Dry Creek Landfill. These landfills have an estimated remaining capacity of 24 years and 76 years, respectively, and are anticipated to have sufficient capacity to serve the anticipated regional growth in Humboldt through 2030. Furthermore, as addressed under Impact UTIL-4, the RCAP is anticipated to reduce overall solid waste production, as well as increase the diversion of organic waste and recyclables through implementation of Measure SW-1. As such, the cumulative impact related to solid waste generation and facilities would be less than significant.

Overall Level of Cumulative Significance

Significant and Unavoidable

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None.

3.10 Effects Found Not to be Significant

Section 15128 of the CEQA Guidelines requires that an EIR briefly describe any possible effects that were determined not to be significant. This section discusses the environmental topics that were determined to not result in potentially significant environmental effects. The discussion of each topic relies on the checklist questions listed in Appendix G of the 2024 CEQA Guidelines and shown in italic text at the beginning of each topical impact analysis in this section.

3.10.1 Geology and Soils

1. *Would the plan expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - a. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*
 - b. *Strong seismic ground shaking?*
 - c. *Seismic-related ground failure, including liquefaction?*
 - d. *Landslides?*

Humboldt County is located within a seismically active region. Specifically, the Mendocino Triple Junction is located in the Pacific Ocean near Cape Mendocino, the westernmost point of California's coast, located within Humboldt County. The Mendocino Triple Junction is the point where three tectonic plates (Gorda, North American, and Pacific) and three major faults (the Cascadia Subduction Zone, the San Andreas Fault, and the Mendocino Fracture Zone) meet. As a result, large earthquakes would be expected to occur during the economic lifespan (50 years) of any improvements or subsequent infrastructure that occurs as a result of the RCAP. There are State regulations, as well as local requirements established by the County and city general plans and municipal codes, that address seismic hazards. The Alquist-Priolo Act prohibits the development of structures for human occupancy across active fault traces. Under the Alquist-Priolo Act, the California Geological Survey has established "Zones of Required Investigation" on either side of an active fault that delimits areas susceptible to surface fault rupture. The zones are referred to as *Earthquake Fault Zones* and are shown on official maps published by California Geological Survey. The Alquist-Priolo Act requires geologic studies be conducted to locate and assess any active fault traces in and around known active fault areas prior to development of structures for human occupancy to prevent the construction of such structures in such locations. In addition, the California Building Code (CBC) incorporates the latest seismic design standards for structural loads and materials, as well as provisions from the National Earthquake Hazards Reduction Program to mitigate losses from an earthquake. The CBC includes provisions for demolition and construction, as well as regulations regarding building foundations and soil types to protect people and property from hazards associated with falling debris or construction processes. Seismic standards within the CBC are among the strictest in the world because of California's susceptibility to earthquakes and other seismic events.

The RCAP is a policy document intended to reduce GHG emissions within Humboldt County. RCAP projects and infrastructure would not include habitable development but would still be subject to the CBC and local jurisdiction's general plan policies, zoning regulations, and design and

infrastructure construction, geotechnical, foundation, and slope standards. This would minimize potential geological risks associated with rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides. Therefore, RCAP impacts related to risk associated with earthquakes and ground failure would be less than significant.

2. Would the plan result in substantial soil erosion or the loss of topsoil?

The RCAP is a policy document intended to reduce GHG emissions within Humboldt County. Future RCAP-related improvements and infrastructure, such as renewable energy and transportation facilities per RCAP Measures BE-1, BE-2, T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-10, may require excavation and groundbreaking activities to prepare a project site. However, project contractor(s) would be required to implement standard Best Management Practices (BMPs), pursuant to the Clean Water Act and the Porter-Cologne Water Quality Control Act, to control runoff and ensure that associated grading and construction would not negatively impact water quality. Such BMPs may include installing straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limiting ground disturbance to the minimum necessary, and stabilizing disturbed soil areas as soon as feasible after construction is completed.

In addition, the Cities of Eureka, Arcata, Fortuna, and Trinidad and portions of unincorporated Humboldt County (McKinleyville; the greater Eureka area, including Myrtle town, Cutten, Ridgewood Heights, Pine Hill, and Humboldt Hill; and Shelter Cove) are subject to the State Water Quality Control Board (SWRCB) General Permit for Municipal Separate Storm Sewer Systems (MS4 Permit). Notably, Condition E.12 of the MS4 Permit required local agencies, by June 30, 2015, to require that projects comply with post-construction stormwater requirements based on “low impact development” (LID) standards.¹ LID standards are intended to maintain a site’s pre-development runoff characteristics by using design techniques that capture, treat, and infiltrate stormwater on site. The jurisdictions noted above have collaborated to develop a common manual, the *Humboldt Low Impact Development Stormwater Manual* (Humboldt LID Stormwater Manual), to present technical information, procedures, and guidance for complying with the State’s LID design standards.² Per the Humboldt LID Stormwater Manual, RCAP improvements or subsequent infrastructure, if not determined to be an Exempt Project,³ would require preparation of a Stormwater Control Plan (SCP) to describe how a project will manage the site’s stormwater and control run-off.

Additionally, RCAP projects such as utility-scale renewable energy per RCAP Measure BE-2, renewable fuel production per RCAP Measure T-10, organic waste processing per RCAP Measure SW-1, recycled water per RCAP Measure WW-2, and transportation facilities per RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural and T-4 that could disturb one or more acres of soil or would disturb less than one acre individually but are part of a larger common plan of development that in total disturbs one or more acres would be subject to the requirements of the National Pollutant

¹ LID standards are guidelines that help manage stormwater and runoff to reduce adverse water quality impacts and replenish groundwater.

² Humboldt County. 2021. Humboldt Low Impact Development Stormwater Manual (Version 3.0) – Design Guidance for Stormwater Treatment and Control Projects in Phase II MS4 Permit Areas. https://northcoaststormwatercoalition.org/wp-content/uploads/2021/10/Humboldt-LID-Stormwater-Manual_V3.0.pdf (accessed November 2024).

³ In accordance with the *Humboldt Low Impact Development Stormwater Manual*, Exempt Projects include the following, which are not subject to LID requirements: projects that create or replace less than 2,500 square feet (SF) of impervious surface; interior remodels and routine maintenance or repair such as exterior wall surface replacement; reroofing of an existing building; asphalt or paving overlays and resurfacing of existing surfaces; and Linear Underground Projects (LUPs) unless the LUP has a discreet location that has greater than or equal to 5,000 SF of newly constructed impervious surface.

Discharge Elimination System (NPDES) General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP) of the SWRCB. Construction activity subject to the CGP includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.⁴ Where such activities would occur, operators of such construction sites are required to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented during construction to reduce the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Within California, the NPDES permit program is administered by the SWRCB and the Regional Water Quality Control Boards. Within Humboldt, the respective Regional Water Board is the North Coast Regional Water Quality Control Board (NCRWQCB).

With implementation of appropriate BMPs and compliance with Humboldt LID Stormwater Manual requirements and the CGP, as applicable, the RCAP would not result in substantial soil erosion or the loss of topsoil. Therefore, RCAP impacts related to erosion and topsoil would be less than significant.

3. *Would the plan be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

Areas of unstable soils are present throughout Humboldt. For example, soils subject to liquefaction are predominantly found near Humboldt Bay where muds and sands are present, while soils subject to landslide are concentrated in the Cape Mendocino watershed area as well as in the North Coast Ranges.⁵ The RCAP is a policy document intended to reduce GHG emissions within Humboldt. The RCAP does not include specific projects or project locations, but there is the potential for future RCAP-related improvements and infrastructure to occur in areas with unstable soils. Future RCAP-related improvements and infrastructure would be required to comply with the CBC and the local jurisdiction's general plan policies, zoning regulations, and design and construction standards to ensure that structural design and construction account for local conditions related to geologic and soil stability. With compliance with existing regulations, future projects and infrastructure that stem from the RCAP would not directly or indirectly cause substantial adverse effects related to unstable soils. Therefore, RCAP impacts related to risk associated with unstable geologic unit or soil would be less than significant.

4. *Would the plan be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Expansive soils generally comprise cohesive, fine-grained clay soils and represent a significant structural hazard to buildings founded on them, especially where seasonal fluctuations in soil moisture occur at the foundation-bearing depth. The RCAP is a policy document intended to reduce GHG emissions within Humboldt. The RCAP does not include specific projects or project locations, but there is the potential for future RCAP-related improvements and infrastructure to occur in areas with expansive soils. Humboldt County and the individual city general plan policies, zoning

⁴ State Water Resources Control Board (SWRCB). 2024. *Welcome to the Construction Stormwater Program*. https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html (accessed November 2024).

⁵ Humboldt County. 2017. Humboldt General Plan Update Revised Draft Environmental Impact Report. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Draft-Document-PDF> (accessed November 2024).

regulations, and design and construction standards require completion of preliminary soils report and geologic investigations to determine adverse geologic and soil conditions. If expansive soils are identified, then special design considerations per the CBC and local zoning and building regulations would be required. With compliance with existing regulations, future projects and infrastructure that stem from the RCAP would not directly or indirectly cause substantial adverse effects related to expansive soils. Therefore, RCAP impacts related to risk associated with expansive soils would be less than significant.

5. *Would the plan area have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The RCAP is a policy document intended to reduce GHG emissions within Humboldt and would not result in new habitable development, though some RCAP-related projects such as utility-scale renewable energy facilities per RCAP Measures BE-1 and BE-2, organic waste processing facilities per RCAP Measure SW-1, and renewable fuel production facilities per RCAP Measure T-10 could require restroom facilities that may utilize septic tanks or alternative wastewater disposal systems. In addition, RCAP Measure WW-1 includes actions that promote improvements and upgrades to existing septic and alternative wastewater disposal systems, such as the use of anaerobic digesters to generate renewable fuel. In the event septic tanks and other alternative wastewater disposal systems are necessary for infrastructure that occurs as a result of the RCAP, such systems would be required to comply with all applicable federal, state, and local regulations related to their design and use, including Humboldt County Department of Environmental Health (DEH) and local jurisdictions' policies and standards. Upgrades and improvements to existing septic and alternative wastewater disposal systems promoted by RCAP Measure WW-1 would also be required to comply with the applicable regulations. Such policies are designed to ensure systems are properly sited and designed for each specific location. Therefore, RCAP impacts related to septic tanks and alternative wastewater disposal systems would be less than significant.

6. *Would the plan directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Implementation of the RCAP, including associated improvements and subsequent development to occur as a result of the proposed plan, may require excavation and groundbreaking activities to prepare a project site. The University of California, Berkeley Museum of Paleontology's repository⁶ has on record over 700 specimens on file within Humboldt, including invertebrates, vertebrates, microfossils, and fossils, indicating groundbreaking activities within the County has the potential to result in inadvertent discovery of paleontological resources. Furthermore, a paleontological resources report, prepared for a separate project involving broadband infrastructure proposed within Humboldt, Trinity, and Shasta Counties, indicates that within the Eureka-Arcata-Trinidad area, "paleontologically sensitive geologic units are widespread" and include unnamed Pleistocene-age nonmarine terrace deposits, unnamed Pleistocene-age marine and nonmarine overlap deposits,

⁶ The University of California Museum of Paleontology at U.C. Berkeley (2024) has several online databases that can be searched, including archives, photographs, localities, and specimens, available at the following link: <https://ucmp.berkeley.edu/collections/databases/>.

and the Falor Formation.⁷ The report further notes that fossil remains of a mammoth have also been located within northern Humboldt County.⁸

Although there are no specific projects and locations identified in the RCAP, implementation of the RCAP would facilitate projects and infrastructure that may include site preparation, demolition, and other construction activities. Such projects would include renewable energy infrastructure (wind, solar, and hydrogen) per RCAP Measures BE-1, BE-2, BE-3, BE-7, and T-10, EV charging and parking infrastructure per RCAP Measures T-6 and T-7 and transportation infrastructure (transit, bicycle, and pedestrian) per RCAP Measures T-1 Urban and Rural, T-2 Urban and Rural, T-4, and T-7. In addition, RCAP Measures SW-1 and WW-2 may result in new organic waste processing and recycled water facilities and infrastructure. Construction of such projects would include site preparation and other ground-disturbing construction activities that could affect previously unknown paleontological resources.

Although there is potential for inadvertent discovery of paleontological resources during groundbreaking activities associated with the RCAP, the State protects paleontological resources located on public lands pursuant to Section 5097.5 of the California Public Resource Code (PRC) and local jurisdictions include policies in local planning documents, including respective general plans, that provide protocol in the event of inadvertent discovery of such resources. Such policies include halting work (including grading and other ground disturbing activities) at the find location until the resources are evaluated and appropriate treatment is determined and implemented. Such policies include Humboldt County General Plan Standard CU-S4, Eureka General Plan Policy HS-1.7, Arcata General Plan Policy H-7, Fortuna General Plan Policy NCR-7.1, and Rio Dell General Plan Policy P1.3.4-2. By complying with State and local regulations and inadvertent discovery protocols, it is anticipated that implementation of the RCAP would not destroy unique paleontological resources or geological features. Therefore, RCAP impacts related to paleontological resources would be less than significant.

3.10.2 Hazards and Hazardous Materials

1. *Would the plan create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
2. *Would the plan create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or has characteristics defined as hazardous by a federal, State, or local agency. Chemical and physical properties such as toxicity, ignitability, corrosiveness, and reactivity cause a substance to be considered hazardous. These properties are defined in the California Code of Regulations (CCR), Title 22, §66261.20-66261.24. A “hazardous waste” includes any hazardous material that is discarded, abandoned, or will be recycled. Therefore, the criteria that render a material hazardous also cause a waste to be classified as hazardous (California Health and Safety Code, Section 25117).

⁷ PaleoServices – San Diego Natural History Museum. 2021. *Paleontological Resource Technical Report – Digital 299 Broadband; Humboldt, Trinity, and Shasta Counties, California*. <https://ia.cpuc.ca.gov/environment/info/transcon/ismnd/Appendix%20L%20-%20Paleontological%20Report%20and%20Monitoring%20Plan/Digital%20299%20Paleo%20Resource%20Technical%20Report%202021%201109.pdf> (accessed November 2024).

⁸ Ibid.

Implementation of the RCAP, including associated improvements or subsequent infrastructure may require the routine transport, use, and disposal of hazardous materials, such as those commonly associated with large-scale renewable energy (e.g., RCAP Measures BE-1 and BE-2), battery energy storage (e.g., RCAP Measures BE-2, BE-4, and BE-7), renewable fuel production (e.g., RCAP Measures T-10 and WW-1), organic waste processing (e.g., RCAP Measure SW-1), and recycled water (e.g., RCAP Measure WW-2) facilities, including the overall construction process and associated operation and maintenance. Such hazardous materials may include but are not limited to gasoline, diesel fuel, hydraulic fluids, oils, lubricants, acids, bases, cleaning solvents, and paint, as well as lithium-ion batteries, renewable fuels (e.g., biofuels and renewable natural gas), and hydrogen fuel. The use and storage of these hazardous materials, in particular, large-scale storage of lithium-ion batteries, hydrogen fuel, and biofuels, could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving their release.

Any use, storage, transport, or disposal of potentially hazardous materials during construction and operation of RCAP projects would comply with all local, State, and federal regulations regarding the handling of potentially hazardous materials, including but not limited to Title 49 of the Code of Federal Regulations (CFR), Title 22, Division 4.5 of the CCR, the NPDES permitting program for construction activities, 29 CFR Part 1910, National Fire Protection Association standards, and local fire district review and conditions. Additionally, future RCAP projects involving the use or storage of hazardous materials would be subject to existing regulations in the Humboldt County Code (HCC), Humboldt County General Plan, and each individual city's municipal code and general plan including policies and development standards that would limit the allowable locations of large-scale renewable energy and battery energy storage, renewable fuel production, organic waste processing, and recycled water facilities. Such large-scale projects would also require discretionary permit approvals and project-level CEQA review. Compliance with existing hazardous materials regulations and local development standards would minimize the potential for the RCAP to result in significant hazards to the public or environment due to the routine use, transport, or disposal of hazardous materials and due to upset or accidental releases. Therefore, RCAP impacts related to risk associated with transport, use, or disposal of hazardous materials and hazardous materials release would be less than significant.

3. Would the plan emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

As described above under Impacts 3.10.2.1 and 3.10.2.2, future RCAP related projects such as renewable energy, battery energy storage, renewable fuel, organic waste processing, and recycled water facilities would involve the use and storage of hazardous materials. Such projects would be subject to federal, State, and local regulations pertaining to the use, storage, transport, and disposal of hazardous materials, which would minimize the potential for accidental releases of hazardous materials that could affect schools. Furthermore, local general plan and zoning code policies and regulations would limit the allowable locations of large-scale renewable energy and battery energy storage, renewable fuel production, organic waste processing, and recycled water facilities to appropriate locations and impose safety requirements that would reduce risks to surrounding land uses, including schools. These include policies such as Humboldt General Plan Policy S-P32 and Standard S-S16, Arcata General Plan Policies PS-6d, PS-6e and PS-6g, Eureka General Plan Policies AQ-1.5, Q-1.6, HS-3.1, HS-3.4, HS-3.7 and HS-3.8, Ferndale General Plan Implementation Program 2.b, Fortuna General Plan Policies HS-1.1, HS-6.1, HS-6.3, HS-6.4, HS-6.7, HS-6.8, Rio Dell General Plan Policy P1.2.4-3, and Trinidad General Plan Public Safety Element Recommendations 21 and 22. Compliance with existing hazardous materials regulations and local development standards would

minimize the potential for the RCAP to result in significant hazards to schools. Therefore, RCAP impacts related to risk associated with hazardous materials release near a school would be less than significant.

4. *Would the plan be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Government Code Section 65962.5 requires that the California Department of Toxic Substances Control (DTSC) compile and update a list of hazardous waste facilities; land designated as hazardous waste property; hazardous waste disposals on public land; sites that contain potential hazards to public health, safety or the environment, the risk of fire or explosion, and toxic hazards; and all sites included in the Abandoned Site Assessment Program. Contaminated sites are present throughout Humboldt, primarily The DTSC Hazardous Waste and Substances Site List includes two active sites, the State Water Resources Control Board Leaking Underground Storage Tanks List includes 12 sites with open cases, and the United States Environmental Protection Agency (USEPA) lists one site in Humboldt, the Copper Bluff Mine, as a Superfund site.^{9, 10, 11} While the RCAP is a policy document intended to reduce GHG emissions within Humboldt County, improvements and subsequent infrastructure associated with implementation of the RCAP may occur. Should such infrastructure be proposed on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5, compliance with applicable federal, State, and local laws and regulations regarding cleanup and reuse of a listed hazardous materials site would ensure there would not be a significant hazard to the public or the environment. Therefore, RCAP impacts related to risk associated with location on a listed hazardous materials site would be less than significant.

5. *For a plan area located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

There are eight airports within Humboldt: California Redwood Coast – Humboldt County Airport, Dinsmore Airport, Garberville Airport, Kneeland Airport, Murray Field Airport, Rohnerville Airport, Samoa Field Airport, and Shelter Cove Airport. Under implementation of the RCAP, improvements and subsequent infrastructure may occur. Should any such development occur on a site located within an airport land use plan or within two miles of a public airport or public use airport, compliance with federal, State, and local regulations, including the Humboldt Airport Land Use Compatibility Plan¹², pertaining to projects and infrastructure in proximity to an airport would be required, including but not limited to land use types and compatibility, heights, and siting and design specifications. This would ensure potential projects and infrastructure would not result in a safety hazard for people residing or working in the area. Additionally, as addressed under Impact NOI-3 in Section 3.7, *Noise*, the RCAP would not expose people residing or working in the vicinity of

⁹ DTSC. 2024. Hazardous Waste and Substances Site List.

https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29 (accessed November 2024).

¹⁰ State Water Resources Control Board. 2024. Leaking Underground Storage Tanks List

¹¹ USEPA. 2024. National Priorities List and Superfund Alternative Approach Sites. <https://www.epa.gov/superfund/search-superfund-sites-where-you-live> (accessed November 2024).

¹² Humboldt County Airport Land Use Commission. 2021. Humboldt County Airport Land Use Compatibility Plan.

<https://humboldt.gov/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB> (accessed October 2024).

airports to excessive noise levels. Therefore, RCAP impacts related to risk associated with airports would be less than significant.

6. Would the plan impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Humboldt County Emergency Operations Plan is a multi-jurisdictional plan that addresses the planned response to emergency situations associated with natural disasters, technological incidents, and national security emergencies in, or affecting, Humboldt.¹³ Emergency evacuation routes present throughout Humboldt provide critical transportation facilities in the event of an emergency. Critical transportation facilities for emergency evacuation throughout Humboldt include U.S. 101, SR 299, SR 255, SR 36, and SR 96. These routes provide regional connectivity throughout Humboldt and allow emergency vehicles to travel countywide, including connections to incorporated cities within Humboldt. The RCAP does not involve site-specific development, nor would it facilitate new development that would interfere with adopted emergency plans. Implementation of some RCAP measures, such as those related to active transportation and public transit infrastructure (e.g., Measures T-1 Urban and Rural, T-2 Urban and Rural and T-4) may involve construction within the local or State right-of-way. Construction activities have the potential to require lane closures and may impact traffic and vehicle speeds on the affected roadways.

However, existing State, County, and City regulations minimize the potential for RCAP projects to interfere with emergency response and evacuation. For example, temporary construction barricades or other obstructions that could impede emergency access on State highway systems/routes would be subject to the standards set forth in the California Manual of Uniform Traffic Control Devices (Manual).¹⁴ The Manual requires the creation and approval of temporary traffic control plans to be used for minimizing impacts to roadways. Pursuant to County Code Title IV, Division 1, Chapter 1, construction activities occurring on County roads would be required to minimize interference with traffic. Projects occurring in the incorporated Cities would be required to comply with similar City-specific regulations regarding encroachment and construction safety, such as Chapter 56-10 of the Eureka Municipal Code, Chapter 12.08 of the Blue Lake Municipal Code, Chapter 12.08 of the Fortuna Municipal Code, and Chapter 12.04 of the Trinidad Municipal Code. The RCAP would not include future projects and land uses that would interfere with emergency response and evacuation plans during operation. Therefore, RCAP impacts related to risk associated with interference with emergency response and evacuation plans would be less than significant.

7. Would the plan expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

As discussed in further detail under Section 3.10.7, *Wildfire*, 45 percent of lands within Humboldt County are classified as Very High, 48 percent as High, and 4 percent as Moderate fire hazard severity.¹⁵ The RCAP is a policy document that does not propose specific projects or development. However, there is the potential for future RCAP-related projects to result in new structures, such as renewable energy (e.g., RCAP Measures BE-1 and BE-2), battery energy storage (e.g., RCAP Measures BE-2, BE-4, and BE-7), renewable fuel production (e.g., RCAP Measures T-10 and WW-1),

¹³ Humboldt County. 2015. Emergency Operations Plan. <https://humboldt.gov/DocumentCenter/View/51861/Humboldt-County-Emergency-Operations-Plan-2015> (accessed November 2024).

¹⁴ California Department of Transportation. 2024. CA Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/programs/safety-programs/camutcd> (accessed October 2024).

¹⁵ Humboldt County. 2019. Humboldt County Community Wildfire Protection Plan. <https://humboldt.gov/2431/Community-Wildfire-Protection-Plan> (accessed November 2024).

organic waste processing (e.g., RCAP Measure SW-1), and recycled water (e.g., RCAP Measure WW-2) facilities, that could be located in areas subject to wildfire hazard. Future projects occurring within fire hazard severity zones would be subject to compliance with local, State, and federal standards for building materials, site design, defensible space, and emergency access per the California Building Code, California Fire Code, and Uniform Fire Code, as well as local regulations such as HCC Title III, Division 11 and local fire district review and conditions. Compliance with existing regulations would minimize the risk of loss, injury, or death involving wildfires. In addition, the RCAP contains Measures T-10 and CS-3, which include actions to sustainably manage forest biomass through actions such as understory clearing, that would reduce the risk of wildfire within Humboldt's forested areas. Therefore, RCAP impacts related to risk associated with wildland fires would be less than significant.

3.10.3 Hydrology and Water Quality

1. *Would the plan violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

The RCAP is a policy document to reduce GHG emissions in Humboldt and does not include specific projects that would have a direct adverse impact on water quality. Nonetheless, some projects facilitated by the RCAP would involve activities that could degrade surface water or groundwater quality or violate any water quality standards or waste discharge requirements as a result of construction activities, stormwater runoff, or the accidental release of stored fuels. For example, new renewable energy, renewable fuel, organic waste processing, and recycled water infrastructure promoted by RCAP Measures BE-1, BE-2, T-10, WW-1, SW-1, and WW-2 could require new roads or other impervious surfaces, with resulting stormwater runoff impacts. Additionally, as described in Section 3.10.2, *Hazards and Hazardous Materials*, new renewable fuel production and fueling facilities could potentially result in accidental spills of biofuels, which could affect surface or groundwater quality. Construction activities associated with future infrastructure improvements under the RCAP, including those mentioned above as well as transportation infrastructure (e.g., Measures T-1 Urban and Rural, T-2 Urban and Rural and T-4), could result in temporary water quality impacts due to soil erosion and ground disturbance.

All projects facilitated by the RCAP would be required to comply with independently enforceable requirements of the NPDES CGP and the MS4 Permit as well as other federal, State, and local requirements such as the Clean Water Act, Porter-Cologne Water Quality Control Act, the Humboldt LID Stormwater Manual, and individual city and County grading ordinances, as applicable. This includes compliance with the California Green Building Standards Code, which requires the incorporation of BMPs for materials and waste storage, handling, equipment and vehicle maintenance, and fueling to reduce potential discharge of polluted runoff from construction sites. It also would include adherence to the CGP, which requires future projects facilitated by the RCAP to prepare and implement a SWPPP for construction activities. The SWPPP is required to identify BMPs to control construction-related erosion and sedimentation in dry weather and stormwater runoff, thereby avoiding substantial degradation of water quality. Typical BMPs that could be incorporated into the SWPPP to protect water quality include: diverting off-site runoff away from the construction site; vegetating or revegetating areas as soon as feasible following grading activities; placing perimeter straw wattles to prevent off-site transport of sediment; conducting dust control activities during demolition and construction; using contained equipment wash-out and vehicle maintenance areas; maintaining erosion and sedimentation control measures throughout the construction period; and training all on-site workers on general site housekeeping. Compliance with

applicable federal, State, and local regulations would ensure that potential impacts of construction facilitated by the RCAP related to polluted runoff would be less than significant.

Compliance with applicable federal, State, and local regulations also would be required during the operation of projects facilitated by the RCAP. Applicable requirements would include NPDES and MS4 Permit requirements as well as site-specific LID features to reduce the potential for pollution from incidental spills of chemicals that can be conveyed by storm and landscape irrigation flows. The NPDES permit would establish limits on pollutants discharged into waterways and require all new development and significant redevelopment to incorporate LID features to reduce the discharge of pollutants into receiving waters. Requisite implementation of BMPs would address water quality concerns, such as inadvertent release of pollutants (e.g., hydraulic fluids, petroleum, biofuels); improper management of hazardous materials; trash and debris; and improper management of portable restroom facilities (e.g., regular service). Additionally, compliance with the California Green Building Standards Code would require source controls for outdoor material storage areas, outdoor trash storage/waste handling areas, outdoor loading/unloading dock areas, and building materials areas to minimize potential water quality impacts. Source controls also would include storm drain messages and signage and beneficial landscape irrigation practices. Compliance with these requirements, as well as with project-specific, site-specific conditions imposed pursuant to individual CEQA and permitting processes, would ensure that degradation of water quality (surface and ground) would remain minimal and that projects facilitated by the RCAP would meet all waste discharge requirements. Therefore, RCAP impacts related to surface and groundwater quality would be less than significant.

2. *Would the plan substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Humboldt is in the North Coast Hydrologic Area and has four principal groundwater basins: Hoopa Valley, Mad River Valley, Eureka Plain, and Eel River Valley. Only the Eel River Valley Groundwater Basin is subject to a Groundwater Sustainability Plan.¹⁶ Implementation of the RCAP would not be expected to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. This is because the RCAP is a policy document intended to reduce GHG emissions within Humboldt, and would not result in new land uses, such as increased residential or commercial development, which would contribute to an increase in demand for groundwater. Additionally, the RCAP includes Measure WW-2 that seeks to decrease community water use by promoting water efficiency retrofits, sustainable landscaping, efficient landscaping irrigation, and increased recycled water production and use. RCAP Measure WW-2, specifically seeks to reduce per capita water consumption by 15 percent by 2030 and includes a related action to expand the recycled water system within the region. As such, the RCAP is anticipated to reduce the use of water, including groundwater supplies. Therefore, RCAP impacts related to groundwater supplies and recharge would be less than significant.

¹⁶ Humboldt County. 2017. Humboldt County General Plan Revised Draft EIR.

<https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Documents-PDF> (accessed November 2024).

3. *Would the plan substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
- a. *Result in substantial erosion or siltation on- or off-site?*
 - b. *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
 - c. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
 - d. *Impede or redirect flood flows?*

Implementation of RCAP measures related to renewable energy (e.g., Measures BE-1 and BE-2), renewable fuel production (e.g., RCAP Measures T-10 and WW-1), organic waste processing (e.g., RCAP Measure SW-1), recycled water (e.g., RCAP Measure WW-2), infill development (e.g., Measure T-3), and active transportation and public transit (e.g., Measures T-1 Urban and Rural, T-2 Urban and Rural and T-4), may promote infrastructure development and construction activities within Humboldt. Implementation of RCAP measures related to infill development, active transportation, and public transit infrastructure would primarily occur within previously developed areas and would not result in substantial alterations to Humboldt's existing drainage patterns and amount of impervious surface. However, larger-scale facilities such as renewable energy (e.g., Measures BE-1 and BE-2), renewable fuel production (e.g., RCAP Measures T-10 and WW-1), organic waste processing (e.g., RCAP Measure SW-1), and recycled water (e.g., RCAP Measure WW-2) facilities may occur within previously undeveloped areas and could result in alteration of existing drainage patterns. Additionally, construction of projects facilitated by the RCAP could temporarily disturb underlying soils and could result in exposure of soil to runoff.

Without precautions, construction activities could produce pollutants and sediment in stormwater runoff. However, impacts to drainage patterns, erosion, runoff, and water quality during construction of RCAP-related projects would be minimized through the implementation of BMPs as required by the NPDES CGP and other applicable State and local regulations discussed above under Impact 3.10.3.1. Compliance with applicable federal, State, and local regulations would ensure that potential impacts of construction facilitated by the RCAP related to drainage patterns would be less than significant.

Compliance with applicable federal, State, and local regulations also would be required during the operation of projects facilitated by the RCAP. Applicable requirements would include NPDES and MS4 Permit requirements for the inclusion of site-specific LID features to reduce the potential for new development to substantially alter drainage conditions in a manner that would result in substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows. Under the MS4 Permit, certain categories of development and redevelopment projects must mimic predevelopment hydrology through infiltration, evapotranspiration, and rainfall harvest and use. Projects for which a LID plan is required must limit post-development peak stormwater runoff discharge rates to no greater than the estimated pre-development rate for developments where the increased peak, stormwater discharge rate would result in increased potential for downstream erosion.

Operation of any future projects also would be subject to CBC and local standards and policies that limit development within flood hazard areas and require flood protection measures. These policies address development and redevelopment, compatibility of uses, required pre-development drainage studies, compliance with discharge permits, and proposed BMPs to protect development within flood risk areas. These include HCC Chapter 5, Arcata Municipal Code Chapter 4, Blue Lake Chapter 13.20, Eureka Municipal Code Chapter 153, Ferndale Ordinance 08-02, Fortuna Municipal Code Chapter 15.58, Rio Dell Municipal Code Chapter 15.15, and Trinidad Municipal Code Chapter 17.20. Compliance with these requirements would confirm that operation of future RCAP-related projects and infrastructure would result in less than significant impacts related to drainage patterns and associated erosion, surface runoff, stormwater drainage systems, and flood flows.

4. In flood hazard, tsunami, or seiche zones, would the plan risk release of pollutants due to project inundation?

Flood hazards in Humboldt are attributable to rivers and streams, dam failure, and coastal high-water hazards (tsunamis and flood tides), with river flooding being the most prevalent. Flooding is a concern for many waterways in Humboldt County, including the Eel River (including the Van Duzen and South Fork), the Mad River, Eureka Plain (especially Freshwater and Jacoby Creeks), and the Trinity River.¹⁷ Projects and infrastructure facilitated by and/or subsequent to implementation of the RCAP that would be located within flood and/or tsunami hazard zones would be subject to requirements of the respective local jurisdiction (i.e., County of Humboldt or an incorporated city) in addition to the CBC that specify design requirements for development located in flood or tsunami hazard zones. These include HCC Chapter 5, Arcata Municipal Code Chapter 4, Blue Lake Chapter 13.20, Eureka Municipal Code Chapter 153, Ferndale Ordinance 08-02, Fortuna Municipal Code Chapter 15.58, Rio Dell Municipal Code Chapter 15.15, and Trinidad Municipal Code Chapter 17.20. For any projects that would occur in proximity to a body of water such as Humboldt Bay that is at risk of a seiche, specific development standards as applicable by land use type would also apply. In addition, compliance with design standards as well as proper storage and handling of hazardous materials, described under Subsection 3.10.2, *Hazards and Hazardous Materials*, above, would reduce the risk of release of hazardous materials due to inundation. Therefore, RCAP impacts related to pollutant release due to inundation would be less than significant.

5. Would the plan conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Water Quality Control Plan for the North Coast Region (Basin Plan) contains the regulations adopted by the NCRWQCB to control the discharge of waste and other factors affecting the quality of surface water and groundwater in Humboldt.¹⁸ In addition, the Eel River Valley Groundwater Basin is subject to a Groundwater Sustainability Plan.¹⁹ Implementation of the RCAP, including construction and operation of improvements and subsequent infrastructure, would not substantially affect surface water or groundwater resources within the RCAP plan area. As discussed above under Impacts 3.10.3.1 through 3.10.3.3, future RCAP projects would be subject to the construction and

¹⁷ Humboldt County. 2017. Humboldt County General Plan Revised Draft EIR. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed November 2024).

¹⁸ NCRWQCB. 2024. An Introduction to the Basin Plan. https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/ (accessed November 2024).

¹⁹ Humboldt County. 2017. Humboldt County General Plan Revised Draft EIR. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed November 2024).

post-construction requirements of the CGP and other applicable regional, State, and local regulations related to water quality and stormwater management. Specifically, projects facilitated by the RCAP would be subject to water quality standards imposed by NPDES permits, including stormwater discharge permits that would require BMPs to ensure protection of beneficial uses of surface waters governed by the Basin Plan. Though not anticipated, any future RCAP projects that would require direct extraction of groundwater from the Eel River Basin would be subject to approval from the Humboldt County Groundwater Sustainability Agency to ensure consistency with the groundwater sustainability plans. Additionally, the RCAP includes Measure WW-2 that seeks to decrease community water use by promoting water efficiency retrofits, sustainable landscaping, efficient landscaping irrigation, and increased recycled water production and use. As such, the RCAP is anticipated to reduce the use of water, including groundwater supplies. Therefore, RCAP impacts related to conflicts with water quality control or sustainable groundwater management plans would be less than significant.

3.10.4 Mineral Resources

1. *Would the plan result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
2. *Would the plan result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

Humboldt is known to contain mineral resources. The Humboldt County General Plan Conservation and Open Space Element indicates that there are over 90 extraction sites across Humboldt (both incorporated and unincorporated areas) that produce sand and gravel, metals, stone, and clay.²⁰ The mined materials are utilized for a variety of uses, including but not limited to concrete foundations; road construction, maintenance, and repair; fill materials; snow and ice control; railroad grade ballast; and as a filtration system for on-site sewage disposal systems. The RCAP is a policy document intended to reduce GHG emissions within Humboldt County and would not result in extraction or use of mineral resources. In addition, goals, policies, and implementation measures included in the County and individual city general plans of the various local agencies facilitate continued operation of local mining sites and protection of mineral resource areas from incompatible land uses and, thus, prevent loss of availability of known and locally important mineral resources. Therefore, RCAP impacts related to mineral resources would be less than significant.

²⁰ Humboldt County. 2017. General Plan Open Space and Conservation Element. <https://humboldt.gov/DocumentCenter/View/61986/Chapter-10-Conservation-and-Open-Space-Elements-PDF> (accessed November 2024).

3.10.5 Public Services

1. *Would the plan result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*
 - a. Fire protection?
 - b. Police protection?
 - c. Schools?
 - d. Parks?
 - e. Other public facilities?

The RCAP would not result in new habitable development requiring the provision or expansion of public services; rather, the RCAP would promote improvements and infrastructure such as renewable energy (e.g., Measures BE-1 and BE-2), renewable fuel production (e.g., Measures T-10 and WW-1), organic waste processing (e.g., Measure SW-1), recycled water (e.g., Measure WW-2), and active transportation and public transit infrastructure (e.g., Measures T-1 Urban and Rural, T-2 Urban and Rural and T-4). There are also no aspects of the RCAP, a policy document intended to reduce GHG emissions within Humboldt County, that would significantly impact the ability of the County, cities, or other local services providers to continue to provide public services in Humboldt. While improvements and subsequent infrastructure would occur, the RCAP would not be anticipated to result in substantial population growth, as described in Section 3.6, *Land Use Planning, Population, and Housing*. Furthermore, RCAP Measure T-3 would promote infill development and reduced urban sprawl within the region, thereby reducing demands upon public services. Therefore, implementation of the RCAP is not anticipated to result in the need for new or physically altered fire protection, police protection, schools, parks, or other public facilities (such as libraries) in order to maintain acceptable service ratios, response times, or other performance objectives. Therefore, RCAP impacts related to public services would be less than significant.

3.10.6 Recreation

1. *Would the plan increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
2. *Would the plan include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The RCAP would not result in new habitable or recreational development requiring the provision or expansion of parks or other recreational facilities; rather, sustainable infrastructure such as renewable energy and active transportation and public transit facilities would be constructed or expanded per RCAP Measures BE-1, BE-2, Measures T-1 Urban and Rural, T-2 Urban and Rural, and T-4. While improvements and subsequent infrastructure would occur, the RCAP would not be anticipated to result in substantial population growth, as described in Section 3.6, *Land Use Planning, Population, and Housing*. Implementation of the RCAP, including associated improvements or subsequent infrastructure to occur as a result of the plan, would not be expected to significantly increase the use of neighborhood and regional parks or other recreational facilities,

create new recreational facilities, nor require the construction or expansion of existing recreational facilities. This is because the RCAP is a policy document intended to reduce GHG emissions within Humboldt and includes strategies, measures, and actions intended to reduce the region's GHG emissions in order to achieve specified targets but does not include specific development plans for new recreational facilities or plans that would be expected to result in substantial deterioration of existing facilities. Therefore, RCAP impacts related to recreation would be less than significant impact.

3.10.7 Wildfire

1. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the plan substantially impair an adopted emergency response plan or emergency evacuation plan?*

In general, areas that fall within the service boundaries of local fire districts are served by such districts; however, there are other areas outside of local district boundaries where volunteer fire companies have assumed responsibility for community fire service. In total, there are 41 local and volunteer fire protection departments that serve Humboldt. In addition, the California Department of Forestry and Fire Protection (CAL FIRE) provides fire protection services for the locations classified as the State Responsibility Area (SRA), which includes a large portion of the privately owned lands within Humboldt as well as State parks. The Federal Responsibility Area (FRA) within Humboldt County generally comprises public lands, national parks, or other lands owned by the federal government, and are managed by the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), and the U.S. Department of Interior Bureau of Land Management (BLM).²¹

As indicated in the Humboldt County Community Wildfire Protection Plan, 45 percent of lands within Humboldt are classified as Very High, 48 percent as High, and 4 percent as Moderate fire hazard severity, as shown in Table 3.10-1.²² Humboldt is divided into two distinct areas of wildfire risk. The northeast and extreme southwest parts of the county have a high risk of wildfire occurrence, while the coastal areas and river valleys have moderate risk and generally better fire protection access.²³

²¹ Humboldt County. 2023. General Plan Safety Element. <https://humboldt.gov/205/General-Plan> (accessed November 2024).

²² Humboldt County. 2019. Humboldt County Community Wildfire Protection Plan. <https://humboldt.gov/2431/Community-Wildfire-Protection-Plan> (accessed November 2024).

²³ Ibid

Table 3.10-1 Humboldt Fire Hazard Severity by Planning Unit²⁴

FIGURE 5.2.3 FIRE HAZARD SEVERITY BY PLANNING UNIT (ACRES AND PERCENTAGE)								
PLANNING UNIT	Very High	%	High	%	Moderate	%	Other	%
Orick–Redwood Park (PU 1)	15,228	15	72,174	72	12,132	12	876	1
Upper Yurok Reservation (PU 2)	132,016	88	16,237	11	1,857	1	1,063	1
Mid Klamath (PU 3)	134,324	99	78	0	37	0	1,897	1
Hoopa (PU 4)	107,620	94	4,768	4	544	0	2,303	2
Trinidad (PU 5)	6	0	45,980	68	21,336	32	59	0
Redwood Creek (PU 6)	117,895	62	71,983	38	103	0	0	0
Willow Creek Area (PU 7)	163,937	97	3,921	2	114	0	376	0
Humboldt Bay Region (PU 8)	1,017	1	97,029	61	25,118	16	41,089	36
Kneeland–Maple Creek (PU 9)	79,578	65	43,553	35		0	0	0
Eel (PU 10)	2	0	133,267	70	24,138	13	65,653	35
Mad–Van Duzen (PU 11)	189,558	62	113,881	37	1,596	1	0	0
Mattole–Lost Coast (PU 12)	13,821	7	180,174	90	6,077	3	716	0
Southern Humboldt (PU 13)	58,028	23	194,740	76	1,964	1	402	0
Avenue of the Giants (PU 14)	19,508	13	120,897	82	6,780	5	0	0
Total	1,032,538	45%	1,098,682	48%	101,793	4%	114,434	0
<i>*Other = Non-Wildland/Non-Urban or Urban Unzoned</i>								

The Humboldt County Emergency Operations Plan is a multi-jurisdictional plan that addresses the planned response to emergency situations associated with natural disasters such as wildfires, technological incidents, and national security emergencies in, or affecting, Humboldt.²⁵ Emergency evacuation routes present throughout Humboldt provide critical transportation facilities in the event of an emergency event. Critical transportation facilities for emergency evacuation throughout Humboldt include U.S. 101, SR 299, SR 255, SR 36, and SR 96. These routes provide regional connectivity throughout Humboldt and allow emergency vehicles to travel countywide, including connections to incorporated cities within Humboldt.

Implementation of the RCAP, including associated improvements or subsequent sustainable infrastructure such as renewable energy (e.g., Measures BE-1 and BE-2), renewable fuel production (e.g., Measures T-10 and WW-1), organic waste processing (e.g., Measure SW-1), recycled water (e.g., Measure WW-2), and active transportation and public transit infrastructure (e.g., Measures T-1 Urban and Rural, T-2 Urban and Rural and T-4) would not be expected to substantially impair implementation of the Humboldt County Emergency Operations Plan. Specifically, the RCAP is a

²⁴ Ibid

²⁵ Humboldt County. 2015. Emergency Operations Plan. <https://humboldt.gov/DocumentCenter/View/51861/Humboldt-County-Emergency-Operations-Plan-2015> (accessed November 2024).

policy document intended to reduce GHG emissions within Humboldt and includes strategies, measures, and actions intended to reduce the region's GHG emissions in order to achieve specified targets but does not include specific infrastructure plans that would jeopardize emergency response and/or evacuation. Any improvements or subsequent infrastructure that may occur as a result of the proposed plan within the SRA would be subject to the Fire Safe Regulations adopted by the State Board of Forestry in Title 14 of the California Administrative Code. The Fire Safe Regulations establish minimum standards for wildfire protection within the SRA, including but not limited to standards for emergency access, emergency vehicle turning radius and vertical clearance, building numbering and signage, defensible space, and emergency water supply that would minimize potential wildfire impacts associated with potential projects and infrastructure within the SRA. Adequate emergency vehicle access would be provided to new infrastructure facilitated by the RCAP and no long-term disruptions to emergency evacuation routes would occur, as discussed under Section 3.10.2, *Hazards and Hazardous Materials*. In addition, the RCAP contains Measures T-10 and CS-3, which include actions to sustainably manage forest biomass such as through understory clearing, that would reduce the risk of wildfire within Humboldt's forested areas. Therefore, RCAP impacts related to risk associated with impairment of emergency response or evacuation plans would be less than significant.

2. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the plan due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose plan occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*
3. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the plan require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

Implementation of RCAP Measures BE-1, BE-2, BE-3 Urban and Rural, and BE-8 may result in the installation and maintenance of additional electrical infrastructure such as electricity transmission lines, substations, and microgrids to support additional renewable and carbon-free energy facilities and increase the electrical system capacity in Humboldt. These measures could exacerbate wildfire risk during construction and operation of infrastructure that occurs within fire hazard areas. For example, heavy duty equipment used during project construction may produce sparks with the potential to ignite vegetation. However, future RCAP projects and electrical infrastructure occurring within wildfire hazard areas would be required to comply with fire safety regulations contained in the California Public Resources Code (PRC). PRC Section 4442 mandates the use of spark arrestors, which prevent the emission of flammable debris from exhaust, on earth-moving and portable construction equipment with internal combustion engines operating on any forest-covered, brush-covered, or grass-covered land. Furthermore, PRC Sections 4427 and 4431 specify standards for conducting construction activities on days when a burning permit is required, and PRC Section 4428 requires construction contractors to maintain fire suppression equipment during the highest fire danger period (April 1 to December 1) when operating on or near any forest-covered, brush-covered, or grass-covered land. With compliance with applicable PRC provisions, future infrastructure construction activities under the RCAP would not exacerbate wildfire risk in a manner that would expose plan occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire or result in temporary or ongoing impacts to the environment.

Operation of electrical transmission and distribution infrastructure within fire hazard areas may also exacerbate wildfire risks. Much of the electrical transmission and distribution infrastructure

facilitated by the RCAP would be owned and operated by the electrical utilities serving Humboldt (e.g., Pacific Gas and Electric [PG&E] and Redwood Coast Energy Authority [RCEA], which uses PG&E infrastructure) and would fall under the regulatory authority of the California Public Utilities Commission. The existing CPUC regulations that would govern electrical infrastructure during construction and/or operation include: General Order 95, under which fire safety requirements for overhead electrical lines include an auditable maintenance program, frequent inspections, vegetation management to maintain minimum clearances, and increased wind load requirements in high-fire-threat districts; General Order 165, which establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation; and General Order 166, which requires that investor-owned utilities develop a fire protection plan with measures that the electric utility will implement to mitigate the threat of power-line fires. Additionally, California Public Utilities Code Section 8386 requires electrical utility providers to annually prepare and submit a wildfire mitigation plan to the CPUC for approval. In compliance with this code section and with Standard 1.E of General Order 166, PG&E maintains a Wildfire Mitigation Plan and Wildfire Safety Program, which includes activities such as undergrounding powerlines, system hardening, and automatic power shutoffs.²⁶ Compliance with these requirements would minimize the potential for RCAP-related electrical infrastructure to exacerbate wildfire risk.

Future RCAP facilities, such as renewable energy projects and renewable fuel production facilities, would have the potential to exacerbate fire risk, for example in the event of an accidental fire at hydrogen or biofuel production or battery energy storage facilities. Future RCAP-related facilities occurring in wildfire hazard areas would be required to implement BMPs, such as defensible space and vegetation clearance zones, in compliance with the respective local jurisdiction's general plan policies, zoning regulations, fire code regulations, design and construction standards, and the CBC Wildland-Urban Interface Building Standards, as well as the adopted Fire Safe Regulations for any development specifically to occur within the SRA. These regulations require adequate access for emergency vehicles/personnel and adequate water and pressure to meet flow standards in the event that a fire needs to be extinguished is provided, as well as defensible space, fire hardening, fire suppression and safety systems, and other site design standards to reduce the risk of fire impacts. Compliance with these regulatory requirements would minimize the potential for operation of future infrastructure associated with the RCAP to exacerbate wildfire risks. In addition, the RCAP contains Measures T-10 and CS-3, which include actions to sustainably manage forest biomass through actions such as understory clearing, that would reduce the risk of wildfire within Humboldt's forested areas. Therefore, operation of future RCAP related infrastructure would not exacerbate wildfire risk in a manner that would expose plan occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire or result in temporary or ongoing impacts to the environment. Impacts would be less than significant.

4. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the plan expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

According to the Humboldt County Operational Area Hazard Mitigation Plan, there were 634 recorded wildfires in Humboldt between 1910 and 2017, with 22 large fires exceeding 5,000 acres occurring since 1908.²⁷ In the wake of wildfire events, secondary hazards such as flooding and

²⁶ PG&E. 2024. 2023-2025 Wildfire Mitigation Plan R 5. <https://www.pge.com/assets/pge/docs/outages-and-safety/outage-preparedness-and-support/pge-wmp-r5-040224.pdf> (accessed November 2024).

²⁷ Humboldt County. 2020.

landslides can occur, especially in areas with steep slopes. Many portions of Humboldt that are designated as fire hazard severity zones are characterized by steep slopes that could expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Some projects promoted by the RCAP, such as new electricity infrastructure (e.g., Measures BE-1, BE-2, BE-3 Urban and Rural, and BE-8), renewable energy projects (e.g., RCAP Measures BE-1 and BE-2), and renewable fuel production (e.g., Measures T-10 and WW-1), organic waste processing (e.g., Measure SW-1), and recycled water (e.g., Measure WW-2) facilities, depending on their locations and site-specific conditions, could increase the risk of wildfire or could expose people or structures to wildfire risks including downslope or downstream flooding, post-fire flooding, or landslides.

As described under Impacts 3.10.7.1 through 3.10.7.3, above, all new development is required to comply with the respective local jurisdiction's general plan policies, zoning regulations, fire code regulations, design and construction standards, and the CBC Wildland-Urban Interface Building Standards, as well as the adopted Fire Safe Regulations for any development specifically to occur within the SRA, reducing the extent to which future projects would expose people or structures to post-fire slope instability risk. As discussed in Section 3.10.1, *Geology and Soils*, if projects facilitated by the RCAP were proposed in landslide susceptible areas, required geotechnical design criteria would be incorporated into geotechnical reviews to verify the stability of nearby slopes and soils, and to provide recommendations intended to protect infrastructure from causing or being affected by landslides, as required by existing regulations. Likewise, as described in Section 3.10.1, *Geology and Soils*, and Section 3.10.3, *Hydrology and Water Quality*, future RCAP projects would be required to implement construction and operational stormwater BMPs pursuant to the Clean Water Act, Porter-Cologne Water Quality Control Act, SWRCB, NCRWQCB, and Humboldt LID Stormwater Manual, limiting the potential for post-fire flooding impacts. Therefore, RCAP impacts related to post-wildfire flooding or landsliding risks would be less than significant.

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None.

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None.

4 Other CEQA Sections

This chapter discusses growth-inducing impacts and irreversible environmental impacts that would be caused by the RCAP and CEQA GHG Emissions Thresholds.

4.1 Growth Inducing Impacts

There are two types of growth-inducing impacts that a plan or project may have: direct and indirect. To assess the potential for growth-inducing impacts, the proposed plan's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated. CEQA Guidelines Section 15126.2(d) requires a discussion of a proposed plan or project's potential to foster economic or population growth, including ways in which a plan could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The CEQA Guidelines, as interpreted by the County, state that a significant growth-inducing impact may result if the proposed plan would:

- Induce substantial population growth in an area (for example, by proposing or facilitating new residences or employment-generating uses beyond the land use density/intensity envisioned in the general plan);
- Substantially alter the planned location, distribution, density, or growth rate of the population of an area; or
- Include extensions of roads or other infrastructure not assumed in the general plan or adopted capital improvements project list, when such infrastructure exceeds the needs of a project and could accommodate unplanned future development.

Direct growth-inducing impacts occur when the implementation of a plan or project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are plans or projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure cannot be considered isolated from the development they facilitate and serve. Plans or projects that physically remove obstacles to growth, or projects that indirectly induce growth, may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

4.1.1 Population and Employment Growth

As discussed in Section 3.6, *Land Use Planning, Population and Housing*, the RCAP and CEQA GHG Emissions Thresholds would not result in construction or operational impacts related to significant unplanned population or employment growth. The RCAP and CEQA GHG Emissions Thresholds would not directly increase the population nor indirectly induce additional unplanned population growth.

It is the specific purpose of the proposed plan to reduce Humboldt's contribution to climate change impacts. Therefore, by its nature, the proposed plan is intended to reduce the potential for

uncontrolled growth and associated environmental impacts. For the reasons discussed above, implementation of the proposed plan would not lead to direct or indirect growth impacts beyond what is anticipated and planned for within the region.

4.1.2 Removal of Obstacles to Growth

As discussed under Impact LU-1 and LU-2 in Section 3.6, *Land Use Planning, Population and Housing*, the RCAP and CEQA GHG Emissions Thresholds are policy documents intended to mitigate and track regional GHG emissions and streamline CEQA GHG analyses for future projects. As such, they would not result in construction or operational impacts that would remove obstacles to growth. It is the intention of the RCAP and CEQA GHG Emissions Thresholds to reduce GHG emissions associated with construction and operation of future projects and plans within Humboldt. Therefore, the proposed plan would not remove obstacles to unplanned growth.

4.2 Irreversible Environmental Effects

CEQA Guidelines Section 15126(c) requires that EIRs evaluating plans and projects involving amendments to public plans, ordinances, or policies contain a discussion of significant irreversible environmental changes. CEQA also requires decision-makers to balance the benefits of a proposed plan or project against its unavoidable environmental risks in determining whether to approve a plan or project. This section addresses the use of non-renewable resources, the commitment of future generations to any proposed development and land use changes, and irreversible impacts associated with the implementation of the RCAP and CEQA GHG Emissions Thresholds.

The RCAP and CEQA GHG Emissions Thresholds are policy documents that do not propose specific new developments that would result in construction or operational impacts related to the use of non-renewable resources. Rather, the documents would serve to reduce GHG emissions and energy required for the construction and operation of new development. Implementation of strategies and measures within the RCAP are expected to offset the demand for non-renewable energy during construction and/or operation of future development. The RCAP and CEQA GHG Emissions Thresholds would not result in additional growth within Humboldt and are not expected to diminish local or regional non-renewable energy supplies. Plan impacts related to energy consumption are further evaluated in Section 3.5, *Greenhouse Gas Emissions and Energy*, and Section 3.9, *Utilities and Service Systems*.

Infrastructure facilitated by the RCAP would result in new electric power, recycled water, and wastewater infrastructure. As discussed in Section 3.9, *Utilities and Service Systems*, impacts to utilities would remain significant and unavoidable as they relate to construction of new electric power, wastewater, and water infrastructure facilities, as well as operation of new electric power infrastructure and facilities.

The RCAP would facilitate decreased regional vehicle miles traveled (VMT), and operational air pollution and GHG emissions. As discussed in Section 3.2, *Air Quality*, and Section 3.5, *Greenhouse Gas Emissions and Energy*, implementation of the RCAP measures would reduce the air pollution and GHG emissions associated with general operations across Humboldt; however, noise impacts would not be reduced to below significant thresholds. In addition, temporary air quality impacts during future RCAP project construction would not be reduced to below the applicable significance thresholds. As discussed in Section 3.4, *Cultural and Tribal Cultural Resources*, RCAP impacts to historical resources would also not be reduced to below significant thresholds. The RCAP would result in irreversible impacts related to these issues.

4.3 Mandatory Findings of Significance

Pursuant to CEQA Guidelines Appendix G Section XVIII, the following mandatory findings of significance analysis is provided.

- a. Does the proposed plan have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

The intent of the RCAP and CEQA GHG Emissions Thresholds is to reduce GHG emissions from Humboldt regional operations through implementation of strategies and measures related to energy, water consumption, transportation, solid waste, carbon sequestration, and community education and outreach. The RCAP strategies and measures are consistent with the Humboldt County General Plan and incorporated city general plans and encourage residents, businesses, and the municipal facilities to reduce energy and water use, fuel use, VMT, and solid waste generation, with a resulting decrease in GHG emissions. As discussed in more detail in Section 3.3, *Biological, Agriculture, and Forestry Resources*, the RCAP would result in indirect impacts to special-status species due to the loss of common, non-sensitive habitat. Implementation of Mitigation Measures BIO-1 through BIO-4 would reduce some impacts to loss of habitat. However, there remains the potential for implementation of the RCAP to eliminate or threaten wildlife habitats. Likewise, as discussed in Section 3.4, *Cultural and Tribal Cultural Resources*, the RCAP could result in substantial adverse changes to the significance of a historic resource. Implementation of Mitigation Measure CR-1 would reduce impacts to historic resources to the extent feasible. However, there remains the potential for implementation of the RCAP to eliminate or threaten historic resources.

- b. Does the proposed plan have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

As a guidance document, the CEQA GHG Emissions Thresholds would not result in cumulative impacts. Implementation of the RCAP would result in a cumulatively beneficial reduction of GHG and air pollutant emissions across the region. Nonetheless, as addressed throughout Section 3.1, *Aesthetics*, through Section 3.9, *Utilities and Service Systems*, the RCAP has the potential to result in significant and unavoidable cumulative impacts related to aesthetics, construction air pollutant emissions, biological resources, agricultural and forestry resources, historic resources, noise, and utilities and service systems.

- c. Does the proposed plan have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

In general, impacts to human beings are associated with air quality, GHG emissions and climate change, hazards and hazardous materials, noise, transportation, and wildfire. As detailed in the preceding sections, the RCAP and CEQA GHG Emissions Thresholds would not result, either directly or indirectly, in substantial adverse effects related to GHG emissions, hazards, transportation, or wildfire. As discussed throughout this document, the RCAP would serve as a pathway to reduce

operational GHG emissions and would result in other positive environmental and sustainability effects. These benefits include reduction in building energy and water consumption, VMT, and solid waste generation, as well as improved long-term air quality and resiliency to the effects of climate change and wildfire.

However, as discussed in more detail in Section 3.2, *Air Quality*, and Section 3.7, *Noise*, the RCAP would result in significant and unavoidable temporary construction impacts related to air quality and noise that could, in turn, affect human beings. As discussed in Section 3.7, *Noise*, operational noise associated with implementation of the RCAP could result in exceedances of County or specific cities noise thresholds that may result in a substantial adverse effect to human beings. Therefore, the RCAP would result in a significant and unavoidable impact related to potential for adverse effects on human beings.

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5 EIR Alternatives

5.1 Introduction

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this chapter contains a comparative impact assessment of alternatives to the proposed plan. The primary purpose of an alternatives analysis under CEQA is to provide decision-makers and the public with a reasonable range of feasible alternatives to the proposed plan that could attain most of the basic plan's objectives, while avoiding or reducing any of the plan's significant adverse environmental effects.

Analysis of three alternatives to the proposed plan is provided for informational purposes and to allow decision-makers to consider the proposed plan in light of hypothetical alternative planning scenarios, thereby promoting CEQA's purpose as an information disclosure statute. This analysis is guided by the following considerations set forth under CEQA Guidelines Section 15126.6:

- An EIR need not consider every conceivable alternative to a plan or project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
 - Failure to meet most of the basic plan or project objectives;
 - Infeasibility; or
 - Inability to avoid significant environmental effects.

In addition to these considerations, the County considered public EIR scoping comments received as part of the alternatives development process. Appendix A includes all comments received during the scoping period. Several commenters suggested that the RCAP should consider more aggressive options to decrease vehicle miles traveled (VMT), such as by requiring individual cities to adopt ordinances related to complete streets, parking, and zoning and by including actions to increase transit funding availability. In consideration of these comments, the Sustainable Communities Alternative (Alternative 2) is assessed herein. Commenters also pointed out that Humboldt's vast forested areas present important opportunities for carbon sequestration and that a greater accounting for and emphasis on the carbon sequestration potential of Humboldt should be included as part of the RCAP. In consideration of these comments, the Carbon Sequestration Alternative (Alternative 3) is assessed herein.

The implementation of the proposed plan was analyzed for potentially significant impacts related to each of the environmental issues discussed in Sections 3.1 through 3.10. The results of the analysis indicate that the proposed plan would result in the following significant and unavoidable impacts:

- **Aesthetics**: operation-related impacts to scenic vistas, scenic resources within State scenic highways, and visual character or quality of public views
- **Air Quality**: construction-related criteria air pollutant generation
- **Biological, Agriculture, and Forestry Resources**: construction- and operation-related impacts to special-status species, construction-related impacts to wildlife movement corridors and nursery sites, and construction- and operation-related impacts to Farmland

- **Cultural and Tribal Cultural Resources:** construction-related impacts to historical resources
- **Noise:** construction-related noise and operation-related stationary and mobile (infrastructure and public transit) noise
- **Utilities and Service Systems:** construction- and operational-related impacts due to new and expanded electric power, water, and wastewater facilities/infrastructure

Mitigation measures were identified for construction-related air quality, biological resources, historic resources, noise, and new and expanded utilities facilities/infrastructure impacts and for operational-related aesthetic, mobile (transportation) noise, stationary (infrastructure) noise, and new and expanded utilities facilities impacts; however, the identified mitigation would not reduce the impacts to less than significant. Thus, even though the proposed plan attempts to mitigate its impacts to the greatest extent feasible as required by CEQA, the mitigation is not technically feasible or sufficient to reduce impacts from significant and unavoidable.

5.2 Alternatives to the Proposed Plan

Pursuant to CEQA Guidelines Section 15126.6, this EIR presents a range of reasonable alternatives to the proposed plan for analysis and evaluation of their comparative merits. These alternatives are considered to cover the range of plan alternatives that would meet the basic objectives of the RCAP and CEQA GHG Emissions Thresholds while lessening one or more of its significant impacts. CEQA Guidelines Section 15126.6(a) states that an EIR need not evaluate every conceivable alternative. Information has been provided for each alternative that would allow meaningful comparison with the proposed plan.

The three alternatives to the proposed plan analyzed in this chapter are as follows:

- **Alternative 1:** “No Project” (i.e., no RCAP or CEQA GHG Thresholds adopted)
- **Alternative 2:** Sustainable Communities Alternative
- **Alternative 3:** Enhanced Carbon Sequestration Alternative

This EIR Alternatives analysis examines the net change from the proposed plan in terms of potential physical environmental impacts. Detailed descriptions of the alternatives are included in the impact analyses for each Alternative in Section 5.5, *Alternative 1: No Project*, through Section 5.7, *Alternative 3: Enhanced Carbon Sequestration Alternative*.

5.3 Plan Objectives

As described in Chapter 2, *Project Description*, the objectives for the RCAP and CEQA GHG Emissions Thresholds are as follows:

- Establish a coalition between jurisdictions and key organizations to guide a regional approach to climate-related challenges
- Identify strategies, measures, actions, and tracking mechanisms to serve as a qualified GHG reduction plan and provide a foundation for sustainable development efforts in the region
- Reduce communitywide GHG emissions by 40 percent below 1990 levels by 2030 (a maximum total annual emissions of 1,241,589 MT of CO₂e) in line with County and State targets
- Reduce communitywide GHG emissions to net neutral by 2045, with at least 85 percent being via GHG emissions reductions, in line with County and State targets

- Demonstrate a level of GHG emissions below which the County would have less-than-cumulatively-considerable GHG impacts for future environmental planning reviews and provide CEQA streamlining for projects via the Humboldt Regional CEQA GHG Checklist
- Strengthen the growing regional green economy
- Improve Humboldt air quality and, thus, public health

5.4 Alternative 1: No Project

The CEQA Guidelines (Section 15126.6[e]) require that the alternatives discussion include an analysis of a “No Project” Alternative. Pursuant to CEQA, the “No Project” Alternative refers to the analysis of existing conditions and what would reasonably be expected to occur in the foreseeable future if the proposed plan was not approved. This is based on current plans and consistent with available infrastructure information. In this case, the No Project Alternative examines a scenario in which the County would not approve the proposed RCAP and CEQA GHG Emissions Thresholds. Under such a scenario, the County, cities and partners within Humboldt would continue with business as usual. Each entity in Humboldt is taking steps to reduce GHG emissions. These efforts would continue, but not with the objective of achieving all the reduction goals contained within the RCAP. A number of measures outlined in the RCAP would not be achieved, new commitments and partnerships would not be facilitated, and County and City agencies would not be held accountable for reaching RCAP targets through monitoring. Therefore, Humboldt would not achieve the State’s goal of a 40 percent reduction in emissions from 1990 levels by 2030, demonstrate progress toward achieving the State’s 2045 carbon neutrality goal, or provide a mechanism for streamlining future CEQA GHG emissions impacts analyses.

The anticipated GHG emissions that would occur in accordance with the No Project Alternative are generally described in the RCAP’s legislative adjusted business as usual (ABAU) forecast, which accounts for future growth in accordance with business-as-usual conditions with adjusting for implementation of existing State laws and programs that affect emissions of GHGs. The ABAU forecast is detailed in Table 2-3 in Section 2, *Project Description*. This Alternative 1 would not provide a clear pathway for Humboldt to meet the State’s emissions reduction goals for 2030 or 2045.

5.4.1 Impact Analysis

Aesthetics

Under Alternative 1, no new utility scale renewable energy, electrical distribution, renewable fuel production, or any other infrastructure projects would be facilitated. As such, Alternative 1 would result in no impacts related to scenic vistas, scenic resources within State scenic highways, visual character or quality of public views, or light and glare.

As discussed in Section 3.1, *Aesthetics*, the proposed plan would result in significant and unavoidable impacts related to scenic vistas, scenic resources within State scenic highways, and visual character or quality of public views. The RCAP would result in less than significant impacts related to light and glare with implementation of mitigation measures. Overall, Alternative 1 would result in lesser impacts related to aesthetics compared to the proposed plan.

Air Quality

Under Alternative 1, no infrastructure projects would be facilitated that could conflict with or obstruct implementation of the applicable air quality plan and impacts would be less than significant. Likewise, no construction-related emissions of criteria air pollutants or toxic air contaminants (TACs) would occur, and Alternative 1 would result in no construction impacts related to criteria pollutants and the exposure of sensitive receptors to pollutants. Alternative 1 also would not result in the generation of additional criteria air pollutants or TAC emissions during operation, but would also not reduce these emissions, and impacts related to operational emissions would be less than significant. Alternative 1 would also result in no construction or operational impacts related to construction odors.

As discussed in Section 3.2, *Air Quality*, the proposed plan would advance the applicable air quality plans through implementation of measures that would have co-benefits to air quality and would result in less than significant impacts related to conflicts with the applicable air quality plans. Construction of future projects facilitated by the RCAP would result in significant and unavoidable construction impacts related to criteria air pollutant emissions and less than significant construction impacts related to TAC emissions and sensitive receptors with implementation of mitigation. The RCAP would also result in reduced vehicle miles traveled (VMT). As a result, long-term, operational regional criteria pollutant and TAC emissions would be reduced and the RCAP would have beneficial operational impacts related to criteria air pollutant and TAC emissions. The RCAP would result in less than significant construction and operational impacts related to odors.

In summary, while Alternative 1 would not conflict with the applicable air quality plans, it would not result in any VMT reductions or other benefits related to air quality in the region and would, therefore, result in greater air quality impacts compared to the RCAP. Alternative 1 would not involve construction activities and would result in lesser construction impacts related to criteria air pollutant emissions and TACs but would result in greater operational impacts related to these issues. Alternative 1 would also result in lesser impacts related to odors compared to the RCAP. Overall, Alternative 1 would result in greater operational impacts related to air quality compared to the proposed plan.

Biological, Agriculture, and Forestry Resources

Under Alternative 1, no new utility scale renewable energy, electrical distribution, renewable fuel production, transportation, or any other infrastructure projects would be facilitated. As such, Alternative 1 would result in no impacts related to biological, agriculture, and forestry resources.

As discussed in Section 3.3, *Biological, Agriculture, and Forestry Resources*, the proposed plan would result in significant and unavoidable impacts related to special status species, wildlife corridors and nursery sites, and Farmland. The RCAP would result in less than significant impacts related to conflicts with local biological resources policies (such as tree ordinances) and adopted habitat conservation plans. Additionally, the RCAP would result in less than significant impacts to forest land. Overall, Alternative 1 would result in lesser impacts related to biological, agriculture, and forestry resources compared to the proposed plan.

Cultural and Tribal Cultural Resources

Under Alternative 1, no new utility scale renewable energy, electrical distribution, renewable fuel production, transportation, or any other infrastructure projects would be facilitated. As such, Alternative 1 would result in no impacts related to cultural or tribal cultural resources.

As discussed in Section 3.4, *Cultural and Tribal Cultural Resources*, the RCAP would result in significant and unavoidable construction impacts related to historic resources. RCAP impacts related to archaeological resources and tribal cultural resources would be less than significant with mitigation. RCAP impacts with regard to human remains would be less than significant. For the reasons discussed above, Alternative 1 would result in lesser impacts related to cultural and tribal cultural resources compared to the proposed plan.

Greenhouse Gas Emissions and Energy

Under Alternative 1, Humboldt would not implement a comprehensive plan of measures and actions to reduce GHG emissions, and the region would not meet the State goals to reduce emissions to 40 percent below the 1990 levels by 2030 or achieve carbon neutrality by 2045. In addition, measures to increase the generation and procurement of renewably sourced electricity and renewable fuels, improve energy efficiency in buildings, decarbonize buildings, and decarbonize the transportation system would not be facilitated by the plan. Therefore, Alternative 1 impacts related to GHG emissions and energy would be significant and unavoidable.

As discussed in Section 3.5, *Greenhouse Gas Emissions and Energy*, the RCAP would result in reduced operational GHG emissions and energy use from non-renewable sources and, thus, less than significant impacts. Overall, Alternative 1 would result in greater impacts related to GHG emissions and energy compared to the proposed plan.

Land Use Planning, Population, and Housing

Under Alternative 1, no new utility scale renewable energy, electrical distribution, renewable fuel production, transportation, or any other infrastructure projects would be facilitated. Therefore, Alternative 1 would result in no impacts related to the division of an established community, displacement of people or housing, and substantial unplanned population growth. However, the Humboldt County General Plan and city general plans contain goals and policies related to the adoption of a climate action plan and minimization of the impacts of climate change. As such, Alternative 1 would result in significant and unavoidable operational impacts related to conflicts with plans and policies adopted for the purpose of avoiding environmental impacts.

As discussed in Section 3.6, *Land Use Planning, Population, and Housing*, the RCAP would result in no impacts related to the division of an established community and the displacement of people and housing. Additionally, though implementing the RCAP would require developing and implementing new programs and ordinances and/or modifying existing ones, the RCAP would not conflict with the regional, County, and city policies adopted for the purpose of avoiding environmental impacts. Impacts related to conflicts with land use policies would be less than significant. The RCAP would not facilitate additional housing but would result in new jobs throughout Humboldt related to renewable fuel production and the green jobs industry. New jobs facilitated by the RCAP would not be anticipated to result in substantial unplanned population growth, and there would be no impact.

Overall, Alternative 1 would result in similar impacts related to displacement of people and housing, the division of an established community, and population growth and greater impacts related to conflicts with land use policies compared to the proposed plan.

Noise

Under Alternative 1, no new utility scale renewable energy, electrical distribution, renewable fuel production, transportation, or any other infrastructure projects would be facilitated. Therefore, Alternative 1 would result in no impacts related to noise and vibration.

As discussed in Section 3.7, *Noise*, construction and operational activities associated with infrastructure improvements promoted by the RCAP would result in significant and unavoidable noise impacts. The RCAP would result in less than significant construction vibration impacts with mitigation, and less than significant operational vibration impacts. RCAP impacts related to airport noise would also be less than significant. In comparison to the proposed plan, Alternative 1 would result in lesser construction and operational impacts related to noise and vibration.

Transportation

Under Alternative 1, no projects would be facilitated that could conflict with a program, plan, ordinance, or policy addressing the circulation system and impacts would be less than significant. In addition, no development would be facilitated under Alternative 1, and no impacts related to VMT and conflicts with CEQA Guidelines Section 15064.3 would occur. As Alternative 1 would not result in any new infrastructure or development, there also would be no impacts related to roadways hazards and emergency access.

As discussed in Section 3.8, *Transportation*, the RCAP would promote active transportation and public transit improvements and a reduction in VMT. As such, the RCAP would be consistent with plans goals, and policies addressing the circulation system and CEQA Guidelines Section 15064.3, and there would be no impact related to these issues. No new active transportation, public transit, or mobility hubs would be created under Alternative 1, and this Alternative would not advance adopted local and regional goals and policies related to the circulation system and VMT. Therefore, Alternative 1 would result in greater operational impacts related to conflicts with circulation system goals, plans, and policies and VMT compared to the proposed plan. The RCAP would not substantially increase roadway hazards or result in inadequate emergency access, and impacts related to these issues would be less than significant. Alternative 1 would result in no alterations to existing roadway conditions or emergency access and would therefore, result in lesser impacts compared to the proposed plan. Overall, Alternative 1 would result in greater operational impacts related to VMT compared to the proposed plan.

Utilities and Service Systems

Under Alternative 1, no new utility scale renewable energy, electrical distribution, renewable fuel production, organic waste processing, recycled water, transportation, or any other infrastructure projects would be facilitated. No facilitated development would occur under Alternative 1, and, therefore, there would be no impacts related to the relocation or construction of new or expanded utilities infrastructure, water supplies, wastewater treatment capacity, and solid waste generation.

As described in Section 3.9, *Utilities and Service Systems*, the RCAP would result in significant and unavoidable impacts related to the expansion of electric power (construction and operational impacts), recycled water (construction impacts), and wastewater treatment facilities (construction impacts). The RCAP includes measures to reduce water use (and resulting wastewater treatment demand) and solid waste generation. As such, construction and operational impacts related to water supply, wastewater treatment capacity, and solid waste generation would be less than

significant. Alternative 1 would result in lesser impacts related to utilities and service systems in comparison to the proposed plan.

5.4.2 Conclusion

In summary, Alternative 1 would avoid the significant and unavoidable impacts related to aesthetics, construction air quality, biological resources, historic resources, agricultural resources, noise, and utilities and service systems related to the construction of renewable energy, electric power distribution, renewable fuel production, organic waste processing, and recycled water facilities. However, this alternative would result in significant and unavoidable impacts related to GHG emissions, energy, and land use, and there would also be increased impacts related to operational air quality, and transportation. In addition, the alternative would not meet any of the plan objectives described under Section 5.3, *Plan Objectives*.

5.5 Alternative 2: Sustainable Communities Alternative

5.5.1 Description

Strategy 7 of the RCAP includes Measure T-3, which commits the Regional Climate Committee (RCC) and jurisdictions to work with partners to enable and encourage mixed-use development in infill priority areas. Additionally, Strategy 6 in the RCAP includes Measure T-4, which focuses on developing regional mobility hubs and expanding transportation options across the region to decrease the level of travel via single occupancy vehicles. While the potential GHG emission reductions associated with these measures are not quantified in the RCAP, they are the foundational step for improving connectivity in the region.

Increasing connectivity between residents and essential needs (i.e., work, shopping, and social) and increasing access to alternative transportation options that are convenient, safe, and reliable can have a notable effect with respect to reducing GHG emissions. The Sustainable Communities Alternative would revise transportation measures within the RCAP to incorporate smart growth planning concepts into a regional growth pattern focused around “Mobility Hubs.” Mobility Hubs are envisioned as places of activity where capital transportation investment would support future housing and jobs and encompass areas that are located within both incorporated cities boundaries and unincorporated County. Under this alternative, RCAP Measure T-3 would be revised to accelerate smart growth development by requiring local jurisdictions to adopt modified or new land use and zoning designations to limit urban sprawl and promote high-density development. This will further support mixed-use development and reduce reliance on single-occupancy vehicles. Furthermore, under this alternative, RCAP Measure T-4 would be revised to commit the local jurisdictions to initiate the planning and development of Mobility Hub projects by 2027. This includes securing funding for transit accessibility improvements, network efficiency enhancements, and alternative transportation options. Additionally, the revised RCAP Measure T-4 would commit RCC to implementing a tracking mechanism to monitor the effectiveness of land use changes in achieving mode shift and reducing VMT.

The RCC would work with the cities, County, Humboldt County Association of Governments, and Humboldt Transit Authority to 1) identify appropriate locations for Mobility Hubs, 2) fund improvements to transit accessibility, 3) make network investments to improve efficiency of all transportation types, 4) implement alternative transportation options that provide last-mile connections to transit centers, and 5) make improvements to technology and communication

systems. The Sustainable Communities Alternative would then result in modifications to each jurisdiction's land use patterns. Qualifying development would be allowed through ministerial approvals. This alternative shifts the focus of the RCAP to integrating land use and transportation planning to achieve reduced regional VMT and GHG emission reductions. The remainder of the RCAP sector strategies would also be implemented as laid out in the RCAP document, and this Alternative 2 would meet the Statewide 2030 and 2045 GHG emissions reduction goals.

5.5.2 Impact Analysis

Aesthetics

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to RCAP Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Under Alternative 2, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts to scenic vistas, scenic resources within state scenic highways, and visual character or quality of public views. Alternative 2 would also result in less than significant impacts related to light and glare with implementation of mitigation measures. The same mitigation measures presented in Section 3.1, *Aesthetics*, would be required under Alternative 2.

As discussed in Section 3.1, *Aesthetics*, the proposed plan would result in significant and unavoidable impacts related to scenic vistas, scenic resources within State scenic highways, and visual character or quality of public views. The RCAP would result in less than significant impacts related to light and glare with implementation of mitigation measures. Alternative 2 would result in similar impacts related to aesthetics compared to the proposed plan.

Air Quality

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Alternative 2 would advance the applicable air quality plans through implementation of measures that would have co-benefits to air quality and would result in less than significant impacts related to conflicts with the applicable air quality plans. Construction of future projects facilitated by Alternative 2 would result in significant and unavoidable construction impacts related to criteria air pollutant emissions and less than significant construction impacts related to TAC emissions and sensitive receptors with implementation of mitigation. Alternative 2 would result in reduced VMT. As a result, long-term, operational regional criteria pollutant and TAC emissions would be reduced, and Alternative 2 would have beneficial operational impacts related to criteria air pollutant and TAC emissions. Alternative 2 would result in less than significant construction and operational impacts related to odors. The same mitigation measures presented in Section 3.2, *Air Quality*, would be required under Alternative 2.

As discussed in Section 3.2, *Air Quality*, the proposed plan would result in less than significant impacts related to conflicts with an air quality plan and odors. The proposed plan would result in significant and unavoidable construction impacts related to construction criteria air pollutant emissions. The proposed plan would result in less than significant construction TAC emissions with implementation of mitigation. Operational criteria air pollutant and TAC emissions under the proposed plan would be less than significant.

Overall, construction-related air quality impacts and impacts related to odors under Alternative 2 would be similar to the proposed plan. However, Alternative 2 would result in greater VMT reductions and associated operational criteria air pollutant and TAC emissions reductions. As a result, Alternative 2 would result in overall lesser air quality impacts compared to the proposed plan.

Biological, Agriculture, and Forestry Resources

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Under Alternative 2, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts to special status species, wildlife corridors and nursery sites, and Farmland. Alternative 2 would also result in less than significant impacts related to conflicts with local biological resources policies (such as tree ordinances) and adopted habitat conservation plans. Additionally, Alternative 2 would result in less than significant impacts to forest land. The same mitigation measures presented in Section 3.3, *Biological, Agriculture, and Forestry Resources*, would be required under Alternative 2.

As discussed in Section 3.3, *Biological, Agriculture, and Forestry Resources*, the proposed plan would result in significant and unavoidable impacts related to biological and agricultural resources and less than significant impacts related to forestry resources. Construction- and operation-related biological and agricultural resources impacts under Alternative 2 would be similar to the proposed plan. Alternative 2 would result in similar impacts related to biological, agriculture, and forestry resources compared to the proposed plan.

Cultural and Tribal Cultural Resources

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Under Alternative 2, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts to historic resources. Impacts to archaeological resources and tribal cultural resources under Alternative 2 would also be less than significant with mitigation. Impacts to human remains under Alternative 2 would be less than significant. The same mitigation measures presented in Section 3.4, *Cultural and Tribal Cultural Resources*, would be required under Alternative 2.

As discussed in Section 3.4, *Cultural and Tribal Cultural Resources*, the RCAP would result in significant and unavoidable construction impacts related to historic resources. RCAP impacts related to archaeological resources and tribal cultural resources would be less than significant with mitigation. RCAP impacts with regard to human remains would be less than significant. Alternative 2 would result in similar impacts related to cultural and tribal cultural resources compared to the proposed plan.

Greenhouse Gas Emissions and Energy

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Alternative 2 would result in reduced long-term GHG emissions and energy use from

non-renewable sources. Impacts related to GHG emissions and energy under Alternative 2 would be less than significant.

As discussed in Section 3.5, *Greenhouse Gas Emissions and Energy*, the RCAP would result in reduced operational GHG emissions and energy use from non-renewable sources and, thus, less than significant impacts. Alternative 2 would result in greater VMT reductions and associated GHG emissions and transportation fuel use reductions in comparison to the proposed plan. As a result, Alternative 2 would result in overall lesser GHG emissions and energy impacts compared to the RCAP.

Land Use Planning, Population, and Housing

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Under Alternative 2, there would be no impacts related to the division of an established community and the displacement of people and housing. Additionally, though implementing Alternative 2 would require some modification of existing policies, including developing and implementing new smart growth ordinances and requiring zoning code and general plan land use updates, Alternative 2 would not conflict with the regional, County, and City policies adopted for the purpose of avoiding environmental impacts. Impacts related to conflicts with land use policies would be less than significant. Alternative 2 would not facilitate additional housing but would result in new jobs throughout Humboldt related to renewable fuel production and the green jobs industry. New jobs facilitated by Alternative 2 would not be anticipated to result in substantial unplanned population growth, and impacts would be less than significant.

As discussed in Section 3.6, *Land Use Planning, Population, and Housing*, the RCAP would result in no impacts related to the division of an established community, the displacement of people and housing, and substantial unplanned population growth. The RCAP would result in less than significant impacts related to conflicts with land use policies. Alternative 2 would result in similar impacts related to land use planning and population and housing compared to the proposed plan.

Noise

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Under Alternative 2, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable construction and operational noise impacts. Alternative 2 would result in less than significant construction vibration impacts with mitigation, and less than significant operational vibration impacts. Impacts under Alternative 2 related to airport noise would also be less than significant. The same mitigation measures presented in Section 3.7, *Noise*, would be required under Alternative 2.

As discussed in Section 3.7, *Noise*, construction and operational activities associated with infrastructure improvements promoted by the RCAP would result in significant and unavoidable noise impacts. The RCAP would result in less than significant construction vibration impacts with mitigation, and less than significant operational vibration impacts. RCAP impacts related to airport noise would also be less than significant. Alternative 2 would result in similar impacts related to noise and vibration compared to the proposed plan.

Transportation

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Though implementing Alternative 2 would require some modification of existing policies, including developing and implementing new smart growth ordinances, Alternative 2 would promote active transportation and public transit improvements and a reduction in VMT. As such, Alternative 2 would be consistent with programs, plans, goals, and policies addressing the circulation system and CEQA Guidelines Section 15064.3, and there would be no impact related to these issues. Alternative 2 would not substantially increase roadway hazards or result in inadequate emergency access, and impacts related to these issues would be less than significant.

As discussed in Section 3.8, *Transportation*, the RCAP would promote active transportation and public transit improvements and a reduction in VMT. As such, the RCAP would be consistent with programs, plans, goals, and policies addressing the circulation system and CEQA Guidelines Section 15064.3, and there would be no impact related to these issues. The RCAP would not substantially increase roadway hazards or result in inadequate emergency access, and impacts related to these issues would be less than significant. Impacts related to roadway hazards and emergency access under Alternative 2 would be similar to the proposed plan. However, Alternative 2 would result in greater VMT reductions and improvements to the circulation system. As a result, Alternative 2 would result in lesser impacts related to consistency with circulation system plans and policies and VMT compared to the proposed plan.

Utilities and Service Systems

Implementation of Alternative 2 would involve the same measures and actions as the RCAP, but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Under Alternative 2, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts related to the expansion of electric power, recycled water, and wastewater treatment facilities. Alternative 2 includes measures to reduce water use (and resulting wastewater treatment demand) and solid waste generation. As such, impacts related to water supply, wastewater treatment capacity, and solid waste generation would be less than significant.

As described in Section 3.9, *Utilities and Service Systems*, the RCAP would result in significant and unavoidable impacts related to the expansion of electric power (construction and operational impacts), recycled water (construction impacts), and wastewater treatment facilities (construction impacts). The RCAP includes measures to reduce water use (and resulting wastewater treatment demand) and solid waste generation. As such, construction and operational impacts related to water supply, wastewater treatment capacity, and solid waste generation would be less than significant. Alternative 2 would result in similar impacts related to utilities and service systems compared to the proposed plan.

5.5.3 Conclusion

In summary, Alternative 2 would involve implementation of the same measures and actions as the RCAP but with modifications to Measures T-3 and T-4 to accelerate smart growth development and VMT reductions. Therefore, Alternative 2 would generally result in the same level of impacts as the proposed plan, including significant and unavoidable impacts to aesthetics, construction air quality,

biological resources, historic resources, agricultural resources, noise, and utilities and service systems. However, this Alternative would result in lesser GHG emissions, operational criteria air pollutant and TAC emissions, and greater VMT reductions compared to the proposed plan, and impacts related to these issue areas would be lesser than under the RCAP. This alternative would also meet all of the plan objectives described under Section 5.3, *Plan Objectives*, above.

5.6 Alternative 3: Enhanced Carbon Sequestration Alternative

5.6.1 Description

Strategy 10 of the RCAP includes Measure CS-1, which focuses on conducting the initial feasibility analysis and funding identification for industrial carbon sequestration projects in the County, and Measure CS-3, which commits the County to conducting a natural and working lands GHG inventory. Implementation of these measures will not result in GHG emission reductions; however, they lay the necessary groundwork for pursuing industrial based carbon sequestration projects and for developing land use management practice policies to enhance and track natural working land carbon sequestration in the County.

The Enhanced Carbon Sequestration Alternative would revise Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration occurring in the region would be tracked and incorporated into the RCAP's GHG emissions inventory. Specifically, Measure CS-3 would be revised to:

- 1) Require the County to conduct a detailed carbon stock inventory of existing natural working lands to determine current levels of carbon sequestration and potential future sequestration under various climate scenarios by 2026.
- 2) Require the County to develop and adopt a series of policies, programs, and regulations aimed at maintaining and enhancing carbon sequestration in natural and working lands by 2027. These policies would focus on sustainable land management practices to maximize carbon sequestration potential.
- 3) Require the County to implement verifiable tracking mechanisms to monitor carbon stock change and ensure the effectiveness of the policies in maintaining or increasing carbon sequestration potential by 2027.

While achieving carbon sequestration through industrial processes by 2030 through Measure CS-1 may be challenging due to the need for extensive studies and project development, this alternative would revise Measure CS-1 to accelerate the timeline for initiating such projects. Specifically, under this alternative, Measure CS-1 would be revised to:

- 1) Require the County to complete feasibility studies to assess the capacity and suitability of potential sites for industrial carbon sequestration by 2027.
- 2) Require the County to initiate project planning and development processes based on the findings of the feasibility studies by 2030.

Under the Enhanced Carbon Sequestration Alternative, the above revised measures would result in the inclusion of carbon sequestration from natural working lands in the GHG inventory. This would

demonstrate the extent to which the County's carbon stock is offsetting GHG emissions generated within Humboldt, thereby contributing to the achievement of the County's overall climate action goals. The remainder of the RCAP would also be implemented as laid out in the RCAP document, and this Alternative 3 would meet the Statewide 2030 and 2045 GHG emissions reduction goal.

5.6.2 Impact Analysis

Aesthetics

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Under Alternative 3, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts to scenic vistas, scenic resources within state scenic highways, and visual character or quality of public views. Alternative 3 would also result in less than significant impacts related to light and glare with implementation of mitigation measures. The same mitigation measures presented in Section 3.1, *Aesthetics*, would be required under Alternative 3.

As discussed in Section 3.1, *Aesthetics*, the proposed plan would result in significant and unavoidable impacts related to scenic vistas, scenic resources within State scenic highways, and visual character or quality of public views. The RCAP would result in less than significant impacts related to light and glare with implementation of mitigation measures. Aesthetic impacts under Alternative 3 would be similar to the proposed plan.

Air Quality

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Alternative 3 would advance the applicable air quality plans through implementation of measures that would have co-benefits to air quality and would result in less than significant impacts related to conflicts with the applicable air quality plans. Construction of future projects facilitated by Alternative 3 would result in significant and unavoidable construction impacts related to criteria air pollutant emissions and less than significant construction impacts related to TAC emissions and sensitive receptors with implementation of mitigation. Alternative 3 would result in reduced VMT. As a result, long-term, operational regional criteria pollutant and TAC emissions would be reduced and Alternative 3 would have beneficial operational impacts related to criteria air pollutant and TAC emissions. Alternative 3 would result in less than significant construction and operational impacts related to odors. The same mitigation measures presented in Section 3.2, *Air Quality*, would be required under Alternative 3.

As discussed in Section 3.2, *Air Quality*, the proposed plan would result in less than significant impacts related to conflicts with an air quality plan and odors. The proposed plan would result in significant and unavoidable construction impacts related to construction criteria air pollutant emissions. The proposed plan would result in less than significant construction TAC emissions with implementation of mitigation. Operational criteria air pollutant and TAC emissions under the

proposed plan would be less than significant. Therefore, air quality impacts under Alternative 3 would be similar to the proposed plan.

Biological, Agriculture, and Forestry Resources

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. This may include additional application of compost on agricultural, parks, and open space areas and expanded wetland conservation and restoration, among other potential strategies. Under Alternative 3, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts to special status species, wildlife corridors and nursery sites, and Farmland. Alternative 3 would also result in less than significant impacts related to conflicts with local biological resources policies (such as tree ordinances) and adopted habitat conservation plans. Additionally, Alternative 3 would result in less than significant impacts to forest land. The same mitigation measures presented in Section 3.3, *Biological, Agriculture, and Forestry Resources*, would be required under Alternative 3.

As discussed in Section 3.3, *Biological, Agriculture, and Forestry Resources*, the proposed plan would result in significant and unavoidable impacts related to biological and agricultural resources and less than significant impacts related to forestry resources. Alternative 3 would emphasize restoration, enhancement, and preservation of natural and working lands to a greater extent than the RCAP, and, therefore, would result in lesser impacts related to biological, agriculture, and forestry resources compared to the proposed plan.

Cultural and Tribal Cultural Resources

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Under Alternative 3, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts to historic resources. Impacts to archaeological resources and tribal cultural resources under Alternative 3 would also be less than significant with mitigation. Impacts to human remains under Alternative 3 would be less than significant. The same mitigation measures presented in Section 3.4, *Cultural and Tribal Cultural Resources*, would be required under Alternative 3.

As discussed in Section 3.4, *Cultural and Tribal Cultural Resources*, the RCAP would result in significant and unavoidable construction impacts related to historic resources. RCAP impacts related to archaeological resources and tribal cultural resources would be less than significant with mitigation. RCAP impacts with regard to human remains would be less than significant. Alternative 3 would result in similar impacts related to cultural and tribal cultural resources compared to the proposed plan.

Greenhouse Gas Emissions and Energy

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Alternative 3 would result in reduced long-term GHG emissions and energy use from non-renewable sources. Impacts related to GHG emissions and energy under Alternative 3 would be less than significant.

As discussed in Section 3.5, *Greenhouse Gas Emissions and Energy*, the RCAP would result in reduced operational GHG emissions and energy use from non-renewable sources and, thus, less than significant impacts. While Alternative 3 would not result in increased GHG emissions reductions in comparison to the RCAP, it would lay the necessary groundwork for pursuing industrial based carbon sequestration projects and for developing land use management practice policies to enhance and track natural working land carbon sequestration in Humboldt. Alternative 3 would result in the inclusion of carbon sequestration from natural working lands in the GHG inventory. This would demonstrate the extent to which the County's carbon stock is offsetting GHG emissions generated within Humboldt, thereby contributing to the achievement of the County's overall climate action goals. As a result, Alternative 3 would result in overall lesser GHG emissions impacts compared to the proposed plan. Energy impacts would be similar to the proposed plan.

Land Use Planning, Population, and Housing

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Under Alternative 3, there would be no impacts related to the division of an established community and the displacement of people and housing. Additionally, though implementing Alternative 3 would require some modification of existing policies, including developing and implementing new programs and ordinances or modifying existing ones, Alternative 3 would not conflict with the regional, County, and City policies adopted for the purpose of avoiding environmental impacts. Impacts related to conflicts with land use policies would be less than significant. Alternative 3 would not facilitate additional housing but would result in new jobs throughout Humboldt related to renewable fuel production and the green jobs industry. New jobs facilitated by Alternative 3 would not be anticipated to result in substantial unplanned population growth, and impacts would be less than significant.

As discussed in Section 3.6, *Land Use Planning, Population, and Housing*, the RCAP would result in no impacts related to the division of an established community, the displacement of people and housing, and substantial unplanned population growth. The RCAP would result in less than significant impacts related to conflicts with land use policies. Alternative 3 would result in similar impacts related to land use and population and housing compared to the proposed plan.

Noise

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Under Alternative 3,

RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable construction and operational noise impacts. Alternative 3 would result in less than significant construction vibration impacts with mitigation, and less than significant operational vibration impacts. Impacts under Alternative 3 related to airport noise would also be less than significant. The same mitigation measures presented in Section 3.7, *Noise*, would be required under Alternative 3.

As discussed in Section 3.7, *Noise*, construction and operational activities associated with infrastructure improvements promoted by the RCAP would result in significant and unavoidable noise impacts. The RCAP would result in less than significant construction vibration impacts with mitigation, and less than significant operational vibration impacts. RCAP impacts related to airport noise would also be less than significant. Alternative 3 would result in similar impacts related to noise and vibration compared to the proposed plan.

Transportation

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Alternative 3 would require some modification of existing policies to promote active transportation and public transit improvements and a reduction in VMT. These changes would be consistent with programs, plans, goals, and policies addressing the circulation system and CEQA Guidelines Section 15064.3, and there would be no impact related to these issues. Alternative 3 would not substantially increase roadway hazards or result in inadequate emergency access, and impacts related to these issues would be less than significant.

As discussed in Section 3.8, *Transportation*, the RCAP would promote active transportation and public transit improvements and a reduction in VMT. As such, the RCAP would be consistent with programs, plans, and policies addressing the circulation system and CEQA Guidelines Section 15064.3, and there would be no impact related to these issues. The RCAP would not substantially increase roadway hazards or result in inadequate emergency access, and impacts related to these issues would be less than significant. Alternative 3 would implement the same transportation-related measures as the RCAP. As such, impacts related to consistency with circulation system plans and policies, VMT, roadway hazards, and emergency access would be similar to the proposed plan.

Utilities and Service Systems

Implementation of Alternative 3 would involve the same measures and actions as the RCAP, but with modifications to Measures CS-1 and CS-3 to expedite the initial analysis necessary and require the County to develop and adopt policies to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Under Alternative 3, RCAP measures related to renewable energy, electrical distribution, renewable fuel production, organic waste processing, and recycled water infrastructure would remain unchanged and would continue to result in significant and unavoidable impacts related to the expansion of electric power, recycled water, and wastewater treatment facilities. Alternative 3 includes measures to reduce water use (and resulting wastewater treatment demand) and solid waste generation. As such, impacts related to water supply, wastewater treatment capacity, and solid waste generation would be less than significant.

As described in Section 3.9, *Utilities and Service Systems*, the RCAP would result in significant and unavoidable impacts related to the expansion of electric power (construction and operational impacts), recycled water (construction impacts), and wastewater treatment facilities (construction impacts). The RCAP includes measures to reduce water use (and resulting wastewater treatment demand) and solid waste generation. As such, construction and operational impacts related to water supply, wastewater treatment capacity, and solid waste generation would be less than significant. Alternative 3 would result in similar impacts related to utilities and service systems compared to the proposed plan.

5.6.3 Conclusion

In summary, Alternative 3 would involve implementation of the same measures and actions as the RCAP but with modifications to Measures CS-1 and CS-3 to manage Humboldt's carbon stock such that carbon sequestration would be tracked and incorporated into the County's inventory. Therefore, Alternative 3 would generally result in the same level of impacts as the proposed plan, including significant and unavoidable impacts to aesthetics, construction air quality, biological resources, historic resources, agricultural resources, noise, and utilities and service systems. While Alternative 3 would not result in increased GHG emissions reductions in comparison to the RCAP, it would lay the necessary groundwork for pursuing industrial based carbon sequestration projects and for developing land use management practice policies to enhance and track natural working land carbon sequestration in Humboldt. Alternative 3 would result in the inclusion of carbon sequestration from natural working lands in the GHG inventory. This would demonstrate the extent to which the County's carbon stock is offsetting GHG emissions generated within Humboldt, thereby contributing to the achievement of the County's overall climate action goals. Alternative 3 would also emphasize the preservation, enhancement, and restoration of natural and working lands to a greater extent than the RCAP. As a result, Alternative 3 would result in overall lesser GHG emissions and biological, agricultural, and forestry resources impacts compared to the proposed plan. This alternative would also meet all of the plan objectives described under Section 5.3, *Plan Objectives*, above.

5.7 Alternatives Considered but Rejected

The following summarizes alternatives considered, but ultimately rejected for inclusion in the analysis, because they would not meet most of the proposed plan objectives, would not substantially reduce environmental impacts compared to the proposed plan, or were determined to be infeasible.

1. The County considered a potential "Preparation of Individual Climate Action Plans (CAPs)" alternative that would involve the County and seven incorporated cities each adopting separate CAPs. However, the preparation of individual CAPs was found to be infeasible for some of the smaller cities in Humboldt due to cost limitations. In addition, the preparation of separate CAPs would reduce the ability of Humboldt to accomplish its GHG emissions reductions on a regional scale, would not take advantage of existing joint power authorities serving the region, and would not meet the basic objective to establish a coalition between jurisdictions and key organizations to guide a regional approach to climate-related challenges. Therefore, this alternative is rejected, because it would not meet most of the basic project objectives and is not feasible.

2. The County considered a potential “No Growth Policy” alternative that would involve the County reducing GHG emissions by enacting a moratorium on new development, thereby avoiding additional carbon emissions that would occur from new development. A No Growth alternative would not meet most of the basic objectives, including meeting Statewide GHG emissions reductions goals or providing the County with a qualified GHG emissions reduction plan to streamline the CEQA GHG emissions analyses of future development projects. The County cannot reasonably, feasibly, or legally restrict growth across all sectors of development, including residential, commercial, and industrial. A No Growth Policy alternative would result in negative economic effects as new employment opportunities from new development would halt, opportunities for new residents to live in the County would be limited, and contributions to the local economy would cease. A No Growth Policy would also conflict with State law requiring that the region meet its Regional Housing Needs Allocation developed by the California Department of Housing and Community Development. Therefore, this alternative is rejected, because it would not meet most of the basic project objectives and is not feasible.
3. The County considered a potential “Carbon Credit” alternative under which, in lieu of adopting the RCAP and CEQA GHG Emissions Thresholds, the County would purchase carbon offsets to reduce GHG emissions. Carbon offset projects could increase or protect carbon sequestration, invest in solar or wind projects, improve water or energy efficiency, capture methane at animal farms or landfills, replace high-global warming-potential gas use with a gas that has a lower global warming potential, or implement other types of measures. To achieve the greatest environmental benefits to Humboldt, priority would be given, from highest to lowest, to offsets purchased locally (within the County), regionally (within the North Coast of California), within California, outside of California but within the Pacific Northwest (and elsewhere in the United States). However, this alternative would not meet most of the basic objectives, including meeting Statewide GHG emissions reductions goals or providing the County with a qualified GHG emissions reduction plan to streamline CEQA GHG emissions analyses of future development projects. Therefore, this alternative was rejected.

5.8 Environmentally Superior Alternative

CEQA Guidelines Section 15126(e)(2) requires identification of an environmentally superior alternative. If the “No Project” Alternative is environmentally superior, CEQA requires selection of the “environmentally superior alternative other than the No Project Alternative” from among the proposed plan and the alternatives evaluated.

5.8.1 Alternative Impacts and Objectives Comparison

To identify the environmentally superior alternative in accordance with the CEQA Guidelines, Table 5-1 presents a comparison of the impacts related to the alternatives and indicates whether each alternative’s environmental impact is greater than, lesser than, or similar to that of the proposed plan for each of the topic areas that were analyzed.

Table 5-1 Summary of Alternatives' Impacts

Impact Area	Proposed Project	Alternative 1: No Project	Alternative 2: Sustainable Communities	Alternative 3: Carbon Sequestration
Aesthetics				
Scenic Vistas	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Scenic Highways	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Visual Character and Quality	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Light and Glare	LTS with Mitigation	Lesser (No Impact)	Similar (LTS with Mitigation)	Similar (LTS with Mitigation)
Air Quality				
Conflict with Air Quality Plan	LTS	Greater (LTS)	Lesser (LTS)	Similar (LTS)
Criteria Pollutant Emissions				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	LTS	Greater (LTS)	Lesser (LTS)	Similar (LTS)
Toxic Air Contaminants				
Construction	LTS with Mitigation	Lesser (No Impact)	Similar (LTS with Mitigation)	Similar (LTS with Mitigation)
Operation	LTS	Greater (LTS)	Lesser (LTS)	Similar (LTS)
Odors				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Biological, Agriculture, and Forestry Resources				
Special Status Species				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Sensitive Natural Communities and Wetlands				
Construction	LTS with Mitigation	Lesser (No Impact)	Similar (LTS with Mitigation)	Similar (LTS with Mitigation)
Operation	No Impact	Similar (No Impact)	Similar (No Impact)	Lesser (No Impact)

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Impact Area	Proposed Project	Alternative 1: No Project	Alternative 2: Sustainable Communities	Alternative 3: Carbon Sequestration
Wildlife Movement and Nursery Sites				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	No impact	Similar (No Impact)	Similar (No Impact)	Lesser (No Impact)
Conflicts with Local Biological Resources Policies				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	No Impact	Similar (No Impact)	Similar (No Impact)	Lesser (No Impact)
Conflicts with Adopted Habitat Conservation Plans	LTS	Lesser (No Impacts)	Similar (LTS)	Similar (LTS)
Conversion of Farmland to Non-Agricultural Use	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Lesser (Significant and Unavoidable)
Conversion of Forest Land to Non-Forest Use	LTS	Lesser (No Impact)	Similar (LTS)	Lesser (LTS)
Cultural and Tribal Cultural Resources				
Historical Resources				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	No impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Archaeological Resources				
Construction	LTS with Mitigation	Lesser (No Impact)	Similar (LTS with Mitigation)	Similar (LTS with Mitigation)
Operation	No impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Human Remains				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	No impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Tribal Cultural Resources				
Construction	LTS with Mitigation	Lesser (No Impact)	Similar (LTS with Mitigation)	Similar (LTS with Mitigation)
Operation	No impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)

Impact Area	Proposed Project	Alternative 1: No Project	Alternative 2: Sustainable Communities	Alternative 3: Carbon Sequestration
Greenhouse Gas Emissions and Energy				
Greenhouse Gas Emissions				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	LTS	Greater (Significant and Unavoidable)	Lesser (LTS)	Lesser (LTS)
Energy				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	LTS	Greater (Significant and Unavoidable)	Lesser (LTS)	Similar (LTS)
Land Use, Planning, Population, and Housing				
Division of an Established Community	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Conflict with Land Use Plans and Policies	LTS	Greater (Significant and Unavoidable)	Similar (LTS)	Similar (LTS)
Substantial Unplanned Population Growth	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Displacement of People and Housing	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Noise and Vibration				
Noise				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Vibration				
Construction	LTS with Mitigation	Lesser (No Impact)	Similar (LTS with Mitigation)	Similar (LTS with Mitigation)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Transportation				
Conflict with Plans, Policies, and Programs				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	No Impact	Greater (No Impact)	Lesser (No Impact)	Similar (No Impact)

Humboldt County
Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Impact Area	Proposed Project	Alternative 1: No Project	Alternative 2: Sustainable Communities	Alternative 3: Carbon Sequestration
Vehicle Miles Traveled				
Construction	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Operation	No Impact	Greater (No Impact)	Lesser (No Impact)	Similar (No Impact)
Design Hazards				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Emergency Access				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Utilities and Service Systems				
Water Infrastructure				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Wastewater Infrastructure				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Electric Power Infrastructure				
Construction	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation	Significant and Unavoidable	Lesser (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Natural Gas and Telecommunications Infrastructure				
Construction	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Operation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)

Impact Area	Proposed Project	Alternative 1: No Project	Alternative 2: Sustainable Communities	Alternative 3: Carbon Sequestration
Water Supply	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Wastewater Treatment Capacity	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
Solid Waste Generation	LTS	Lesser (No Impact)	Similar (LTS)	Similar (LTS)
LTS = Less than Significant				

5.8.2 Identification of Environmentally Superior Alternative

Based on the alternatives analysis provided in this EIR chapter, Alternative 1 (No Project) is the environmentally superior alternative, as it would lessen the severity of most impacts of the proposed plan. However, it would not meet any of the proposed plan objectives. If the “No Project” Alternative is determined to avoid or reduce more impacts than any other alternative, CEQA requires that the EIR identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e]).

Alternative 2 (Sustainable Communities) would further reduce VMT and associated GHG emissions, air pollutant emissions, and transportation energy use in Humboldt in comparison to the proposed plan. While most Alternative 2 impacts are similar in significance to the proposed plan, greater benefits related to air quality, energy use, GHG emissions, and transportation would occur. Alternative 2 would also meet all of the plan objectives. Alternative 3 (Enhanced Carbon Sequestration) would result in the same significant and unavoidable impacts as the proposed plan, but impacts to biological, agricultural, and forestry resources would be slightly reduced in comparison to the proposed plan. Additionally, though Alternative 3 would not result in greater GHG emissions reductions compared to the RCAP and Alternative 2, it would advance Humboldt’s climate action goals to a greater extent than the proposed plan.

Overall, of the alternatives evaluated in this EIR chapter, Alternative 3 (Carbon Sequestration) would be the environmentally superior alternative.

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6 Contributors and Preparers

6.1 EIR Contributors

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Elizabeth Schatz, Planning Manager
John Ford, Planning and Building Director

City of Arcata Planning Division

David Loya, Community Development Director
Emily Benvie, Environmental Services Deputy Director

City of Eureka Planning Division

Cristin Kenyon, Development Services Director

City of Ferndale Planning Division

Michelle Nielsen, Contract City Planner

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Shari Meads, Community Development Director

City of Trinidad Planning Division

Trevor Parker, Contract City Planner

Redwood Coast Energy Authority

Faith Carlson, Regulatory and Legislative Policy Manager

Humboldt County Association of Governments

Oona Smith, Senior Regional Planner

Humboldt Transit Authority

Jerome Qiriazzi, Transit Planner

6.2 EIR Preparers

This EIR was prepared by Humboldt County, with the assistance of Rincon Consultants, Inc. and LACO Associates. Consultant staff involved in the preparation of the EIR are listed below.

RINCON CONSULTANTS, INC.

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Appendix A

Notice of Preparation and Scoping Comments



Notice of Preparation of an Environmental Impact Report and Public Scoping
Meeting for the Humboldt County Regional Climate Action Plan

**NOTICE OF PREPARATION OF AN
ENVIRONMENTAL IMPACT REPORT
AND PUBLIC SCOPING MEETING**

DATE: August 30, 2024

TO: Office of Planning and Research, Responsible Agencies, Trustee Agencies, Organizations, and Interested Parties

SUBJECT: **Notice of Preparation (NOP) of an Environmental Impact Report and Public Scoping Meeting for the Humboldt Regional Climate Action Plan**

PLAN NAME: Humboldt Regional Climate Action Plan

PLAN LOCATION: All unincorporated and incorporated areas of Humboldt County; see Figure 1

REVIEW PERIOD: August 30, 2024 to September 30, 2024 (30 days)

Humboldt County (County) is the Lead Agency pursuant to the California Environmental Quality Act (CEQA) and its implementing regulations, the CEQA Guidelines. The County intends to prepare a programmatic Environmental Impact Report (EIR) for the Humboldt Regional Climate Action Plan (RCAP). The County has prepared this Notice of Preparation (NOP) to provide Responsible Agencies, Trustee Agencies, potentially affected agencies, organizations, and other interested parties with information regarding this plan and its potential environmental effects, and to solicit your input on the scope and content of the EIR.

PLAN DESCRIPTION

The Draft RCAP was published on August 14, 2024 for public review. The RCAP includes strategies, measures, and actions addressing communitywide greenhouse gas (GHG) emissions and establishes a target of a 40 percent reduction in GHG emissions below 1990 levels by 2030 and a longer-term goal of carbon neutrality by 2045. The 2030 GHG emissions target was selected to be consistent with California Senate Bill (SB) 32 State emissions targets and the CEQA Guidelines for a qualified GHG emissions reduction strategy, and to be achievable by the actions identified in the CAP. To achieve the Humboldt 2030 GHG emissions reduction target, the County has developed 29 measures related to carbon-free energy, building energy use, transportation, waste, water/wastewater, and carbon sequestration. In addition, the County proposes to adopt quantitative CEQA GHG emissions thresholds for use in evaluating whether a plan or project's GHG emissions would result in a potentially significant environmental impact under CEQA for plans or projects with pre-2030 buildout or initial operational years. The CEQA GHG emissions thresholds would be applied to plans or projects that cannot tier from the environmental analysis for the RCAP.

POTENTIAL ENVIRONMENTAL EFFECTS

The EIR will provide a programmatic evaluation of potential environmental impacts of the plan. The County has reviewed the RCAP and identified the following topics that have the potential for significant impacts:

- Aesthetics
- Air Quality
- Biological, Agricultural, and Forestry Resources
- Cultural/Tribal Cultural Resources
- Greenhouse Gas Emissions and Energy
- Land Use, Population, and Housing
- Noise and Vibration
- Transportation
- Utilities/Service Systems

PUBLIC REVIEW PERIOD

The County invites interested parties to provide written comments as to your specific concerns about the plan's potential environmental effects. The County requests that any Responsible or Trustee Agency responding to this notice do so in a manner consistent with Section 15082(b) of the State CEQA Guidelines.

The 30-day review period starts on August 30, 2024, and ends on September 30, 2024. Due to the time limits mandated by State law, please send your written response to the address or email below at the earliest possible date, but no later than September 30, 2024, at 5:00 p.m. Please include your name and address for all correspondence.

Please send written comments to the following email or physical address:

Megan Acevedo, Associate Planner
macevedo@co.humboldt.ca.us
Humboldt County Planning and Building Department
Long Range Planning Division
3015 H Street
Eureka, California 95501

Any comments provided should identify specific topics of environmental concern and your reason for suggesting the study of these topics in the EIR. All written comment letters/emails will be included in an appendix in the Draft EIR and the contents considered in the preparation of the EIR.

DOCUMENT AVAILABILITY AND WEBSITE

This Notice of Preparation and the Draft RCAP are available for view online at:
<https://humboldt.gov/2464/Humboldt-Regional-Climate-Action-Plan>

NOTICE OF PUBLIC SCOPING MEETING

The County will conduct a public scoping meeting to solicit oral and written comments from interested parties on the scope and content of the EIR. All interested parties are invited to attend the scoping meeting to assist in identifying issues to be addressed in the EIR.

The scoping meeting will include a brief presentation of the plan scope to be addressed in the EIR, a summary of the EIR process, and will provide attendees with an opportunity to provide input to the scope and content of the EIR.

Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting
for the Humboldt County Regional Climate Action Plan

The scoping meeting will be held on September 17, 2024 starting at 3:30 PM at the Ag Center (5630 S. Broadway Eureka, CA 95503) and online via Zoom:

<https://us06web.zoom.us/j/84442771552?pwd=BNTVkryeW4bamOS0o5agkRCsdfXWYy.1>

Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting
for the Humboldt County Regional Climate Action Plan

Figure 1 Plan Location



Basemap and imagery provided by Microsoft Bing, Esri and their licensors © 2024.

22-13470 EPS EIR Project Description
Fig 2.2 Plan Location

From: Oona Smith <oona.smith@hcaog.net>
Sent: Tuesday, September 17, 2024 11:58 AM
To: Acevedo, Megan
Cc: Beth Burks
Subject: Scoping for the programmatic EIR for the Humboldt Regional Climate Action Plan (RCAP)

Follow Up Flag: Follow up
Flag Status: Flagged

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

Hello Megan,

HCAOG has two requests for consideration for the scope of the programmatic EIR.

For assessing potential impacts in Greenhouse Gas Emissions and Energy and/or Transportation:
Please ensure that the EIR explicitly outline circumstances under which an environmental impact assessment for GHG emissions from vehicle miles travelled (VMT) can tier from (streamline) the RCAP programmatic EIR.

Overall:
Please ensure that the EIR articulates how urban and rural areas in Humboldt County are defined, thereby clearly defining when, where, and how the 29 measures in the RCAP would contribute to achieving the Humboldt 2030 GHG emissions reduction target.

Thanks very much.

Have a great day,

Oona S.

Oona Smith, Senior Regional Planner (she/her pronouns)

HCAOG ~ Humboldt County Association of Governments | www.hcaog.net

611 I Street, Suite B, Eureka, CA 95501 | (707) 444-8208 | cell (707) 298-0488

I acknowledge my presence in [Jaroujiji](#) (meaning "where you sit and rest" (Eureka)), part of the ancestral territory of the Wiyot peoples. I offer gratitude and reconciliation to their elders past and present.

350 Humboldt | Climate 911| Coalition for Responsible Transportation Priorities
Environmental Protection Information Center | Humboldt Coalition for Clean Energy
Humboldt Waterkeeper | Northcoast Environmental Center
Redwood Coalition for Climate & Environmental Responsibility

Sent via email on date down below

September 20, 2024

Planning & Building Department
3015 H St.
Eureka CA, 95521
planningclerk@humboldt.ca.us
Macevedo@co.humboldt.ca.us

RE: Draft Climate Action Plan and CEQA Scoping Comments

I. Introduction

Thank you for this opportunity to provide comment on the draft Humboldt County Climate Action Plan. Please accept these comments from 350 Humboldt, the Coalition for Responsible Transportation Priorities, the Environmental Protection Information Center, Humboldt Waterkeeper, the Northcoast Environmental Center, and the Redwood Coalition for Climate and Environmental Responsibility on both the draft Regional Climate Action Plan and as scoping comments for the forthcoming Environmental Impact Report.

As organizations whose missions include the preservation and protection of our environment, we believe that quick, coordinated action to reduce our greenhouse gas emissions locally is imperative to combat the effects of climate change and that local governments have a responsibility to adopt and implement policies to ensure this action. Although we support most of the concrete actions described in the draft CAP, we feel there are ways in which it can be strengthened not only with more concrete actions, but also with a strong implementation plan which includes dedicated staffing. Our organizations further stress that taking action to address our climate crisis need not wait for the Climate Action Plan to be finalized.

II. In Order For A Qualified Climate Action Plan to Work, Progress Must Be Verifiable

We applaud the County for undertaking the work of creating a qualified Climate Action Plan. It is essential that actions to address climate change be meaningful and measurable. Otherwise, jurisdictions run the risk of greenwashing and lawsuits. The county is relying on a qualified CAP to mitigate “significant and unavoidable” greenhouse gas emissions stemming from its 2017 General Plan Update. OPR defines acceptable mitigation measures as “fully enforceable”, “capable of being accomplished successfully within a reasonable period of time”, ...and capable of achieving the GHG target with “a high level of confidence.” CAP measures that are not mandatory must have “substantial evidence of effectiveness.”¹

To that end, we believe that the RCAP must be more explicit, with measurable outcomes, and more accountable to the public. The plan currently calls for the Climate Program Manager to develop an “annual progress report.”² Given that there are only 5 years until 2030, and it has taken 7 years just to get to this draft, we can’t afford to waste whole years at a time if implementation is not going well and a course correction is needed. There should be a timeline on each jurisdiction’s website, updated quarterly, displaying progress toward a due date for each measure.

Another opportunity for accountability comes from the Regional Climate Committee. The committee should meet regularly and publicly so that progress on the Climate Action Plan can be tracked by the public.

III. The Regional Climate Committee Must Be Effective and Accountable

The Regional Climate Committee is central to the function of the RCAP. The term appears over 300 times throughout the document and the Committee is charged with a variety of tasks, from “develop[ing] and provid[ing] models, pilot programs, and template policies or ordinances”³ to “identify[ing] locations throughout the county that are priority for utility-scale, nano-grid, and micro-grid solar, hydropower, and/or wind energy generation”⁴ to “[d]evelop[ing]” and administer[ing]” a “home energy advisory service.”⁵

Yet, the RCAP contains very little specific instruction on the construction and staffing of the Regional Climate Committee. We believe that the Regional Climate Committee needs to be: (1)

¹ OPR General Plan Guidelines, Climate Change https://www.opr.ca.gov/docs/OPR_C8_final.pdf OPR CEQA and Climate Change Advisory 2018 https://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf

² C-1a page 30

³ Page 30.

⁴ Page 35.

⁵ Page 38

adequately staffed; (2) meaningfully integrated into important decisionmaking; (3) politically accountable.

We believe that these goals are best achieved through housing the Regional Climate Committee under the Humboldt County Association of Governments (HCAOG). Not only is HCAOG already tasked with multiple-jurisdictional coordination, it is also the lead in regional transportation planning, one of the prime subjects of concern in this CAP. As members of HCAOG are elected representatives from jurisdictions subject to the CAP, incorporation of the Regional Climate Committee under HCAOG also ensures that decisions made by the Committee are politically accountable.

IV. Key Ingredients for Success

The California Association of Environmental Professionals Climate Change Committee produced a white paper titled Best Practices in Implementing Climate Action Plans after reviewing the implementation, and lack thereof, of a number of local CAPs.⁶ They found that reliance on existing staff, lack of funding, and lack of political support were the most common reasons for failure. By those criteria, with the current draft, the prospects of successful implementation are not good.

A. Staffing

Staffing appears insufficient to meet all of the obligations created by the RCAP. The RCAP anticipates that a significant portion of the work will be grant funded. The RCAP currently envisions one FTE – the Climate Program Manager – who will implement the RCAP in coordination with staff from the County and Cities.⁷ Of course, as the RCAP itself acknowledges, these jurisdictions are understaffed and climate focused policies are often an afterthought.⁸ For example, this document itself is several years delayed.

Therefore, we strongly recommend that the RCAP envision more than one FTE focused on RCAP implementation. A Climate Program Manager to act as a coordinator is a good start. We recommend the recruitment of at least two additional FTEs to help implement these policies. If the Regional Climate Committee is integrated with HCAOG, as we recommend, not only would there need to be at least three FTE added but the joint organization would need to look at how

⁶ AEP Climate Change Committee White Paper Best Practices in Implementing Climate Action Plans. 2018. https://www.califaep.org/climate_change.php

⁷ C-1a page 30

⁸ Page 7

to use the same staff to provide similar functions for both agencies. Sonoma County, for example, has a Data Analyst position that serves both their regional climate and transportation organizations.

B. Funding

It takes money to get money. Matching funds are one of the biggest barriers for local jurisdictions to access government grants. A ballpark ratio of funded to submitted grant applications is somewhere between 1 in 3 and 1 in 10, so the 3-5 grants per year in the current draft are insufficient. It takes staff to write grants, and, even in this time of budget shortfalls, successful CAP implementation depends on jurisdictions' willingness to "prime the pump" and hire them. The RCAP correctly notes that Humboldt has the opportunity to seek grants for more rural communities that may not be available to competitors. We should take advantage of our unique position to receive as much funding as possible.

C. Public and Political Support

Community support is essential for approval and implementation of this CAP. Without a broad base of support, a few vocal naysayers can sway public officials and stall climate progress. For the public to support the CAP, they have to understand what is being committed to, by whom, and by when, and have a way to monitor progress. The draft in its current state does not provide this. We strongly suggest a thousand foot view with clear quantitative targets.

V. Additional Information on the Use of CEQA Streamlining Must Be Provided

The draft document describes "CEQA GHG Emissions Analysis Streamlining" for future projects and plans that are consistent with the RCAP (i.e., tiering) as one of the purposes of the RCAP.⁹ The draft specifies that demonstrating consistency with the RCAP for CEQA purposes will be accomplished with a "GHG Emissions Analysis Compliance Checklist," and that future projects that are not consistent with the RCAP "must complete a different assessment utilizing quantitative thresholds of significance."¹⁰ The Notice of Preparation for the RCAP Environmental Impact Report (EIR) specifically includes the establishment of these quantitative thresholds as part of the RCAP project.

However, the current draft document contains neither a Compliance Checklist, nor a description of what types of projects the Checklist might apply to, nor a set of quantitative GHG emissions significance thresholds. Without these critical pieces of information, it is impossible to fully

⁹ Page 4

¹⁰ Page 79

assess the impacts of the RCAP. It is especially critical to understand the way compliance will be assessed via the Checklist, since the draft RCAP relies on many vague and/or uncertain measures and actions (e.g., conducting feasibility studies) which do not always have a clear application to individual future projects.

Compliance checklists are commonly included in city and county Climate Action Plans, generally as an Appendix. San Diego County, LA County, Pasadena, San Luis Obispo, San Mateo and San Jose all include Compliance Checklists in the draft CAPs they provided for public review.

VI. Urbanized Parts of the County Should Be Characterized as “Urban” Rather Than Rural

The current draft distinguishes between “rural” and “urban” areas of the county and then proposes different measures for each of these areas.¹¹ The justification for this distinction is that it is more difficult for rural areas of the county to reduce GHG emissions. However, as currently defined, many urbanized areas of the county are categorized as rural. This is because the current definition of “rural” is written far too broadly by including “the unincorporated County as well as some incorporated cities that have similar constraints.”¹²

While they are not incorporated, areas of the county such as McKinleyville, Cutten, and Myrtle town are hardly “rural.” McKinleyville has the third largest population of any community in Humboldt. Many of the people who live in these areas are served by municipal water and sewer systems and commute to the nearby cities of Eureka and Arcata for work. These areas are effectively urbanized and should not be treated the same as truly remote areas of the county. Reducing VMT from these areas is essential to reducing the County’s overall VMT, as much of the county’s VMT is generated by these kinds of suburban commuter communities. Instead of giving these areas a pass by categorizing them as rural, we should be specifically targeting them for increased transit access, bike mobility, etc., in order to reduce VMT. Additionally, measures to reduce building emissions in these areas are essentially the same as measures in larger incorporated communities, whereas “rural” measures pertaining to off-grid propane or diesel have little applicability.

¹¹ Page 25

¹² Page 25

We therefore propose that the CAP adopt the 2020 Census Urban Area boundaries to define urban communities.¹³ By doing so, the communities of McKinleyville, Cutten, Myrtle town, Humboldt Hill, Ridgewood, and others would be classified as urban for purposes of the RCAP.

VII. The RCAP Cannot Take Credit For Reduction Measures Already Mandated by Law

Measure SW-1 is focused on meeting the requirements of SB 1383. We absolutely believe that Humboldt should follow State Law and reduce waste sent to landfills. However, we do not believe it is appropriate to attribute emissions reductions resulting from state mandates to the RCAP when they should be in the adjusted BAU forecast. Waste characterization studies provide organic waste yardage by jurisdiction, so it is not difficult to subtract out contributions from the few small towns with Low Population Waivers. Collection and edible food diversion ordinances have been passed in the rest of the county, and HWMA is in the process of setting up an organics processing facility.

SB 1383 doesn't require the county to develop its own compost facility. If construction of a compost facility is a CAP measure, then the only emissions reductions that can be counted are from decreased trucking to out of county composting facilities. 29,689 MT CO₂e looks more like all the methane emissions avoided by diverting the county's organic waste from landfills, which properly belongs to state action.¹⁴

State guidance on what kinds of emissions reductions count for a qualified climate action plan, aligns with this approach, specifically stating:

Reductions measured towards a reduction target should not include the benefits of State programs already in force; rather these reductions should be reflected in the forecast. Regardless of the role State programs play in local emissions reductions, the focus of local CAPs should be on measures to reduce emissions beyond what the State programs will achieve.¹⁵

Even when CARB modeling is not available, it is preferable to adjust the forecast with best estimates than to credit GHG reductions from massively influential state programs to local jurisdictions. SB 1383 and other mandated emission reductions—including reductions from the

¹³ Available at

<https://cacensus.maps.arcgis.com/apps/webappviewer/index.html?id=67f7e4aa0bc6450e8a052176a12d86b9>

¹⁴ Page 70

¹⁵ https://opr.ca.gov/docs/OPR_C8_final.pdf at 228

Advanced Clean Trucks, Advanced Clean Fleets, Advanced Clean Cars II, Title 24, and Federal CAFE Standards—should be moved to the adjusted BAU and new, non-state mandated measures added to make up for the gap.

VIII. Treatment of Point Sources

Humboldt only has two point sources required to report greenhouse gas emissions, the gas powered Humboldt Bay Generating Station and Humboldt Sawmill Company's biomass plant. Both are regulated under the Clean Air Act. The California Supplement to the National Community Protocol recommends excluding greenhouse gas emissions from power plants and industrial facilities regulated by the Clean Air Act, along with their electricity use and fuel consumption.¹⁶ Electricity and fuel consumption from the power plants and former pulp mills, also regulated by the Clean Air Act, were included in the inventory without any clear explanation of how local governments could exercise authority.

Historically, Humboldt's sawmills and pulp mills burned their wood waste to provide their own heat and power. They produced far more electricity than they needed and exported the rest to the grid. Humboldt Sawmill Company still generates its own electricity from biomass instead of using grid power. The CO₂ emissions from its electricity consumption would not be included in the RCAP inventory's Energy sector since the IPCC classifies CO₂ emissions from biomass plants as "Agriculture, Forestry and Other Land Use," and then only as information. Methane and nitrous oxide emissions from biomass energy are included in the Energy sector.¹⁷

HBGS is a large gas consumer but its emissions from gas consumption and power generation are one and the same. Fossil gas and electricity consumption in Humboldt dropped significantly between 1990 and 2010 as sawmills and the pulp mill shut down.¹⁸ Excluding HSC and HBSC's energy consumption from the back cast 1990 inventory in line with the recommendations of the CA Supplement to the US Community Wide GHG Emissions Protocol would make a significant difference in the amount of GHG reduction the RCAP must achieve. Excluding both emissions and energy use of Major Sources under the Clean Air act would not preclude measures to decrease energy consumption or emissions by other industries whose emissions are not federally regulated and which could, in the case of aquaculture and data centers, have a significant impact on the region's ability to meet its energy goals.

¹⁶ AEP, CA Supplement to the US Community Wide GHG Emissions Protocol
https://califaep.org/docs/California_Supplement_to_the_National_Protocol.pdf

¹⁷ 2019 Refinement of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2.
https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/2_Volume2/19R_V2_2_Ch02_Stationary_Combustion.pdf

¹⁸ CEC, California Energy Consumption Database <https://ecdms.energy.ca.gov/>

IX. VMT Reduction Measures and Targets Are Insufficient and Inconsistent with Other Plans and Policies

A. VMT Reduction Targets Are Inconsistent with CEQA Significance Threshold

The Governor's Office of Planning and Research (OPR) recommends a CEQA significance threshold for vehicle miles traveled (VMT) of 15% below existing VMT per capita for most development projects.¹⁹ The draft RCAP acknowledges this recommendation and notes that the county has recently adopted the same threshold of significance for evaluating the transportation impacts of its own projects.²⁰ Yet the only quantified VMT reduction measures included in the draft RCAP, TR-1 and TR-2, cumulatively fall far short of this mark. For the target year of 2030, TR-1 Urban and TR-1 Rural each equate to a 0.2% reduction in VMT,²¹ while TR-2 Urban and TR-2 Rural each equate to a 3% reduction.²² Assuming the population is roughly stable over the next 5 years, the RCAP measures collectively equate to a 3.2% reduction in per capita VMT, which is 11.8% short of the CEQA significance threshold. (Note that part of the problem may be faulty assumptions, such as the assumption that even rural transit trips only average 3.8 miles,²³ despite many of the common transit trips in the region being much longer, and the assumption that only biking and not walking rates can be significantly increased,²⁴ despite walking being already much more common than biking.)

Although the RCAP is not explicitly a residential or office project subject to the 15% VMT reduction threshold, it is meant to streamline CEQA approval of such projects. If the VMT analysis of subsequent plans and projects is subjected to such streamlining, it will result in violations of the county's own adopted significant threshold for VMT, which is unacceptable. Furthermore, missing the 15% VMT reduction threshold means that the RCAP itself should be considered to have a significant VMT impact, requiring additional mitigation. This is illogical and counterproductive.

Furthermore, the proposed reductions to regional VMT are so small that they are likely within the margin of error of any tool that could be used to estimate VMT in the region. The VMT reductions are therefore not only inadequate, they are also unmeasurable and therefore unenforceable, which undermines the RCAP's status as a "qualified" Climate Action Plan.

¹⁹ Governor's Office of Planning and Research. December 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA.

²⁰ Page 42

²¹ Appendix C, Pages 46, 50

²² Appendix C, Pages 54, 60

²³ Appendix C, Page 56

²⁴ Appendix C, Table 21

The draft RCAP describes its measures multiple times as “conservative” relative to the 15% reduction threshold, but that is not true. The measures fail to ensure that the RCAP’s VMT impacts are less than significant, and are therefore the opposite of “conservative.” To comply with CEQA and ensure a “qualified” RCAP, measures must be added and strengthened to ensure at least 15% reductions in per capita VMT.

B. VMT Reduction & Mode Share Targets Are Inconsistent with Regional Transportation Plan Targets

Humboldt County’s adopted Regional Transportation Plan (RTP) calls for even greater VMT reductions than the CEQA threshold. Specifically, the RTP calls for a 25% per capita by 2030.²⁵ Clearly, the draft RCAP does not come anywhere near complying with this target either.

The RTP further calls for increasing the combined active transportation and transit mode share to 30% by 2030.²⁶ In contrast, the draft RCAP calls for achieving an active transportation mode share of 8%²⁷ and a transit mode share of 13%,²⁸ for a collective active and transit mode share of 21%, well short of the RTP’s target. Since mode share is closely tied to VMT, this lack of consistency is also deeply troubling.

The draft RCAP cites the RTP’s VMT and mode share targets many times, and describes the RCAP measures as “consistent with” or “aligning with” these targets, but that is not accurate. The draft RCAP simply calls for much less VMT reduction, and much less mode shift, than does the adopted RTP. To ensure consistency across regional planning documents, to support RTP implementation, and to avoid significant CEQA impacts caused by a conflict with another adopted local plan, the RCAP should add and strengthen measures in order to achieve the VMT and mode share targets found in the RTP.

C. VMT Reduction Measures Are Not Sufficient to Achieve Targets

The measures included in the draft RCAP to increase active transportation and transit mode share and reduce VMT are not sufficient to achieve even the extremely limited targets currently included in the draft document.

²⁵ Humboldt County Association of Governments. Regional Transportation Plan: Variety in Rural Option of Mobility (VROOM): 2022-2042: Page 2-13.

²⁶ Ibid.

²⁷ Pages 45, 49

²⁸ Pages 53, 58

The main barriers to implementing active transportation infrastructure are funding, staffing shortages, and lengthy and ineffective public processes. These obstacles combine to both dramatically reduce the number of projects built and increase the timeline for completion. Yet for funding, the RCAP suggests merely applying for 3 grants each year,²⁹ and continuing to seek funding from other competitive external sources - measures already regularly met and exceeded by local agencies. And the RCAP is silent on staffing and public process. To ensure adequate active transportation infrastructure is built in a timely manner that could conceivably allow the targets to be met, additional measures must be added to the RCAP. These measures must include, at a minimum:

- Development of additional, substantial sources of local funding for active transportation, or a commitment to devote a significantly greater share of street and road funds to bike and pedestrian infrastructure.
- Universal adoption and implementation of enforceable complete streets policies, which require complete streets features to be automatically included in routine road maintenance and repair projects, and any other project that affects the right-of-way, including when such features require portions of the right-of-way to be reallocated away from vehicle travel or parking.
- Development of a regional quick-build program for bike and pedestrian infrastructure, without which there is no way that necessary bike and pedestrian networks will be completed by 2030.

Furthermore, behavioral research suggests that transportation mode shift is most effectively encouraged by a combination of incentives and disincentives.³⁰ Specifically, parking supply has been shown to be a critical factor in mode choice, more significant even than walkability or transit access.³¹ Therefore, in order to achieve meaningful mode shift, the RCAP must include measures to either limit or price the parking supply in urban areas. Parking management measures also must be explicitly incorporated into employer Transportation Demand Management (TDM) Plans (see proposed Measure TR-5).

The proposed RCAP transit measures, TR-2 Urban and Rural, include headway targets and other measures that have a more defensible relationship to desired mode share. However, funding is again the main obstacle to reducing transit headways and making other transit improvements, and the RCAP is silent on transit funding, other than suggesting a “collaboration”

²⁹ Page 47

³⁰ Piatkowski, Marshall and Krizek. 2017. Carrots vs. sticks: Assessing intervention effectiveness and implementation challenges for active transport. *Journal of Planning Education and Research*: 1-15.

³¹ Millard-Ball and West. 2020. Residential parking supply has a stronger influence on household travel choices relative to a neighborhood's walkability and access to transit. UC Institute of Transportation Studies Policy Brief.

to apply for grant funding.³² The Humboldt Transit Authority (HTA) and Humboldt County Association of Governments (HCAOG) are already extremely effective at winning competitive grants, but this is not a sufficient nor sufficiently reliable funding strategy for long-term headway reductions and other necessary improvements.

Indeed, the text of the RCAP points to other cities that have increased transit mode share, and identifies successful strategies including taxes to support transit, user taxes, reduced parking availability, and transit-only lanes. The RCAP says that “it is anticipated” that the county’s urban areas will follow suit with similar policies, but inexplicably does not include any of them in the list of actions to implement the measure.³³ In order to ensure sufficient funding, and to align incentives to produce ridership growth, all of these “key strategies” must be explicitly listed as implementation actions in the plan.

D. Potential VMT Reductions from Land Use Changes are Vague and Underutilized

Measure TR-3 emphasizes the importance of land use decisions, yet lacks clear language or actions that promote infill. This measure only explicitly aims to increase mixed use within infill areas, rather than increasing infill itself. It delegates the development of templates and educational materials, working with existing agencies on their plans, and pursuit of funding to the Regional Climate Committee, but stops short of committing jurisdictions to change their zoning. We are concerned that this lack of clarity about the planned result will allow streamlining of residential projects that contribute to sprawl. The current wording would allow those projects to say: “We’re not building in an infill priority area, so increasing mixed use doesn’t apply to us.”

Even though this measure doesn’t claim quantitative greenhouse gas reductions, it is critical to mitigating significant and unavoidable increases in VMT caused by Humboldt County’s 2017 General Plan. The county’s participation in this RCAP is required by CEQA because quantifying and mitigating the increased GHG emissions from the General Plan update was deferred to this Regional Climate Action Plan.³⁴

E. Potential Measures that Promote Infill Development and Decrease VMT.

³² Tables 15 and 16

³³ Appendix C Page 54

³⁴ Humboldt County GPU, Revised EIR Chapter 3.13 Climate Change and Greenhouse Gas Emissions, 2017.

<https://humboldt.gov/DocumentCenter/View/58842/Section-313-Climate-Change-and-Greenhouse-Gas-Emissions-Revised-DEIR-PDF> 2017.

The following measures, which have been instituted by other California cities and counties, have potential to lower transportation greenhouse gas emissions within designated zones by up to 65%.³⁵

- Establish infill and transit-oriented development (TOD) overlay zones with minimum density requirements for as-of-right ministerial approval, streamlined permitting and reduced fees. CAPCOA indicates that GHG reduction in these zones could be as high as 31%.
- Pass ordinances prohibiting redesignation and rezoning of land for lower intensity land uses in transit-oriented development areas (areas within walking distance of basic services and transit).
- Charge a transportation impact fee for projects located more than a half mile from transit that lack bike/pedestrian infrastructure to create a fund used for improving transit and complete streets.
- Have planning departments audit zoning codes for consistency with compact walkable development and require changes.
- Further streamline permitting and reduce fees for construction of ADUs and affordable housing in targeted areas.
- Increasing the cost and limiting the supply of parking decreases urban car ownership and driving mode share while creating the opportunity for construction of additional housing.³⁶ This can be done on-street with metered parking with dynamic pricing and time limits, which can decrease transportation GHG emissions by 30%, or by reallocating street space from parking to bike lanes.³⁷ Off-street parking can be limited or made more expensive by eliminating parking minimums, unbundling parking from rent, charging for workplace parking, and decreasing transit headways to less than 15 minutes, triggering a state law that forbids parking minimums within a half mile of transit stops.

X. Quantitative Measures that Don't Meet CEQA Criteria

³⁵ CAPCOA, Handbook for Analysing Greenhouse Gas Emissions Reductions 2021
https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

³⁶ Spears, S. Impacts of Parking Pricing Based on a Review of the Empirical Literature Policy Brief.
https://ww2.arb.ca.gov/sites/default/files/2020-06/Impacts_of_Parking_Pricing_Based_on_a_Review_of_the_Empirical_Literature_Technical_Background_Document_0.pdf

³⁷ CAPCOA, Handbook for Analyzing Greenhouse Gas Emissions Reductions 2021
https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

Quantitative measures in a qualified CAP must be enforceable or accompanied by significant evidence of effectiveness, must be additive and not mandated by pre existing law and ordinances, and must be feasible to accomplish within a reasonable amount of time.³⁸

A. Measure TR-6, Increasing EV Adoption and Charging

Action TR-6b commits the Regional Climate Committee to draft a template for an ordinance to streamline EV infrastructure “to be distributed to applicable jurisdictions” but falls short of committing jurisdictions to pass it. Furthermore, AB 1236 already requires every city and county to adopt ordinances that expedite and streamline the EVCS permitting process.

Action TR-6c commits the Regional Climate Committee to “working with local jurisdictions to modify the Municipal code to promote EV charger access in new developments, redevelopment and existing parking spaces. This may include [*a list of possible code changes*].” Listing a possible menu falls short of committing local jurisdictions to make specific code changes, and the lack of specificity makes it impossible to quantitatively predict or verify the result. A specific list of code changes that all jurisdictions “shall” adopt would turn this into a qualified CAP measure.

TR-6 conflates the number of charging stations “needed to support” a given number of EVs with the number of charging stations needed to induce the purchase of the same number of EVs and attributes 100% of the GHG reduction from the newly adopted EV miles to the installation of charging infrastructure. No supporting evidence is provided. CAPCOA’s Handbook for Analyzing Greenhouse Gas Emission Reductions caps the GHG reduction from chargers required by reach codes at 11.9% of GHG emissions from vehicles accessing the charger location, counting only gasoline miles replaced by electric miles in PHEVs.³⁹ Other California CAPs have followed this convention. One could reasonably also attribute some GHG reductions to workplace L2 and public DC chargers which shift load from predominantly gas-fired evening home charging to midday solar charging, but attributing all new EV miles to added charging goes too far.

Ordinances to expedite and streamline siting and permitting are mandated by AB 1236.⁴⁰ While including them in the CAP may finally get jurisdictions to comply, this should be a supportive, not quantitative measure.

³⁸ OPR, General Plan Guidelines, Chapter 8. Climate Change

³⁹ CAPCOA, Handbook for Analyzing Greenhouse Gas Emissions Reductions 2021
https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

⁴⁰ CalBO. AB 1236 Toolkit for Small Jurisdictions 2015
<https://www.calbo.org/sites/main/files/file-attachments/ab1236toolkitsmalljurisdiction.pdf?1524861090>

Expansion of public charging over the next 6 years from these CAP measures is not likely to produce a 55,000 MT drop in transportation emissions. The target should be scaled down and the GHG emissions reduction decreased accordingly.

B. Other Measures with Potential to Increase EV Adoption

The draft CAP projected future charging needs in 2030 and 2045 using EVI-Pro Lite, but a newer California analysis projects a higher percentage of workplace, multifamily, and fast charging will be needed.⁴¹ Workplaces and multifamily housing are locations where vehicles park long enough at an L2 charger to fully charge, so installation in these locations should have the greatest impact on EV adoption and on increasing PHEV electric miles. It is unlikely that private landowners will voluntarily add charging beyond what is required by Title 24. Humboldt could follow other CA jurisdictions and adopt reach codes to increase the percentage of office, industrial and multifamily off street parking in new and substantially remodeled buildings that is “charger ready” (has a 220 outlet for each stall) and the percentage of L2 chargers actually installed.⁴² Employers with over 25 employees and off street parking could also be required to provide charging and preferred parking places for zero emission vehicles.

C. Measure TR-8, Off Road Renewable Diesel

While it makes sense to take actions to speed the retirement of existing small off-road gas engines, the major GHG reductions claimed in this measure are for enforcing Title 13 [Section 2449.1\(f\)\(2\)](#) of the CA Code of Regulations requiring the use of renewable diesel. This fails CEQA criteria because it relies on a state law. It also isn’t applicable because Humboldt County is on the list of “captive attainment areas” for the off road diesel rule, which means that off-road diesel equipment owners are exempt from the requirement to use renewable diesel if they operate exclusively within Humboldt and the following counties: Alpine, Colusa, Del Norte, Glenn, Lake, Lassen, Mendocino, Modoc, Monterey, Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Trinity, Tehama, Yuba, and the portion of Sonoma County that lies within the boundaries of the North Coast Air Basin.⁴³ The 42,580 MT CO₂e of the GHG reduction claimed for off road renewable diesel should be removed from the plan.

D. Measure BE-1, Building Energy

⁴¹ CEC, Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment Commission Report 2024

⁴² CA Energy Codes and Standards. Reach Code Paths: Electric vehicle requirements <https://localenergycodes.com/content/reach-codes/electric-ready>

⁴³ CARB Fact Sheet Renewable Diesel Fuel Requirements <https://ww2.arb.ca.gov/resources/fact-sheets/fact-sheet-renewable-diesel-fuel-requirements> 2022

SB 1020 requires 90% renewable electricity by 2035 and 95% by 2040. This should be reflected in the Adjusted BAU forecast for 2045. Only measures and associated GHG reductions that exceed state targets should be included in the CAP.

The draft states that “RCEA is currently on track to provide all customers with electricity that is sourced from 100% net-zero-carbon emissions renewable resources by 2030, 15 years ahead of the state target,” citing RCEA’s 2019 RePower Plan. This 5 year old document doesn’t reflect current reality. RCEA is moving backwards, cutting its renewable and zero-carbon power by over 50% for the next 2 years, which is the minimum required by the state, due to the RPS driving up the cost of renewable energy.⁴⁴ They hope to increase their percent of renewable energy in 2026 “financial conditions permitting,” but competition and high prices in the wholesale market may not resolve that quickly. Given this uncertainty, the plan should use the conservative assumption that RCEA’s portfolio will conform to the RPS.

The draft also states that RCEA’s electricity is lower carbon than PGE’s and uses this as one justification for departing from the California average energy consumption in the inventory. Comparison of RCEA and PGE power content labels from RCEA’s inception in 2017 to 2023 reveals that, not counting biogenic carbon, RCEA’s default plan was only lower carbon than PGE’s for 2 years out of the 7, owing to PGE’s high percentage of carbon free nuclear energy.⁴⁵ Measures that aim to entice PGE customers to switch to RCEA or prevent RCEA customers from opting out to PGE will not reliably decrease carbon emissions from local energy consumption.

The plan refers to the county’s success in requiring cannabis growers to use renewable energy as evidence of the effectiveness of a potential policy requiring new industries to use renewable energy. We support adoption of this policy but no substantial evidence was given to prove its effectiveness. Cannabis license holders report their energy use and sources to the state. The data is incomplete, but of the 22.4 GWh/ year consumed by the reporting license holders, only 6.2 GWh were renewable.⁴⁶ There is nothing in BE-1 to support the claimed GHG reduction of 15,403 MT CO₂e.

⁴⁴ RCEA July 24, 2024 Board Meeting

<https://redwoodenergy.org/wp-content/uploads/2024/06/June-27-2024-Board-Meeting-Agenda-Packet-Final.pdf>

⁴⁵ CEC Power Content Labels

<https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure-program/power-content-label> accessed Sept 2024

⁴⁶ California Department of Cannabis Control. Electricity use reported by Humboldt cannabis permittees provided in response to public record request May 2024

E. Alternative Measures to Reduce Emissions from Buildings

Since even renewable energy entails some emissions, efficiency reduces carbon emissions more than replacing fossil fuel with renewables. A kwh saved in Humboldt, where the actual electrons come from gas and biomass, cuts GHG more than a kwh in most of the state, where the power mix is cleaner.⁴⁷

Given the area's relatively low rate of new construction, the largest reductions in energy use from efficiency will come from existing buildings. With the majority of Humboldt's housing constructed prior to 1978 and the state energy code, there is significant potential for improvement. Envelope efficiency upgrades should come before heat pumps since a smaller appliance may be used, lowering both up front cost and subsequent electric bills, while decreasing demand on the grid.⁴⁸

Efficiency reach codes for new construction, renovation, and time of sale; reduced or waived fees, building performance standards, expedited permitting for energy retrofits, and energy benchmarking are measures used in other CAPs to increase building energy efficiency.

The Regional Climate Committee could create a Climate Corps program to do blower door tests and seal air leaks and ducts.⁴⁹ These home visits might also be a way of pinpointing gas water heaters and furnaces nearing the end of life and prioritizing them for pre-emptive replacement.

The Policy Studio's Cost Effectiveness Explorer has a "choose your own adventure" modeling tool specific to Humboldt's housing stock and climate that predicts the GHG reduction and financial impact on homeowners for various building energy policies.⁵⁰

F. Other Efficiency Measures for Local Jurisdictions

⁴⁷ Oates, DL Locational Marginal Emissions, 2021

<https://www.brattle.com/wp-content/uploads/2021/08/Locational-Marginal-Emissions-A-Force-Multiplier-for-the-Carbon-Impact-of-Clean-Energy-Programs.pdf>

⁴⁸ ACEEE. Empowering electrification through building envelope improvements.

https://www.aceee.org/sites/default/files/pdfs/empowering_electrification_through_building_envelope_improvements_-_encrypt.pdf

⁴⁹ BlocPower <https://www.blocpower.io/posts/civilian-climate-corps-warmth-comfort-skills>

⁵⁰ The Policy Studio. Online Cost Effectiveness Explorer <https://explorer.localenergycodes.com/>

The CAP should encourage local jurisdiction to pass ordinances requiring conversion of street lights from incandescent to solar or LED. Arcata, Fortuna, and McKinleyville CSD own their street lights. Some are still incandescent. Conversion to LED decreases energy use by 65% and pays for itself within a few years. Solar street lights don't require wiring to an external power source, lowering the cost of installation. Jurisdictions could form a purchasing alliance to decrease cost. EV charging could be incorporated into LED light poles on blocks with multifamily housing.⁵¹

XI. Building Decarbonization Can and Should Go Further

A. Measure BE-3, Residential Building Decarbonization

With all the incentives available now and in the near future, a 4% increase in existing residential building decarbonization isn't ambitious enough. We have the following suggestions on how to further decrease emissions from buildings.

An ordinance to improve indoor air quality in existing buildings by requiring replacement of gas stoves with electric induction at the end of life would have substantial gains for public health and equity, since indoor air pollutants reach higher concentrations in small homes, which often also don't have range hoods. Ideally this would be paired with an assistance program to help low income homeowners and owners of affordable multifamily housing access all rebates and incentives.

An ordinance adopting a revised version of the Title 24 Voluntary Measure for Existing Housing. The state version requires heat pumps when replacing air conditioners at end of life. Adding furnaces would make this requirement applicable in coastal Humboldt where people rarely have air conditioners.

Use installation permit records to identify and reach out to building owners with appliances nearing end of life.

Establish a Volunteer Home Energy Coach program in which volunteers are trained to guide other residents through decisionmaking about electrification and clean energy. Rewiring America is currently training cohorts of volunteers and 31 communities in Massachusetts have implemented coaching programs.⁵²

⁵¹ LPDD, Model Law: Municipal Ordinance for Using Street Light Poles for EV Charging <https://lpdd.org/resources/lpdd-model-law-municipal-ordinance-for-using-street-light-poles-for-electric-vehicle-charging/> and Reducing energy use in public outdoor lighting <https://www.aceee.org/toolkit/2015/01/reducing-energy-use-public-outdoor-lighting>

⁵² Rewiring America, Electric Coach Cohorts 2024 <https://homes.rewiringamerica.org/learning/electric-coaches> and Abode, Acton's Clean Energy Coaching Program, 2024 <https://abodeem.com/homeowners/community-programs/acton/>

B. Measure BE-7, Municipal building decarbonization should have a 2045 goal of 100%

The draft currently sets a goal of decarbonizing 30% of municipal buildings and facilities by 2030.⁵³ Unlike other measures, there is currently no goal for 2045. We suggest that Humboldt set the goal of decarbonizing 100% of municipal buildings by 2045. This goal would demonstrate that Humboldt's jurisdictions are committed to the State's goals and would help them lead by example.

XII. Measure TR-10, Renewable Fuels

This section is entirely misguided and should be eliminated. Doing so would not affect the qualified status of the RCAP since it is "supportive" and does not entail any specific reductions. Reasons to eliminate this section include:

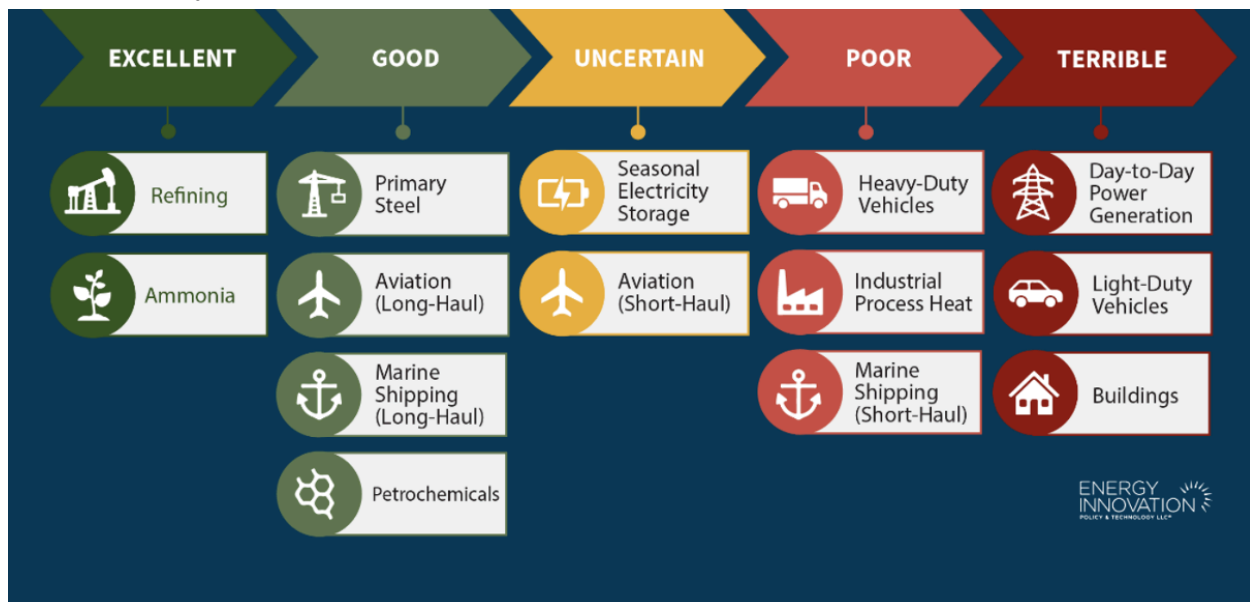
- The assumption that biofuels are carbon neutral is not correct. The Low Carbon Fuel Standard assigns a carbon intensity to each alternative fuel "pathway." These vary greatly and must be determined by an independent Life Cycle Assessment. Biogenic feedstocks that grow quickly have a relatively low carbon intensity. But woody biomass contributes directly to global heating because it takes 30 to 100 years for the trees to regrow. So uses of woody biomass cannot be considered close to carbon neutral in the time frame of the CAP.⁵⁴
- "Renewable natural gas" is primarily dairy biogas upgraded to biomethane. The LCFS erroneously assigns it negative carbon intensity values because dairy methane is not regulated. Our climate action plan cannot be predicated on the lack of regulation of the largest single source of anthropogenic methane in the state.
- The current draft of LCFS regulations adds a cap to renewable diesel, and, because it indirectly causes deforestation, it is not considered a climate mitigation in Europe. Our CAP cannot be based on an industry that is contributing to loss of forest sequestration.⁵⁵

⁵³ Page 41

⁵⁴ Booth, M.S., 2018. Not carbon neutral: Assessing the net emissions impact of residues burned for bioenergy. *Environmental Research Letters*, 13(3), p.035001; Fingerman, K. R., et al. (2023). "Climate and air pollution impacts of generating biopower from forest management residues in California." *Environmental Research Letters* 18(3). The CAP draft cites a 2014 NRDC document that is no longer current.

⁵⁵ Das, Arpita, and Samuel Lalthazuala Rokhum. "Renewable diesel and biodiesel: a comparative analysis." In *Renewable Diesel*, pp. 123-166. Elsevier, 2024. There are US consequences too: the price of corn has gone up, synthetic fertilizer use increased, and water pollution increased.

- Hydrogen is widely considered a climate-neutral energy source because when combusted it does not produce CO₂. However, if leaked into the atmosphere it has a warming effect because it reacts with methane and ozone. Because it is such a small molecule, “fugitive” hydrogen is a concern.⁵⁶
- “Green hydrogen” is needed for certain very difficult to decarbonize sectors, such as steel and cement and aviation. The graph below, from a just released report by the highly respected think tank Energy Innovations makes clear hydrogen has a narrow pathway.⁵⁷



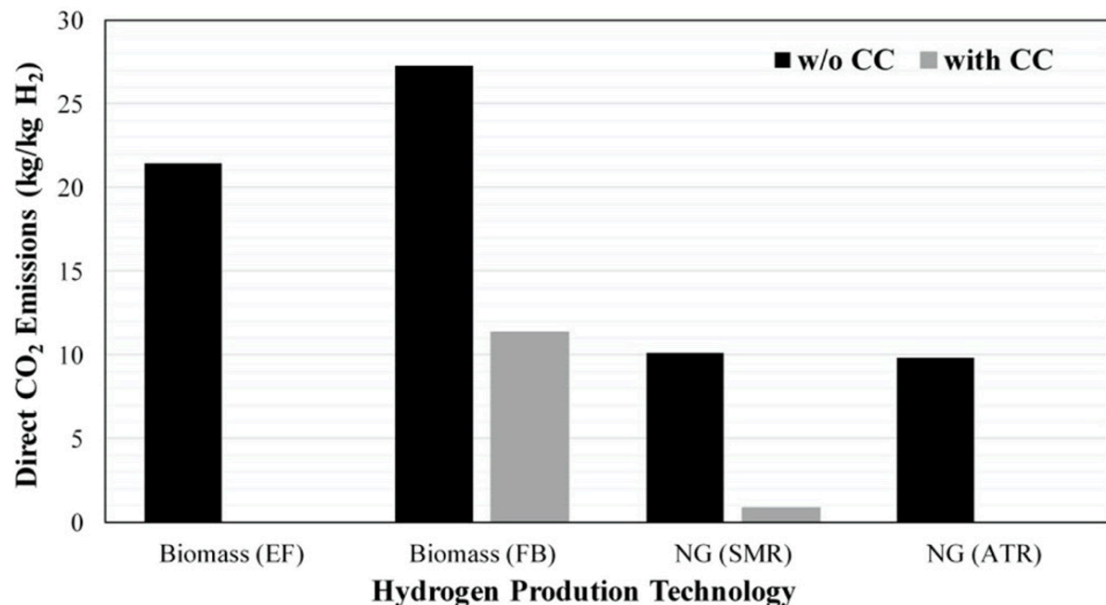
- However, there is virtually no green hydrogen available at this point. The Inflation Reduction Act contains large incentives for green hydrogen and it is hoped that by 2030 that industry can take off.⁵⁸
- The CAP should not endorse the use of any hydrogen for light vehicles, including fueling stations for light vehicles. HTA will be bringing fueling stations for buses and presumably some trucks and perhaps port equipment. 350 Humboldt supported the HTA grant on the assurance that the hydrogen would be green by 2028.

⁵⁶ Ocko, Ilissa B., and Steven P. Hamburg. "Climate consequences of hydrogen emissions." *Atmospheric Chemistry and Physics* 22, no. 14 (2022): 9349-9368.

⁵⁷ Energy Innovations, Hydrogen Policy's Narrow Path Delusions and Solutions, August 2024. <https://energyinnovation.org/publication/hydrogen-policy-narrow-path-delusions-and-solutions-report/hydrogen-policy-narrow-path-delusions-and-solutions-2/>

⁵⁸ There is much confusion about what constitutes “green hydrogen.” We believe it should be defined as it is in the Treasury Department’s draft 45V regulations as electrolytic hydrogen made from water according to the “three pillars”: a) the renewable energy used in making it is additional; b) the renewable energy is co-located; and c) the carbon intensity of the energy is based on 24/7 accounting.

- Hydrogen made from woody biomass is not green; the greenhouse gas emissions are higher than simple combustion because of the additional energy needed to pre-process the wood waste. The graph below shows direct CO₂ emissions from two types of hydrogen manufacture using gasification of biomass and two types of manufacture from natural gas (including steam methane reformation).⁵⁹ Even with carbon capture and sequestration the carbon intensity of manufacturing hydrogen from biomass is unacceptable. In contrast to the biomass processes in which over 20 kg of CO₂ are released per kg of hydrogen produced, the green hydrogen to be supported by the IRA must be no higher than 0.45 kg of CO₂ for each kg of hydrogen.



XIII. Refrigerants are Entirely Missing from the RCAP

Refrigerants are missing from the RCAP. When the improbable, unsubstantiated, inflated, and misclassified GHG reductions are weeded out of this draft, there's a big hole that needs filling. Thus far we've suggested alternatives within the same categories as the measures we commented on. Refrigerants are in a category of their own.

HFC and HCFC refrigerants have Global Warming Potentials from a few hundred to 13,000 times greater than CO₂. Reducing emissions of these extremely powerful short-lived climate

⁵⁹ Salkuyeh, Yaser Khojasteh, Bradley A. Saville, and Heather L. MacLean. "Techno-economic analysis and life cycle assessment of hydrogen production from different biomass gasification processes." *International Journal of Hydrogen Energy* 43, no. 20 (2018): 9514-9528.

pollutants can reduce near term warming by 0.4C. The Kigali Accord will, if followed, phase down HFC emissions 56% by 2050 but that falls short of the 70-80% reduction required to keep warming below 1.5°C.⁶⁰

Faster action than the US is currently pursuing would buy us time to reduce CO2 levels and limit warming close to 1.5°C.

The AEP Climate Change Committee's "The California Supplement to the United States Community-Wide Greenhouse Gas (GHG) Emissions Protocol" – the basic protocol used for the emissions inventory – contains virtually no information on refrigerant emissions, but it was published in 2013 and is out of date.⁶¹ More recent Climate Action Plans in CA have included refrigerants. Local data is available through the state's Refrigerant Management Programs's mandatory reporting program.

The primary source of refrigerant leaks in Humboldt County is supermarkets, with the EPA estimating leaks averaging 25% a year. The phasedown in state regulations is slow and limited. Humboldt County can make much faster progress.

Here are the current state standards:

⁶⁰ Purohit, Pallav, Nathan Borgford-Parnell, Zbigniew Klimont, and Lena Höglund-Isaksson. "Achieving Paris climate goals calls for increasing ambition of the Kigali Amendment." *Nature Climate Change* 12, no. 4 (2022): 339-342.

⁶¹ Rincon could request Humboldt County data on businesses with 50 lbs or more of refrigerants from CARB's Refrigerant Management Database, Tristan Pulido, Manager. 350 Humboldt received the 2019 data through a public records request. There are 102 supermarket refrigerant systems (sometimes more than one to a store) with a total GWP for the refrigerants of 131,329,801 metric tons of CO2e. If we use the EPA estimate that amounts to approximately, 26,000 metric tons of CO2e leaked each year, or roughly the same emissions as 2,925,622 gallons of gas consumed a year.

Existing Retail Food Companies

Company Size	Compliance Requirement	Date
Companies owning or operating 20 or more retail food facilities in California, and national supermarket chains operating in California.	Attain a company-wide weighted-average GWP of less than 2,500 or a 25% or greater reduction in GHGp below 2019 levels by December 31, 2026	December 31, 2026
	Attain a company-wide weighted-average GWP of less than 1,400 or a 55% or greater reduction in GHGp below 2019 levels	January 1, 2030
Companies owning or operating fewer than 20 retail food facilities in California	Attain a company-wide weighted-average GWP of less than 1,400 or a 55% or greater reduction in GHGp below 2019 levels	January 1, 2030

Since systems using CO₂ or propane are available with a GWP of 1 or less, there is clearly a large reduction possible beyond the existing regulations. It is likely that the Regional Climate Committee will need to apply for grants to assist independents and smaller markets. The County and cities can establish their own standards for chains.

Leak prevention is an important action to take in the short run, and leak detectors can be required. California air districts may enforce such requirements under agreements with the ARB, using funding provided through facility registration fees. (Portable handheld detectors can be purchased for a few hundred dollars Recycling of HFC refrigerants can be required.) The EPA has a voluntary program of leak reduction called Green Chill that markets can be urged to join.

Beyond the supermarkets and businesses with 50 pounds or more of refrigerant, approximately one-third of US refrigerant emissions come from air conditioners. There are relatively few in Humboldt County. However, there is a state and national push to install heat pumps. Unfortunately most of these now use HFC refrigerants, creating a large problem for capture and disposal at end of life. The Regional Climate Protection Board can publicize the heat pumps that do not use HFCs and establish fail-safe measures for capturing end of life HFCs. It can also promote CO₂ heat pump hot water heaters that do not use HFCs.

New regulations in the County and CAP cities could also require and incentivize HFC capture from smaller appliances at end of life. These include older refrigerators and freezers and automobile cooling systems.⁶²

⁶² New refrigerators use iso-butane and new automobile systems use R1234yf with zero GWP.

An example of how Humboldt could proceed is found in the Eugene, Oregon 2020 Climate Action Plan. The plan called for convening owners and servicers of commercial refrigeration units by the end of 2021 to identify market-based and regulatory options to reduce community-wide refrigerant gas leaks from appliances like air conditioners, refrigerators, and commercial refrigeration systems.⁶³

XIV. Other Comments

A. Natural Gas End Date

The draft currently considers setting an end of natural gas flow date and then chooses not to.⁶⁴ Humboldt County should set a target for an end of natural gas flow date in 2045.

In order to achieve this goal, the draft should more aggressively promote switching from natural gas to electric heating. For example, the current draft proposes to “require electrification of feasible equipment in association with major renovations” for commercial buildings but not residential ones.⁶⁵

B. Measure BE- 8, Local Distribution of Offshore Wind Energy

CAISO has already approved a transmission plan which, in addition to a new Humboldt 500 kV substation and long distance high voltage transmission lines, also includes a 500/115 kV transformer, a 115 kV line to Humboldt’s existing 115 kV substation, and a 115 kV phase-shifting transformer at the substation, which would make offshore wind energy available to our local distribution system.⁶⁶

CAISO’s plan makes it unlikely that wind power will bypass the local distribution system. The CAP should encourage jurisdictions should advocate for an affordable PPA for RCEA as part of a Community Benefits package.

⁶³ <https://www.eugene-or.gov/4284/Eugenenes-Climate-Action-Plan-20> and <https://www.eugene-or.gov/DocumentCenter/View/71308/Refrigerant-Management-Guidebook>
<https://www.eugene-or.gov/5267/Managing-Refrigerants>

Please see Appendix I for more detailed information about refrigerants in Humboldt County.

⁶⁴ Page 37

⁶⁵ Pages 37, 40.

⁶⁶ California ISO Greenlights Transmission Plan for Offshore Wind Integration <https://www.offshorewind.biz/2024/05/24/california-iso-greenlights-transmission-plan-for-offshore-wind-integration/> May 24, 2024).

C. Measure WW-1 Underestimates Methane from Wastewater Treatment

Wastewater releases greenhouse gases, primarily methane. The RCAP discusses CO₂ emissions from combustion of anaerobic digester biogas and lagoon emissions. In fact, methane can be emitted from almost any aspect of sewage treatment. The RCAP uses emissions factors from the IPCC, which are in turn adopted by EPA. However, in the last year we have learned from a Princeton University team that directly measured emissions at 63 waste treatment plants (the largest study yet) that methane release is underestimated by a factor of two by the EPA.⁶⁷

1. Digesters in particular emit far more methane as leaks than the EPA assumes.⁶⁸
2. Much more routine monitoring of methane monitoring is necessary and, in all likelihood, all of the Humboldt wastewater treatment systems will need interventions.
3. This is actually a significant opportunity to reduce emissions because wastewater treatment plants are government owned and operated and intervention to fix leaks can be directly required by entities covered in the Humboldt RCAP.

XV. Conclusion: We Need Climate Action Now

2023 was the hottest year since global records began in 1850. We need climate action *now* to forestall the worst effects of global climate change. The development of the RCAP has been slow and marked by delays. We encourage jurisdictions to begin work towards implementing RCAP measures before the RCAP is finalized. We encourage the expeditious completion of this RCAP. Furthermore, we urge jurisdictions to immediately begin planning for the next iteration of the Climate Action Plan, as 2030 is quickly approaching.

Thank you for the opportunity to review this draft. We are happy to discuss any portion of these comments should you have any questions, concerns or comments.

Sincerely,

⁶⁷ Moore, Daniel P., Nathan P. Li, Lars P. Wendt, Sierra R. Castañeda, Mark M. Falinski, Jun-Jie Zhu, Cuihong Song, Zhiyong Jason Ren, and Mark A. Zondlo. "Underestimation of sector-wide methane emissions from United States wastewater treatment." *Environmental Science & Technology* 57, no. 10 (2023): 4082-4090.

⁶⁸ "We found plant-wide CH₄ emissions vary by orders of magnitude, from 0.01 to 110 g CH₄/m³ with high emissions associated with plants equipped with anaerobic digestion or stabilization ponds." Song, Cuihong, Jun-Jie Zhu, John L. Willis, Daniel P. Moore, Mark A. Zondlo, and Zhiyong Jason Ren. "Methane emissions from municipal wastewater collection and treatment systems." *Environmental science & technology* 57, no. 6 (2023): 2248-2261. (This was a statistical review of over 310,000 articles.)

Dan Chandler
350 Humboldt

Wendy Ring
Climate 911

Colin Fiske
Coalition for Responsible Transportation Priorities

Tom Wheeler
Environmental Protection Information Center

Martha Walden
Humboldt Coalition for Clean Energy

Jen Kalt
Humboldt Waterkeeper

Sable Odry
Northcoast Environmental Center

Matt Simmons
Redwood Coalition for Climate & Environmental Responsibility

APPENDIX I: HOW MUCH GREENHOUSE GAS EMISSIONS ARE DUE TO REFRIGERANTS IN HUMBOLDT COUNTY?

The state Air Resources Board keeps a database, updated annually, of every business using HFCs that has equipment needing a refrigerant charge of 50 lbs or more. This is called the Refrigerant Management System. We obtained by public records request RMS data from 2019, 2021 and 2022. Like many administrative databases where the information required is not of use to those supplying it, compliance is somewhat inconsistent. This appears to be the case for 2020 data as 81 of 103 supermarkets reported zero refrigerant having to be replaced due to leaks, which is not plausible. Additionally, the leak rate data for the 2021 data was also not plausible (far too many systems were listed as having leaked several times the full charge amount) The data from 2022 look plausible but the number of sources was reduced from 103 to 63 which appears to be a mistake.⁶⁹ In the table below we show the number of businesses (overwhelmingly supermarkets) in the data from each year, the percentage with zero reported leaks, and the overall leak rate with and without the organizations reporting no leaks. We also show the total Global Warming Potential (GWP100) as used by CARB for the county supermarkets; and finally we estimate the likely GWP of leaked supermarket HFCs. The estimate for leakage is taken from the 2022 data and applied to the total from each year to provide a range of the metric tons of CO₂e leaked each year. We can be fairly sure that the metric tons of CO₂e leaked annually is between 19,000 and 45,000.

Humboldt County HFC Systems and Leaks: Annual CO₂e Emissions

	HFC systems	No reported leaks	Fraction of full charge leaked	Total GWP of charge in metric tons	GWP of leaked HFC <i>using 2022 leak rate</i>
2019	103	84%*	0.07*	131,000,000	44,540,000
2021	86	13%	1.11*	89,700,000	30,498,000
2022	63	44%	0.34	56,400,000	19,176,000

*Not plausible

It would obviously be useful to have reliable data, and perhaps Rincon can obtain it from CARB. However, it is simple to describe the goal: as many supermarkets as possible should switch to CO₂ or propane-based systems by 2030. As noted above the state only requires a reduction to

⁶⁹ For 2021 and 2022 we obtained statewide data. In 2021 there were 26,977 refrigerant systems but only 16,000 in the 2022 data. So apparently not all data was supplied as requested.

1,400 GWP refrigerant. But this would mean, since the state intends ultimately to reduce refrigerants to a GWP of under 150, that stores will be undergoing two remodels. It will be much more cost-effective and helpful to the climate if stores make only one change by 2030 – to GWP 1 or less refrigerants. The state's FRIP program has substantial incentive payments for making this change.



September 30, 2024

County of Humboldt
Attn: Megan Acevedo
Long Range Planning Division, Planning & Building Department
3015 H St.
Eureka, CA 95501

VIA EMAIL TO: macevedo@co.humboldt.ca.us

RE: The Buckeye Conservancy Comments on the “Notice of Preparation of a Program
Environmental Impact Report for Humboldt Regional Climate Action Plan”

Dear Megan,

Please accept the following comments on behalf of The Buckeye Conservancy to consider as part
of the scoping process for the development of the PEIR.

The Buckeye is an organization of Northwestern California ranchers, farmers, timberland
owners, and resource professionals. Our mission is to promote stewardship of working
landscapes through shared experience, hands-on education, and collaboration, with the vision
that the working lands and open spaces of Northwestern CA are viable, and to be conserved in
perpetuity for future generations.

Thank you for the opportunity to provide input to the PEIR scoping process. The Buckeye will
continue to be active in the development of the Humboldt Regional Climate Action Plan . We
will continue to share the perspective of those who steward working lands and conserve open
spaces in Northwestern CA.

Sincerely,

Gary C. Rynearson, RPF #2117
Chair, The Buckeye Conservancy



GCR 9-27-24 PM

Comments on Public Draft Regional Humboldt County Climate Action Plan (Draft)

Draft P3- Definitions:

Comment: The glossary does not include a definition of biogenic and non- biogenic carbon emissions. It also excludes any definition of “carbon offsets”.

Draft P6: Located on the northern coast of California, Humboldt County is 270 miles north of San Francisco. Humboldt is known for its natural beauty with rugged coastlines, pristine rivers, mountainous terrain, and for being home to one of the largest densities of old-growth coast redwood forests in the world. Historically, logging and the timber industry were the backbone of the county's economy. However, the timber industry has been in decline over the past few decades. Other drivers of the economy in the region include agriculture, particularly dairy farming and specialty crops, tourism, and in recent decades cannabis production.

Comment: Humboldt has the largest concentration of OG redwood. Timber production in 1990 was 609,900 MBF (Source: Humboldt Co 1990 Crop Report), but has been stable for over a decade with a harvest of 221,617 MBF in 2012 and 230,207 MBF in 2023. (source: CDTFA Timber Harvest Tables by County)

Draft P6: The county is approximately 4,052 square miles and has a population of approximately 135,010 people, with over half the population living in the unincorporated county.

Comment: The Draft plan does not properly represent “the setting” of Humboldt Co as it excludes a review of the significant area of the County that is occupied by agricultural and timberlands (conifer forestlands). The excerpts below are from the Humboldt County General Plan. Humboldt County is 2,290,000 acres and 93% is agriculture lands or timberland. Much of the agricultural lands are “forestland” that includes oak woodlands intermixed with grasslands.

Humboldt General Plan

P4-26 “According to the 2002 U.S Department of Agriculture Census, approximately 27% of Humboldt County land (634,000 acres) is in agricultural use. While this total includes large ranches that have a significant amount of timber production contributing to their operations, it fairly represents the overall significance of agriculture to Humboldt County.”

P4- 33: “There are 1.2 million acres of private forested land and 0.3 million acres of public forested land in Humboldt County, covering more than 80% of the County’s land area. Roughly 990,000 acres are zoned Timber Production Zone (TPZ), two-thirds of which are



held by timber companies. Dedicated timber management of these lands and unique growing conditions have consistently made Humboldt County the state's leading timber producer, contributing more than 20 percent of the state's total since 2000."

"Despite a 50-year trend of reduced timber production, timberlands remain the cornerstone of the County's economy, providing critical export income and a significant number of high wage jobs."

"While forestlands are unquestionably the County's greatest long term economic asset, they are also the County's greatest natural resources asset, providing a wealth of ecological values. They influence the supply and quality of water resources. They provide habitat for wildlife and plants, some of which is critical to endangered species. And because trees remove carbon from the atmosphere, they are pivotal to the state's efforts to reduce greenhouse gas emissions."

Draft P8: 5. Carbon Sequestration in Natural Ecosystems: Humboldt's diverse ecosystems, including forests, wetlands, and coastal habitats, provide valuable opportunities for carbon sequestration. Protecting and restoring these natural areas can enhance resilience to climate change impacts while mitigating carbon emissions. With its extensive natural lands there are significant opportunities to implement sustainable land practices that sequester carbon, protect biodiversity, and support local economies.

Comment: The Draft does not recognize that agricultural lands are protected by zoning regulations and under Williamson Act contracts. These lands sequester and store carbon in the root systems and the above- ground vegetation (oaks, etc.). There are 990,000 acres of private timberlands protected by TPZ zoning regulations, which have requirements to replant and meet minimum stocking standards under the Forest Practice Rules. This ensures continuous growth of the forests and sequestration of atmospheric carbon. There are also 300,000 acres of public timberlands that include national forest, national and state parks, BLM, county and city forests that are protected. When combined, the agricultural and forestlands of Humboldt County are net sequestrers of carbon.

Draft P 15: Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and decomposition of organic waste in landfills.

Comment: Humboldt County's dairy herds are raised in open pastures and only concentrate during milking. As a result, emissions are widely dispersed and not concentrated. The beef cattle are raised on lowland pastures and upland grasslands and are not in concentrated feed lots. Also, Humboldt's beef and dairy feed mostly on grass or locally produced grass hay, limiting the need for imported grain and hay. This helps reduce transportation emissions. Humboldt does not have a landfill. All garbage is exported to Anderson or the Medford Oregon area. This results in significant transportation CO₂ emissions.



Draft P 16: Similar to other regions in California, Humboldt is also vulnerable to more frequent and severe wildfires due to climate change where dry and hot conditions contribute to the spread of wildfires, posing risks to communities, ecosystems, and infrastructure. The risk of wildfires is even greater in Humboldt due to the abundant stock of vegetation, which over the last decades have increased in density as vegetative clearing and prescribed burning have reduced.

Comment: Nowhere in CA is immune from wildfire. Inland Humboldt County is much more prone to potential large wildfires than coastal Humboldt County. Due to our marine environment with high humidity at low temperatures, the coastal portion of the county is less likely to experience large wildfires as compared to the inland portion. Wildfire risk has increased due to the shifting climate resulting in longer fire seasons. The buildup of understory of vegetation has occurred not because there has been a lack of clearing and prescribed burning, but because of the exclusion of natural fires since the early 1900s. As a result, wildfires have increased in intensity and size and have become more difficult to control. To help restore forests to natural conditions the use of mechanical thinning followed by prescribed fires to maintain understory clearance is critical to reduce wildfire hazard, intensity and increase controllability.

Draft P 17: The primary policies that have driven statewide GHG emissions reductions are Executive Order (EO) S-3-05, Assembly Bill (AB) 32, Senate Bill (SB) 32, EO B-55-18, and most recently AB 1279. Signed in 2005, EO S-3-05 established statewide GHG emission reduction targets to achieve long-term climate stabilization...

Comment: AB 32 established the carbon offset program and resulted in the development of multiple programs that utilize forests, wildlands and agriculture to offset industrial CO₂ emissions. Humboldt County has multiple forest carbon offset projects registered with the Air Resources Board covering tens of thousands of acres.

Draft P17: AB 1279 requires the direct reduction in GHG emissions by 85 percent below 1990 levels by 2045. The remaining 15 percent of emissions would be removed via carbon removal technology or natural working lands.

Comment: Humboldt County's forests, agricultural, and wildlands will play a critical role in achieving this goal. Policies need to be in place that protect our working lands.

Draft P 20: Emissions associated with agricultural land use practices (e.g., land management, livestock emissions) are excluded from the inventory because the County and local jurisdictional governments have limited control over these type of agricultural emissions. Further, the state has not yet issued guidance on methodology for quantifying GHG emission impacts associated with natural working lands. Therefore, GHG emission impacts and carbon sequestration of natural working lands are not included in the inventory.



Comment: While the County cannot regulate timber harvesting or most agricultural operations, it is of great concern that the above and below ground carbon stored and being actively sequestered in forestlands, agricultural lands, and wildlands is not included in the accounting of net CO₂ calculations. These “natural working lands” are critical to achieve the goals of AB 1279 and Governor Newsom’s 30 X 30 plan. If these the CO₂ sequestered by these lands were included Humboldt County would clearly be a net sequester of CO₂. Emissions from agricultural operations is likely to be minimal compared to other industrial sectors. Dairy is higher compared to beef due to the daily milking and milk transportation. Transportation of beef cattle is occasional and is associated with transportation to market or “stockers” being moved in and out of the county to feed on grass. GHG emissions associated with truck farming is also minimal and is primarily associated with cultivation for planting and moving the crops to market, mostly local Farmer’s Markets. GHG emissions associated with timber harvesting is primarily from transportation, with lesser emissions associated with the actual harvesting activities (felling, yarding and log loading).

Draft p 22/23: Due to lack of available and accurate 1990 activity data, Humboldt does not have a 1990 GHG emissions inventory from which to develop GHG reduction targets consistent with SB 32, however, 1990 GHG emissions can be estimated for the community relative to Humboldt’s updated 2022 inventory using a state-level emissions change metric. The calculation is developed using the published Statewide emissions results from CARB38, after removing emissions from sectors not included in Humboldt’s inventory (e.g., non-specified, industrial point sources, agricultural land management practices). This approach assumes that Humboldt’s community activities and associated GHG emissions have generally tracked with the State’s activity trends and associated GHG emissions. However, since 1990, electricity and natural gas consumption and associated GHG emissions in Humboldt have declined at a much more rapid rate than the Statewide trend reflected in the Statewide inventory. This is because Humboldt has experienced a significant decline in industrial operations leading to a significant decrease in electricity and natural gas consumption. Further, RCEA has emerged as the main alternative electricity provider in the region offering since 2017 an alternative to PG&E, the sole utility provider to the Humboldt region in 1990. Because RCEA has a more renewable and carbon-free energy profile than PG&E, GHG emissions associated with building electricity use in the region have declined to a greater extent than Statewide trends reflect.

Comment: Emissions from the forestry sector are greatly reduced since 1990 both from manufacturing as well as transportation. In 1990 Humboldt County harvested 609,900 MBF (source: Humboldt 1990 Crop Report) of timber as compared to 234,000 MBF in 2022 (source: CDTFA Timber Harvest Tables by County), or 38% of the 1990 harvest level. Since 1990 multiple forest products manufacturing facilities have closed and not reopened, including: Pacific Lumber at Carlotta and Fortuna; Eel River Sawmills at Redcrest and Rio Dell; Blue Lake Sawmill at Glendale; Sierra Pacific at Arcata; Louisiana Pacific at Samoa and Big Lagoon; Arcata Redwood at Orick and Eureka (Brainard); Evergreen Pulp at Samoa; Ultra Power, Blue Lake; and Fairhaven Power, Fairhaven. Not only has there been a reduction in emission associated with plant operations, but



there have also been reductions in transportation emissions from both the delivery of raw materials and the transportation of finished products. There were two additional biomass powerplants generating electricity in 1990; Ultra Power at Blue Lake and Fairhaven Power at Fairhaven (Samoa).

Draft P 29: Measure C-1 commits the region to establishing a Regional Climate Committee and governance to serve as a regional coalition. This committee would include representatives from municipalities across Humboldt County as well as representatives from regional agencies such as the HTA, HCAOG, HWMA, and RCEA, and other partner organizations.

Response: The committee should include representatives from both large and small landowners. A common mistake of initiatives such as the RCAP is exclude landowners during the planning process and then expect buy-in at the implementation stage. The landowner/land management organizations including State and National Parks, USFS, Tribal, ranchers and private timberland owners should be represented on this committee. While the county may not have jurisdiction over public or Tribal lands, atmospheric carbon knows no boundaries and all parties that could help provide solutions should be included.

Draft P 32: Renewable electricity sources such as geothermal and biomass are reliable and consistent sources of power, however, these sources generate a small amount of GHG emissions and there are capacity limitations in terms of maximum output of power supplied.

Comment: While biomass energy production does emit CO₂ this is relatively short-lived biogenic carbon that comes from trees with an average age that ranges from 30 – 50 years. CO₂ emitted from the biomass plants is then available for re-sequestration as part of the on-going carbon cycle. Biomass power also has the added benefit of displacing electricity produced from fossil energy that is essentially “new” carbon being emitted into the atmosphere. Humboldt County has three biomass powerplants: one at Blue Lake is mothballed and unlikely to become operational; a second is located at Fairhaven and undergoing renovation; and a third is in Scotia that is fully operational. Given the amount of biomass feedstock available from sawmill byproducts, logging slash, and forest thinning there is tremendous opportunity for additional biomass energy production. However, the price structure paid for biomass- generated electricity needs to increase to support the cost of power generation, including the cost of feedstock transportation. With an adequate price structure that supports biomass removal associated with forest thinning projects that reduce fire hazard a co-benefit would be reduced emissions should a wildfire occur. A proposed action should be to support and expand biomass generated electricity.

Draft P 34: Increase the development of micro-grids and energy storage across the region to support RCEA’s RePower Humboldt goals of enhancing grid capacity and facilitating the electrification of buildings and transportation.



Comment: Microgrids should be placed on vacant industrial sites, not on agricultural lands.

Draft P 46: On- and off-road transportation makes up approximately 81 percent of Humboldt's regional GHG profile. Of that, approximately 90 percent of transportation GHG emissions are due to on-road transportation. The primary strategies to reduce transportation involve mode shift away from single-occupancy vehicles to reduce VMT and decarbonizing the remaining vehicle miles traveled (VMT). Reducing VMT consists of transitioning residents and visitors out of single-occupancy vehicles and into active transportation mode options (i.e., walking and biking) and public and shared transit options (e.g., public buses, rail, carpools) by improving these mode options and safety and adopting policies to discourage single-occupancy vehicle commutes.

Comment: The RCAP needs to recognize the rural nature of Humboldt Co and the infeasibility for rural communities to significantly reduce VMT or switch to other means of transportation. While there are opportunities for carpooling, many living in rural communities such as Willow Creek, Hoopa, Alderpoint, Orleans, and Orick have limited job opportunities, and must travel for work and most goods and services. The agricultural and forestry industries rely on off-road equipment to harvest and transport their products. Many of these operations are seasonal and therefore have equipment that is only used occasionally, six or eight months out of the year. This equipment is oftentimes several years old. Local policies should not require the replacement of this equipment due to the age of the engines.

Draft P 62: Electrify or otherwise decarbonize 12% of applicable small off-road engines (SOREs) off-road equipment by 2030 and 100% by 2045 and replace fossil diesel consumption with renewable diesel in 55% of applicable large diesel in alignment with EO N-79-20 by 2030.

Comment: CARB has recognized that agricultural and forestry equipment is operated in extremely rural settings and therefore emissions are not concentrated, nor do they expose the urban population to emissions. The loss of SOREs under AB 1340 has already placed a severe economic burden on gardening and landscaping contractors. Expanding this would be extremely expensive and place an undue burden on agriculture and forestry applications. Offroad vehicles such as quadrunners (ATVs) are used by both agriculture and forestry in place of a pickup to access areas that are too wet or too rugged for on-road vehicle use. The Draft should also recognize that many rural families that do not live in communities rely on gas or diesel powered generators as their sole source of power and utilize propane for cooking and heating (combined with wood heat). The Draft does not adequately address the sources of additional electrical power needed to charge vehicles to meet the 100% replace of internal combustion engines by 2045. Nor does it discuss the environmental consequences related to the disposal of batteries used to power on and off road vehicles. Also, see above response for replacement of older equipment off road equipment such as tractors and logging equipment.



Draft P 64: Renewable fuel production has the potential to help address wildfire risks by using existing forest biomass resulting from forest thinning projects that could otherwise fuel fires. Biofuels reduce emissions by substituting fossil fuels with renewable organic materials, which absorb CO₂ during growth. When combusted, biofuels release biogenic CO₂, minimizing net atmospheric carbon emissions compared to traditional fuels.

Comment: Humboldt County has a tremendous potential for biofuels. Between sawmill byproducts, logging slash, and thinning of small diameter trees there is ample feedstock to produce biofuels. This could include not only biodiesel, but cellulosic ethanol and butanol. Animal waste could also be used to generate biogas.

Draft P 76: Establishing a baseline will aid the county in pursuing State funding to protect the county's forestland assets and receive credit for aiding in State goals to protect natural working lands. Measure CS-3 directs the County to build off of North Coast Resource Partnership's 2017 Northern California regional natural working lands study to establish an updated County-wide Natural and Working Lands GHG Inventory baseline by 2027. This initiative seeks to provide a comprehensive understanding of current and future potential GHG sequestration within the county's natural and working lands. The Natural and Working Lands inventory baseline will be folded into future RCAP updates and used to establish GHG sequestration tracking metrics and monitor resiliency efforts. Developing this Natural and Working Lands inventory will identify key areas where natural carbon sequestration is occurring and highlight opportunities to protect and expand these areas. By promoting biodiverse forests and wetlands that are resilient to wildfire, Measure CS-3 supports the dual goals of enhancing carbon sequestration and mitigating climate risks. This measure will help the region obtain funding and resources necessary for conservation and restoration projects, ultimately contributing to long-term climate resilience, biodiversity, and the health of natural ecosystems.

Comment: This inventory should occur before the development of any CAP. The rates and amounts of sequestration are critical to GHG inventory and accounting. While the Draft RCAP identifies many opportunities to reduce GHG emissions, the accounting of emissions to sequestration is the most important metric to understand where Humboldt stands on GHG emissions compared to sequestration rates. Consider the difference between GHG accounting for San Francisco County, with few forests and lots of cars and office buildings, compared to Humboldt County. Humboldt needs to be recognized as a net carbon sink, while seeking incremental GHG reduction improvements that do not result in economic hardship. The large timberland owners (50,000 acres +) are required to develop Sustained Yield information that may be available to the public or may be held as confidential. Many small timberland owners do not have a current timber inventory. The USFS maintains forest inventory plots throughout the county on both public and private lands. These Forest Inventory and Assessment plots are remeasured at regular intervals and measure both growth and changes in cover. They are probably the best measure of county-wide sequestration for the timberlands. This USFS forest inventory data is also used by the Air Resources Board to establish baselines for the Forest Carbon Offset program.



Draft P 79: As discussed at the beginning of this document, the CEQA Guidelines provide an option for new projects to streamline the CEQA analysis of GHG emissions by tiering off of a “qualified” GHG reduction plan.

Comment: The Board of Forestry has approved a Vegetation Treatment Program EIR (VTPEIR) that can be used by landowners and CAL FIRE to implement fuel hazard reduction projects in an expedited manner. This programmatic EIR can be used to implement projects that reduce fire hazard, increase the controllability of fires, and reduce emissions from fires. Fuel hazard reduction and forest health projects should also be coordinated with CAL FIRE, Humboldt Co RDC, and Federal NRCS. Outreach to small landowners can be done through Farm Bureau, Humboldt Cattlemen and Cattlewomen, and The Buckeye Conservancy.

Draft P 120: Measure WW-2 Reduce per capita potable water consumption by 15% by 2030.

Comment: It is unclear why a 15% reduction in water use is needed. Well over 50% of the Humboldt County population receives their water from the Mad River system including the cities of Arcata, Blue Lake, Eureka (and the adjacent areas via HCSD), and the communities of Manila, Fieldbrook, and McKinleyville. This unique system has ample storage and is fish- friendly because it pulls the water from within a few miles of the confluence with the Pacific Ocean, thereby allowing water to stay in the system from near the headwaters to near the ocean. The system is also using less than half of its designed capacity since the last pulp mill shut down in 2008. Instead of a reduction of water use, the effort should be on more energy efficient ways to deliver water.

Draft P 121; Measure CS-1: Conduct a carbon sequestration feasibility study facilitated by the Regional Climate Committee to identify emergent technology for carbon sequestration and regional viability of implementation, including consideration of identified carbon sequestration technology facilities (e.g. ocean carbon capture, agriculture methane capture, forest biomass to biochar soil amendment, biochar wastewater filtration, forest biomass as green hydrogen fuel, etc).

Comment: The best way to sequester and store carbon is to protect, restore, and maintain our agricultural and forest lands. Our oak woodlands sequester and store carbon in the trees and sod. Our forests sequester and store carbon, as well as producing building materials that store carbon. Thinning can produce biomass as well as reduce fire hazard, increase wildfire controllability, and increase tree survivability. There are many historic timber parcels in Humboldt County that were converted into marijuana growing sites during the past few decades. Many of these have now been abandoned and provide opportunities to be returned to timberlands. The plan should include policies that support the economic viability of endemic forest and agricultural land use and discourage conversion to other uses.

Draft p123: Measure CS-3: Develop a County-wide Natural and Working Lands GHG Inventory baseline by 2027 to better understand the existing and future GHG sequestration and help obtain resources to protect and increase natural carbon sequestration occurring in the region as well as promote biodiverse forests and wetlands resistant to wildfire



Comment: This Measure lays out how the inventory of “Natural and Working Lands” will be accomplished. Surprisingly there is no mention of working with private landowners to develop this information. There is also no mention of the Humboldt Co Forestry Review Committee that should be actively involved in this process. A subcommittee of the Climate Committee should be formed to advise and help achieve the goals of this Measure. The subcommittee should include public and private timberland owner representatives, agricultural and ranching representatives, and Tribes that manage wildlands. The subcommittee should also include resource professionals including registered professional foresters, range managers, and agriculturalists. The USFS also maintains forest inventory plots throughout the county on both public and private lands. These Forest Inventory and Assessment plots are remeasured at regular intervals and measure both growth and changes in cover. This is probably the best measure of county- wide storage and sequestration for the timberlands.

Humboldt Regional CAP Scoping Comment

While we welcome progress toward regional climate action, we are concerned about the proposed CAP's potential to greenwash the continuation of the land use, building, and transportation patterns which are major sources of greenhouse gas emissions. A lack of meaningful public participation, uneven levels of commitment from jurisdictions, and the rush to finish the process before the money runs out have produced a plan with some strong measures but others which are weak and appear to either fall short of actual commitments to adopt or lack substantial evidence of effectiveness. We hope that Rincon can muster the objectivity to properly review their own product for adverse impacts and shortcomings. The best chance of this happening is if the EIR is done by different people than the ones who wrote the CAP.

Things to include in the EIR scope

LAND USE -

Streamlining Given the number of vague measures and lack of a Consistency Checklist, it is impossible to be sure what kind of projects would be allowed to tier off this CAP and avoid public consideration of their greenhouse gas impacts. The EIR should take a very conservative approach and include the impacts of overly permissive tiering, since that possibility can't be excluded. The EIR must include consideration of the greenhouse gas and other environmental impacts if projects only comply with the exact language of this CAP which frequently falls short of committing to policy adoption.

For example, a large housing project on the edge of town might qualify to streamline because Land Use Measure TR-3, which comes the closest to promoting infill, doesn't actually commit jurisdictions to rezone or take any other actions. Encouraging mixed use in projects that are already planned as infill is not the same thing as encouraging infill itself. The County's General Plan Update promoted dispersed development by allowing homes in Timber Production Zones and between existing towns and delegated mitigation of the resulting GHG increases to this CAP, so consistency with the GPU is not be a yardstick for CAP consistency.

Streamlining sprawl due to the CAP's lack of commitment to zoning changes or other substantive action to promote infill would increase VMT, decrease road safety for non-vehicular users, destroy wildlife habitat, convert agricultural or timber lands, commit irretrievable public resources to the extension and maintenance of public infrastructure that could have been used for climate mitigation or resilience, and induce further development and concentration of residents and workers at urban margins. This is just one example. Impacts of the CAP's failure to commit should not be ignored.

Renewable diesel- It is clear now that the US is rapidly increasing imports of non recycled vegetable oils for renewable diesel feedstock. CARB has proposed capping low carbon fuel credits at 20% for biofuel from vegetable oils. **It is not known if this will happen.** Scope should include conversion of forest, grassland, and marginal farmland in US and other countries.

<https://fas.usda.gov/data/us-renewable-diesel-production-growth-drastically-impacts-global-feedstock-trade#:~:text=In%202022%2C%20the%20main%20feedstocks,the%20growth%20of%20renewable%20diesel.>

<https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/agriculture/101223-us-shifts-to-net-soybean-oil-importer-on-biofuel-boom-foreign-agricultural-service>

<https://blog.ucsusa.org/jeremy-martin/a-cap-on-vegetable-oil-based-fuels-will-stabilize-and-strengthen-californias-low-carbon-fuel-standard/>

GHG EMISSIONS-

GHG impacts of questionable emissions reductions.

There are some large questionable GHG reductions in the CAP which should either be revised or bolstered by substantial evidence and policy commitments. In the event that doesn't happen, the EIR should address the environmental impact of those emissions because the CAP will allow them to happen.

For example Measure TR-6 claims 55,726 MT CO₂e reduction for EV adoption on the basis of expanding the charging network, but there is no evidence provided that installing a certain number of EV chargers will result in the adoption of a certain number of electric vehicles, and no accepted protocol that attributes all the avoided emissions from an EV to a public charging station. CARB and CAPCOA count GHG reductions from EV charging by counting only the EV miles charged by the newly installed station. There is wide variation across the US in the ratios of registered EVs to installed chargers. In CA EV adoption is way out ahead of public charging.

https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/allowanceallocation/ghg_benefits_estimation_tools_instructions.pdf

Many of the 2045 carbon reductions are questionable because the CAP kicked the majority of decarbonization down the road and doesn't include enough policy and other specific commitments to achieve it.

Use EPA social cost of carbon and local climate impacts such as wildfires, salmon,

PUBLIC HEALTH AND SAFETY –

Physical activity co benefits of transit and bike/ped infrastructure

Collision reducing benefits of above. Humboldt has one of the highest rates of ped/cyclist deaths in the state.

Climate health impacts extreme weather, spread of infectious disease, deterioration of air quality, displacement, migration, violent conflict over increasingly scarce resources

Air quality- see below

ENERGY

Electricity The CAP's energy projections, which are the foundation for predicting emissions reductions from building decarbonization and transition to electric vehicles may be overly optimistic. The CAP bases its assumptions on RCEA's 2019 RePower Plan to provide 100% renewable energy by 2030. RCEA recently shrank its renewable portfolio down to the minimum required by the RPS for financial reasons and qualified its commitment to resume progress toward the 2030 goal as "financial conditions permitting". As the RPS continues to ratchet upward, increasing competition in the wholesale renewable market may well keep prices high enough the RCEA does not reach 100% by 2030.

RCEA does not have a time or location coincident procurement policy. The marginal emissions increase from running a heat pump or charging an EV, especially at night, with power from the gas powered Humboldt Bay Generating Station is much larger than the marginal emissions displaced by procured solar energy in the Central Valley or geothermal energy in Sonoma County, lowering the GHG reduction benefits somewhat.

Reduced or increased electricity bills and their impact on energy burdened residents

Renewable Fuels-

include GHG and pollution emissions from renewable diesel production and transportation. Assume no local production Bio-oil could be produced locally but it would have to be transported to a distant refinery, then back up to Humboldt to be burned.

Humboldt only comes under the off road vehicle rule in 2028 and then, at the bottom of the tier. Renewable diesel is more expensive than fossil diesel, so the target percent and projected GHG reductions in the CAP for 2030 are probably unrealistic unless the county adopts its own rules.

include GHG emissions from hydrogen production from fossil gas as there are many barriers to producing enough hydrogen from biomass locally to support a heavy duty fueling station.

Making hydrogen from biomass emits twice as much carbon as making it from fossil gas. It is inefficient because a lot of energy is required to dry the feedstock and condition the hydrogen for transport.

Equity-

This CAP sets lower targets for VMT reduction, transit, and active transportation than the ones adopted by HCAOG.

<https://www.hcaog.net/sites/default/files/Adopted%20Safe%20and%20Sustainable%20Transportation%20Targets.pdf>

Lowering targets and diverting resources from transit and active transportation would have a disproportionate affect on low income, BIPOC, youth, elders, and disabled persons

Environmental justice impacts from refineries making renewable diesel

Global food prices when fuel is made out of food crops

AIR QUALITY

reduced air quality from increased emissions of criteria pollutants and air toxics resulting from increased demand for electricity and increased generation at the gas fired Humboldt Bay Generating Station and Humboldt Sawmill Co's biomass plant

emissions of criteria pollutants and air toxics from renewable diesel and biomass hydrogen refineries

improved indoor and outdoor air quality via electrification

Alternatives

1) BAU

2) The Humboldt RCAP – include the GHG consequences of over permissive tiering and any GHG emissions in the CAP that measures would not actually reduce

3) A more committed CAP Napa County has a similar mix of urban and rural and a similar size population. Its Regional Climate Action and Adaptation Plan's measures are superior to Humboldt's: more specific, more enforceable, and having due dates that provide a higher expectation of timely completion. A high ambition alternative for Humboldt can be generated by applying all the relevant measures in the Napa Regional plan to Humboldt County. <https://climateactionnapa.konveio.com/ghg-measures-memo-and-matrix> (Humboldt lacks a natural lands carbon inventory so Napa's quantitative measure for ag carbon doesn't apply, nor would provisions for winery wastewater.)

Wendy Ring for 350 Humboldt

Public Scoping Meeting Comments Received

Colin Fiske:

Request to see the CEQA checklist as soon as available. VMT and mode share of the RCAP should be in line with the Regional Transportation Plan or proposed as an alternative. The County should consider the 15% VMT threshold as a part of the RCAP.

Gary Hughes (Biofuelwatch organization):

Necessary scope for the EIR to include the effects of renewable diesel: land use change (direct and indirect), deforestation and habitat degradation, commodity market elasticities and resource displacement, palm oil importation. Food system impacts and economic impacts from making fuel from food. Include the impacts from electrification policies by relying on renewable diesel. Transportation impacts from fuel product imports with fuel spill risks in marine and terrestrial environments, and the refining process impacts to the public health and safety.

Deforestation and land use change associated with the Natural and Working Lands chapter of the RCAP. The EIR must address how silviculture activities (logging) along associated road building and road maintenance is a major source of biogenic and fossil fuel related emissions, major contributor to other climate damages such as increased wildfire risk and water shortages. Wildfire should be included as an impact in the EIR. The EIR must provide a scientifically robust estimate of the GHG emissions resulting from silviculture activities. It must assess how industrial logging activities generate significant fossil fuel related GHG's through the operation of logging equipment, fertilizers and pesticide applications and the milling and manufacturing. The transport of logs and use products and disposal of wood products in landfills. Take a good look at climate stressors that can be exacerbated by logging and road building which include: heat waves, droughts, water shortages, wildfires, rain damage, warming waters, harmful algal blooms, insects, disease and biodiversity.

Biomass to hydrogen from woody biomass: Requires production of a sin gas by heating the biomass which produces CO₂, carbon monoxide and particulate matter, which should be evaluated. The energy efficiencies in any industrial process to secure hydrogen from woody biomass needs to be analyzed. The EIR must address or evaluate the uncertainties about whether biomass gasification can be deployed at scale in any commercially viable way and look at the economic realities of this proposal. Addressing uncertainties regarding non-homogenous feedstocks, production of those impurities and byproducts like flu ash, nitrous oxide, sulfur oxide and tar.

Look at the science around carbon trading. There are a lot of assumptions around the efficacy of carbon credits. A lot of economic issues and environmental justice issues around carbon trading.

Appendix B

Biological Resources

Table 3.3-1 Special-Status Plant Species within Humboldt County

Scientific Name Common Name	Status	Habitat Requirements
<i>Abronia umbellata</i> var. <i>breviflora</i> pink sand-verbena	None/None G4G5T2/S2 1B.1	Perennial herb. Coastal dunes. Foredunes and interdunes with sparse cover. <i>A. umbellata</i> var. <i>breviflora</i> is usually the plant closest to the ocean. Elevations: 0-35 ft. (0-10 m.) Blooms Jun-Oct.
<i>Anisocarpus scabridus</i> scabrid alpine tarplant	None/None G3/S3 1B.3	Perennial herb. Upper montane coniferous forest. Open stony ridges, metamorphic scree slopes of mountain peaks, and cliffs in or near red fir forest. Elevations: 5415-7545 ft. (1650-2300 m.) Blooms Jul-Aug (Sep).
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i> Konocti manzanita	None/None G5T3/S3 1B.3	Perennial evergreen shrub. Chaparral, cismontane woodland, lower montane coniferous forest. Volcanic. Elevations: 1295-5300 ft. (395-1615 m.) Blooms (Jan) Mar-May (Jul).
<i>Astragalus agnicidus</i> Humboldt County milk-vetch	None/SE G2/S2 1B.1	Perennial herb. Broadleafed upland forest, north coast coniferous forest. Disturbed areas, Openings, roadsides (sometimes). Elevations: 395-2625 ft. (120-800 m.) Blooms Apr-Sep.
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> coastal marsh milk-vetch	None/None G2T2/S2 1B.2	Perennial herb. Coastal dunes, coastal scrub, marshes and swamps. Mesic sites in dunes or along streams or coastal salt marshes. Elevations: 0-100 ft. (0-30 m.) Blooms (Apr) Jun-Oct.
<i>Astragalus umbraticus</i> Bald Mountain milk-vetch	None/None G4/S2 2B.2	Perennial herb. Cismontane woodland, lower montane coniferous forest. Roadsides (sometimes). Elevations: 490-4100 ft. (150-1250 m.) Blooms May-Aug.
<i>Bensoniella oregona</i> bensoniella	None/SR G3/S2 1B.1	Perennial herb. Bogs and fens, lower montane coniferous forest, meadows and seeps. Mesic. Elevations: 2955-4595 ft. (900-1400 m.) Blooms May-Jul.
<i>Buxbaumia viridis</i> green shield-moss	None/None G5T/S2 2B.2	Moss. Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Well-rotted logs and in peaty soil and humus. Elevations: 3200-7220 ft. (975-2200 m.)
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	None/None G5Q/S2 2B.1	Perennial rhizomatous herb. Coastal scrub, marshes and swamps. Usually in marshy swales surrounded by grassland or coastal scrub. Elevations: 35-195 ft. (10-60 m.) Blooms May-Aug.
<i>Calycadenia micrantha</i> small-flowered calycadenia	None/None G2/S2 1B.2	Annual herb. Chaparral, meadows and seeps, valley and foothill grassland. Roadsides, rocky, scree, serpentinite (sometimes), talus. Elevations: 15-4920 ft. (5-1500 m.) Blooms Jun-Sep.

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<i>Cardamine angulata</i> seaside bittercress	None/None G4G5/S3 2B.2	Perennial herb. Lower montane coniferous forest, north coast coniferous forest. Streambanks. Elevations: 50-3000 ft. (15-915 m.) Blooms (Jan) Mar-Jul.
<i>Carex arcta</i> northern clustered sedge	None/None G5/S1 2B.2	Perennial herb. Bogs and fens, north coast coniferous forest. Mesic sites. Elevations: 195-4595 ft. (60-1400 m.) Blooms Jun-Sep.
<i>Carex lenticularis</i> var. <i>limnophila</i> lagoon sedge	None/None G5T5/S1 2B.2	Perennial herb. Bogs and fens, marshes and swamps, north coast coniferous forest. Gravelly (often). Elevations: 0-20 ft. (0-6 m.) Blooms Jun-Aug.
<i>Carex leptalea</i> bristle-stalked sedge	None/None G5/S1 2B.2	Perennial rhizomatous herb. Bogs and fens, marshes and swamps, meadows and seeps. Mostly known from bogs and wet meadows. Elevations: 0-2295 ft. (0-700 m.) Blooms Mar-Jul.
<i>Carex lyngbyei</i> Lyngbye's sedge	None/None G5/S3 2B.2	Perennial rhizomatous herb. Marshes and swamps. Elevations: 0-35 ft. (0-10 m.) Blooms Apr-Aug.
<i>Carex praticola</i> northern meadow sedge	None/None G5/S2 2B.2	Perennial herb. Meadows and seeps. Moist to wet meadows. Elevations: 0-10500 ft. (0-3200 m.) Blooms May-Jul.
<i>Carex saliniformis</i> deceiving sedge	None/None G2/S2 1B.2	Perennial rhizomatous herb. Coastal prairie, coastal scrub, marshes and swamps, meadows and seeps. Mesic. Elevations: 10-755ft. (3-230m.) Blooms Jun (Jul).
<i>Carex viridula</i> ssp. <i>viridula</i> green yellow sedge	None/None G5T5/S2 2B.3	Perennial herb. Bogs and fens, marshes and swamps, north coast coniferous forest. Mesic sites. Elevations: 0-5250 ft. (0-1600 m.) Blooms (Jun) Jul-Sep (Nov).
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i> Humboldt Bay owl's-clover	None/None G5T2/S2 1B.2	Annual herb (hemiparasitic). Marshes and swamps. In coastal saltmarsh with <i>Spartina</i> , <i>Distichlis</i> , <i>Salicornia</i> , <i>Jaumea</i> . Elevations: 0-10 ft. (0-3 m.) Blooms Apr-Aug.
<i>Castilleja litoralis</i> Oregon coast paintbrush	None/None G3/S3 2B.2	Perennial herb (hemiparasitic). Coastal bluff scrub, coastal dunes, coastal scrub. Sandy. Elevations: 50-330 ft. (15-100 m.) Blooms Jun.
<i>Castilleja mendocinensis</i> Mendocino Coast paintbrush	None/None G2/S2 1B.2	Perennial herb (hemiparasitic). Closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. Often on sea bluffs or cliffs in coastal bluff scrub or prairie. Elevations: 0-525 ft. (0-160 m.) Blooms Apr-Aug.

Scientific Name Common Name	Status	Habitat Requirements
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	None/None G4?T2/S2 1B.2	Annual herb (hemiparasitic). Marshes and swamps. Usually in coastal salt marsh with <i>Salicornia</i> , <i>Distichlis</i> , <i>Jaumea</i> , <i>Spartina</i> , etc. Elevations: 0-35 ft. (0-10 m.) Blooms Jun-Oct.
<i>Clarkia amoena</i> ssp. <i>whitneyi</i> Whitney's farewell-to-spring	None/None G5T1/S1 1B.1	Annual herb. Coastal bluff scrub, coastal scrub. Elevations: 35-330 ft. (10-100 m.) Blooms Jun-Aug.
<i>Collinsia corymbosa</i> round-headed collinsia	None/None G1/S1 1B.2	Annual herb. Coastal dunes. Elevations: 0-65 ft. (0-20 m.) Blooms Apr-Jun.
<i>Cornus unalaschkensis</i> bunchberry	None/None G5/S2 2B.2	Bogs and fens, meadows and seeps, North Coast coniferous forest. 60-1920 m. Blooms May-Jul.
<i>Discelium nudum</i> naked flag moss	None/None G4G5/S1 2B.2	Ephemeral moss. Coastal bluff scrub. Moss that grows on moist silty clay to fine sandy banks in somewhat shaded sites. Elevations: 35-165 ft. (10-50 m.)
<i>Downingia willamettensis</i> Cascade downingia	None/None G4/S2 2B.2	Annual herb. Cismontane woodland, valley and foothill grassland, vernal pools. Lake margins. Elevations: 50-3640 ft. (15-1110 m.) Blooms Jun-Jul (Sep).
<i>Empetrum nigrum</i> black crowberry	None/None G5/S1? 2B.2	Perennial evergreen shrub. Coastal bluff scrub, coastal prairie. Elevations: 35-655 ft. (10-200 m.) Blooms Apr-Jun.
<i>Epilobium oreganum</i> Oregon fireweed	None/None G2/S2 1B.2	Perennial herb. Bogs and fens, lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. In and near springs and bogs; at least sometimes on serpentine. Elevations: 1640-7350 ft. (500-2240 m.) Blooms Jun-Sep.
<i>Erigeron maniopotamicus</i> Mad River fleabane daisy	None/None G2?/S1S2 1B.2	Perennial herb. Lower montane coniferous forest, meadows and seeps. Open slopes, disturbed areas (road cuts); tan-colored, rocky soils. Elevations: 4185-4920 ft. (1275-1500 m.) Blooms May-Aug.
<i>Erysimum concinnum</i> bluff wallflower	None/None G3/S2 1B.2	Annual/perennial herb. Coastal bluff scrub, coastal dunes, coastal prairie. More or less a coastal generalist within coastal habitat types. Elevations: 0-605 ft. (0-185 m.) Blooms Feb-Jul.
<i>Erysimum menziesii</i> Menzies' wallflower	FE/SE G1/S1 1B.1	Perennial herb. Coastal dunes. Localized on dunes and coastal strand. Elevations: 0-115 ft. (0-35 m.) Blooms Mar-Sep.

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<i>Erythranthe trinitensis</i> pink-margined monkeyflower	None/None G2/S2 1B.3	Annual herb. Cismontane woodland, lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Often on serpentine and along roadsides. Elevations: 1310-7495 ft. (400-2285 m.) Blooms Jun-Jul (Aug).
<i>Erythronium oregonum</i> giant fawn lily	None/None G5/S2 2B.2	Perennial herb. Cismontane woodland, meadows and seeps. Openings. Sometimes on serpentine; rocky sites. Elevations: 330-3775 ft. (100-1150 m.) Blooms Mar-Jun (Jul).
<i>Erythronium revolutum</i> coast fawn lily	None/None G4G5/S3 2B.2	Perennial bulbiferous herb. Bogs and fens, broadleafed upland forest, north coast coniferous forest. Mesic sites; streambanks. Elevations: 0-5250 ft. (0-1600 m.) Blooms Mar-Jul (Aug).
<i>Fissidens pauperculus</i> minute pocket moss	None/None G3?/S2 1B.2	Moss. North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. Elevations: 35-3360 ft. (10-1024 m.)
<i>Gentiana plurisetosa</i> Klamath gentian	None/None G2/S2 1B.3	Perennial herb. Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Meadows in red fir and yellow pine forests; mesic sites. Elevations: 3935-6235 ft. (1200-1900 m.) Blooms Jul-Sep.
<i>Gilia capitata</i> ssp. <i>pacifica</i> Pacific gilia	None/None G5T3/S3 1B.2	Annual herb. Chaparral, coastal bluff scrub, coastal prairie, valley and foothill grassland. 5-. Elevations: 15-5465 ft. (5-1665 m.) Blooms Apr-Aug.
<i>Gilia millefoliata</i> dark-eyed gilia	None/None G2/S2 1B.2	Annual herb. Coastal dunes. Elevations: 5-100 ft. (2-30 m.) Blooms Apr-Jul.
<i>Glyceria grandis</i> American manna grass	None/None G5/S3 2B.3	Perennial rhizomatous herb. Bogs and fens, marshes and swamps, meadows and seeps. Wet meadows, ditches, streams, and ponds, in valleys and lower elevations in the mountains. Elevations: 50-6495 ft. (15-1980 m.) Blooms Jun-Aug.
<i>Hemieva ranunculifolia</i> buttercup-leaf hemieva	None/None G5/S2 2B.2	Perennial herb. Meadows and seeps, upper montane coniferous forest. Granitic, mesic, rock crevices (often), rocky. Elevations: 4920-8205 ft. (1500-2500 m.) Blooms Jun-Aug.
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i> short-leaved evax	None/None G4T3/S3 1B.2	Annual herb. Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. Elevations: 0-705 ft. (0-215 m.) Blooms Mar-Jun.
<i>Hosackia yollabollensis</i> Yolla Bolly Mountains Bird's-foot trefoil	None/None G2/S2 1B.2	Perennial herb. Meadows and seeps, upper montane coniferous forest. Elevations: 5395-7005 ft. (1645-2135 m.) Blooms Jun-Aug.

Scientific Name Common Name	Status	Habitat Requirements
<i>Howellia aquatilis</i> water howellia	FD/None G3/S2 2B.2	Annual herb (aquatic). Marshes and swamps. In clear ponds with other aquatics and surrounded by ponderosa pine forest and sometimes riparian associates. Elevations: 3560-4230 ft. (1085-1290 m.) Blooms Jun.
<i>Iliamna latibracteata</i> California globe mallow	None/None G2G3/S2 1B.2	Perennial herb. Chaparral, lower montane coniferous forest, north coast coniferous forest, riparian scrub. Seepage areas in silty clay loam. Elevations: 195-6560 ft. (60-2000 m.) Blooms Jun-Aug.
<i>Juncus dudleyi</i> Dudley's rush	None/None G5/S1 2B.3	Perennial herb. Lower montane coniferous forest. Wet areas in forest. Elevations: 1495-6560 ft. (455-2000 m.) Blooms Jul-Aug.
<i>Juncus nevadensis</i> var. <i>inventus</i> Sierra rush	None/None G5T3T4/S1 2B.2	Perennial rhizomatous herb. Bogs and fens. Elevations: 0-35 ft. (0-10 m.) Blooms Jul-Nov.
<i>Kopsiopsis hookeri</i> small groundcone	None/None G4?/S1S2 2B.3	Perennial rhizomatous herb (parasitic). North coast coniferous forest. Open woods, shrubby places, generally on Gaultheria shallon. Elevations: 295-2905 ft. (90-885 m.) Blooms Apr-Aug.
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	None/None G3T2/S2 1B.2	Perennial herb. Coastal bluff scrub, coastal dunes, coastal scrub. Elevations: 15-1705 ft. (5-520 m.) Blooms Jan-Nov.
<i>Lathyrus biflorus</i> two-flowered pea	None/None G1/S1 1B.1	Perennial herb. Lower montane coniferous forest. Endemic to serpentine. Elevations: 4495-4545 ft. (1370-1385 m.) Blooms Jun-Aug.
<i>Lathyrus japonicus</i> seaside pea	None/None G5/S2 2B.1	Perennial rhizomatous herb. Coastal dunes. Elevations: 5-100 ft. (1-30 m.) Blooms May-Aug.
<i>Lathyrus palustris</i> marsh pea	None/None G5/S2 2B.2	Perennial herb. Bogs and fens, coastal prairie, coastal scrub, lower montane coniferous forest, marshes and swamps, north coast coniferous forest. Moist coastal areas. Elevations: 5-330 ft. (1-100 m.) Blooms Mar-Aug.
<i>Layia carnosa</i> beach layia	FT/SE G2/S2 1B.1	Annual herb. Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. Elevations: 0-195 ft. (0-60 m.) Blooms Mar-Jul.
<i>Lewisia cotyledon</i> var. <i>heckneri</i> Heckner's lewisia	None/None G4T3/S3 1B.2	Perennial herb. Lower montane coniferous forest. Rocky places. Elevations: 740-6890 ft. (225-2100 m.) Blooms May-Jul.

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<i>Lilium occidentale</i> western lily	FE/SE G1G2/S1 1B.1	Perennial bulbiferous herb. Bogs and fens, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, north coast coniferous forest. Well-drained, old beach washes overlain with wind-blown alluvium and organic topsoil; usually near margins of Sitka spruce. Elevations: 5-605 ft. (2-185 m.) Blooms Jun-Jul.
<i>Lupinus constancei</i> Lassics lupine	FE/SE G1/S1 1B.1	Perennial herb. Lower montane coniferous forest. Serpentine barrens. Elevations: 4920-6560 ft. (1500-2000 m.) Blooms Jul.
<i>Lupinus elmeri</i> South Fork Mountain lupine	None/None G2/S2 1B.2	Perennial herb. Lower montane coniferous forest. Elevations: 3995-6560 ft. (1218-2000 m.) Blooms Jun-Jul (Aug).
<i>Lupinus tracyi</i> Tracy's lupine	None/None G4/S3 4.3	Perennial herb. Upper montane coniferous forest. Dry soil, open to partial shade, on ridgetops, slopes, hillsides, and in meadows. Elevations: 2935-6560 ft. (895-2000 m.) Blooms (May) Jun-Jul.
<i>Lycopodiella inundata</i> inundated bog-clubmoss	None/None G5/S1 2B.2	Perennial rhizomatous herb. Bogs and fens, lower montane coniferous forest, marshes and swamps. Peat bogs, muddy depressions, pond margins. Elevations: 15-3280 ft. (5-1000 m.) Blooms Jun-Sep.
<i>Microseris borealis</i> northern microseris	None/None G5/S1 2B.1	Perennial herb. Bogs and fens, lower montane coniferous forest, meadows and seeps. Elevations: 3280-6560 ft. (1000-2000 m.) Blooms Jun-Sep.
<i>Moneses uniflora</i> woodnymph	None/None G5/S2 2B.2	Perennial rhizomatous herb. Broadleafed upland forest, north coast coniferous forest. Elevations: 330-3610 ft. (100-1100 m.) Blooms May-Aug.
<i>Monotropa uniflora</i> ghost-pipe	None/None G5/S2 2B.2	Perennial herb (achlorophyllous). Broadleafed upland forest, north coast coniferous forest. Often under redwoods or western hemlock. Elevations: 35-1805 ft. (10-550 m.) Blooms Jun-Aug (Sep).
<i>Montia howellii</i> Howell's montia	None/None G3G4/S2 2B.2	Annual herb. Meadows and seeps, north coast coniferous forest, vernal pools. Vernally wet sites; often on compacted soil. Elevations: 0-2740 ft. (0-835 m.) Blooms (Feb) Mar-May.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	None/None G4T2/S2 1B.1	Annual herb. Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Vernal pools and swales; adobe or alkaline soils. Elevations: 15-5710 ft. (5-1740 m.) Blooms Apr-Jul.

Scientific Name Common Name	Status	Habitat Requirements
<i>Noccaea fendleri</i> ssp. <i>californica</i> Kneeland Prairie pennycress	FE/None G5?T1/S1 1B.1	Perennial herb. Coastal prairie. Serpentine rock outcrops. Elevations: 2495-2675 ft. (760-815 m.) Blooms May-Jun.
<i>Oenothera wolfii</i> Wolf's evening-primrose	None/None G2/S1 1B.1	Perennial herb. Coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest. Sandy substrates; usually mesic sites. Elevations: 10-2625 ft. (3-800 m.) Blooms May-Oct.
<i>Packera bolanderi</i> var. <i>bolanderi</i> seacoast ragwort	None/None G4T4/S2S3 2B.2	Perennial rhizomatous herb. Coastal scrub, north coast coniferous forest. Sometimes along roadsides. Elevations: 100-2135 ft. (30-650 m.) Blooms (Jan-Apr) May-Jul (Aug).
<i>Piperia candida</i> white-flowered rein orchid	None/None G3?/S3 1B.2	Perennial herb. Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. Elevations: 100-4300 ft. (30-1310 m.) Blooms (Mar) May-Sep.
<i>Platismatia lacunosa</i> crinkled rag lichen	None/None G4/S2? 2B.3	North Coast coniferous forest, Riparian woodland. Usually growing on <i>Alnus</i> . 20-2000 m.
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	None/ST G2/S2 1B.1	Perennial rhizomatous herb. Broadleafed upland forest, meadows and seeps, north coast coniferous forest. Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. Elevations: 35-2200 ft. (10-671 m.) Blooms Apr-Jun.
<i>Polemonium carneum</i> Oregon polemonium	None/None G3G4/S2 2B.2	Perennial herb. Coastal prairie, coastal scrub, lower montane coniferous forest. Elevations: 0-6005 ft. (0-1830 m.) Blooms Apr-Sep.
<i>Puccinellia pumila</i> dwarf alkali grass	None/None G5/SH 2B.2	Perennial herb. Marshes and swamps. Mineral spring meadows and coastal salt marshes. Elevations: 5-35 ft. (1-10 m.) Blooms Jul.
<i>Ramalina thrausta</i> angel's hair lichen	None/None G5?/S2S3 2B.1	Fruticose lichen (epiphytic). North coast coniferous forest. On dead twigs and other lichens. Elevations: 245-1410 ft. (75-430 m.)
<i>Rhynchospora globularis</i> round-headed beaked-rush	None/None G5/S1 2B.1	Perennial rhizomatous herb. Marshes and swamps. Freshwater marsh. Elevations: 150-195 ft. (45-60 m.) Blooms Jul-Aug.
<i>Romanzoffia tracyi</i> Tracy's romanzoffia	None/None G4/S2 2B.3	Perennial herb. Coastal bluff scrub, coastal scrub. Rocky sites. Elevations: 50-100 ft. (15-30 m.) Blooms Mar-May.

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<i>Rorippa columbiae</i> Columbia yellow cress	None/None G3/S2 1B.2	Perennial rhizomatous herb. Lower montane coniferous forest, meadows and seeps, playas, vernal pools. Moist sandy soil, low gravelly riverbanks, basaltic lava slopes. Elevations: 3935-5905 ft. (1200-1800 m.) Blooms May-Sep.
<i>Rosa gymnocarpa</i> var. <i>serpentina</i> Gasquet rose	None/None G5T3T4/S2 1B.3	Perennial rhizomatous shrub. Chaparral, cismontane woodland. Serpentinite. Often on roadsides, sometime on ridges, streambanks, and in openings. Elevations: 1310-5660 ft. (400-1725 m.) Blooms Apr-Jun (Aug).
<i>Sabulina decumbens</i> Lassics sandwort	None/None G1/S1 1B.2	Perennial herb. Lower montane coniferous forest, upper montane coniferous forest. Endemic to serpentine. Only known from upper, north-facing slopes under Jeffrey pines. Elevations: 4920-5495 ft. (1500-1675 m.) Blooms Jul.
<i>Sanguisorba officinalis</i> great burnet	None/None G5?/S2 2B.2	Perennial rhizomatous herb. Bogs and fens, broadleafed upland forest, marshes and swamps, meadows and seeps, north coast coniferous forest, riparian forest. Rocky serpentine seepage areas and along streams. Elevations: 195-4595 ft. (60-1400 m.) Blooms Jul-Oct.
<i>Schoenoplectus subterminalis</i> water bulrush	None/None G5/S3 2B.3	Perennial rhizomatous herb (aquatic). Bogs and fens, marshes and swamps. Montane lake margins, in shallow water. Elevations: 2460-7380 ft. (750-2250 m.) Blooms Jun-Aug (Sep).
<i>Scytinium siskiyouense</i> Siskiyou jellyskin lichen	None/None G2G3/S1S2 1B.1	Lower montane coniferous forest, North Coast coniferous forest. Epiphytic, usually on the bark of <i>Fagaceae</i> , such as <i>Quercus</i> or <i>Chrysolepis</i> . 635-1460 m.
<i>Sedum divergens</i> Cascade stonecrop	None/None G5/S2 2B.3	Perennial herb. Alpine boulder and rock field. Rocky alpine slopes and cool cliffs. Elevations: 5250-7645 ft. (1600-2330 m.) Blooms Jul-Sep.
<i>Sidalcea malviflora</i> ssp. <i>patula</i> Siskiyou checkerbloom	None/None G4G5T2/S2 1B.2	Perennial rhizomatous herb. Coastal bluff scrub, coastal prairie, north coast coniferous forest. Open coastal forest; roadcuts. Elevations: 50-4035 ft. (15-1230 m.) Blooms (Mar) May-Aug.
<i>Sidalcea oregana</i> ssp. <i>eximia</i> coast checkerbloom	None/None G5T1/S1 1B.2	Perennial herb. Lower montane coniferous forest, meadows and seeps, north coast coniferous forest. Near meadows, in gravelly soil. Elevations: 15-4395 ft. (5-1340 m.) Blooms Jun-Aug.
<i>Silene bolanderi</i> Bolander's catchfly	None/None G2/S2 1B.2	Perennial herb. Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest. Openings (usually), Roadsides (sometimes), Rocky (sometimes), Serpentinite (sometimes). Elevations: 420-1150 m (1380-775 ft). Blooms May-Jun.
<i>Silene hookeri</i> Hooker's catchfly	None/None G4/S2 2B.2	Perennial herb. Chaparral, Cismontane woodland, Lower montane coniferous forest. Openings (often), Rocky (sometimes), Serpentinite (sometimes). Elevations: 150-260 m (490-4135 ft). Blooms (Mar) May-Jul.

Scientific Name Common Name	Status	Habitat Requirements
<i>Silene scouleri</i> ssp. <i>scouleri</i> Scouler's catchfly	None/None G5T4T5/S2S3 2B.2	Perennial herb. Coastal bluff scrub, coastal prairie, valley and foothill grassland. Elevations: 0-1970 ft. (0-600 m.) Blooms (Mar-May) Jun-Aug (Sep).
<i>Sisyrinchium hitchcockii</i> Hitchcock's blue-eyed grass	None/None G1G2/S1 1B.1	Perennial rhizomatous herb. Cismontane woodland, valley and foothill grassland. Openings in woodland or in grassland in California. Elevations: 1000-1000 ft. (305-305 m.) Blooms Jun.
<i>Spergularia canadensis</i> var. <i>occidentalis</i> western sand-spurrey	None/None G5T4/S1 2B.1	Annual herb. Marshes and swamps. Elevations: 0-10 ft. (0-3 m.) Blooms Jun-Aug.
<i>Sulcaria spiralifera</i> twisted horsehair lichen	None/None G3G4/S2 1B.2	Fruticose lichen (epiphytic). Coastal dunes, north coast coniferous forest. Usually on conifers. Elevations: 0-295 ft. (0-90 m.)
<i>Thermopsis robusta</i> robust false lupine	None/None G2/S2 1B.2	Perennial rhizomatous herb. Broadleafed upland forest, north coast coniferous forest. Ridgetops; sometimes on serpentine. Elevations: 490-4920 ft. (150-1500 m.) Blooms May-Jul.
<i>Tracyina rostrata</i> beaked tracyina	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Open grassy meadows usually within oak woodland and grassland habitats. Elevations: 295-4165 ft. (90-1270 m.) Blooms May-Jun.
<i>Trichodon cylindricus</i> cylindrical trichodon	None/None G4G5/S2 2B.2	Moss. Broadleafed upland forest, meadows and seeps, upper montane coniferous forest. Moss growing in openings on sandy or clay soils on roadsides, stream banks, trails or in fields. Elevations: 165-6570 ft. (50-2002 m.)
<i>Viburnum ellipticum</i> oval-leaved viburnum	None/None G4G5/S3 2B.3	Perennial deciduous shrub. Chaparral, cismontane woodland, lower montane coniferous forest. Elevations: 705-4595 ft. (215-1400 m.) Blooms May-Jun.
<i>Viola palustris</i> alpine marsh violet	None/None G5/S1S2 2B.2	Perennial rhizomatous herb. Bogs and fens, coastal scrub. Swampy, shrubby places in coastal scrub or coastal bogs. Elevations: 0-490 ft. (0-150 m.) Blooms Mar-Aug.

Table 3.3-2 Special-Status Wildlife Species within Humboldt County

Scientific Name Common Name	Status	Habitat Requirements
Invertebrates		
<i>Bombus crotchii</i> Crotch's bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .
<i>Bombus occidentalis</i> western bumble bee	None/SCE G3/S1	Once common and widespread, species has declined precipitously from central California to southern Baja California, perhaps from disease.
<i>Bombus suckleyi</i> Suckley's cuckoo bumble bee	None/SCE G2G3/S1	Pacific coast from Alaska to far Northern California, east to Nebraska. An inquiline in the colonies of other bumblebees. Adult food plant genera include <i>Aster</i> , <i>Centaurea</i> , <i>Cirsium</i> , <i>Trifolium</i> , <i>Chrysothamnus</i> , <i>Helichrysum</i> .
<i>Branchinecta conservatio</i> conservancy fairy shrimp	FE	Live in ephemeral or temporary pools of fresh water (vernal pools) that form in the cool, wet months of the year. Inhabit highly turbid water in vernal pools. Feed on algae, bacteria, protozoa, rotifers, and bits of detritus. Resting (summer) eggs are known as cysts and are capable of withstanding heat, cold, and prolonged dry periods. As the vernal pools refill with rainwater, in the same or subsequent seasons, some of the cysts may hatch.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FE	Small, freshwater crustacean that is found in vernal pools in California. They glide gracefully through the water upside down, swimming by beating their legs in a complex, wavelike movement that passes from front to back. Unlike other types of shrimp, the vernal pool fairy shrimp does not have a hard outer shell. Vernal pool fairy shrimp are restricted to vernal pools found in California and southern Oregon.
<i>Danaus plexippus</i> monarch butterfly	FC/None G4T1T2Q/S2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	FE	They have a hard shell that is large, flattened and arched like a shield over its back. Vernal pool tadpole shrimp are uncommon even where vernal pool habitats occur. Vernal pool tadpole shrimp are found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales and other seasonal wetlands in California.
<i>Pacifiastacus fortis</i> Shasta crayfish	FE	Living in cold streams that are fed by underground springs. Found in isolated spots along Pit River and Fall River Mills. Shasta crayfish are small to medium-sized crayfish that grow to be 2 to 4 inches in length. Most Shasta crayfish are a dark brownish-green on the topside and a bright orange underside.
<i>Pycnopodia helianthoides</i> sunflower sea star	Proposed Threatened/ None	The largest of the sea stars and has the most arms. It is typically found in the eastern Pacific Ocean from Unalaska Island, Alaska, to Baja California, but less typically south of Monterey Bay. This soft-bodied sea star relies on fluid pressure to maintain its body form. It has fifteen to twenty-four arms and may weigh up to 13.4 pounds (5 kg). Colors vary from orange to pinkish to yellow, brown, and purplish with white spines.
Fish		
<i>Acipenser medirostris</i> pop. 1 green sturgeon - southern DPS	FT/None G2T1/S1 SSC	Spawning site fidelity. Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles. Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder.

Scientific Name Common Name	Status	Habitat Requirements
<i>Acipenser medirostris</i> pop. 2 green sturgeon - northern DPS	None/None G2T1/S1 SSC	Exhibits spawning site fidelity. Known to spawn in the Klamath, Trinity, Salmon, and Eel Rivers in California; historically known to spawn in the South Fork Trinity River. Non-spawning adults occupy marine and estuarine waters. Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder.
<i>Cottus klamathensis polyporus</i> Lower Klamath marbled sculpin	None/None G4T2T4/S2S4 SSC	Marbled Sculpin are usually found in cold (<20°C) spring-fed streams that have a low gradient and adequate aquatic vegetation. They tend to occupy pools or runs with cover, where optimal temperatures might be 11-15°C. Temperatures above 15°C are considered stressful, while sustained temperatures at 25-27°C are considered lethal.
<i>Entosphenus tridentatus</i> Pacific lamprey	None/None G4/S3 SSC	Found in Pacific Coast streams north of San Luis Obispo County, however regular runs in Santa Clara River. Size of runs is declining. Swift-current gravel-bottomed areas for spawning with water temps between 12-18 C. Ammocoetes need soft sand or mud.
<i>Eucyclogobius newberryi</i> tidewater goby	FE/None G3/S3 SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.
<i>Lampetra richardsoni</i> western brook lamprey	None/None G4G5/S3S4 SSC	Spend their entire life in freshwater. This species bypasses the juvenile stage transforming from larvae directly into adults at which point they stop feeding
<i>Oncorhynchus clarkii clarkii</i> coast cutthroat trout	None/None G5T4/S3 SSC	Small coastal streams from the Eel River to the Oregon border. Small, low gradient coastal streams and estuaries. Needs shaded streams with water temperatures <18C, and small gravel for spawning.
<i>Oncorhynchus kisutch</i> pop. 2 coho salmon - southern Oregon/northern California ESU	FT/ST G5T2Q/S2	Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt County, California. State listing refers to populations between the Oregon border and Punta Gorda, California.
<i>Oncorhynchus mykiss irideus</i> pop. 48 steelhead - northern California DPS summer-run	FT/SE G5T2Q/S2	Naturally spawning population of the stream-maturing summer-run ecotype. From Redwood Creek watershed south to and inclusive of Gualala River watershed. Distribution within range more limited. Require cool water (<23C); holding habitat to withstand higher temps; lower flows in summer/fall; require loose gravels at pool tails for redd construction. Favor cool, clear, fast-flowing riffles, ample riparian cover, undercut banks and diverse prey.
<i>Oncorhynchus mykiss irideus</i> pop. 49 steelhead - northern California DPS winter-run	FT/None G5T3Q/S3 SSC	Naturally spawning population of the ocean-maturing winter-run ecotype. From Redwood Creek watershed south to and inclusive of Gualala River watershed. Distribution throughout range. Adults require high flows of 18-20 cm for passage and loose gravels at pool tails for redd construction. Juveniles favor areas with cool (10-17 C), clear, fast-flowing riffles, ample riparian cover, undercut banks and diverse prey.
<i>Oncorhynchus tshawytscha</i> pop. 17 chinook salmon - California coastal ESU	FT/None G5T2Q/S2 SSC	Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Cr, Humboldt Co and Russian River, Sonoma County.

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Scientific Name Common Name	Status	Habitat Requirements
<i>Oncorhynchus tshawytscha</i> pop. 30 chinook salmon - upper Klamath and Trinity Rivers ESU	FC/ST G5T2Q/S2 SSC	Spring-run chinook in the Trinity River and the Klamath River upstream of the mouth of the Trinity River. Major limiting factor for juvenile chinook salmon is temperature, which strongly effects growth and survival.
<i>Spirinchus thaleichthys</i> longfin smelt	Proposed Endangered/ST G5/S1	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per trillion but can be found in completely freshwater to almost pure seawater.
<i>Thaleichthys pacificus</i> eulachon	FT/None G5/S1 SSC	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.
Amphibians		
<i>Ascaphus truei</i> Pacific tailed frog	None/None G4/S3S4 SSC	Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.
<i>Plethodon elongatus</i> Del Norte salamander	None/None G4/S3 WL	Old-growth associated species with optimum conditions in the mixed conifer/hardwood ancient forest ecosystem. Cool, moist, stable microclimate, a deep litter layer, closed multi-storied canopy, dominated by large, old trees.
<i>Rana aurora</i> northern red-legged frog	None/None G4/S3 SSC	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover. Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.
<i>Rana boylei</i> pop. 1 foothill yellow-legged frog - north coast DPS	None/None G3T4/S4 SSC	Northern Coast Ranges north of San Francisco Bay Estuary, Klamath Mountains, and Cascade Range including watershed subbasins (HU 8) Lower Pit, Battle Creek, Thomes Creek, and Big Chico Creek in Lassen, Shasta, Tehama, and Butte Counties. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.
<i>Rhyacotriton variegatus</i> southern torrent salamander	None/None G3?/S2S3 SSC	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest. Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.
<i>Taricha rivularis</i> red-bellied newt	None/None G2/S2 SSC	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.
Reptiles		
<i>Actinemys marmorata</i> northwestern pond turtle	FPT/None G2/SNR SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft. elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. Occurs in northern California, south along the Sierra Nevada Mountains and the Coast Range down to Monterey and Kern Counties.

Scientific Name Common Name	Status	Habitat Requirements
<i>Chelonia mydas</i> green sea turtle	FT/None	The green sea turtle is the largest hard-shelled sea turtle. Green turtles are found throughout the world. Green turtles are the only herbivorous species of sea turtle. Their diet mainly consists of algae and seagrasses, though they may also forage on sponges, invertebrates, and discarded fish.
<i>Dermochelys coriacea</i> Leatherback sea turtle	FE/None	The leatherback sea turtle is the largest turtle in the world. They are the only species of sea turtle that lack scales and a hard shell. Leatherback sea turtles undertake the longest migrations between breeding and feeding areas of any sea turtle, some averaging 3,700 miles each way. Leatherbacks occur in the Atlantic, Pacific, and Indian Oceans. Nesting beaches are primarily located in tropical latitudes around the world.
Birds		
<i>Accipiter atricapillus</i> American goshawk	None/None G5/S3 SSC	Within, and in vicinity of, coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.
<i>Accipiter cooperii</i> Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.
<i>Accipiter striatus</i> sharp-shinned hawk	None/None G5/S4 WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft. of water.
<i>Agelaius tricolor</i> tricolored blackbird	None/ST G1G2/S2 SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.
<i>Ammodramus savannarum</i> grasshopper sparrow	None/None G5/S3 SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.
<i>Aquila chrysaetos</i> golden eagle	None/None G5/S3 FP WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
<i>Bonasa umbellus</i> ruffed grouse	None/None G5/S3S4 WL	Extreme northern humid coastal strip, in Del Norte, Humboldt, and Siskiyou counties. Inhabits dense canyon-bottom or stream-side growths, usually of mixed deciduous and coniferous trees.
<i>Brachyramphus marmoratus</i> marbled murrelet	FT/SE G3/S2	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.
<i>Cerorhinca monocerata</i> rhinoceros auklet	None/None G5/S3 WL	Off-shore islands and rocks along the California coast. Nests in a burrow on undisturbed, forested and unforested islands, and probably in cliff caves on the mainland.

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<i>Charadrius montanus</i> mountain plover	None/None G3/S2 SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.
<i>Charadrius nivosus nivosus</i> western snowy plover	FT/None G3T3/S3 SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.
<i>Circus hudsonius</i> northern harrier	None/None G5/S3 SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.
<i>Elanus leucurus</i> white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SD G4T4/S3S4	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.
<i>Fratercula cirrhata</i> tufted puffin	None/None G5/S1S2 SSC	Open-ocean bird; nests along the coast on islands, islets, or (rarely) mainland cliffs. Requires sod or earth into which the birds can burrow, on island cliffs or grassy island slopes.
<i>Haliaeetus leucocephalus</i> bald eagle	FD/SE G5/S3 FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.
<i>Hydrobates furcatus</i> fork-tailed storm-petrel	None/None G5/S1 SSC	Colonial nester on small, offshore islets. Forages over the open ocean, usually well off-shore. Birds choose offshore islets which provide nesting crannies beneath rocks or sod for burrowing.
<i>Nannopterum auritum</i> double-crested cormorant	None/None G5/S4 WL	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.
<i>Pandion haliaetus</i> osprey	None/None G5/S4 WL	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
<i>Phoebastria albatrus</i> short-tailed albatross	FE/None G1/S1 SSC	Pelagic species that forages at sea, often in the productive waters in the Gulf of Alaska, Aleutian Islands, and Bering Sea but occasionally along the coast of California. Nests on small, isolated Pacific islands, including Midway Atoll and Tori-shima Island.

Scientific Name Common Name	Status	Habitat Requirements
<i>Pterodroma sanwicensis</i> Hawaiian petrel	FE/None	A large, long-winged petrel that appears mostly dark above and white below. The forehead is white and the underwings have a broad black diagonal bar. The flight is fast with high arcing turns. Nests in the mountains on several of the main Hawaiian Islands. At breeding colonies it is usually active only at night. Regularly observed offshore from boats and can be seen from shore at dusk in some areas.
<i>Riparia riparia</i> bank swallow	None/ST G5/S3	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.
<i>Strix occidentalis caurina</i> northern spotted owl	FT/None	The species is relatively long-lived, has a long reproductive life span, invests significantly in parental care, and exhibits high adult survivorship relative to other North American owls. Northern spotted owls are medium-sized, chocolate brown owls with dark eyes, and they have round or irregular white spots on their head, neck, back, and underparts.
Mammals		
<i>Antrozous pallidus</i> pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
<i>Arborimus albipes</i> white-footed vole	None/None G3G4/S2 SSC	Mature coastal forests in Humboldt and Del Norte counties. Prefers areas near small, clear streams with dense alder and shrubs. Occupies the habitat from the ground surface to the canopy. Feeds in all layers and nests on the ground under logs or rock.
<i>Arborimus pomo</i> Sonoma tree vole	None/None G3/S3 SSC	Occurs in the North coast fog belt from Oregon border to Sonoma County. Habitats include Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock, or spruce. Nests in trees and may use old nests of birds, squirrels, or woodrats.
<i>Canis lupus</i> gray wolf	FE/None	The largest wild members of Canidae, or dog family, with adults ranging in weight from 18 to 80 kilograms (40 to 175 pounds). Gray wolves have a circumpolar range including North America, Europe and Asia. The wide range of habitats in which wolves can thrive reflects their adaptability as a species and includes temperate forests, mountains, tundra, taiga, grasslands and deserts.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls & ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.
<i>Lasiurus frantzii</i> western red bat	None/None G4/S3 SSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.
<i>Martes caurina humboldtensis</i> Humboldt marten	FT/SE G4G5T1/S1 SSC	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. Associated with late-successional coniferous forests, prefer forests with low, overhead cover.
<i>Martes caurina</i> Pacific marten	FT/None	A member of the family Mustelidae. It is found throughout western North America.

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<i>Pekania pennanti</i> Fisher	None/None G5/S2S3 SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.
<i>Taxidea taxus</i> American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.
Marine Mammals		
<i>Balaenoptera physalus</i> fin whale	FE MMPA	Primarily found in deep, offshore waters of all major oceans, primarily in temperate to polar latitudes. Most migrate from the Arctic and Antarctic feeding areas in the summer to tropical breeding and calving areas in the winter.
<i>Balaenoptera musculus</i> blue whale	FE MMPA	Blue whales migrate seasonally between summer feeding grounds and winter breeding grounds. They prefer deep waters, though can be found in more shallow coastal waters when migrating or following food supplies. The North Pacific blue whales live off the California coast and migrate to waters off the coast of Mexico and Central America in winter.
<i>Eschrichtius robustus</i> gray whale	MMPA	Breeding occurs in lagoons in Baja California in the fall. Migration occurs northward along the west coast from mid-February to May.
<i>Eubalaena japonica</i> north Pacific right whale	FE MMPA	Although migration patterns are unknown, it is thought the whales spend the summer in far northern feeding grounds and migrate south to warmer waters, such as southern California, during the winter. Nursery areas are in shallow, coastal waters.
<i>Eumetopias jubatus</i> Steller sea lion	FD/None MMPA	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.
<i>Megaptera novaeangliae</i> humpback whale	FE MMPA	Feeding and migration occurs off the coast of California during spring, summer, and fall.
<i>Mirounga angustirostris</i> northern elephant seal	FP MMPA	Breeding occurs in Channel Islands and birth occurs from December to March. May occur on land in sandy or rocky areas along coastline. Ocean dive depths can be up to 300-800 m.
<i>Orcinus orca</i> southern resident killer whale	FE MMPA	During the spring, summer, and fall, the range of Southern Resident killer whales includes the inland waterways of Washington State and the transboundary waters between the United States and Canada. Less is known about their winter movements and range. They have been spotted as far south as central California during the winter months and as far north as Southeast Alaska.
<i>Phoca vitulina</i> harbor seal	MMPA	Temperate coastal habitats along the coast of California. Rest on rocks, reefs, beaches.
<i>Phocoena phocoena</i> harbor porpoise	MMPA	Found in temperate, subarctic, and arctic coastal and offshore waters. Commonly found in coastal areas, bays, estuaries, harbors, and fjords. Most often seen in groups of under 10. Feed on schooling fish and occasionally squid and octopus.

Scientific Name Common Name	Status	Habitat Requirements
<i>Tursiops truncatus</i> common bottlenose dolphin	MMPA	Bottlenose dolphins are found in temperate and tropical waters around the world. They inhabit a wide variety of habitats, including harbors, bays, gulfs, and estuaries, as well as nearshore coastal waters, deeper waters over the continental shelf, and even far offshore in the open ocean.
<i>Zalophus californianus</i> California sea lion	MMPA	Shallow waters in temperate coastal habitats along the coast of California. Rest on beaches, docks, buoys, and jetties. Prefer sandy beaches or rocky coves for breeding and haul-out sites.

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Appendix C

Cultural Resources

Name	St Number	St Name	City	Vicinity	Evaluation Info
	1576	6TH ST	EUREKA		2D2, 10/28/1977, 7K, 04/30/2002, FHWA020318K
	616	MYRTLE AVE	EUREKA		2D2, 10/28/1977, 7K, 04/30/2002, FHWA020318K
	223	W CEDAR ST	EUREKA		2D2, 12/30/1991, HUD911122B
VANCE HOTEL	511	2ND ST	EUREKA		2D3, 03/19/2003, 537.9-12-0009
MCADAM HOUSE	262	CLARK ST	EUREKA		2D3, 09/08/1993, DOE-12-93-0002-0000 2D3, 09/08/1993, HUD960908L
LONG		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0008 2S, 07/06/1979, 65000905
LONG		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0014
GRAHAM		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0015
GRAHAM HOUSE		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0016
STEPHEN WILSON HOUSE		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0018 2S, 07/06/1979, 65001112
SECOND WILSON CLIFTON HOUSE		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0019
WILSON WATER TOWER		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0020
JOSEPH SPINNEY HOUSE		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0022 2S, 07/06/1979, 65001034
GIDEON SPINNEY HOUSE		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0024 2S, 07/06/1979, 65001033
JOHN PINKERTON HOUSE		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0025 2S, 07/06/1979, 65000954
PINKERTON		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0054
FRANCIS HENRY HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0060 2S, 07/06/1979, 65000798
JAMES HENRY HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0061
JOHN BERRY HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0062
JIM NOBLE HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0063 2S, 07/06/1979, 65000908
CLENDENIN HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0065
MATHESON HOUSE, DOLBEER & CARLSON SCHOOL		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0066
McGUIRE BARN		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0074
SECOND BAYSIDE POST OFFICE, McADAM		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0076
NELLIST		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0084
NELLIST HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0089
TRINIDAD WATER TOWER, RHODES		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0092 2S, 09/05/1979, 650001063
BAYSIDE PRESBYTERIAN CHURCH		MYRTLE AVE	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0098 2S, 10/28/1977,
CHARLES		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0099 2S, 07/06/1979, 65000891
CONNORS		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0100
GEORGE MITCHELL HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0101 2S, 07/06/1979, 65000890
JOHNSON HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0102
PINKERTON		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0103 2S, 09/05/1979, 65000966
VIALE HOUSE		MYRTLE RD	BAYSIDE	X	2S, 01/01/1979, 5524-0003-0104 2S, 07/06/1979, 65006874
FRANCIS HENRY HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1978, DOE-12-79-0017-0000 2S, 07/06/1979, 65000783 3S, 11/03/1978, FHWA781006A
BAYSIDE PRESBYTERIAN CHURCH		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000566 2S, 07/06/1979, DOE-12-79-0027-0000 3S, 11/03/1978, FHWA781006A
JOHN BERRY HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000567 2S, 07/06/1979, DOE-12-79-0019-0000 3S, 11/03/1978, FHWA781006A
CAMPBELL		MYRTLE RD	BAYSIDE	X	2S, 07/06/1979, 65000697 7N, , 5524-0003-0073
CLENDENIN HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000715 2S, 07/06/1979, DOE-12-79-0021-0000 3S, 11/03/1978, FHWA781006A
CONNORS-LAWLOR-WILSON HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000716 2S, 07/06/1979, DOE-12-79-0028-0000 3S, 11/03/1978, FHWA781006A
GEORGE GRAHAM HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000783 2S, 09/19/1979, DOE-12-79-0004-0000 3S, 11/03/1978, FHWA781006A
JAMES HENRY HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000799 2S, 07/06/1979, DOE-12-79-0018-0000 3S, 11/03/1978, FHWA781006A
AL AND MARY JOHNSON HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000828 2S, 07/06/1979, DOE-12-79-0013-0000 3S, 11/03/1978, FHWA781006A
McADAM-BARWISE-WILL McFARLAND HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000862 2S, 07/06/1979, DOE-12-79-0025-0000 3S, 11/03/1978, FHWA781006A
GEORGE MITCHELL HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000890 2S, 07/06/1979, DOE-12-79-0026-0000 3S, 11/03/1978, FHWA781006A
DAVIS OSCAR NELLIST HOUSE		OLD ARCATA RD	BAYSIDE		2S, 07/06/1979, 65000904 2S, 10/28/1977,
LONG-GRAHAM DAIRY BARN		MYRTLE AVE	ARCATA	X	2S, 07/06/1979, 65000905 2S, 07/06/1979, DOE-12-79-0001-0000 3S, 11/03/1978, FHWA781006A
JOHN PINKERTON HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65000964 2S, 07/06/1979, DOE-12-79-0011-0000 3S, 11/03/1978, FHWA781006A
GIDEON SPINNEY HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65001033 2S, 07/06/1979, DOE-12-79-0010-0000 3S, 11/03/1978, FHWA781006A
JOSEPH SPINNEY HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65001034 2S, 07/06/1979, DOE-12-79-0009-0000 3S, 11/03/1978, FHWA781006A
SECOND CLIFTON WILSON HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65001111 2S, 07/06/1979, DOE-12-79-0006-0000 3S, 11/03/1978, FHWA781006A
CLIFTON WILSON WATER TOWER		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65001113 2S, 07/06/1979, DOE-12-79-0007-0000 3S, 11/03/1978, FHWA781006A
VIALE HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, 65006874 2S, 07/06/1979, DOE-12-79-0012-0000 3S, 11/03/1978, FHWA781006A
LONG-GRAHAM HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0002-0000 3S, 11/03/1978, FHWA781006A
GRAHAM-ANDERSON HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0003-0000 3S, 11/03/1978, FHWA781006A
GEORGE PINKERTON-McALISTER BARN	3333	Old Arcata Rd	Bayside		2S, 07/06/1979, DOE-12-79-0014-0000 3S, 11/03/1978, FHWA781006A
JIM NOBLE HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0020-0000 3S, 11/03/1978, FHWA781006A
DOLBEER & CARSON SCHOOL - MATHESON HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0022-0000 3S, 11/03/1978, FHWA781006A
CAMPBELL-SMITH-MONROE HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0023-0000 3S, 11/03/1978, FHWA781006A
CHARLES MONAHAN-DEXTER HOUSE, FIFTH AND PRESENT BA		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0029-0000 3S, 11/03/1978, FHWA781006A
DAVID OSCAR NELLIST HOUSE		MYRTLE AVE	ARCATA		2S, 07/06/1979, DOE-12-79-0031-0000 3S, 11/03/1978, FHWA781006A
J VENNING NELLIST-WILLIAM ZUCAR-AMY SMITH HOUSE		MYRTLE AVE	ARCATA		2S, 09/09/1979, DOE-12-79-0030-0000 3S, 11/03/1978, FHWA781006A
HONEYDEW CREEK BRIDGE		WILDER RIDGE RD	HONEYDEW		2S, 08/01/1980, 65000809
TRINIDAD WATER TOWER		MYRTLE AVE	ARCATA		2S, 09/05/1979, 650001063 2S, 09/05/1979, DOE-12-79-0032-0000 3S, 11/03/1978, FHWA781006A
GEORGE PINKERTON-MONTGOMERY-WILLIAMSON BARN		MYRTLE AVE	ARCATA		2S, 09/05/1979, 65000955 2S, 09/05/1979, DOE-12-79-0015-0000 3S, 11/03/1978, FHWA781006A
GEORGE PINKERTON-MONTGOMERY-WILLIAMSON HOUSE		MYRTLE AVE	ARCATA		2S, 09/05/1979, DOE-12-79-0016-0000 3S, 11/03/1978, FHWA781006A
STEPHEN WILSON HOME		MYRTLE AVE	ARCATA		2S, 09/19/1979, DOE-12-79-0005-0000 3S, 11/03/1978, FHWA781006A
McGUIRE BARN		MYRTLE AVE	ARCATA		2S, 09/19/1979, DOE-12-79-0024-0000 3S, 11/03/1978, FHWA781006A
CHARLES MONAHAN-DEXTER HOUSE			BAYSIDE		2S, 10/28/1977,
CLIFTON WILSON WATER TOWER		MYRTLE AVE	EUREKA	X	2S, 10/28/1977,
HUMBOLDT BAY LIFE-SAVING STATION		SAMOA PENINSULA	EUREKA		2S, 10/28/1977,
VAN DUZEN RIVER BRIDGE		US 101	FORTUNA	X	2S, 10/28/1977,
EUREKA HISTORIC DISTRICT		DEL NORTE ST	EUREKA		2S, 12/17/1976, 65000742
VAN DUZEN RIVER BRIDGE		SR 56	BAYSIDE	X	2S2, 01/01/1980, 5524-0004-0000 2S2, 08/28/1980, 65001081
VAN DUZEN RIVER BRIDGE #4-94		SR 36	BRIDGEVILLE	X	2S2, 01/01/1980, 5526-0002-0000 2S2, 07/31/1980, 65001083
VAN DUZEN RIVER BRIDGE, BRIDGE #4-17R		SR 101	RIO DELL	X	2S2, 01/01/1980, 5561-0001-0000
MOODY BRIDGE		S FORK ELK RIVER	EUREKA		2S2, 01/01/1981, 5501-0015-0000
BRIDGE #4-50		SR 299	WILLOW CREEK		2S2, 01/01/1983, 5573-0001-0000
HONEYDEW CREEK BRIDGE		WILDER RIDGE RD	HONEYDEW	X	2S2, 01/01/1984, 5545-0001-0000
Theatre Arts Building/John Van Duzer Theatre	1	Harpst St	Arcata		2S2, 02/12/2021, FCC 2021_0105_010
	1801	MARKET ST	FERNDALE		2S2, 02/26/2002, DOE-12-02-0001-0000 2S2, 02/26/2002, FEMA011016A
Dolbeer & Carson Lumber Company railroad line			Eureka		2S2, 03/04/2020, COE 2019_0628_002
JACOBY CREEK CABIN	1559	US 101 S	ARCATA		2S2, 03/12/2001, FWS001127A
	1413	D ST	EUREKA		2S2, 03/24/1992, HUD920228L
	1686	OLD ARCATA RD	ARCATA		2S2, 04/26/1996, HUD960321Y
	1737	J ST	EUREKA		2S2, 04/28/2006, HUD060421D
EAST HOUSE	56025	US 101 S	FORTUNA		2S2, 05/29/1989, DOE-12-89-0002-0000 2S2, 05/29/1989, FHWA890502A
ALTON BRIDGE		VAN DUZEN RIVER	EUREKA		2S2, 05/29/1989, DOE-12-89-0003-0000 2S2, 05/29/1989, FHWA890502A
NORTHWESTERN PACIFIC RAILROAD BRIDGE		VAN DUZEN RIVER	EUREKA		2S2, 05/29/1989, DOE-12-89-0004-0000 2S2, 05/29/1989, FHWA890502A
HUMBOLDT COUNTY FAIRGROUNDS	1250	5TH ST	FERNDALE		2S2, 06/03/2010, FCC100510F
	1016	F ST	EUREKA		2S2, 08/05/1991, HUD910708B
CHECK STATION	1020	RANCH RD	EUREKA		2S2, 08/08/2005, FWS050511A
THE PROFESSIONAL BUILDING			EUREKA		2S2, 08/12/2002, DOE-12-02-0019-0000 2S2, 08/12/2002, FCC020410G 7J, 05/01/2000, 537.9-12-0011
GAMBI WATERWHEEL			WILLOW CREEK		2S2, 08/13/1993, DOE-12-93-0001-0000 2S2, 08/13/1993, USFS930610C
Bayside Temperance Hall<	1928	Old Arcata Rd	Bayside		2S2, 08/24/2021, FHWA 2021_0401_001
Trinidad 1913 Granite Cross, Heceta-Bodega Expedit			Trinidad		2S2, 09/02/2016, NOAA_2016_0412_001
Trinidad Head		TRINIDAD HEAD	TRINIDAD	X	2S2, 09/02/2016, NOAA_2016_0412_001 7L, 06/06/1934, SHL-0146-0000
	811	M ST	EUREKA		2S2, 09/07/2005, HUD050824E

BRIDGE #4C-12 VALLEY FLOWER BRIDGE-REPLACED IN 1			FERNDALE		2S2, 09/17/1991, DOE-12-91-0001-0000 7K, 09/17/1991, FHWA891103A
WEAVER BALLY LOOKOUT	0		SHA-T NF		2S2, 09/30/1991, USFS860227A
	226	W GRANT ST	EUREKA		2S2, 10/12/2009, HUD091005F
BR-4C-12		DILLON RD	FERNDALE	X	2S2, 10/19/1986, DOE-12-86-0001-0000 2S2, 10/19/1986, FHWA860919Z
BR-4C-26		BLUE LAKE RD	KORBEL		2S2, 10/19/1986, DOE-12-86-0002-0000 2S2, 10/19/1986, FHWA860919Z
BR-4C-75		LINDLEY RD	HONEYDEW	X	2S2, 10/19/1986, DOE-12-86-0003-0000 2S2, 10/19/1986, FHWA860919Z
BENBOW BRIDGE		BENBOW DAM RD	BENBOW		2S2, 10/19/1986, DOE-12-86-0004-0000 2S2, 10/19/1986, FHWA860919Z
BR-4C-189		MATTOLE RD	HONEYDEW		2S2, 10/19/1986, DOE-12-86-0005-0000 2S2, 10/19/1986, FHWA860919Z
BR-4C-239			BENBOW	X	2S2, 10/19/1986, DOE-12-86-0006-0000 2S2, 10/19/1986, FHWA860919Z
BRIDGE #4-17R			ALTON	X	2S2, 10/19/1986, DOE-12-86-0007-0000 2S2, 10/19/1986, FHWA860919Z
BRIDGE #4-101			BRIDGEVILLE		2S2, 10/19/1986, DOE-12-86-0007-0000 2S2, 10/19/1986, FHWA860919Z
BRIDGE #4-134			FERNBIDGE	X	2S2, 10/19/1986, DOE-12-86-0009-0000 2S2, 10/19/1986, FHWA860919Z
McKENZIE HOUSE	1875	11TH ST	ARCATA		2S2, 10/30/1992, DOE-12-92-0004-01 2S2, 10/30/1992, FHWA920923A 7N, , 5521-0032-0000
	2115	Albee St	Eureka		2S2, 11/03/2008,
W.J. LITTLE BUILDING	1100	CALIFORNIA ST	EUREKA		2S2, 11/04/1991, HUD910819E
VAISSADE HOUSE CHEVRET HOUSE, VAISSADE HOUSE	927	J ST	ARCATA		2S2, 11/10/1997, DOE-12-97-0001-0000 2S2, 11/10/1997, HUD971024G 3S, , 5521-0130-0000
	2335	UNION ST	EUREKA		2S2, 11/28/2005, HUD050808L
	3333	OLD ARCATA RD	ARCATA		2S2, 12/10/2002, DOE-12-02-0040-0000 2S2, 12/10/2002, FHWA021024B
ANDRAIN HOUSE	7711	MYRTLE AVE	ARCATA		2S2, 12/10/2002, DOE-12-02-0041-0000 2S2, 12/10/2002, FHWA021024B
PETERSON-HENDRICKSON HOUSE	3656	OLD ARCATA RD	ARCATA		2S2, 12/10/2002, DOE-12-02-0042-0000 2S2, 12/10/2002, FHWA021024B
BEATTY CABIN			PETROLIA		2S2, 12/17/1997, BLM960329B 2S2, 12/17/1997, DOE-12-97-0002-0000
HASTY PROPERTY	210	I ST	BLUE LAKE		2S2, 12/23/1986, HUD861119A
JACOBY CREEK BRIDGE		BROOKWOOD DR	BAYSIDE	X	2S2, 12/27/2016, FHWA 2016 1208_001 7R, , 5524-0003-0035
STEWART SCHOOL	1125	16TH ST	ARCATA		2S3, 04/18/1985, 537.9-12-0004

TABLE HP - 1 DESIGNATED HISTORICAL SITES LIST

#	NAME		Street Address	Built	Historic Period
1	Fry House	290	12th Street	1874	Settlement Period
2	Dillon House	188	11th Street	1886	Settlement Period
3	Cates House	185	12th Street	1884	Settlement Period
4	Malvich House	1030	C Street	1914	Craftsman Period
5	Moore House	930	D Street	1903	Transitional Period
6	Shuman House	965	A Street	1906	Transitional Period
7	Aaron Alden House	947	A Street	1908	Transitional Period
8	Putnam-McCready House	913	A Street	1910	Transitional Period
9	Simms-Hunt House	855	A Street	1905	Transitional Period
10	Phillips House	71	7th Street	1855	Settlement Period
11	Beacom House	68	12th Street	1889	Settlement Period
12	Maronich House	87	12th Street	1889	Victorian Period
13	Susan House	67	11th Street	1874	Settlement Period
14	Leveque House	320	Park Avenue		
15	Ca. Central Creameries Plant	2151	9th Street	1918	Craftsman Period
16	Thomas Devlin House	885	K Street	1900	Transitional Period
17	Burrows House	453	F Street		
18	Simpson House	493	G Street		
19	Truesdell House	494	H Street	1876	Settlement Period
20	Fleckenstein-Newton House	588	H Street		
21	Monette House	665	F Street	1885	Settlement Period
22	Senevey-Menefee House	513	I Street	1880	Settlement Period
23	Baiocchi House	895	7th Street	1925	Craftsman Period
24	Selvage House	609	J Street	1874	Settlement Period
25	Eddy-Greene House	987	8th Street		
26	Vaissade House	927	J Street	1905	Transitional Period
27	Nixon House	1022	10th Street	1858	Settlement Period
28	Minor Theatre	1013	H Street	1914	Craftsman Period
29	Minor Building	1015	H St.	1914	Craftsman Period
30	Epicurean Restaurant	1057	H Street	1884	Victorian Period
31	First National Bank	1000	H Street	1913	Craftsman Period
32	Arcata Theater	1036	G Street	1937	Modern Period
33	Seely & Titlow Building	970	I Street		
34	Chevret House	739	10th Street		
35	Murray House	987	F Street	1901	Victorian Period
36	Hotel Arcata	780	9th Street	1915	Craftsman Period
37	Hunt House	839	9th Street		
38	Plaza		Block 167	1850	Settlement Period
39	Union Building	898	G Street	1890	Victorian Period
40	KXGO Radio/ Western Auto	826	G Street		
41	Old Post Office Building	735	8th Street		
42	Jacoby Building	791	8th Street	1857	Settlement Period
43	Packer's House	630	11th Street	1870	Settlement Period
44	Sowash House	1160	G Street	1914	Craftsman Period
45	Morgan House	1192	G Street	1901	Victorian Period
46	Miller House	1193	G Street	1900	Transitional Period

#	NAME		Street Address	Built	Historic Period
47	Pythian Castle	1100	H Street	1884	Victorian Period
48	Stewart Foster House	1139	H Street		
49	Moulton-Barlow House	860	11th Street	1907	Transitional Period
50	Wagner Block House	1157	J Street	1920	Craftsman Period
51	Wagner Block House	1187	J Street	1920	Craftsman Period
52	Wagner Block House	1087	12th Street	1920	Craftsman Period
53	Schorlig House	1050	12th Street	1885	Victorian Period
54	C.E. Daniels House	918	12th Street	1885	Victorian Period
55	Beers-Ely House	1285	I Street	1877	Settlement Period
56	Bair-Stokes House	916	13th Street	1888	Victorian Period
57	Horel House	980	13th Street	1904	Transitional Period
58	McCormack/ MacMillan House	1056	13th Street	1903	Transitional Period
59	Gastman-Gaynor Beer House	1362	K Street	1902	Transitional Period
60	David Wood House	1318	H Street	1910	Craftsman Period
61	Ericson House	1376	H Street	1870	Settlement Period
62	Whaley House	1395	H Street	1855	Settlement Period
63	Zehndner-Parton House	1164	14th Street	1902	Transitional Period
64	Stone House	902	14th Street	1888	Victorian Period
65	Cullberg House	1452	I Street	1862	Settlement Period
66	A. Gastman House	1492	H Street	1898	Victorian Period
67	William-Smith House	1542	H Street	1888	Victorian Period
68	Jako-Wagner House	1593	F Street		
69	Barter Bungalow/ Court	1645	G Street	1930	Craftsman Period
70	Smith-Mckenzie House	1619	H Street	1877	Settlement Period
71	Scribner House	1661	H Street	1885	Victorian Period
72	Sweet House	1717	H Street	1911	Craftsman Period
73	Godden House	938	17th Street	1919	Craftsman Period
74	Davidson-Carroll Store/ House	1593	I Street	1914	Craftsman Period
75	Keller House	1566	I Street	1894	Victorian Period
76	Stewart School Building	1125	16th Street	1925	Craftsman Period
77	St. Mary's Church	1090	16th Street	1884	Victorian Period
78	Greenwood Cemetery	1757	J Street	1860	Settlement Period
79	Nelson Hall		Humboldt St. Univ.	1940	Craftsman Period
80	Gist Hall		Humboldt St. Univ.	1933	Craftsman Period
81	Jenkins Hall		Humboldt St. Univ.	1950	Craftsman Period
82	Founders Hall		Humboldt St. Univ.	1921	Craftsman Period
83*	Bayside Post Office	1786	Old Arcata Road		
84*	Chaffey House	1220	Spear Avenue	1887	Victorian Period
85*	O'Grady House	1630	27th Street		
86*	Strobel House	1621	J Street	1874	Settlement Period
87*	Zehndner-Harpst-Austin House	1860	11th Street	1870	Settlement Period
88*	McMillian House	589	F Street		
89*	Old Methodist Church-Parsonage House	1166	H Street		
90*	Liscom-Morrell House	1166	I Street		
91*	Morrell-St. Louis House/Barn/Milk House	3215	St. Louis Road		
92*	Janes School House	1105	Spear Avenue		
93*	Pointsett House	3501	Boyd Road		

City of Eureka Local Register of Historic Places

City of Eureka Local Register of Historic Places

Parcel Number	Street Address	Owner
001-021-003	37 W 2ND ST	MOORE JACK E TR 4617 LITTLE CALIFORNIA ST EUREKA, CA 95501
001-031-005	50 W 5TH ST	HONE GAVIN & HONE BRIAN 2640 VISSER CT MCKINLEYVILLE, CA 95519
001-033-004	505 SUMMER ST	DIVINE FREDRIC C & VICTORIA G TR 1924 4TH ST SAN RAFAEL, CA 94901
001-042-001	115 W 6TH ST	FREITAS MARCO & MARIA A D V 3667 MIDDLEFIELD ST EUREKA, CA 95501
001-042-012	609 SUMMER ST	CHAMBERS JONATHAN J & MELINDA L TR 2565 FOREST KNOLL LANE EUREKA, CA 95503
001-042-013	119 W 6TH ST	CHAMBERS JONATHAN J & MELINDA L & DUNLAP BRIAN UMT 2850 E STREET EUREKA, CA 95501
001-045-010	719 CALIFORNIA ST	FIELD JONATHAN W & CHRISTINE K 6501 NICOLAUS ROAD LINCOLN, CA 95648
001-046-003	724 CALIFORNIA ST	KATRI JEROD J & TOLLEFSON AARIN & DART MILES & JEN 3394 PIGEON POINT RD EUREKA, CA 95503
001-046-008	803 PINE ST	BRADY MARIAN 803 PINE ST EUREKA, CA 95501

City of Eureka Local Register of Historic Places

Parcel Number	Street Address	Owner
001-047-009	813 SUMMER ST	KING BRENDA R 1874 CECIL AV FORTUNA, CA 95540
001-047-012	801 SUMMER ST	MCGILLIVRAY GERALD JR & KATHY PO BOX 72 FORTUNA, CA 95540
001-048-012	312 W WASHINGTON ST	NICHOLS ANDREW & ROBISON KEATON 911 C ST EUREKA, CA 95501
001-051-003	102 F ST	BARMORE MICHAEL K & LORENA D TR PO BOX 464 LOLETA, CA 95551
001-051-004	108 F ST	VELLUTINI DOLORES M TR 2424 J ST EUREKA, CA 95501
001-051-009	403 2ND ST	EUREKA PRESERVATION PARTNERS PO BOX 2103 RANCHO MIRAGE, CA 92270
001-051-011	424 FIRST ST	FSB HOLDINGS LLC CO PO DRAWER 1008 EUREKA, CA 95502
001-051-015		VELLUTINI DOLORES M TR 2424 J ST EUREKA, CA 95501
001-052-008	301 2ND ST	SWAN RICHARD G & NANCY C 646 ROCKING HORSE CT SAN JOSE, CA 95123

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Parcel Number	Street Address	Owner
001-053-001	200 FIRST ST	ODELL PATRICK S TR PO BOX 29 OAKVILLE, CA 94562
001-053-005	223 2ND ST	FERGUSON KARL & DANIELLE HWCPRS 607 STONE LANE TRINIDAD, CA 95570
001-062-002	208 C ST	KRAUSE LESTER L & KATHLEEN F TR PO BX 841 BAYSIDE, CA 95524
001-062-003	242 C ST	G & K PAVILLION LLC CO 1589 MYRTLE AVE EUREKA, CA 95501
001-062-004	127 3RD ST	HOPKINS JACKSON D & POZEL LYND A TR 2402 D ST EUREKA, CA 95501
001-081-001	605 B ST	EUREKA CITY OF POLICE DEPT
001-084-005	716 B ST	HOCH RICHMOND J & DIANE C TR 1985 CAMPTON RD EUREKA, CA 95503
001-084-006	724 B ST	SANDERS MARK & BRENDA K 17023 424TH DR. SE GOLD BAR, WA 98251
001-084-007	732 B ST A & B	FREEMAN DONALD R 275 FOX HILL LANE FORTUNA, CA 95540

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Parcel Number	Street Address	Owner
001-091-001	203 F ST	CARTER MARK J TR 301 L ST EUREKA, CA 95501
001-091-006	236 G ST	GLOBE IMPORTS LTD INC PO BX 952 EUREKA, CA 95502
001-091-007	241 F ST	CARSON BLOCK QALICB LLC CO 241 F STREET EUREKA, CA 95501
001-092-001	213 E ST	PROVISOR INVESTMENT PROPERTIES LLC CO PO BOX 2238 REDWAY, CA 95560
001-092-002	416 2ND ST	ESTRADA KARINA I TR 3353 32ND AVENUE SOUTH MINNEAPOLIS, MN 55406
001-092-003	422 2ND ST	ULANSEY LEE R & CATHERINE A TR PO BOX 57 EUREKA, CA 95502
001-092-004	426 2ND ST	IRVINE JOHN W & IRVINE MARGARET Y TR 2159 TERRA VISTA AVE MCKINLEYVILLE, CA 95519
001-093-004	320 2ND ST	IMPERIALE SQUARE LLC 1821 BARNEY STREET FORTUNA, CA 95540
001-093-011	240 E ST	CLARKE MEMORIAL MUSEUM 240 E ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
001-093-016	306 2ND ST	FANUCCHI EVO & CATHERINE 218 D ST EUREKA, CA 95501
001-095-001	404 3RD ST	WILLIAMS WILLIAM R TR 1901 12TH AVE SACRAMENTO, CA 95818
001-095-005	329 E ST	EUREKA CENTRAL II 6600 HUNTER DR ROHNERT PARK, CA 94928
001-095-007	324 F ST	CARTER PROPERTIES 301 L ST EUREKA, CA 95501
001-096-002	312 3RD ST	EUREKA CITY OF CR 531 K ST EUREKA, CA 95501
001-096-004	310 E ST	SELBY AND BLACKWOOD PROPERTIES LLC 316 E ST EUREKA, CA 95501
001-096-006	350 E ST	FRANK VANESSA & FRANK HEATHER SUC TR PO BOX 126 TRINIDAD, CA 95570
001-111-003	636 F ST	HUMBOLDT ARTS COUNCIL INC 636 F ST EUREKA, CA 95501
001-123-003	511 2ND ST	OLD TOWN 3 LLC CO 1589 MYRTLE AVE EUREKA, CA 95501

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Parcel Number	Street Address	Owner
001-123-005	503 2ND ST	LAND TRAVIS A & SARAH B 123 F ST EUREKA, CA 95501
001-123-006	109 F ST	EUREKA PRESERVATION PARTNERS PO BOX 2103 RANCHO MIRAGE, CA 92270
001-131-002	812 2ND APTS A-B ST	TUTEJA ASHOK K & XUEJUAN L TR 2954 DEVONSHIRE CIR SALT LAKE CITY, UT 84108
001-131-003	826 2ND ST	MCGUIRE JAKE PO BOX 372 FIELDS LANDING, CA 95537
001-131-006	817 3RD ST	MARTIN KELLY & KALA PO BX 6158 EUREKA, CA 95502
001-131-007	805 3RD ST	CASAGRANDE GREG & CASAGRANDE LISA TR PO BOX 6768 EUREKA, CA 95502
001-132-007	711 3RD ST	FULLERTON JOHN B 711 THIRD ST EUREKA, CA 95501
001-133-001	213 G ST	MARTIN KELLY J & KALA L PO BX 6158 EUREKA, CA 95502
001-133-002	210 H ST	OLD TOWN 3 LLC CO 1589 MYRTLE AVE EUREKA, CA 95501

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Parcel Number	Street Address	Owner
001-133-005	621 3RD ST	HUMBOLDT PARLOR 14 NSGW PO BX 5041 EUREKA, CA 95502
001-133-007	239 G ST	MARTIN KELLY J & KALA L PO BOX 6158 EUREKA, CA 95502
001-136-004	617 4TH ST	POUND WENDY L & KOVACS KURT & GROOM BARBARA A TR 617 FOURTH ST EUREKA, CA 95501
001-141-005	701 5TH ST	UMPQUA BANK 9285 NE TANASBOURNE DR HILLSBORO, OR 97124
001-143-002	412 G ST	CUE II LLC 323 FIFTH ST EUREKA, CA 95501
001-145-001	515 G ST	HUMBOLDT MASONIC TEMPLE ASSN PO BX 197 EUREKA, CA 95502
001-145-002	514 H ST	HONOR LLC CO 2425 NORTH RIDGEPARK LN ORANGE, CA 92867
001-146-001	500 5TH ST	A & K INVESTMENTS LLC 1589 MYRTLE AVE EUREKA, CA 95501
001-154-006	703 8TH ST	HUMBOLDT COUNTY HISTORICAL SOCIETY 703 8TH STREET EUREKA, CA 95501

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Parcel Number	Street Address	Owner
001-155-003	730 H ST	NEWH LLC PO BOX 668 EUREKA, CA 95502
001-156-001	518 7TH ST	EUREKA INN LLC CO 518 7TH ST EUREKA, CA 95501
001-171-002	1020 2ND ST	FEARON BRIAN R & CREMA CHRISTINE TR 728 4TH ST #F EUREKA, CA 95501
001-171-005	1027 3RD ST	CARTER FAMILY REAL ESTATE LLC CO 301 L ST EUREKA, CA 95501
001-171-006	1023 3RD ST	CARTER FAMILY REAL ESTATE LLC CO 301 L STREET EUREKA, CA 95501
001-171-009	1006 2ND ST	FREDSTI DANA & FITZGERALD DAVID WHTC & PAYNTER JEN 1006 2ND ST EUREKA, CA 95501
001-172-004	931 3RD ST	CARTER PROPERTIES 301 L ST EUREKA, CA 95501
001-172-005	923 3RD ST	CARTER JOSEPH P SM ET AL 301 L ST EUREKA, CA 95501
001-172-006	911 3RD ST	CARTER PROPERTIES 301 L ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
001-174-003	1026 3RD ST	RAEL GREGORY L & RHONDA K & EDSON JUDITH L TR 1026 3RD ST EUREKA, CA 95501
001-174-007	1023 4TH ST	RUSH GERALD D & BELINDA M TR 572 OBRIEN RD PORT ANGELES, WA 98362
001-194-002		HUMBOLDT COUNTY OF PARKING LOT & HEALTH CENTER
001-206-001	707 I ST	HUNT HOWARD L & JANETH N TR 2161 GOLF COURSE RD BAYSIDE, CA 95524
001-223-004	304 N ST	NORTHCOAST CHILDRENS SERVICES INC PO BOX 1165 ARCATA, CA 95521
001-235-004	1236 6TH ST	CHAMBERLAIN PAUL M PO BOX 2066 TRINIDAD, CA 95570
001-241-016	1315 8TH ST	MARTINI JENNA R M & MARTINI ALBERT P WHCPRS 308 W ORMONDE RD SAN LUIS OBISPO, CA 93401
001-242-004	1235 8TH ST	TRALLE CHERYL B TR 1235 8TH ST EUREKA, CA 95501
001-244-001	805 N ST	DYER BERT E & MCINERNEY JOSEPH T TR PO BOX 2163 WEAVERVILLE, CA 96093

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Parcel Number	Street Address	Owner
001-245-002	1218 8TH ST	LUTHER GUY K & JUDITH A 4157 EXCELSIOR RD EUREKA, CA 95503
001-245-006	1205 9TH ST	ESPITIA BELEN 1205 9TH STREET EUREKA, CA 95501
001-245-009	811 M ST	BARBOZA CAROL S 811 M ST EUREKA, CA 95501
001-246-002	804 M ST	DELGADO ROBERTO E & LOPEZ MARINA M & MAXON JUSTIN 804 M STREET EUREKA, CA 95501
001-251-010	1521 6TH ST	KIMBEL REBECCA TR 37506 COUNTY RD 69 BRIGGSDALE, CO 80611
001-251-011	1505 6TH ST	CHIN ALAN & SAM D TR 2333 F ST EUREKA, CA 95501
001-252-007	1423 6TH ST	SPENCER LEE R & BARBARA A 2218 RAINTREE LN RIVERBANK, CA 95367
001-252-008	1419 6TH ST	CHIN ALAN & CHIN SAM TR 2333 F ST EUREKA, CA 95501
001-254-006	1417 7TH ST	NASH LESLIE A TR 1417 7TH ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
001-254-007	631 O ST	CHIN ALAN & CHIN SAM TR 2333 F ST EUREKA, CA 95501
001-262-007	725 O ST	HANAFI HAMOUDA B & CATHERINE B 829 MADISON STREET ALBANY, CA 94706
002-031-001	301 P ST	LEWIS GARY W & LEWIS ARGELIS I HWCPRS 301 P ST EUREKA, CA 95501
002-031-002	1522 3RD ST	OPEN DOOR COMMUNITY HEALTH CARE CENTER 1275 8TH ST ARCATA, CA 95521
002-032-001	305 O ST	KOKISH RON & DELSON NIKI TR 1056 VILLAGE RD CARBONDALE, CO 81623
002-032-011	309 O ST	HANSON RORY A & HANSON JO ANN TR 1729 FAIRWAY DR BAYSIDE, CA 95524
002-053-004	1825 2ND ST	JONES MARK A TR PO BOX 517 FORT BRAGG, CA 95437
002-055-001	1607 2ND ST	BIO-JEM INC 2127 W ASH AVE FULLERTON, CA 92833
002-055-005	1613 2ND ST	VAN WOLBECK TINA & CHRISTOPHER & EMILY 280 CASTLE HILL RANCH RD WALNUT CREEK, CA 94595

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Parcel Number	Street Address	Owner
002-061-005	1826 2ND ST	ELLSWORTH CHARLES T JR FAMILY TRUST 1826 2ND ST EUREKA, CA 95501
002-061-007	206 T ST	MARTINS WAYNE W PO BOX 464 EUREKA, CA 95502
002-061-018	1813 3RD ST	GONZALES SHANTHI UWJT & RODRIGUEZ CHRISTOPHER 1813/1811 3RD STREET EUREKA, CA 95501
002-062-003	1739 3RD ST	LAFFERTY STEVEN J & BAKER SARI A HWCPRS 1739 3RD ST EUREKA, CA 95501
002-063-002	1612 2ND ST	TOLLNER MARTHA 1612 2ND ST EUREKA, CA 95501
002-065-003	1722 3RD ST	HEER BALWINDER S HW & KAUR NACHHATTAR 1722 3RD ST EUREKA, CA 95501
002-091-010		HUMBOLDT TRANSIT AUTHORITY -
002-093-003	1939 2ND ST	MITCHELL PAMELA TR 1937 2ND STREET EUREKA, CA 95501
002-093-004	1929 2ND ST	MUNOZ GERARDO S 720 SKYWAY AVE CHICO, CA 95928

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Parcel Number	Street Address	Owner
002-094-004	2136 2ND ST	TRUTNA TIMOTHY N TR 710 E ST SUITE 245 EUREKA, CA 95501
002-104-006	2014 4TH ST	DOUGLAS FIR LODGES INC 2014 4TH ST EUREKA, CA 95501
002-112-005	523 T ST	REDWOOD COMMUNITY ACTION AGENCY 904 G ST EUREKA, CA 95501
002-121-004	2235 FIRST ST	BOLZ FRANCIS 2235 FIRST ST EUREKA, CA 95501
002-181-017	1305 BAY ST	PETRICCA JOSEPH P & JILL S 1305 BAY ST EUREKA, CA 95501
002-182-002	1214 BAY ST	SHOBE JUSTIN & BACKMAN CHRISTINE TR 1214 BAY STREET EUREKA, CA 95501
002-211-001	1507 2ND ST	ELLOWAY KERISA & WONENBERG BRETT 1519 2ND ST EUREKA, CA 95501
002-212-002	1522 2ND ST	CONKLIN NANCY 1522 2ND ST EUREKA, CA 95501
002-212-006	1525 3RD ST	CONDRO LAUREL 1525 3RD ST UNITS 1-4 EUREKA, CA 95501

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Parcel Number	Street Address	Owner
002-212-007	1521 3RD ST	TARI MARK PO BOX 2013 EUREKA, CA 95502
004-011-003	123 W WASHINGTON ST	BLACK KAREN L 1028 FLORIDA ST VALLEJO, CA 94590
004-021-002	129 W CLARK ST	WILLIAMS CARI & WILLIAMS JAMES 129 W CLARK ST EUREKA, CA 95501
004-021-003	123 CLARK ST	CRAIG ROBIN B & LYNDA L 1941 QUAKER ST EUREKA, CA 95501
004-021-005	1126 CALIFORNIA ST	PAYES INVESTMENT PROPERTIES LLC CO 1840 MYRTLE AVE EUREKA, CA 95501
004-021-007	122 W SIMPSON ST	JANOWSKI FRANK & JANOWSKI TERESA 1602 L ST EUREKA, CA 95501
004-021-008	128 W SIMPSON ST	TVEDT TINA N P O BOX 816 GARBERVILLE, CA 95542
004-023-001	135 W SIMPSON ST	CURTICE BRAD & GRETCHEN 4599 EXCELSIOR RD EUREKA, CA 95503
004-023-006	112 W CEDAR ST	RETZLOFF MICHAEL L & ROSEMARIE TR 4709 PATRICIA DR EUREKA, CA 95503

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Parcel Number	Street Address	Owner
004-023-007	124 W CEDAR ST	DILLON CEDAR 124 W CEDAR STREET EUREKA, CA 95501
004-023-008	130 W CEDAR ST	WEST JEANETTE D TR 130 W. CEDAR ST EUREKA, CA 95501
004-024-003	204 W CEDAR ST	BLACK KAREN L & FITZGERALD ERIN L 1028 FLORIDA ST VALLEJO, CA 94590
004-024-004	212 W CEDAR ST	AYRES CAROLYN 212 W CEDAR STREET EUREKA, CA 95501
004-024-005	220 W CEDAR ST	CLARK JEFFREY S 220 W CEDAR ST EUREKA, CA 95501
004-033-007	34 VINE ST	CAVE GENE D TDP 34 VINE ST EUREKA, CA 95501
004-053-004	601 W WABASH AVE	GREGG KENNETH W & TRUDY L 2056 WESTWOOD PL EUREKA, CA 95503
004-054-003	405 W DEL NORTE ST	BURNS PATRICK C & RACHEL PO BOX 5694 EUREKA, CA 95502
004-061-001	135 W CEDAR ST	MCCARTHY ATHENA 135 WEST CEDAR ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-061-002	127 W CEDAR ST	CHRISTIANSEN CORRINE 127 W CEDAR ST EUREKA, CA 95501
004-061-003	125 W CEDAR ST	BIRKS CARL G & DUKES DEBORAH 125 W CEDAR ST EUREKA, CA 95501
004-061-005	1300 CALIFORNIA ST	CALVARY CHAPEL EUREKA INC PO BOX 6920 EUREKA, CA 95502
004-061-006	1334 CALIFORNIA ST	CARTER MARK J TR 301 L ST EUREKA, CA 95501
004-061-008	130 W 14TH ST	RENER NATALIE R & RENER DAVID J 130 W 14TH ST EUREKA, CA 95501
004-061-009	1315 PINE ST	KAY DE ANDREA 1315 PINE ST EUREKA, CA 95501
004-062-003	223 W CEDAR ST	CHAREST KATHERINE SWJT & SANCHEZ RUBEN 223 W CEDAR ST EUREKA, CA 95501
004-062-004	213 W CEDAR ST	GOUVEA SAVANNAH 213 W CEDAR ST EUREKA, CA 95501
004-062-006	1334 PINE ST	HANS HEATHER G 1334 PINE ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-063-009	305 W CEDAR ST	MAPLES WAYNE R & MAXINE M TR ET AL 317 W CEDAR ST EUREKA, CA 95501
004-064-002	123 W 14TH ST	HANES DESSA M 123 W 14TH ST EUREKA, CA 95501
004-065-008	1461 SUMMER ST	OVERTON ARCHIE TR 1986 WASHINGTON AVE A SAN LEANDRO, CA 94577
004-065-009	1455 SUMMER ST	LANNING PHILLIP 1455 SUMMER ST EUREKA, CA 95501
004-071-004	1620 CALIFORNIA ST	MATHESON ELAINE 848 BATAAN AVE DUNKIRK, NY 14048
004-071-007	1646 CALIFORNIA ST	AYRES JOHN TR 6255 LEEANN DR EUREKA, CA 95503
004-071-015	1627 PINE ST	SHELTON BRADLEY JR 16027 BROOKHURST ST STE 1542 FOUNTAIN VALLEY, CA 92708
004-072-003	1616 PINE ST	SCHUSTER GRETCHEN E 805 WILEY CT ARCATA, CA 95521
004-072-009	226 W WABASH AVE	KESSEL GAREN & DOW-KESSEL JENEICE 226 W WABASH AVE EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-072-014	1623 SUMMER ST	COLTRA TERRY L & COLTRA LINDA K 1623 SUMMER ST EUREKA, CA 95501
004-072-015	1615 SUMMER ST	SHANNON MICHAEL D & JACQUELINE M 1615 SUMMER ST EUREKA, CA 95501
004-072-016	1633 SUMMER ST	MORI PIERO & FREUDE EVELYNN 1633 SUMMER STREET EUREKA, CA 95501
004-073-007	1644 SUMMER ST	TRANSITIONAL RESIDENTIAL TREATMENT FACILITIES PO BOX 6244 EUREKA, CA 95502
004-081-008	104 W DEL NORTE ST	HENDRICKSON BARRY A & KIMBERLY R 104 WEST DEL NORTE ST EUREKA, CA 95501
004-082-005	207 W WABASH AVE	MCCURDY BRYCE W B & BROOK A K & LARSON JACOB 2035 EVERDING ST EUREKA, CA 95503
004-082-006	204 W DEL NORTE ST	GUIMOND WILLIAM J & BEVERLY J TR 66 SUNSHINE WAY EUREKA, CA 95503
004-082-010	222 W DEL NORTE ST	BRUHNKE LOUIS 222 W DEL NORTE ST EUREKA, CA 95501
004-084-008	1910 CALIFORNIA ST	HUMBOLDT SENIOR RESOURCE CENTER INC 1910 CALIFORNIA ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-085-003	213 W DEL NORTE ST	BROWN LELAND W & BROWN BONNIE J TR & FERGUSON KENN 213 W DEL NORTE ST EUREKA, CA 95501
004-085-007	226 W SONOMA ST	THOMPSON WAYNE 350 BEAN CREEK RD SCOTTS VALLEY, CA 95066
004-085-008	234 W SONOMA ST	HALL JESSICA 234 W SONOMA ST EUREKA, CA 95501
004-091-004	827 B ST	HARTMAN DENNIS R & DAPHNE G 827 B ST EUREKA, CA 95501
004-092-001	801 A ST	LINDLEY SARAH A 312B MYRTLE ST SANTA CRUZ, CA 95060
004-092-006	815 A ST	ZWIEFELHOFER BRAD A & JOANNA HWCPRS PO BOX 222 CARLOTTA, CA 95528
004-092-007	811 A ST	JOHNSON LAUREL R 811 A ST EUREKA, CA 95501
004-093-006	935 B ST	GAINES DAVID 935 B ST EUREKA, CA 95501
004-093-007	921 B ST	TITUS BEVERLY & OLSON CARRIE PO BOX 4170 ARCATA, CA 95521

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Parcel Number	Street Address	Owner
004-093-008	917 B ST	BENNETT RHONDA 917 B ST EUREKA, CA 95501
004-094-002	904 B ST	FAUSER ELAINE D TR 88 W NAPA DR PETALUMA, CA 94954
004-095-005	916 A ST	CHANDLER MARGO A TR 916 A ST EUREKA, CA 95501
004-095-008	10 W GRANT ST	WOLFE BARON 10 W GRANT ST EUREKA, CA 95501
004-101-001	1003 B ST	BEST DAVID W 275 SHIRLEY BL ARCATA, CA 95521
004-101-013	1024 C ST	CASANOVA MARK A & SHERI D 1002 C ST EUREKA, CA 95501
004-104-005	1134 C ST	SERVICE ROBERT & PAMELA 1134 C ST EUREKA, CA 95501
004-104-008	1111 B ST	URSICH CHRISTOPHER A TR 1111 B ST EUREKA, CA 95501
004-106-002	25 W CLARK ST	MCQUOWN MARVIN D PO BOX 12 JUNCTION CITY, CA 96048

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Parcel Number	Street Address	Owner
004-111-001	1205 B ST	DRURY ELLEN M 54 BEACH DR TRINIDAD, CA 95570
004-111-008	1229 B ST	BRADFORD CARYLE K PO BOX 1233 EUREKA, CA 95502
004-112-002	1204 B ST	SNOWDEN CHARLES L & MARGARET C 1204 B ST EUREKA, CA 95501
004-112-004	1218 B ST	SERPA ROBERT TR 1502 CEDAR ST APT C BERKELY, CA 94703
004-112-008	1233 A ST	CARLSON CHARLES A & ERICA M 1233 A STREET EUREKA, CA 95501
004-113-006	18 W CEDAR ST	GOETSCH DALE R & DARIA M 18 W CEDAR ST EUREKA, CA 95501
004-114-006	1313 B ST	SMITH HARLEY N PO BOX 117 EUREKA, CA 95502
004-115-013	1315 A ST	WALTERS DUDLEY & LAURI 503 N FIR VILLA RD. DALLAS, OR 97338
004-116-003	15 W CEDAR ST	DIONNE DANIEL L & LINDA M 15 W CEDAR ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-116-008	28 W 14TH ST	NORDLOF MARTIN T & SUSAN F 28 W 14TH ST EUREKA, CA 95501
004-121-001	1405 B ST	SMITH SUZANNE R TR 1401 J STREET EUREKA, CA 95501
004-121-002	1406 C ST	VIEYRA DOUGLAS L & LILIANE E TR 1406 C ST EUREKA, CA 95501
004-121-005	1446 C ST	SHERMAN RUPPE JENIFER M 1446 C ST EUREKA, CA 95501
004-121-008	1461 B ST	JORDAN ROBERT D 2414 D ST EUREKA, CA 95501
004-121-009	1449 B ST	MESSEGE JAMIE R WSJT & SHIRLEY KRISTEN K 1449 B ST EUREKA, CA 95501
004-122-002	24 14TH ST	ROJAS GILBERTO B & GONZALEZ CARMELA P 1404 B ST EUREKA, CA 95501
004-122-010	1441 A ST	LUBKE RYAN K & LUBKE ANNA K 1441 A ST EUREKA, CA 95501
004-122-011	1439 A ST	JONES CARLOS R & KYUNG S 1439 A ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-131-011	1613 B ST	HASSLER WILLIAM & RESNICK NANCY TR 5460 ERICSON WAY ARCATA, CA 95521
004-132-015	11 WABASH AVE	CORAGLIOTTI MICHAEL C & ROBERTA COTR P.O. BOX 9175 VALLEJO, CA 94591
004-133-012	1625 CALIFORNIA ST	MUCHA DAVID J 1625 CALIFORNIA ST EUREKA, CA 95501
004-143-001	1801 CALIFORNIA ST	PRIVAT JODI 3060 BARBER CREEK RD HYDESVILLE, CA 95547
004-143-008	1829 CALIFORNIA ST	SANDERS DANNY W & HONEYCUTT KATHERINE M PO BOX 5627 EUREKA, CA 95502
004-143-009	1823 CALIFORNIA ST	BAILEY ULYSSES 3868 WELLINGTON ST EUREKA, CA 95501
004-143-010	1811 CALIFORNIA ST	EVENSON DARRELL E SR 1811 CALIFORNIA ST EUREKA, CA 95501
004-144-006	1929 B ST	MCCURDY BROOK MPSE 2035 EVERDING ST EUREKA, CA 95503
004-146-007	1930 A ST	PICKERING ALIAH C SP 1930 A ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-151-009	902 E ST	OTTO ADRIENNE PO BOX 408 EUREKA, CA 95502
004-151-020	821 D ST	WOOD GENIE TR 821 D ST EUREKA, CA 95501
004-161-004	1028 E ST	PELREN GARY & PAMELA 1374 ALDER GROVE RD ARCATA, CA 95521
004-161-007	303 CLARK ST	BURNS PHILIP E 303 CLARK ST EUREKA, CA 95501
004-161-008	1031 D ST	PAVLETICH THOMAS 1031 D ST EUREKA, CA 95501
004-162-001	1003 C ST	TUVELL PRIYA M & USHA J & CHRISTOPHER K & SILVA 115 SANTA FE LN CHICO, CA 95973
004-162-003	226 GRANT ST	CHAPIN B EILEEN & STURDY WILLIAM 239 CLARK ST EUREKA, CA 95501
004-162-004	230 GRANT ST	STURDY WILLIAM A 239 CLARK ST EUREKA, CA 95501
004-162-006	250 GRANT ST	GUIMOND WILLIAM J & BEVERLY J TR 66 SUNSHINE WAY EUREKA, CA 95503

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Parcel Number	Street Address	Owner
004-162-008	239 CLARK ST	STURDY WILLIAM A 239 CLARK ST EUREKA, CA 95501
004-162-009	227 CLARK ST	FERRIS DIANA R 227 CLARK ST EUREKA, CA 95501
004-162-014	1011 C ST	LYNES CHRISTOPHER W & LINDA K 1011 C ST EUREKA, CA 95501
004-163-005	272 CLARK ST	MACMILLAN-SCHWABE LAURIE A TR 272 CLARK STREET EUREKA, CA 95501
004-163-011	303 HILLSDALE ST	MASON NICKLAS SMJT & NYOKKA EMILY 352 MEADOW VIEW LANE GARBERVILLE, CA 95542
004-163-015	261 HILLSDALE ST	SELVIDGE KIMBER L 261 HILLSDALE ST EUREKA, CA 95501
004-163-016	251 HILLSDALE ST	CRABB RICHARD M & CRABB KIYOKO TR 251 HILLSDALE ST EUREKA, CA 95501
004-163-017	239 HILLSDALE ST	FLYNN MICHAEL E & JEAN M TR 239 HILLSDALE ST EUREKA, CA 95501
004-163-020	234 CLARK ST	RHUDE PAULA I TR PO BOX 38 EUREKA, CA 95502

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Parcel Number	Street Address	Owner
004-163-024	233 HILLSDALE ST	WOMACK RICHARD L & WOMACK LYNDA C & BINGHAM SUSAN 517 EVERDING ST EUREKA, CA 95503
004-171-002	258 HILLSDALE ST	HEUER SAIGE 258 HILLSDALE ST EUREKA, CA 95501
004-171-005	278 HILLSDALE ST	WRIGHT JEREMY & MORRISON SUSAN A 278 HILLSDALE ST EUREKA, CA 95501
004-171-009	1302 E ST	BINNIE WILLIAM T & JUDITH L 11000 WEST END RD ARCATA, CA 95521
004-171-024	1305 WILLIAMS ST	WILKINS CHRISTOPHER & MARIE C 1305 WILLIAMS ST EUREKA, CA 95501
004-172-003	220 HILLSDALE ST	LEPHEW MICHAEL J 220 HILLSDALE ST EUREKA, CA 95501
004-172-004	232 HILLSDALE ST	BENZONELLI HEIDI 1985 CAMPTON RD EUREKA, CA 95503
004-172-011	235 14TH ST	FARRAR WAYNE TR 235 14TH ST EUREKA, CA 95501
004-172-014	1321 C ST	ALCOHOL DRUG CARE SERVICE INC 2109 BROADWAY STE A EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-172-020	1222 WILLIAMS ST	CARTER JILLIAN PO BOX 4972 EUREKA, CA 95502
004-172-021	1239 C ST	DEPROSPERO CHRISTINA & RAPLJENOVIC AARON WHJT & RA 1239 C STREET EUREKA, CA 95501
004-181-001	1401 D ST	REGIER PHILIP J & JANET E TR 15705 MILNE CIR MOORPARK, CA 93021
004-181-002	316 14TH ST	OSENBAUGH REGINA 316 14TH ST EUREKA, CA 95501
004-181-005	1410 E ST	SCHIERER BETH A 1410 E ST EUREKA, CA 95501
004-181-008	1421 D ST	CLARK DONALD R 7587 ELK RIVER RD EUREKA, CA 95503
004-181-009	1413 D ST	STARK ERIC M & PATRICIA A G TR 877 A ST ARCATA, CA 95521
004-182-002	264 14TH ST	HAGEN BRIANNE N & HAGEN PETER J 264 14TH ST EUREKA, CA 95501
004-182-007	1424 D ST	LANNUNZIATA HELEN & LOHOEFENER CHRISTOPHER 1026 E MITCHELL ST TUCSON, AZ 85719

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Parcel Number	Street Address	Owner
004-182-008	287 15TH ST	EDDISFORD LUCIEN & ISABELLE 287 15TH ST EUREKA, CA 95501
004-183-009	223 15TH ST	SANDS LORETTA A 223 15TH ST EUREKA, CA 95501
004-183-011	1423 C ST	HUNT WILLIAM R & HUNT ZENA TR 1621 E STREET NAPA, CA 94559
004-183-012	1409 C ST	SMITH KAREN A 1409 C ST EUREKA, CA 95501
004-185-002	254 15TH ST	ARONSON SANDRA 254 15TH ST EUREKA, CA 95503
004-185-004	1502 D ST	FREESE DANIEL R & SUSANNA 1502 D ST EUREKA, CA 95501
004-186-003	226 15TH ST	DORIS TIMM TR 226 15TH ST EUREKA, CA 95501
004-194-002	324 WATSON ST	MOORE JAMES 324 WATSON ST EUREKA, CA 95501
004-194-006	1628 E ST	NEWCOMB MARK D & TAMMY 1628 E ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-194-007	1633 D ST	RECTOR WARDENS AND VESTRY OF CHRIST CHURCH PARISH PO BOX 861 EUREKA, CA 95502
004-195-002	1606 D ST	BLACKSONE KIM SUC TRTC & MCGINNIS MARK MSTC 333 HENDERSON DR SAN JOSE, CA 95123
004-197-001	303 WABASH AVE	STOKEY PAUL G 649 MAIN ST ST HELENA, CA 94574
004-199-002	1603 C ST	THRASH STANLEY A & KATHERINE E PO BX 342013 LAKEWAY, TX 78734
004-199-004	1627 C ST	LEE DAVID A & JANICE M 1627 C ST EUREKA, CA 95501
004-199-005	1631 C ST	HALES JENNIFER & SIMS HANK 1631 C ST EUREKA, CA 95501
004-199-008	1657 C ST	SHAPIRO MICHAEL 2613 SWANLUND LANE EUREKA, CA 95503
004-201-004	1804 D ST	GRISWOLD TERRY E & MARY L HWJT ET AL 623 HAYES ST EUREKA, CA 95501
004-201-010	1817 WILLIAMS ST	STEPHENS SHERRY D 1817 WILLIAMS ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-206-001	1903 C ST	MCKAY LAUREL B 1903 C ST EUREKA, CA 95501
004-206-005	1927 C ST	SABATA SUSANNE J SWTC & DEMONTIGNY EVERTA SOLOMON 1927 C ST EUREKA, CA 95501
004-211-001	803 F ST	OCONNOR DANIEL J 5741 NE HAZEL CT NEWPORT, OR 97365
004-211-004	537 9TH ST	REDWOOD COMMUNITY ACTION AGENCY INC 904 G ST EUREKA, CA 95501
004-221-002	904 G ST	REDWOOD COMMUNITY ACTION AGENCY INC 904 G ST EUREKA, CA 95501
004-221-016	925 F ST	GRIGGS TOBIAS R 925 F ST EUREKA, CA 95501
004-221-018	911 F ST	FAUSER PETER C & FAUSER LELA J 1121 WALKER POINT RD BAYSIDE, CA 95524
004-222-013	1016 F ST	GOOSBY ZUETTI L & GOOSBY BRENDA A TR 4619 FLORENCE PL EUREKA, CA 95503
004-231-007	1137 F ST	GENTLE SAMMY R & DARLENE A 1137 F ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-232-001		EUREKA CITY OF AUDITORIUM
004-233-007	1225 F ST	KUNZE MARC & HALL AMANDA C 1225 F STREET EUREKA, CA 95501
004-233-010	1207 F ST	JORDAN ROBERT 2414 D ST EUREKA, CA 95501
004-234-002	1200 F ST	MACDONALD JILL J TR 2426 G STREET EUREKA, CA 95501
004-234-007	1207 E ST	PEELE JONAH 1207 E ST EUREKA, CA 95501
004-234-008	430 12TH ST	FONSECA MANUEL PO BOX 3061 EUREKA, CA 95502
004-242-001	1303 E ST	WEYER FAMILY PROPERTIES LLC CO PO BOX 4925 EUREKA, CA 95502
004-242-008	1333 E ST	TRIPP STEVEN D & TRIPP LAURA HWCPRS 1333 E ST EUREKA, CA 95501
004-242-009	1329 E ST	COLE HUGH B 1656 CHURCH AVE MCKINLEYVILLE, CA 95519

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Parcel Number	Street Address	Owner
004-243-007	1428 G ST	BELL KEVIN C 1428 G STREET EUREKA, CA 95501
004-243-017		MARSH JAMES N IV & PHOEBE M 516 14TH STREET EUREKA, CA 95501
004-251-002	514 15TH ST	BLADOW JOAN M & GEORGE 514 15TH ST EUREKA, CA 95501
004-251-004	1510 G ST	WASSON LARRY L & KAREN A 1510 G ST EUREKA, CA 95501
004-251-014	1604 G ST	KUHNEL RONALD W TR PO BOX 1049 FERNDAL, CA 95536
004-251-024	1646 G ST	KUHNEL RONALD W TR PO BOX 1049 FERNDAL, CA 95536
004-252-008	1523 E ST	PELLE JESSE 1523 E ST EUREKA, CA 95501
004-263-009	325 DEL NORTE ST	ALBIN CHESTER C TR PO BOX 601 FORTUNA, CA 95540
004-264-002	1910 G ST	METHODIST EPISCOPAL 520 DEL NORTE ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
004-264-007	1926 G ST	FIRST METHODIST CH 520 DEL NORTE ST EUREKA, CA 95501
004-265-002	1922 F ST	HOWATT CATRINA L & H BRENT TR 1922 F ST EUREKA, CA 95501
004-266-005	1940 E ST	HAAS GEORGE TR 1940 E ST EUREKA, CA 95501
005-014-006	933 I ST	SCHULZE LINDA L TR 933 I ST EUREKA, CA 95501
005-016-001	905 G ST	THISSELL-CARTER VIRGINIA TR 905 G STREET EUREKA, CA 95501
005-021-004	1030 J ST	CRANFORD CLAUDIA 1030 J ST EUREKA, CA 95501
005-022-001	1003 H ST	KEIG LESLIE 3529 PIGEON POINT RD EUREKA, CA 95503
005-022-003	1024 I ST	HANCOCK JOHN AA PO BOX 63 EUREKA, CA 95502
005-022-008	1039 H ST	ZEBADIAH DEVANE PO BOX C MAD RIVER, CA 95552

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Parcel Number	Street Address	Owner
005-023-001	1005 G ST	GLADSTONE-CLARK JEAN TR 1005 G ST EUREKA, CA 95501
005-025-006	1125 H ST	BROPHY CATHERINE A & BROPHY GRANT M 1632 BROADWAY ST#455 EUREKA, CA 95501
005-026-004	1122 H ST	TEMPELAERE AARON 1122 H ST EUREKA, CA 95501
005-026-005	1134 H ST	DODD ROBERT & MARY 1134 H ST EUREKA, CA 95501
005-031-003	1236 J ST	SULLIVAN WILLIAM P & AMY B 1236 J ST EUREKA, CA 95501
005-031-005	1237 I ST	VAN BUSKIRK STASIA V & WADE H 16707 S PAM DR OREGON CITY, OR 97045
005-033-002	1204 H ST	KELSO TOM 1204 H ST EUREKA, CA 95501
005-033-003	1212 H ST	MOSSMAN ALEXANDER W 1212 H ST EUREKA, CA 95501
005-033-007	1225 G ST	ZWIEFELHOFER BRENDA & DALY CHARLES D TR 3225 EDGEWOOD RD EUREKA, CA 95501

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Parcel Number	Street Address	Owner
005-034-001	1303 I ST	BASHIRI NICOLE N 1303 I STREET EUREKA, CA 95501
005-034-006	1323 I ST	PRESTON DALE & SENNOTT CATHERINE B COTR 1335 H ST EUREKA, CA 95501
005-036-003	1300 H ST	VERBECK JONATHAN A & EILEEN C 624 13TH ST EUREKA, CA 95501
005-036-010	1312 H ST	PETTY CHARLES A & WENDY L 1312 H ST EUREKA, CA 95501
005-042-007	717 15TH ST # A	HARRIS MICHAEL B 717 15TH ST EUREKA, CA 95501
005-043-008	625 15TH ST	CHRIST CHURCH PO BX 861 EUREKA, CA 95502
005-044-008	1525 I ST	MULLEN LYNETTE C PO BOX 1033 EUREKA, CA 95502
005-045-003	1500 I ST	MUELLER TIMOTHY F & RHONDA L 1500 I ST EUREKA, CA 95501
005-045-004	1512 I ST	ONEILL ERIK T & CHRISTINE M PO BOX 242 CUTTEN, CA 95534

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Parcel Number	Street Address	Owner
005-045-005	737 16TH ST	HILSON DEREK K & ANN C K 737 16TH ST EUREKA, CA 95501
005-045-006	725 16TH ST	CHAPPELLE LEE 725 SIXTEENTH ST EUREKA, CA 95501
005-045-007	715 16TH ST	WATKINS MATTHEW G & BONNIE E 715 16TH STREET EUREKA, CA 95501
005-046-006	639 16TH ST	DANIELS DEBORAH PO BOX 3030 EUREKA, CA 95502
005-051-002	822 16TH ST	STIEGLITZ DAVID & WYLES MARGARET M 822 16TH ST EUREKA, CA 95501
005-051-003	1604 J ST	SANDERSON PAUL M 1604 J ST EUREKA, CA 95501
005-051-004	1632 J ST	BRUNDAGE J ERIC 1341 FICKLE HILL RD ARCATA, CA 95521
005-052-007	1623 H ST	IRWIN ROBERT C & VICKIE L 2436 18TH ST EUREKA, CA 95501
005-061-001	1705 I ST	HOANG JASON & NGUYEN TIEN 4763 DICKSON DR EUREKA, CA 95503

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Parcel Number	Street Address	Owner
005-061-008		EUREKA CITY OF VOLUNTEER MEETING HALL
005-061-017	1723 I ST	PAYES PARTNERSHIP PROPERTIES LLC 3340 18TH ST EUREKA, CA 95501
005-061-022	1708 J ST	GRIESHABER ROY TR 838 J ST EUREKA, CA 95501
005-063-004	1722 H ST	DOWNEY NICHOLAS & EVELYN M & PERRY PAUL J 3161 CHURCH ST FORTUNA, CA 95540
005-071-019	1819 I ST	CURTIS BRAD & CURTIS CATHY C 1819 I ST EUREKA, CA 95501
005-072-001	1801 H ST	BUTLER KRISTINA A 1801 H ST EUREKA, CA 95501
005-072-002	1802 I ST	MCBETH CHRISTOPHER J & JESSICA E 1824 P ST EUREKA, CA 95501
005-072-008	1833 H ST	TRUTNA TIMOTHY N TR 710 E ST SUITE 245 EUREKA, CA 95501
005-072-011	1813 H ST	KELLER RANDALL J PO BOX 126 PINE VALLEY, CA 91962

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Parcel Number	Street Address	Owner
005-074-007	1933 I ST	WEYER BRICE C BOX 4925 EUREKA, CA 95502
005-076-005	1936 H ST	HUNT THOMAS TR 1936 H ST EUREKA, CA 95501
005-082-008	809 J ST	STALEY ROBERTA TR 3240 K ST EUREKA, CA 95503
005-084-006	925 J ST	WATSON GABRIEL 925 J ST EUREKA, CA 95521
005-091-006	1007 I ITH ST	KELSO TOM SM JT & KELSO ILSE H PO BOX 3699 EUREKA, CA 95502
005-091-007	1025 K ST	SAMUELSON MICHAEL TR PO BOX 6777 EUREKA, CA 95502
005-091-008	1013 K ST	DADD CHRIS UMJT & CONDR0 LAUREL 1013 K ST EUREKA, CA 95501
005-092-002	1004 K ST	MAPLES LINDA R 32B SUNBRAE GROVE NEW ZEALAND, 3116
005-092-007	1025 J ST	GILMORE FRANKLIN J 1025 J ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
005-093-010	1106 L ST	ATKINSON DIRK E & ATKINSON PATRICIA M TR 1213 WEST ST PETALUMA, CA 94952
005-094-006	1136 K ST	WRIGHT PAUL L & LAURA C 1136 K ST EUREKA, CA 95501
005-094-008	1145 J ST	HILL HANS F & MARY A 1145 J ST EUREKA, CA 95501
005-102-001	1201 J ST	JEWELL LAUREL 1201 J ST EUREKA, CA 95501
005-102-008	1207 J ST	HUMPHERS SCOTT N & ANGELIQUE M 1207 J ST EUREKA, CA 95501
005-105-008	1413 J ST	THROSSEL THOMAS G & JANINE C 1413 J ST EUREKA, CA 95501
005-111-002	926 15TH ST	WARREN JANET C TR 926 15TH ST EUREKA, CA 95501
005-111-018	1531 J ST	EUREKA WOMANS CLUB PO BX 778 EUREKA, CA 95502
005-111-029	1525 J ST	KHALEELI SUZANNE A TR 1525 J ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
005-133-001	1086 17TH ST	PARISH BRENT M 1086 17TH ST EUREKA, CA 95501
005-134-002	1716 K ST	BARTHEL EDWIN J & SHEILA M 6239 MARLBOROUGH DR GOLETA, CA 93117
005-134-003	1724 K ST	CIPRA MICHAEL C & JANE A 1724 K ST EUREKA, CA 95501
005-142-003	910 N ST	NELSON SUSAN M 910 N ST EUREKA, CA 95501
005-142-006	944 N ST	PAYES PARTNERSHIP PROPERTIES LLC 3340 18TH ST EUREKA, CA 95501
005-142-014	923 M ST	STRANAHAN PATRICK S 923 M ST EUREKA, CA 95501
005-143-002	904 M ST	JARA JOSE V & COLLEEN S 1909 MORENO ST OCEANSIDE, CA 92054
005-144-004	1303 11TH ST	HUMBOLDT RECOVERY CENTER INC PO BX 6310 EUREKA, CA 95502
005-145-006	1213 11TH ST	JOHNSON-GUIRARD LORI A & GUIRARD JEAN-PAUL TR 5064 WALNUT DRIVE EUREKA, CA 95503

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Parcel Number	Street Address	Owner
005-146-001	1106 10TH ST	REID JESSEMYN & HUMBERT SARAH 1106 10TH STREET EUREKA, CA 95501
005-146-006	1121 11TH ST	IMMITT JESSICA 1121 11TH ST EUREKA, CA 95501
005-146-011	1024 M ST	MORALES CHASE SMJT & FOURNIER KIMBERLEY 1024 M ST EUREKA, CA 95501
005-152-001		EUREKA CITY OF CITY HALL EUREKA, CA 95501
005-153-001	1105 L ST	MORELLI VAL M TR 1105 L ST EUREKA, CA 95501
005-153-002	1102 M ST	WILLIAMS ANTHONY P 1102 M ST EUREKA, CA 95501
005-153-006	1125 12TH ST	GREEN WADE T & DOMINGUEZ-GREEN KATELINE Y HWCPRS 1125 12TH ST EUREKA, CA 95501
005-153-007	1125 L ST	BURNS CHARLES 1125 L ST EUREKA, CA 95501
005-153-008	1121 L ST	ROGERS DENISE Y & KEENEY CLARK R 3456 CALIFORNIA ST EUREKA, CA 95503

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Parcel Number	Street Address	Owner
005-155-009	1205 13TH ST	DODY FRANCES SCHIRESON & DODY MERVYN W 1205 13TH ST EUREKA, CA 95501
005-165-001	1403 M ST	HISE MARK 1600 MYRTLE AVE EUREKA, CA 95501
005-183-013	811 O ST	OGAN CHESTER AND BARBARA FAM TRUST 811 O ST EUREKA, CA 95501
005-193-004	1405 11TH ST	LUNGI DAVID G JR 1405 11TH ST EUREKA, CA 95501
005-223-002	1604 R ST	CLEARY KATHLEEN T TR 1604 R ST EUREKA, CA 95501
005-232-003	1752 EASTWOOD DR	CARRICO LYNN M 3775 PENNSYLVANIA AV EUREKA, CA 95501
005-232-009	1751 EASTWOOD DR	SHANAHAN PAUL G III & SHANAHAN SARAH A Y TR 1751 EASTWOOD DRIVE EUREKA, CA 95501
005-232-010	1761 EASTWOOD DR	ROSS LISA & JAMES M 1761 EASTWOOD DR EUREKA, CA 95501
005-232-011	1735 EASTWOOD DR	MASTRONI JOHN S & JULIE D 1735 EASTWOOD DR EUREKA, CA 95501

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Parcel Number	Street Address	Owner
005-241-001	1771 EASTWOOD DR	SHANAHAN PATRICK M & MARTHA J TR 1771 EASTWOOD DR EUREKA, CA 95501
005-244-010	1815 O ST	NATZLER CAROL S TDP PO BOX 488 LOLETA, CA 95551
005-245-004	1830 O ST	ROBINSON GLORIA 1830 O ST EUREKA, CA 95501
005-245-005	1842 O ST	MCDONOUGH JOEL T & THOMAS KRISTEN M TR 1842 O ST EUREKA, CA 95501
005-245-006	1858 O ST	HALL GREGORY & HALL SARAH 1858 O ST EUREKA, CA 95501
006-041-008	1736 13TH ST	FRITZ GARY L & RITA F HWCPRS 1736 13TH ST EUREKA, CA 95501
006-042-002	1810 13TH ST	WARD B MATTHEW & WARD MELANIE 1810 13TH ST EUREKA, CA 95501
006-043-008	1338 WEST AVE	ROWLAND CHARLES A & CONNIE L 1830 MULBERRY ST MCKINLEYVILLE, CA 95519
006-045-008	1834 14TH ST	ROFFE MARK D & ROFFE MARY J 1834 14TH ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
006-046-003	1736 14TH ST	HOLGERSEN NIELS & HOLGERSEN CHARLOTTE 5250 GREENWOOD HEIGHTS DR KNEELAND, CA 95549
006-074-010	1530 GATES ST	KAUP TERRY & CYNTHIA A 1530 GATES ST EUREKA, CA 95501
006-111-027	1223 WEST AVE	GRIMES MARC & LYNN M 1223 WEST AVE EUREKA, CA 95501
006-112-002	1220 MYRTLE AVE	WAGGONER DAVID R & ELLEN P 1220 MYRTLE AV EUREKA, CA 95501
006-112-003	1232 MYRTLE AVE	NINO DONALD E 1232 MYRTLE AVE EUREKA, CA 95501
006-121-001	1307 WEST AVE	STONE JON & STONE MARY 2682 SPEARS RD EUREKA, CA 95503
006-141-016	1629 WEST AVE	FLEMMING GERALDINE B PO BOX 3046 EUREKA, CA 95502
006-154-012	1805 COUNTY LN	WARD KELLY 1805 COUNTY LN EUREKA, CA 95501
006-171-010	1231 MYRTLE AVE	GRIESHABER ROY TR 838 J ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
006-171-014	1303 MYRTLE AVE	RASMUSSEN JEREMY & COLLEEN 2486 BAINBRIDGE ST EUREKA, CA 95503
006-181-006	1408 MCFARLAN ST	MCFARLAN LLC CO PO BX 931 LYLE, WA 98635
006-181-007	1410 MCFARLAN ST	MCFARLAN LLC CO PO BX 931 LYLE, WA 98635
006-181-016	1404 MCFARLAN ST	GRIFFITH PATRICK R PO BOX 7253 EUREKA, CA 95502
006-191-003	1436 MCFARLAN ST	SLOPER NEAL W TDP 1436 MCFARLAN ST EUREKA, CA 95501
006-191-005	1444 MCFARLAN ST	HILL HARRIET UW TDP 1695 TIMOTHY RD MCKINLEYVILLE, CA 95519
006-191-016	1526 MCFARLAN ST	DOUGE GABE & MEGLEMRE LAURA 1526 MCFARLAN ST EUREKA, CA 95501
006-241-004	1450 MYRTLE AVE	HASSENFRITZ JOLENE SUC TR 3005 G ST EUREKA, CA 95501
006-242-033	1550 MYRTLE AVE	STARR FARREL G & GLADYS N 1550 MYRTLE AVE EUREKA, CA 95501

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Parcel Number	Street Address	Owner
006-261-032	1631 MCFARLAN ST	HOANG LIEN 1631 MCFARLAN ST EUREKA, CA 95501
006-261-033	1647 MCFARLAN ST	SHWAIKA WILLIAM L 2417 SECOND AVE FORTUNA, CA 95540
006-271-018	2340 17TH ST	WENGER PATRICK M TR 2340 17TH ST EUREKA, CA 95501
006-272-011	1725 DEAN ST	FARRAR ROBERTA L & ROBERT I 1725 DEAN ST EUREKA, CA 95501
007-093-010	1725 TOMLINSON ST	ZERLANGS LLC CO 1725 TOMLINSON ST EUREKA, CA 95503
008-013-008	2340 FAIRFIELD ST	BECK DOUGLAS C 2340 FAIRFIELD ST EUREKA, CA 95501
008-014-001	2207 FAIRFIELD ST	SPEERS PHILIP 2207 FAIRFIELD ST EUREKA, CA 95501
008-014-003	2229 FAIRFIELD ST	WAHLUND LORA D PO BOX 1048 FERNDAL, CA 95536
008-014-004	2239 FAIRFIELD ST	CHRISTENSEN RALPH A 9550 SANTOS RANCH ROAD PLEASANTON, CA 94588

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Parcel Number	Street Address	Owner
008-014-006	2301 FAIRFIELD ST	SANCHEZ JUAN & ELVIA G & SANCHEZ-GOMEZ PEDRO 2301 FAIRFIELD EUREKA, CA 95501
008-014-012	2306 GARLAND ST	MOORE JOHN C 2306 GARLAND ST EUREKA, CA 95501
008-014-017	2326 GARLAND ST	HARTMAN JAMES R 2326 GARLAND ST EUREKA, CA 95501
008-022-021	2534 GARLAND ST	LAZAR STEVEN 2534 GARLAND ST EUREKA, CA 95501
008-032-007	804 W CREIGHTON ST	CUNNINGHAM ERNEST R & MARY DAWN 804 CREIGHTON EUREKA, CA 95501
008-032-008	814 W CREIGHTON ST	BOWERS DIANE LSE 814 CREIGHTON ST EUREKA, CA 95501
008-032-020	826 W CREIGHTON ST	JOHNSON STEVE 826 W CREIGHTON ST EUREKA, CA 95501
008-111-012	1552 MCCULLENS AVE	FOWLE W THOMAS & SUSAN J 1552 MCCULLEN EUREKA, CA 95503
008-142-003	3522 COTTAGE ST	NELSON ERIC P 3522 COTTAGE ST EUREKA, CA 95503

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Parcel Number	Street Address	Owner
009-014-006	2142 SPRING ST	KELLY CHRISTINE 2142 SPRING ST APT B EUREKA, CA 95501
009-014-024	2201 GARLAND ST APT A	STEFFANO MARIA I 2201 GARLAND ST EUREKA, CA 95501
009-015-014	2123 SPRING ST	IRWIN MATTHEW M TR 2560 CHRISTENSEN WAY EUREKA, CA 95501
009-022-015	2317 SPRING ST	JONES JENNIFER L 2317 SPRING ST EUREKA, CA 95501
009-031-010	2532 SPRING ST	CRABB RACHELLE 2532 SPRING ST EUREKA, CA 95501
009-123-009	136 W HAWTHORNE ST	BURNS MARIA 3560 GLEN ST EUREKA, CA 95503
009-124-001	323 W HAWTHORNE ST	BRISTOW LORA WS TDP 323 W HAWTHORNE ST EUREKA, CA 95501
009-124-012	233 W HAWTHORNE ST	ADAIR ROGER D & GAIL N 233 W HAWTHORNE EUREKA, CA 95501
009-125-005	2140 CALIFORNIA ST	CHAPMAN JIMIA TR 2140 CALIFORNIA ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
009-133-008	2306 CALIFORNIA ST	BAZAN LUIS M C UMJT & CUENCA-CARRASCO FLOR 2306 CALIFORNIA STREET EUREKA, CA 95503
009-181-003	525 HARRIS ST	TROSOW SAMUEL E & BLOSH MARIE 43 MAYFAIR DR LONDON ONTARIO,
009-183-007	3132 SUMMER ST	HOLL MICHAEL G & MERIE TR 2890 ROBINSON CREEK RD UKIAH, CA 95482
009-192-002	3302 UNION ST	DAVID L & SUSAN M FELT REV TRUST PO BX 233 MIRANDA, CA 95553
009-212-001	3501 ALBEE ST	DINNING VIOLET M & FRANK H 3501 ALBEE STREET EUREKA, CA 95501
009-214-003	3516 SUMMER ST	CARROLL MICHAEL F & HITCHKO BARBARA J TR 4833 PATRICIA DR EUREKA, CA 95503
009-232-005	2828 CALIFORNIA ST	FREEMAN AARON C & JEAN LAUREL & MORGAN AARON & JAM 2828 CALIFORNIA ST EUREKA, CA 95501
009-242-015	2916 CALIFORNIA ST	GARCIA DAVID E 2916 CALIFORNIA ST EUREKA, CA 95501
009-251-024	3143 SUMMER ST	BARTOW CINDY L 3143 SUMMER ST EUREKA, CA 95503

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Parcel Number	Street Address	Owner
009-252-028	3306 CALIFORNIA ST	MCCLURG MARC D & ANN 3306 CALIFORNIA ST EUREKA, CA 95503
009-263-006	3469 CALIFORNIA ST	BETTIS JACK W 3469 CALIFORNIA ST EUREKA, CA 95503
009-272-007	3560 CALIFORNIA ST	ABERCROMBIE JEFFREY M & MELANI E FAMILY TRUST 2368 HOME DR EUREKA, CA 95503
009-273-008	3471 CALIFORNIA ST	MURGUIA ELIZABETH TR 3471 CALIFORNIA ST EUREKA, CA 95503
009-281-001	3608 PINE ST	BROWNFIELD DANNY R 1547 FIELDBROOK RD MCKINLEYVILLE, CA 95519
009-281-003	3604 CALIFORNIA ST	DAVIS PAMELA A 3604 CALIFORNIA ST EUREKA, CA 95503
009-281-049	3610 CALIFORNIA ST	MIELE MATTHEW P 3610 CALIFORNIA ST EUREKA, CA 95503
010-011-006	2035 B ST	FREEMANTLE BOB E & NANCY E 2035 B ST EUREKA, CA 95501
010-014-010	16 W TRINITY ST	DEVLIN-LAKE KELLEY J TR PO BOX 6756 EUREKA, CA 95502

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Parcel Number	Street Address	Owner
010-014-014	2135 CALIFORNIA ST	COMBS KEITH A & CONNIE 3335 INGLEY ST EUREKA, CA 95503
010-015-002	2102 B ST	HANSEN ALFRED J & ANGELA M TR 2102 B ST EUREKA, CA 95501
010-015-004	2124 B ST	THOMAS LOGAN 2124 B ST EUREKA, CA 95501
010-015-010	2155 A ST	JUSTUS JACK & ANNE M 2155 A ST EUREKA, CA 95501
010-021-003	2210 C ST	SHOWS AMBER M SWTC & ENSMINGER KARL V 2210 C STREET EUREKA, CA 95501
010-022-003	2212 B ST	BANNERMAN BRUCE W & JANE M TR 2212 B ST EUREKA, CA 95501
010-023-002	15 TRINITY ST	HAWK CYNTHIA L 2603 FAIRFIED ST EUREKA, CA 95501
010-023-003	2234 A ST	AYRES LEIF G & BANNERMAN MOLLY 2234 A STREET EUREKA, CA 95501
010-024-007	2337 CALIFORNIA ST	WARREN RANDALL & POWELL KENI D 2337 CALIFORNIA ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
010-024-010	2305 CALIFORNIA ST	SANDIFER AARON UMJT & GOFORTH MICHELLE 2305 CALIFORNIA ST EUREKA, CA 95501
010-025-009	2305 A ST	BURNS RYAN & SCHRAMM VALERIE 2305 A ST EUREKA, CA 95501
010-026-008	2309 B ST	ESTRADA KARINA I TR 3353 32ND AVENUE SOUTH MINNEAPOLIS, MN 55406
010-031-005	2434 C ST	REBHOLTZ TIMOTHY A 2434 C ST EUREKA, CA 95501
010-032-001	2405 A ST	NEWELL DIANNE 9160 GOLDEN GATE AV ORANGEVALE, CA 95662
010-032-004	2424 B ST	SWEDENBURG RAY D & RANDY C TR 2424 B ST EUREKA, CA 95501
010-032-008	2411 A ST	COOK MORGAN 2411 A ST EUREKA, CA 95501
010-036-005	2534 C ST	NORRIE HELEN H 2534 C ST EUREKA, CA 95501
010-036-006	2542 C ST	FERGUSON LINDA I SWJT & HOBerecht TODD 2542 C ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
010-036-007	2556 C ST	BRADY RALPH K 2556 C ST EUREKA, CA 95501
010-051-006	2860 A ST	HUDSON-CRIM ABIGAIL B PO BOX 300 EUREKA, CA 95502
010-051-007	2837 CALIFORNIA ST	REAGAN EDWARD D & SCHRADER THOMAS J JR TR 2837 CALIFORNIA ST EUREKA, CA 95501
010-072-009	3216 LOWELL ST	BRAZIL GERALD WALTER & BETTY J 3216 LOWELL ST EUREKA, CA 95503
010-081-051	3347 CALIFORNIA ST	MOSES CARRIE E 3347 CALIFORNIA ST EUREKA, CA 95503
010-091-004	3339 WILLIAMS ST	JOHNSON SHIRLEY 3339 WILLIAMS ST EUREKA, CA 95503
010-091-011	3340 D ST	NORDQUIST ELLA S 2555 A ST EUREKA, CA 95501
010-093-001	3312 LOWELL ST	WILSON JAMES M & SUSAN L TR 6690 MYRTLE AV EUREKA, CA 95503
010-133-012	2036 D ST	WYCKOFF JOHN EVERETT & BARBARA ANN 2036 D ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
010-136-003	2135 C ST	LOPICCOIO JASON & ARROYO NATALIE 2127 C STREET EUREKA, CA 95501
010-141-005	247 HUNTOON ST	BIRCH MELISSA M PO BOX 6770 EUREKA, CA 95502
010-141-007	233 HUNTOON ST	BERNIKOFF HEATHER A & RABOY DAVID C TR PO BOX 185 CATHEYS VALLEY, CA 95306
010-141-008	221 HUNTOON ST	FALK PATTI 221 HUNTOON EUREKA, CA 95501
010-142-006	2240 D ST	MACAN EDWARD & MACAN CONNIE 2240 D ST EUREKA, CA 95501
010-144-010	232 HUNTOON ST	BAILEY DAVID 1021 GLENDALE DR SPC I MCKINLEYVILLE, CA 95519
010-144-012	2301 C ST	MCINTOSH CLAYTON & DANIELLE 2301 C ST EUREKA, CA 95501
010-151-013	2436 WILLIAMS ST	JORDAN ROBERT D 2414 D ST EUREKA, CA 95501
010-151-018	248 BUHNE ST	PIMENTEL RITA 427 W HARRIS ST EUREKA, CA 95503

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Parcel Number	Street Address	Owner
010-172-002	2804 WILLIAMS ST	SHEALOR KENNETH G & LESA D 5631 CHRISTINE DR EUREKA, CA 95503
010-191-003	2016 E ST	PLASTERER JAMES D & EMERY JAMES F HHCPRS 2016 E ST EUREKA, CA 95501
010-195-001	2109 E ST	NAZARENE FIRST CHURCH OF 2039 E ST EUREKA, CA 95501
010-196-004	2124 E ST	BIESECKER JOSHUA & ROSEMARY 2124 E ST EUREKA, CA 95501
010-196-005	2134 E ST	MATTEOLI MARC 2134 E ST EUREKA, CA 95501
010-201-001	312 TRINITY ST	DOLAN KEVIN M & PEREIRA MONICA C 312 TRINITY STREET EUREKA, CA 95501
010-201-002	316 TRINITY ST	CROOK SHEILA A TR 316 TRINITY ST EUREKA, CA 95501
010-201-003	2202 E ST	CARTER PATRICIA L 2202 E ST EUREKA, CA 95501
010-201-006	2220 E ST	DOLF JEFFREY M & SIN SOCHENDA 2220 E ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
010-201-008	2239 D ST	SALVI VIRGINIA R TR 2239 D STREET EUREKA, CA 95501
010-201-009	2229 D ST	JUELL STACEY E & GALLIANI SUSAN M TR PO BOX 206 EUREKA, CA 95502
010-204-012	2332 G ST	ANGLIN STEVEN H & REGINA L TR REM 2332 G ST EUREKA, CA 95501
010-205-005	2333 E ST	HOLLAND PHILIP R & KRISTI L TR 2333 E ST EUREKA, CA 95501
010-206-003	2312 E ST	PETERSON CHERYL E 4807 NETHERLANDS PL FLOWERY BRANCH, GA 30542
010-206-005	2336 E ST	CABLE EDWARD & ELIZABETH HWCPRS PO BOX 127 CRESCENT CITY, CA 95531
010-211-001	2405 D ST	CULICK ALEXANDER J & HANNE R TR 1920 ALDERBROOK LN SANTA ROSA, CA 95405
010-211-002	2434 E ST	MULHERN DAVID 928 H ST ARCATA, CA 95521
010-212-005	2436 F ST	ALLEN PAUL L HW JT & LOLLICH LESLIE N 2436 F ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
010-213-002	2410 G ST	TRACY CHARLES A & ZISKIN VICTORIA L TR PO BOX 1321 EUREKA, CA 95502
010-213-009	2540 G ST	WRIGHT PAUL E & WRIGHT DEENA S 2540 G ST EUREKA, CA 95501
010-222-011	2549 E ST	DERUYTER DIANE & DERUYTER NICK 2544 E ST EUREKA, CA 95501
010-233-004	2714 G ST	LIVENGOOD DAVID 2714 G ST. EUREKA, CA 95501
010-241-010	2863 D ST	MCATEE JONI L 2863 D ST EUREKA, CA 95501
010-251-014	331 HARRIS ST	MATTEOLI MARC R 2134 E ST EUREKA, CA 95501
010-263-004	3122 F ST	CHAVEZ JOSEPH C UMJT & CHAVEZ KIM L 3122 F ST EUREKA, CA 95503
010-263-006	3140 F ST	GRIFFITH TREVLIN D & THISSELL GARY D TR 3140 F STREET EUREKA, CA 95503
010-263-010	3223 E ST	RIDDLE DAVID & BURKART PATRICK 202 S PARKER AVE BRYAN, TX 77803

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Parcel Number	Street Address	Owner
010-263-017	3117 E ST	HALL BRIAN M & KATHLEEN M 935 FERNWOOD DR FORTUNA, CA 95540
010-271-009	3369 D ST	OBRIAIN JORDAN & OBERG-WOOD ALEX 1817 OLDFIELD CT EL CAJON, CA 92019
011-012-006	737 HUMBOLDT ST	SUNDBERG SCOTT S & PATRICIA A 737 HUMBOLDT ST EUREKA, CA 95501
011-012-007	2031 H ST	SAMELSON PAUL & VALERIE 2808 TREE SWALLOW CR ELK GROVE, CA 95757
011-013-003	2018 J ST	MURRIETA ASHLEE M & GRIMES SEAN C 2018 J ST EUREKA, CA 95501
011-022-007	2233 H ST	ADDISON SHELLEY C 2233 H ST EUREKA, CA 95501
011-031-018	2427 G ST	MARTINEZ SHERRI L PO BOX 7097 EUREKA, CA 95501
011-032-001		EUREKA CITY OF PLAYGROUND - CARSON PARK
011-033-002	2424 J ST	VELLUTINI DOLORES M TR 2424 J ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
011-033-007	2531 I ST	LOWTHER HARRY J & BREDOW URSULA TR PO BOX 7010 EUREKA, CA 95502
011-041-004	2626 H ST	GIACOMINI ROBERT L & CAROL A TR 2626 H ST EUREKA, CA 95501
011-042-007	2623 H ST	VALNESS CHRISTOPHER & MARINO CARLY 2623 H ST EUREKA, CA 95501
011-042-009	2607 H ST	VICKERMAN JACQUELINE & WOODS MEGAN 2607 H ST EUREKA, CA 95501
011-042-010		LACORNU EUGENE J 2216 F ST EUREKA, CA 95501
011-042-011	2615 H ST	BERTI NATHAN & JESSICA 2615 H ST EUREKA, CA 95501
011-043-001	818 CARSON ST	ATWOOD PATRICIA 297 WISTERIA LN EUREKA, CA 95503
011-043-008	2615 I ST	ALFANO ANGELO 2615 I ST EUREKA, CA 95501
011-045-001	2701 H ST	NOYES SIDNEY W & DIANA R 2701 H ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
011-045-002	2706 I ST	RIGGINS BRIDGET & JOSHUA 2706 I ST EUREKA, CA 95501
011-051-008	2827 G ST	TORONI GAY G TR 3005 G ST EUREKA, CA 95503
011-103-021	3504 I ST	MAPLES LINDA R 32B SUNBRAE GROVE NEW ZEALAND, 3116
011-141-009	2225 J ST	FULLER MARK D & ANNE C TR PO BOX 2795 MCKINLEYVILLE, CA 95519
011-151-020	2415 J ST	JUHNE LLC CO 2424 J ST EUREKA, CA 95501
011-162-003	2614 L ST	FULKERSON JULIE E & EVANS ELIZABETH L 2614 L ST EUREKA, CA 95501
011-191-002	912 HODGSON ST	THODE BETSY A TR 912 HODGSON ST EUREKA, CA 95503
012-012-001	1903 O ST	VAUGHN CASEY A & LEAH 1903 O ST EUREKA, CA 95501
012-013-003	2040 O ST	GODDARD ROGER R 2040 O ST EUREKA, CA 95501

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Parcel Number	Street Address	Owner
012-014-001	2009 O ST	ROBBINS SCOTT & BYRNE MICHAEL A CO-TR 2009 O ST EUREKA, CA 95501
012-014-008	2021 O ST	SANCHEZ CRAIG M 2021 O ST EUREKA, CA 95501
012-022-006	2133 O ST	HALE THOMAS L & CHERYL D 2133 O ST EUREKA, CA 95501
012-023-003	2220 O ST	UPATISRINGA VISUTDHI TR 2220 O ST EUREKA, CA 95501
012-082-003	3343 N ST	MAXEY JOSEPH & JUDITH PO BOX 4537 ARCATA, CA 95518
012-182-010	2732 Q ST	FARLAN CAROLE A TR 2732 Q ST EUREKA, CA 95501
012-203-002	3006 S ST	HUI HELEN B TR 3006 S ST EUREKA, CA 95501
012-206-006	1526 HARRIS ST	FRYE KIM H & FRYE PYONG S TR 2240 FERN ST EUREKA, CA 95503
012-231-008	3407 Q ST	WEESE CLYDE E JR 3407 Q ST EUREKA, CA 95503

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Parcel Number	Street Address	Owner
013-052-002	1930 HENDERSON ST	ZIBILICH GEORGE J & MARILYN J 1930 HENDERSON ST EUREKA, CA 95501
013-061-003	1835 HARRIS ST	HUGHES GERALD B 1835 HARRIS ST EUREKA, CA 95501
013-061-006	1807 HARRIS ST	KELLOGG JOHN M & CHARLOTTE L 1807 HARRIS ST EUREKA, CA 95503
013-065-007	1907 EVERDING ST	STEWART DUANE 1907 EVERDING ST EUREKA, CA 95503
013-071-008	3203 S ST	PATINO OMAR & MAY 3203 S ST EUREKA, CA 95503
013-071-009	3234 T ST	GAXIOLA MARK & MARY S 815 HODGSON EUREKA, CA 95503
013-081-001		EUREKA CITY OF SEQUOIA PARK
013-152-039	2215 CHESTER ST	GOSSARD LEE A TR 2215 CHESTER ST EUREKA, CA 95503
013-152-040	2235 CHESTER ST	CLAYTON CHRISTOPHER D & CATHERINE M TR 4330 WALNUT DRIVE EUREKA, CA 95503

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013-153-006	2129 HODGSON ST	SANTINO PETER J & SHIRLEY L 2129 HODGSON EUREKA, CA 95503
018-191-010	3676 F ST	REGLA PATRICIA 3676 F ST EUREKA, CA 95503

Name	St Number	St Name	City	Vicinity	Evaluation Info
		MYRTLE AVE	BAYSIDE	X	3B, , 5524-0003-0017
CARSON BLOCK BUILDING	241	F ST	EUREKA		3S, , 5501-0020-0000 3S, 12/19/1988, 619.0-HP-88-12-005
MARSH SCOTT LOGAN HOUSE, MARSH HOUSE	889	6TH ST	ARCATA	X	3S, , 5521-0001-0000
	100	7TH ST	ARCATA	X	3S, , 5521-0004-0000
THE PLAZA		9TH ST	ARCATA	X	3S, , 5521-0007-0000
GRAHAM HOUSE	380	9TH ST	ARCATA	X	3S, , 5521-0009-0000
ARCATA NATIVE SONS OF THE GOLDEN WEST HALL, MARINO	861	9TH ST	ARCATA	X	3S, , 5521-0012-0000
CALIFORNIA CENTRAL CREAMERY PLANT, GOLDEN STATE CR	1251	9TH ST	ARCATA	X	3S, , 5521-0013-0000
HUMBOLDT MACHINE WORKS		10TH ST	ARCATA	X	3S, , 5521-0014-0000
KIRK HOUSE	860	10TH ST	ARCATA	X	3S, , 5521-0015-0000
NIXON HOUSE	1022	10TH ST	ARCATA		3S, , 5521-0017-0000
THE LORD HOUSE	1168	10TH ST	ARCATA		3S, , 5521-0018-0000
ARCATA PRESBYTERIAN CHURCH		11TH ST	ARCATA		3S, , 5521-0019-0000
DILLON HOUSE	388	11TH ST	ARCATA		3S, , 5521-0020-0000
PACKERS HOUSE	630	11TH ST	ARCATA		3S, , 5521-0021-0000
DEVLIN COTTAGES	1112	7TH ST	ARCATA		3S, , 5521-0023-0000
DEVLIN COTTAGES	1136	7TH ST	ARCATA		3S, , 5521-0024-0000
DEVELIN COTTAGES	1162	7TH ST	ARCATA		3S, , 5521-0025-0000
DEVLIN COTTAGES	1188	7TH ST	ARCATA		3S, , 5521-0026-0000
PORTUGUESE HALL	1185	11TH ST	ARCATA		3S, , 5521-0030-0000
	11	11TH ST	ARCATA		3S, , 5521-0033-0000
JACOBS HOUSE	986	12TH ST	ARCATA		3S, , 5521-0037-0000
	686	E 12TH ST	ARCATA		3S, , 5521-0040-0000
THE MARONICH HOUSE	87	E 12TH ST	ARCATA		3S, , 5521-0041-0000
	120	E 12TH ST	ARCATA		3S, , 5521-0042-0000
CATES HOUSE	185	E 12TH ST	ARCATA		3S, , 5521-0043-0000
	290	E 12TH ST	ARCATA		3S, , 5521-0044-0000
GEORGE AVERELL HOUSE	890	E 12TH ST	ARCATA		3S, , 5521-0045-0000
C E DANIELS HOUSE	918	E 12TH ST	ARCATA		3S, , 5521-0046-0000
ARCATA WOMEN'S CLUB, CHURCH OF CHRIST		J ST	ARCATA		3S, , 5521-0047-0000
McKINNON HOUSE	631	13TH ST	ARCATA		3S, , 5521-0049-0000
RAIR STOKES HOUSE, BAIR HOUSE	916	13TH ST	ARCATA		3S, , 5521-0050-0000
ARCATA SANITARIUM, HOREL HOUSE	980	13TH ST	ARCATA		3S, , 5521-0051-0000
SEAVER HOUSE	120	13TH ST	ARCATA		3S, , 5521-0052-0000
TODD HOUSE	616	13TH ST	ARCATA		3S, , 5521-0054-0000
WILEY HOUSE	950	14TH ST	ARCATA		3S, , 5521-0058-0000
JACKSON MATTHEWS HOUSE, JACKSON HOUSE	980	14TH ST	ARCATA		3S, , 5521-0059-0000
ARCATA VETERANS MEMORIAL BUILDING		J ST	ARCATA		3S, , 5521-0061-0000
	890	15TH ST	ARCATA		3S, , 5521-0062-0000
ST MARY'S CATHOLIC CHURCH		16TH ST	ARCATA		3S, , 5521-0063-0000
MALVICH BOARDING HOUSE	1030	C ST	ARCATA		3S, , 5521-0068-0000
STEWART HOUSE	1180	C ST	ARCATA		3S, , 5521-0070-0000
TRINITY HOSPITAL, TRINITY HOSPITAL UNIVERSITY ANN		C ST	ARCATA	X	3S, , 5521-0072-0000
MURRAY HOUSE	987	F ST	ARCATA	X	3S, , 5521-0075-0000
	560	G ST	ARCATA	X	3S, , 5521-0077-0000
	965	A ST	ARCATA	X	3S, , 5521-0085-0000
	1226	B ST	ARCATA	X	3S, , 5521-0086-0000
ARCATA THEATRE	1034	G ST	ARCATA		3S, , 5521-0091-0000 3S, 12/19/1988, 619.0-HP-88-12-001 7K, , 88ARCATA 7
MORGAN HOUSE	1192	G ST	ARCATA	X	3S, , 5521-0092-0000
JOHANSEN HOUSE MORRELL HOUSE	1369	G ST	ARCATA	X	3S, , 5521-0094-0000
	1605	G ST	ARCATA	X	3S, , 5521-0096-0000
TRUEDELL HOUSE	494	H ST	ARCATA	X	3S, , 5521-0098-0000
MINOR THEATRE	1015	H ST	ARCATA	X	3S, , 5521-0100-0000 3S, 12/19/1988, 619.0-HP-88-12-002
	1542	H ST	ARCATA	X	3S, , 5521-0102-0000
ERICSON HOUSE	1376	H ST	ARCATA		3S, , 5521-0107-0000
	1661	H ST	ARCATA		3S, , 5521-0114-0000
SWEET HOUSE	1717	H ST	ARCATA		3S, , 5521-0115-0000
COLLEGE ELEMENTARY SCHOOL, GIST HALL		LAUREL DR	ARCATA		3S, , 5521-0116-0000
FOUNDERS HALL		HUMBOLDT STATE UNIVERSITY	ARCATA		3S, , 5521-0117-0000
INDUSTRIAL ARTS BLDG, JENKINS HALL		LAUREL DR	ARCATA		3S, , 5521-0118-0000
NELSON HALL		HUMBOLDT STATE UNIVERSITY	ARCATA		3S, , 5521-0119-0000
	513	I ST	ARCATA		3S, , 5521-0120-0000
CULLBERG HOUSE	1452	I ST	ARCATA		3S, , 5521-0124-0000
	1566	I ST	ARCATA		3S, , 5521-0126-0000
DAVIDSON HOUSE	1593	I ST	ARCATA		3S, , 5521-0127-0000
SERVAGE HOUSE	609	J ST	ARCATA		3S, , 5521-0129-0000
THE WAGNER BLOCK	1056	11TH ST	ARCATA		3S, , 5521-0131-0000
THE WAGNER BLOCK	1038	11TH ST	ARCATA		3S, , 5521-0132-0000
THE WAGNER BLOCK	1008	11TH ST	ARCATA		3S, , 5521-0133-0000
THE WAGNER BLOCK	1133	J ST	ARCATA		3S, , 5521-0134-0000
THE WAGNER BLOCK	1157	J ST	ARCATA		3S, , 5521-0135-0000

THE WAGNER BLOCK	1187	J ST	ARCATA		3S, , 5521-0136-0000
THE WAGNER BLOCK	1087	12TH ST	ARCATA		3S, , 5521-0137-0000
THE WAGNER BLOCK	1077	12TH ST	ARCATA		3S, , 5521-0138-0000
THE WAGNER HOUSE	1057	12TH ST	ARCATA		3S, , 5521-0139-0000
THE WAGNER HOUSE	1045	12TH ST	ARCATA	X	3S, , 5521-0140-0000
STROBEL HOUSE	1621	J ST	ARCATA	X	3S, , 5521-0143-0000
SORENSEN HOUSE	1651	J ST	ARCATA	X	3S, , 5521-0144-0000
TRACY HOUSE DAMGAARO HOUSE	1712	J ST	ARCATA	X	3S, , 5521-0145-0000
THE THOMAS DEVLIN HOUSE	885	K ST	ARCATA		3S, , 5521-0148-0000
GASTMAN HOUSE BEER HOUSE GAYNOR HOUSE	1362	K ST	ARCATA		3S, , 5521-0149-0000
	1528	M ST	ARCATA		3S, , 5521-0150-0000
	1190	SPRING ST	ARCATA	X	3S, , 5521-0155-0000
COLLEGE ELEMENTARY SCHOOL, GIST HALL		LAUREL DR	ARCATA		3S, , 5521-0159-0000
FOUNDERS HALL		LAUREL DR	ARCATA		3S, , 5521-0160-0000
SKIFFINGTON MITCHELL HOUSE		MYRTLE AVE	BAYSIDE	X	3S, , 5524-0003-0001
HILL HOUSE		MYRTLE AVE	BAYSIDE	X	3S, , 5524-0003-0002
CLOSE		MYRTLE AVE	BAYSIDE	X	3S, , 5524-0003-0003
DINSMORE, BRIDGE #4-129		SR 36	BRIDGEVILLE	X	3S, , 5526-0006-0000
Centerville Beach Cross		CENTERVILLE RD	FERNDAL	X	3S, , 5536-0006-0000 7L, 03/06/1935, SHL-0173-0000
SALMON BROWN HOUSE	3435	CHURCH ST	FORTUNA		3S, , 5540-0002-0000
HIBBERT	3406	CHURCH ST	FORTUNA		3S, , 5540-0004-0000
BOWMAN PRICE HOUSE	3434	CHURCH ST	FORTUNA		3S, , 5540-0005-0000
JEWETT	3521	CHURCH ST	FORTUNA		3S, , 5540-0009-0000
ROONEY HOUSE	3427	DRAKE HILL RD	FORTUNA		3S, , 5540-0010-0000
ROHNERVILLE TOWN HALL		JORDAN ST	FORTUNA		3S, , 5540-0011-0000
METHODIST PARSONAGE	3545	JORDAN ST	FORTUNA		3S, , 5540-0013-0000
GALLUP	3595	JORDAN ST	FORTUNA		3S, , 5540-0014-0000
STRONGS HALL	1380	MAIN ST	FORTUNA		3S, , 5540-0016-0000
NEWLAND JORDAN HOUSE	1624	MAIN ST	FORTUNA		3S, , 5540-0017-0000
MARY LITGOW HOUSE	1625	MAIN ST	FORTUNA		3S, , 5540-0018-0000
COBB	1631	MAIN ST	FORTUNA		3S, , 5540-0019-0000
JACKSON	1665	MAIN ST	FORTUNA		3S, , 5540-0020-0000
JOHN W. DEGNAN HOUSE	1920	ROHNERVILLE RD	FORTUNA		3S, , 5540-0021-0000
EBBY	5060	ROHNERVILLE RD	FORTUNA		3S, , 5540-0022-0000
MYERS		SCHOOL ST	FORTUNA		3S, , 5540-0023-0000
FRANK HOUSE	3342	SCHOOL ST	FORTUNA		3S, , 5540-0024-0000
GATES	3375	SCHOOL ST	FORTUNA		3S, , 5540-0025-0000
HACKER	3437	SCHOOL ST	FORTUNA		3S, , 5540-0026-0000
WEBER	3437	SCHOOL ST	FORTUNA		3S, , 5540-0027-0000
CAMPTON	3565	TRINITY AVE	FORTUNA		3S, , 5540-0031-0000
	3610	TRINITY AVE	FORTUNA		3S, , 5540-0032-0000
BAIRD HOUSE	3630	TRINITY AVE	FORTUNA		3S, , 5540-0033-0000
BETTS HOUSE	1389	WEBBER ST	FORTUNA		3S, , 5540-0034-0000
BRIDGEVILLE, BRIDGE #4-101		SR 36	BRIDGEVILLE	X	3S, 01/01/1970, 5526-0005-0000
EUREKA MUNICIPAL AUDITORIUM	1120	F ST	EUREKA		3S, 04/05/1995, DSA-12-SPS-3285
RHODES-MARSH HOUSE		MYRTLE AVE	ARCATA		3S, 11/03/1978, FHWA781006A 6Y, 07/06/1979, DOE-12-79-0033-0000
KIRKHAM-CHANDLER-SPAGHT HOUSE		MYRTLE AVE	ARCATA		3S, 11/03/1978, FHWA781006A 6Y, 09/05/1979, DOE-12-79-0008-0000
PRATT FIRE LOOKOUT STATION			GARBERVILLE	X	4CM, 09/12/1996, ST.AG.-3540-0014
GRASSHOPPER PEAK FIRE LOOKOUT STATION			WEOTT	X	4CM, 09/12/1996, ST.AG.-3540-0017
SCHOOLHOUSE PEAK FIRE LOOKOUT STATION			ORICK	X	4CM, 09/12/1996, ST.AG.-3540-0034 6Y, 05/08/2019, NPS 2017_0123_001
IAQUA BUTTES FIRE LOOKOUT STATION			FORTUNA	X	4CM, 09/12/1996, ST.AG.-3540-0040
FORTUNA RANGER UNIT HEADQUARTERS	118	S FORTUNA BLVD	FORTUNA		4CM, 10/28/1996, ST.AG.-3540-0083
FORTUNA RANGER UNIT HEADQUARTERS	118	S FORTUNA BLVD	FORTUNA		4CM, 10/28/1996, ST.AG.-3540-0085
GARBERVILLE FOREST FIRE STATION	324	ALDERPOINT RD	GARBERVILLE		4CM, 10/29/1996, ST.AG.-3540-0086
GARBERVILLE FIRE CONTROL STATION MESSHALL	324	ALDERPOINT RD	GARBERVILLE		4CM, 10/29/1996, ST.AG.-3540-0087
D-2 BUGALOW, DAVISON RANCH	227	DAVISON RD	ORICK		5D1, 09/08/1992, NPS920803B 5D2, 09/08/1992, DOE-12-92-0005-0001
D-1, D & W's HOUSE	225	DAVISON RD	ORICK		5D1, 09/08/1992, NPS920803B 5D2, 09/08/1992, DOE-12-92-0005-0002
D-3, McDONALD HOUSE	217	DAVISON RD	ORICK		5D1, 09/08/1992, NPS920803B 5D2, 09/08/1992, DOE-12-92-0005-0003
D-4, MILKING BARN		DAVISON RD	ORICK		5D1, 09/08/1992, NPS920803B 5D2, 09/08/1992, DOE-12-92-0005-0004
D-5, HAY BARN		DAVISON RD	ORICK		5D1, 09/08/1992, NPS920803B 5D2, 09/08/1992, DOE-12-92-0005-0005
D-6, EQUIPMENT SHED		DAVISON RD	ORICK		5D1, 09/08/1992, NPS920803B 5D2, 09/08/1992, DOE-12-92-0005-0006
DAVISON RANCH		DAVISON RD	ORICK		5S2, 09/08/1992, DOE-12-92-0005-9999 5S2, 09/08/1992, NPS920803B