3.7 Hazards and Hazardous Materials

This section provides background information regarding hazards and hazardous materials within the County, including the regulations and programs that provide for their use, handling and disposal, and an assessment of the potential impacts of implementing the proposed General Plan Update. Existing hazard and hazardous materials conditions are described in Chapter 12, Fire and Other Hazards, of the *Natural Resources and Hazards Report*, September 2002 (Appendix D), which includes a discussion of fire risk and underground storage and fuel tanks. Additional background information is contained in the Humboldt County Master Fire Protection Plan, August 2006 (Appendix I), which is the County's community wildland fire protection plan and which informed the General Plan Update process, and the Humboldt Operational Area Hazard Mitigation Plan (HMP), December 2014, which inventories natural hazards within the County and assesses potential risk to communities and is available on the County website at http://humboldtgov.org//506/Local-Hazard-Mitigation. These reports, which are available for review at the Planning Division public counter at 3015 H Street in Eureka during normal business hours or for download at http://co.humboldt.ca.us/gpu/documentsbackground.aspx, are incorporated by reference and summarized below. Where any discrepancies may exist between the referenced material and the material presented here, the material presented here should be considered as the most up to date and is to be relied on for the environmental setting and analyses.

3.7.1 Hazards and Hazardous Materials - Regulatory Setting

Hazards and hazardous materials are regulated by federal, state, and county laws and regulations, which are periodically revised as more is learned about the impacts on the environmental and human health. Most regulations originate at the state and federal levels, with local county and city agencies enforcing these regulations. The following table lists the federal, state, and local laws and regulations that relate to hazards and hazardous materials production, use, transport, handling, and disposal. Further discussion of these regulations can be found within the setting discussions below.

Regulations Relating to Hazardous Materials, and Waste.

Legislation	Purpose
Federal	
Federal Hazardous Substance Control Act of 1960	Requires labeling and bans certain hazardous products used in the household
Occupational Safety and Health Act of 1970	Ensures worker and workplace safety from hazards, including toxic substances
Federal Insecticide, Fungicide, and Rodenticide Act of 1972	Regulates pesticide sale and use, requires labeling, licensing, and certification of applicators
Hazardous Materials Transportation Act of 1975	Requires driver training, cargo labeling, container design and safety specifications relating to hazardous materials
Toxic Substance Control Act of 1976	Authorizes the reporting, tracking, testing, and control of industrial chemicals
Resource Conservation and Recovery Act of 1978 (RCRA)	Regulates the generation, transportation, treatment, storage, and disposal of hazardous

Legislation	Purpose
	materials
Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)	Also known as the Superfund, this act authorizes the management of inactive hazardous waste sites
Hazardous and Solid Waste Amendments of 1984	Affirms and extends the "cradle to grave" system established by the RCRA and includes restrictions on land disposal and underground storage tanks
Superfund Amendments and Reauthorization Act of 1986	Affirms and broadens CERCLA to include emergency planning and other provisions
Emergency Planning and Community Right to Know Act of 1986	Imposes hazardous materials planning requirements to help protect local communities in the event of accidental release
Telecommunications Act of 1996 (47 U.S.C. Section 332(c))	Broadly regulates telecommunications. Provides for competition-"to let anyone enter any communications business -- to let any communications business compete in any market against any other." In particular, state and local governments may not reject the siting of a tower on the basis of radio frequency emissions—i.e., radiation— unless a tower exceeds standards set forth by the Federal Communications Commission
State of California	
Hazardous Waste Control Law of 1972	Requires the generation, transportation, treatment, storage, and disposal of hazardous materials
Hazardous Substance Account Act of 1981	Provides response authority and funding for accidental releases of hazardous substances and hazardous waste disposal sites
Underground Storage of Hazardous Substance Act of 1985	Governs design, maintenance, testing, and use of underground storage tanks containing hazardous materials
Toxic Injection Well Control Act of 1985	Prohibits the injection of hazardous wastes into the ground that would endanger the use of groundwater that is designated as drinking water
California Hazardous Materials Release Response Plans and Inventory Law of 1985	Requires preparation of Hazardous Materials Business Plans and the disclosure of hazardous materials inventories
California Hazardous Waste Control Act of 1985	Regulates siting of hazardous waste facilities and requires preparation of County Hazardous Water Management Plans
Safe Drinking Water and Toxic Enforcement Act of 1986	Prohibits the contamination of drinking water with listed chemicals known to cause cancer or reproductive toxicity
Assembly Bill 2948 of1986	Requires that a Hazardous Waste Management Plans be prepared as part of General that identifies the type and quantity of hazardous waste that is generated in the County; projects future quantities; includes goals, policies, and

Legislation	Purpose
	standards for the management of hazardous waste; and establishes procedures for the siting of new hazardous treatment, storage, and disposal facilities. Plan
Assembly Bill 1809 of 1986	Establishes a program for the safe management of household hazardous waste
Assembly Bill 2185 of 1987	Implements an emergency planning and community right-to-know program
Aboveground Petroleum Storage Act of 1990	Establishes inspection programs for aboveground storage tanks to avoid spills
Medical Waste Management Act of 1991	Provides for programs to ensure the proper handling and disposal of medical waste
Assembly Bill 2707 of 1991	Requires the preparation of Household Hazardous Waste Element
Senate Bill 1082 of 1993	Establishes authority to form Certified Unified Program Agencies (CUPAs) for consolidating the hazardous materials management functions of state and local agencies
Asbestos Airborne Toxic Control Measure for Construction -Grading, Quarrying, and Surface Mining Operations	Air Resources Board Final Regulation Order (2002-07-29 Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations) regulates any construction, grading, quarrying, or surface mining operation on any property is located in a geographic ultramafic rock unit; has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner / operator, or the Air Pollution Control Officer; naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the owner / operator, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.
Humboldt County	
Humboldt County Code Title III, Division 8 – Environmental Protection- Chapter 3 - Transportation of Wastes and By-Products of Fuel for Nuclear Power Plants Prohibited	Prohibits the transport of nuclear waste through the County for purposes of storage or disposal
Humboldt County Code Title III, Division 8 – Environmental Protection- Chapter 4 - Underground Storage of Hazardous Substances	Implements and enforces state law regarding the underground storage of hazardous substances
Humboldt County Code Title V, Division 6 - Hazardous Materials - Handling and Storage of Hazardous Substances	Establishes policy and procedures for the administrative enforcement of violations of state laws regarding hazardous materials release response plans and inventory
Humboldt County Code title VI - Water and Sewage - Division 4 Water Pollution	Regulations prohibiting the pollution of waters in the County

Legislation	Purpose
North Coast Unified Air Quality Management District Regulation III - Control of Toxic Air Contaminants	Rule 300, State Airborne Toxic Control Measures. Incorporates California State Air Toxic Control Measures (ATCMs) per Health and Safety Code 39666 and relates to asbestos airborne toxic control measure for construction, grading, quarrying, and surface mining operations.

Regulations Relating to Airport Hazards.

Legislation	Purpose
Federal	
Federal Aviation Regulations Safe, Efficient Use, and Preservation of the Navigable Airspace	Code of Federal Regulations, Title 14, Chapter I, Subchapter E, Part 77. Establishes standards used to determine obstructions to air navigation, and navigational and communication facilities; and the process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment
State	
State Aeronautics Act	Public Utilities Code Section 21001, and following. Regulates aeronautics, airports and air navigational facilities, establishes Airport Land Use Commissions and Airport Land Use Compatibility Plans
California Airport Land Use Planning Handbook	Handbook prepared by Caltrans Division of Aeronautics to (1) provide information to ALUCs, their staffs, airport proprietors, cities, counties, consultants, and the public, (2) to identify the requirements and procedures for preparing effective compatibility planning documents, and (3) define exemptions where applicable
Local	
Humboldt County Airports Airport Land Use Compatibility Plan, March 1993	Sets forth criteria and policies which the Humboldt County Airport Land Use Commission will use in assessing compatibility between public use airports and land use in surrounding areas.

Regulations Relating to Wildland Fire Hazards.

Legislation	Purpose
State	
Responsibility for Fire Protection Public Resources Code Sections 4125 to 4137	The California Department of Forestry and Fire Protection (CAL FIRE) has the primary financial responsibility of preventing and suppressing fires within State Responsibility Area

Legislation	Purpose
Hazardous Fire Areas Public Resources Code Sections 4251 to 4290	CAL FIRE has responsibility for enforcement of Fire Safe Standards as required by Public Resources Code 4290 relating to road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; fuel breaks and greenbelts
Local	
Title III, Land use and Development, Division 11 Fire Safe Regulations	Local alternative standards as authorized by Section 4290 of the Public Resources Code relating to the future design and construction of structures, subdivisions and developments in SRA.

Regulations Relating to Emergency Management.

Legislation	Purpose
Federal	
Disaster Mitigation Act of 2000 (Public Law 106-390)	Requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance.
State	
Requirements for Local Hazard Mitigation Plans Government Code Section 65302(g)	The State of California encourages local government to adopt a , county, or a city and county may adopt a local hazard mitigation plan with its safety element, including called for in the federal act requirements: an initial earthquake performance evaluation of public facilities; an inventory of private facilities that are potentially hazardous; a plan to reduce the potential risk from private and governmental facilities in the event of a disaster.
Local	
Humboldt Operational Area Hazard Mitigation Plan, February 2014 Update	A plan to reduce risks from natural disasters and to comply with the federal and state law. This plan will act, and has acted, as the key to funding under FEMA hazard mitigation grant programs.

3.7.2 Hazards and Hazardous Materials - Environmental Setting

This section provides background information regarding hazards and hazardous materials within the County, including the handling of hazardous materials, industrial hazards, airport safety, wildfires and the programs that are currently in place to manage hazards. Flood hazards are analyzed in Section 3.10, Hydrology and Water Quality, and geologic hazards are analyzed in Section 3.8 Geology and Soils.

Hazardous Materials and Hazardous Waste

A hazardous material is defined as a substance or combination of substances that, because of its quantity, concentration, or physical, chemical or infectious characteristics, may: (1) cause or significantly contribute to an increase in mortality, or an increase in serious irreversible or incapacitating reversible illness; or, (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of or otherwise managed.

Exposure to hazardous materials and wastes could cause various short-term or long-term health effects. Health effects resulting from exposure to hazardous materials would be specific to each chemical or combination of chemicals. Possible health effects of exposure may be acute (immediate or of short-term severity), chronic (long-term, recurring, or resulting from repeated exposure), or both. Hazardous materials are commonly used in various commercial, agricultural, and industrial applications, as well as in residential uses.

Pursuant to AB 2948 (Tanner, 1986), Humboldt County prepared the Hazardous Waste Management Plan that was adopted as part of the Framework General Plan in 1989. The Hazardous Waste Management Plan identifies the type and quantity of hazardous waste that is generated in the County; projects future quantities; includes goals, policies, and standards for the management of hazardous waste; and establishes procedures for the siting of new hazardous treatment, storage, and disposal facilities. In addition, the County has prepared and adopted an Integrated Waste Management Plan (IWMP), consistent with the Integrated Waste Management Act. The IWMP addresses solid waste source reduction and recycling, household hazardous waste, and countywide landfill capacity needs. (See section 3.3 Utilities and Services).

State and federal agencies regulate hazardous materials. The Hazardous Waste Control law (Chapter 6.5 of Division 20 of the Health and Safety Code) and Title 26 of the California Code of Regulations list more than 800 potentially hazardous materials and establish criteria for identifying, packaging, and disposing of such wastes. Under these regulations, the generator of hazardous waste material must complete a manifest that accompanies the material from the point of generation to transportation to the ultimate disposal location, with copies of the manifest filed with State Department of Toxic Substance Control.

Certified Unified Program Agencies. California established a unified hazardous waste and hazardous materials management regulatory program, and in doing so created Certified Unified Program Agencies (CUPA) to provide for unified local hazardous waste and hazardous materials management. The CUPAs deal with the day-to-day programs required to protect communities from unsafe hazardous material use and practices and provide a coordinated emergency response in the case of an accidental release.

The Humboldt County Division of Environmental Health Hazardous Materials Program has been designated as the CUPA for Humboldt County. The CUPA is responsible for conducting compliance inspections of over 800 facilities in Humboldt County. These facilities handle hazardous materials, generate or treat hazardous waste, and/or operate underground storage tanks. The CUPA uses education and enforcement programs to minimize the risk of chemical exposure to human health and the environment. The CUPA forwards important facility information to local fire prevention agencies that enables them to take appropriate protective actions in the event of an emergency at regulated facilities. The Humboldt County CUPA program elements include:

1. Hazardous Materials Release Response Plans and Inventory (Business Plans)
2. California Accidental Release Program (CalARP)
3. Underground Storage Tanks (UST)
4. Aboveground Petroleum Storage Spill Prevention Control and Countermeasures (SPCC)
5. Hazardous Waste Generation and Onsite Treatment

In order to legally store hazardous substances (e.g. industrial solvents, flammable liquids, and petroleum products) underground, UST owners must apply for permits and demonstrate satisfactory tank maintenance and local groundwater testing to the local CUPA. The CUPAs then add these sites to the SWRCB's GeoTracker database (also known as Geographic Environment Information Management System (GEIMS) for public access. GeoTracker is a database or sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities including: Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites. The GeoTracker database can be accessed at https://geotracker.waterboards.ca.gov/. Water wells within 1,000 feet of a UST are at risk for contamination and must be documented in the permit. Exempt from permitting are small tanks (holding 1,100 gallons or less) on farms holding heating oil or machinery fuel, sumps, storm drains, and oil pipelines.

Sites with Known Hazardous Materials Issues. The Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act Information (RCRAInfo) database indicates that, as of January 20, 2017, there were 198 transporters, treaters, storers, and disposers of hazardous waste in Humboldt County. The most common users are commercial and industrial users such as automotive repair, dry cleaners, gas stations, pest control, energy providers, and retailers. Institutional users of hazardous materials include schools, colleges, correctional facilities, utilities, hospitals and other public agencies.

The Division of Clean Water Programs (CWP), under the California State Water Resources Control Board (SWRCB), is responsible for regulating waste discharges to land, including the documentation of USTs and leaking underground fuel tanks (LUFTs). Under contract with the SWRCB, the County Health Hazardous Materials Program Local Oversight Program (LOP) oversees the investigation and cleanup of soil and groundwater contamination resulting from unauthorized releases of petroleum products (gasoline, diesel fuel, waste oil, etc.) from leaking USTs. The cleanup of these sites is necessary to protect groundwater from contamination and to protect the public from exposure to hazardous materials.

The LOP works with responsible parties and consultants to ensure that the UST Corrective Action Requirements are met. Compliance with these requirements allows cleanup costs to be reimbursed by the state's UST Cleanup Fund to the maximum extent possible. As of 2007, over 300 contaminated sites in Humboldt County have been cleaned up to a level where no further action is required. In addition to working with SWRCB, consultants and responsible parties, the LOP works closely with the North Coast Regional Water Quality Control Board (NCRWQCB) staff on a site-specific basis.

Information regarding known hazardous waste facilities and activities in Humboldt County can be accessed using the U.S. EPA "EnviroFacts" database at http://www.epa.gov/enviro/index.html. The EnviroFacts database allows users to map data by multiple environmental databases for facility information including toxic chemical releases, water discharge permit compliance, hazardous waste handling processes, Superfund status,

and air emission estimates. In addition, users can map data from the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS-or Superfund); Brownfield sites; RCRAInfo; data on the generation of hazardous waste from large quantity generators; data on waste management practices from treatment, storage, and disposal facilities as well as data on accidents, spills, leaks, and past improper disposal and handling of hazardous materials and wastes.

Government Code Section 65962.5 requires that the California Department of Toxic Substances Control 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. This law is commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA). Because this statute was enacted over twenty years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information to be included in the Cortese List does not exist.

The Cortese list can be found at http://www.calepa.ca.gov/sitecleanup/corteselist/. According to the Cortese list, within Humboldt County (including the incorporated areas because sites are only listed by address and not jurisdictional boundary) there are 829 "cleanup sites" that require cleanup with emphasis on groundwater, which include Cleanup Program Sites, Land Disposal Sites, and Leaky Underground Storage Tank Sites; two sites on the "Hazardous Waste and Substances Site List"; and 63 sites that have current or past clean up orders.

Transport of Hazardous Materials. U.S. 101 and S.R. 299 pass through Humboldt County, and a wide range of hazardous cargo is regularly transported along these routes. Types of hazardous cargo regularly transported into, out of, and through Humboldt County by highway include flammable liquids, corrosive materials, compressed and/or poisonous gases, explosives, flammable solids, and irritating materials. The Hazardous Materials Transportation Act regulates the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines. The Act includes provisions for material classification, packaging, marking, labeling, place carding, and shipping documentation.

The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) have primary responsibility for enforcing federal and state hazardous materials regulations and responding to transportation emergencies. The CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at locations throughout the state.

Accidental Spills and Illegal Disposal of Hazardous Waste. Based on information from Humboldt County Environmental Health, there are between approximately 50 and 100 accidental spills of hazardous material spills per year in the County (including incorporated cities). Spills primarily include the accidental release of materials along roadways, at commercial and industrial sites, and on public property. County data regarding releases includes major incidents as well as minor spills and false alarms.

Hazardous waste (e.g., used motor oil, solvents, or paint) is occasionally illegally dumped in remote areas of the County or along roadways. Illegitimate businesses, such as clandestine drug laboratories, are also a significant threat to human health, property, and the environment. In many instances, the dumped residue can pose a serious health threat to unsuspecting persons.

Illegal dumping occurs throughout Humboldt County. The County Public Health Branch and the Code Enforcement Unit respond to complaints regarding illegal dumping. Countywide total dumping complaints range from approximately 100 to 200 per year and include nuisance roadside garbage dumps, illegal disposal sites, sharps/needle dumps, and abandoned appliances or vehicles on abandoned roadsides. Disposal costs for illegally dumped material are covered, in part, by a portion of Humboldt Waste Management Authority's (HWMA) waste management fee (aka disposal fee) to off-set costs incurred by public agency and non-profit organizations for costs associated with cleaning up illegal dump sites incurred by public agency and non-profit organizations. Humboldt County Code, Title V, Health and Safety, Division 2, Solid Waste and Source Separated Materials, establishes fines and possible jail time for dumping related offenses.

The resources necessary to manage a hazardous materials incident depend on the severity and location of the incident and the type of hazardous materials involved. If there is an accident involving hazardous materials on any roadway in the County, including highways and County roads, the CHP is the agency that will assume incident command. If an incident occurs on a roadway within a city, the incident command responsibility will fall to city police with support from the local fire department. If the accident does not occur on a road, its management will be within the jurisdictional responsibility of the County (most likely the Sheriff's Department).

Industrial Hazards. Several specific industrial activities have been identified with the potential to cause significant damage to the surrounding area in the event of an accident. These activities include the use of chlorine at the sewage treatment plants within the region, shipping and receiving of hazardous materials other than chlorine, and the nuclear materials at the Pacific Gas & Electric (PG&E) Humboldt Bay Power Plant. Each of these activities/facilities is required to have a contingency plan that directs the appropriate disaster response.

Naturally Occurring Asbestos. Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. Asbestos is commonly found in ultramafic rock, including serpentine, and near fault zones. The amount of asbestos that is typically present in these rocks ranges from less than 1% up to about 25%, and sometimes more. Asbestos is released from ultramafic and serpentine rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. It is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time.

In Humboldt County ultramafic rock types that may contain naturally-occurring asbestos are found primarily in the Salmon Mountains east of Hoopa and south of Orleans. According to geographic information system mapping data available from the California Department of Conservation, California Geological Survey, other areas with ultramafic rock are listed below.

- Bluff Creek area east of Weitchpec
- upper Soctish and Rock Creeks and the lower slopes of the west side of the Hoopa Valley
- east slope of the upper Little Van Duzen drainage;
- Chalk Mountain area
- Elk Ridge area
- Salmon Creek area

It should be noted that while geologic conditions are more likely for asbestos formation in or near these areas, its presence is not certain. The only way to establish the presence or absence of asbestos at a specific location is through a detailed site examination by a qualified geologist. In addition, naturally occurring asbestos may also be present in rocks and soils outside these areas.

Site disturbing activities within areas containing ultramafic rock or that are identified to contain naturally occurring asbestos are subject to the North Coast Unified Air Quality Management District Rule 300, Section 3.2.5, which is Title 17, Section 93105 of the California Code of Regulations, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. This rule specifies procedures for determining ultramafic rock composition and the applicability of health and safety control measures.

As a result of the 2009 Housing Element (prior Housing Element Implementation Measure H-IM34, Reduce and Avoid Air Quality Impacts from Naturally Occurring Asbestos), the Planning and Building Department refers all building permits on parcels which appear to be underlain by ultramafic rock to the NCUAQMD for appropriate standards and recommendations. The Planning and Building Department uses its GIS system to identify all parcels that may be underlain by ultramafic rock on places a note on such parcel records in Humboldt County's online permit management system. This program ensures that new development in areas of known ultramafic rock would be subject to NCUAQMD air quality standards.

Electromagnetic Fields. High-speed internet access, or broadband, is a fundamental aspect of the infrastructure required for education, job creation, public safety, and for the delivery of essential services like health care. While some Humboldt County residents have access to broadband, many residents and businesses are underserved in terms of provider choice and speed. The General Plan Update indicates that Humboldt County is lagging behind the rest of the state in the quality and availability of broadband, and contains numerous policies that encourage the expansion of service.

Broadband communications can be delivered using terrestrial (as opposed to satellite based service) "wired" and "wireless" technology. Wired technology consists of copper and optical fiber networks originating from the telecommunications provider that follow pole lines or are placed in underground trenches along roadways and within easements across private property. Wireless technology consists of radio antennas that broadcast communications signals using electromagnetic energy commonly referred to as "radiofrequency" or "RF".

As of 2016 there were approximately 93 wireless communications towers in Humboldt County, including cellular telephone, public safety communications, radio, and television (based on a search of registered towers of any height in Humboldt County using the FCC Antenna Structure Registration search website). These towers may include one antenna, or could include multiple antennas of different types owned by various service providers. Towers vary in terms of their construction (metal lattice, tubular metal, wooden, etc.) and are located on ridge tops, such as Kneeland and Horse Mountain, and are also located within communities and on buildings.

The Telecommunications Act of 1996 (47 U.S.C. Section 332(c)) generally preserves local zoning authority over wireless telecommunications antennas. However, the Telecommunications Act also limits local authority in a number of significant respects. Specifically, it provides that "no state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the (Federal

Communication) Commission's regulations concerning such emissions." Consequently, the County may not impose any limitations or restrictions on the establishment or location of wireless telecommunication facilities based on concerns about the health effects of RF emissions, so long as the service provider can demonstrate compliance with FCC regulations.

The U.S. Congress directed the FCC, the Federal licensing agency for communication facilities, to evaluate possible significant impacts on the environment from their actions. The FCC adopted human exposure limits for field strength and power density as recommended in the National Council on Radiation Protection and Measurements (NCRP) - Report No. 86, "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields." Provisions within the Telecommunications Act of 1996 require these standards are recognized as the local standard. Therefore, to evaluate public health effects associated with radio frequency (RF) radiation exposure, the County requires that an applicant for a telecommunications facility demonstrate through the preparation of a cumulative RF study that the resulting RF emissions from the facility will comply with the above standards.

Hazardous Materials Response Team. The 2008 Humboldt County Hazardous Materials Area Plan establishes the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County's population, the environment, and public and private property from the effects of hazardous materials incidents. The Hazardous Materials Area Plan contains the results of a hazard analysis performed by Humboldt County Environmental Health that identified those facilities and transportation routes which present a hazardous materials release risk associated with hazardous materials storage, handling and transportation. In addition, vulnerable populations were identified and mapped relative to their proximity of acutely hazardous materials (AHM) and bulk storage facilities. These items can be found in Appendices A through C. This plan establishes the emergency response organization for hazardous materials incidents occurring within Humboldt County. The Hazardous Materials Area Plan was utilized in the preparation of the Humboldt Operational Area Hazard Mitigation Plan and the Humboldt County Emergency Operations Plan.

The County of Humboldt, County of Del Norte, and each city within both counties (with the exception of Fortuna) make up the Humboldt-Del Norte Hazardous Materials Response Joint Powers Authority (HazMat JPA), which was formed in 1995. The HazMat JPA meets quarterly and provides ongoing funding for the 12-member HazMat Team. Each jurisdiction pays a proportionate amount, based on population, of the Team's ongoing expenses. The HazMat Team has received over $200,000 in grants for training and equipment, and receives approximately $60,000 per year in ongoing funding from the JPA. The Hazardous Materials Area Plan also establishes the operational concepts and procedures associated with the HazMat Team.

Airport Safety

Nine public airports operate in Humboldt County: Arcata-Eureka Airport; Dinsmore Airport; Garberville Airport; Kneeland Airport; Murray Field Airport; Rohnerville Airport; Eureka Municipal Airport; Shelter Cove Airport; and Hoopa Airport (see Table 3.5-2 in Section 3.5 Transportation for additional information regarding these airports). All but the Eureka Municipal, Shelter Cove, and Hoopa Airports are owned and operated by Humboldt County. General background information regarding public airports in Humboldt County can be found in the Humboldt County Regional Transportation Plan, Chapter 7, Aviation System Element; the Airport Land Use Compatibility Plan (ALUCP) for Humboldt County Airports, March 1993 and amended in 1998; and in each airport's respective airport master plan. Airport master plans for Humboldt County

airports are available from the Humboldt County Public Works Department at https://humboldtgov.org/1396/Aviation.

The Humboldt County Public Works Department operates six County airports. The Airport Land Use Commission (presently consisting of the members of the Board of Supervisors) coordinates with applicable agencies to ensure compatible land uses for areas surrounding public airports. The principal airport/land use compatibility around airports is:

- **Noise:** Often the most significant of the adverse impacts of airport activities.
- **Airspace:** The height of structures, trees, and other objects in the vicinity of an airport greatly affect the use of that airport.
- **Safety:** Controls on land uses near airports can reduce potential risks both to people on the ground and to the occupants of aircraft.

The Airport Land Use Commission (ALUC) adopted the Airport Land Use Compatibility Plan, Humboldt County Airports, March 1993 (amended in 1998)(ALUCP), which establishes airport land use compatibility policies and maps that are applied to areas adjacent to all the public use airports in the County. The land use compatibility policies are incorporated into the General Plan Update in standard S-P22, Airport Land Use Compatibility Criteria. The General Plan applies these compatibility policies to the County's three other airports.

Wildland Fire Hazards

Wildland fires are fires caused by nature or humans that result in the uncontrolled destruction of forests, brush, field crops, grasslands, and real and personal property in non-urban areas. The wildland fire season in Humboldt County usually begins in early July and typically ends in mid-October; however, wildland fires have occurred in every month of the year. Drought, light snow pack, and local weather conditions can expand the length of the fire season. The early and late shoulders of the fire season are usually associated with human-caused fires. Fires during the peak months of July, August, and September are usually related to thunderstorms and lightning strikes.

Typically, western Humboldt County's wildland fire season is shorter than the eastern half for a number of reasons: (1) the western half of the County receives more rainfall; (2) the west has spring seasons that are wetter and cooler than the east; (3) temperatures in the eastern portion of the County are much higher in the summer months; and (4) much of the precipitation received in the east is snow that falls during winter.

Fire Hazard Severity Mapping. In August 2000, President Clinton directed the Secretaries of the Agriculture Department and the Department of the Interior to develop a plan to respond to severe wildland fires, reduce the impact of wildfires on rural communities, and ensure sufficient firefighting capacity in the future. The resulting action plans and agency strategies have collectively become known as the National Fire Plan, which supports the integration of wildland and prescribed fire as a basic tool for land and resource management. The plan directs federal agencies to work directly with states and local communities to reduce immediate hazards in wildland-urban interface areas, and to develop a collaborative effort to ensure that sufficient resources are available for extreme fire conditions in the future. A major feature of the National Fire Plan is the interagency aspect of risk reduction planning and implementation among federal, state, and local agencies.

A major component of the National Fire Plan was funding for projects designed to reduce fire risks to people and their property. A fundamental step in realizing this goal was the identification of areas that are at high risk of damage from wildfire. Federal fire managers authorized state

foresters (foresters with the California Department of Forestry and Fire Protection or CAL FIRE) to determine which communities were under significant risk from wildland fire on federal lands. CAL FIRE undertook the task of generating the state's list of communities at risk. With California's extensive wildland-urban interface situation, the list of communities extended beyond those just on Federal lands.

Part II - Risk Assessment of the 2013 Humboldt County Community Wildfire Protection Plan (see discussion of the Humboldt County Community Wildfire Protection Plan below), beginning on page II.2-2, describes the National Fire Plan Communities at Risk program and the communities within the County that are considered at risk by federal land management agencies and CAL FIRE. Figure II.2-1 Humboldt County Designated Communities at Risk, lists 69 communities in Humboldt County that are considered at risk by CAL FIRE based on vegetation types and their potential fire behavior during a wildland fire; the probability that a large, damaging wildland fire would occur in a particular vegetation type; and the housing density that would create wildland-urban interface fire protection strategy situations.

The Fire and Resource Assessment Program (FRAP) developed and maintained by CAL FIRE includes a historical record of all wildfires in Humboldt County. According to FRAP statistics, 631 wildfires burned in Humboldt County between 1908 and 2015 (the most recent available data). The cause of 414 of these fires is known and recorded. Seventy-two percent were caused by human activities. Lightning accounts for the other 28 percent of the County's wildfires, but human activities often influence the severity and number of fires caused by lightning strikes. Therefore, human activities either directly cause or significantly influence most wildfires.

Recent wildfires of note in Humboldt County include the Megram Fire within the Six Rivers National Forest, caused by lighting that burned 5,473 acres in 1999; the Canoe fire in Humboldt Redwoods State Park and the Honeydew Fire, at 952 and 1,095 acres respectively, both caused by a lightning storm in 2003; the Humboldt Complex fire in 2008 that was composed of multiple fires caused by lightning strikes throughout the County, including the Paradise Ridge Fire that burned over 1,000 acres and threatened Shelter Cove; and the numerous lightening fires of 2015 in the southern portion of the County .

The following is based on the "Fire Perimeters" data, a statewide interagency file geodatabase with wildfire history, prescribed burns and other fuel modification projects, from the CAL FIRE Fire and Resource Assessment Program (FRAP). Over the last 20 years, an average of 9,000 acres of wildland per year have been burned, ranging from 25 acres in 2000 to 59,000 acres in 1999. 2015 was marked by significant lightning events on July 30th that resulted in over 36,000 acres of the over 38,000 total acres burned during that year. The following table describes the total acreage of the largest fires within the County that year.

Table 3.7-2. Humboldt County Large Wildfires, 2015.

Year	Fire Name	Impacted Areas	Acres
2015	Humboldt Complex	Middle Fork Eel River drainage between Alderpoint and Fort Seward, and near Blocksburg	4,531
2015	Route Complex	Mad and Van Duzen River drainage - Six Rivers National Forest lands north and south of Dinsmore	24,345
2015	Mad River Complex	Mad and Van Duzen River drainage - Six Rivers National Forest lands northwest of Blocksburg	7,348

CAL FIRE has prepared fire hazard severity rating maps for Humboldt County (see Table 3.7-2 Fire Hazard Severity by Planning Watershed). Fire hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat produced by the fire, and most importantly, the burning firebrands that the fire sends ahead of the flaming front. According to the Humboldt County Community Wildfire Fire Protection Plan (Hazard Assessment and Fire Hazard Severity Mapping, Chapter II.1 Wildfire Environment, Page II.1-22) fire hazard elements include the following:

- **Vegetation.** Vegetation is "fuel" to a wildfire and it changes over time. The fire hazard severity rating considers the potential vegetation over a 50-year time horizon.
- **Topography.** Fire burns faster on steep slopes.
- **Weather**. Fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong.
- **Crown fire potential.** Under extreme conditions, fires burn up into trees and tall brush.
- **Ember production and movement.** Firebrands are blown ahead of the main fire, which can ignite buildings and spread the fire.
- **Likelihood of Fire.** Likelihood of an area burning over a 30 - 50 year period.

Humboldt County exhibits extreme diversity in its potential for destructive wildland fire, ranging in severity classification from nil to very high based on the wildfire hazard severity zone map. The Map generally reflects a moderate to high rating on the western portions of the County where the fuel potential is high but the climate is damp. The very high ratings are generally in the drier, eastern portions of the County or in very steep terrain. The areas not prone to fire risk are concentrated in coastal and estuary lands.

Table 3.7-3. Fire Hazard Severity by Planning Watershed.

Planning Watershed	Fire Hazard Severity (Acres)			
	Very High	High	Moderate	Other*
Cape Mendocino	16,761	287,213	6,960	643
Eureka Plain	2,213	83,543	21,094	17,458
Lower Eel	38,514	103,010	18,188	30,526
Lower Klamath	302,702	26,408	1,921	1,499
Lower Trinity	185,511	4,613	657	1,321
Mad River	124,082	86,282	7,285	3,506
Middle Main Eel	83,239	52,412	2,771	0
Redwood Creek	92,555	83,072	11,845	223
South Fork Eel	18,731	178,947	2,561	0
South Fork Trinity	70,130	2,906	0	0
Trinidad	1,517	59,791	21,937	394
Van Duzen	96,581	130,457	6,374	1,300
Total	**1,032,536**	**1,098,653**	**101,594**	**56,868**

*Other = Non-Wildland/Non-Urban, Urban Unzoned

Wildland fire Prevention and Suppression. The State Responsibility Area (SRA) is defined in California Public Resources Code §4125 – 4127 as lands in which the financial responsibility for preventing and suppressing wildland fire resides with the state. In general, SRA lands contain trees producing, or capable of producing, forest products; timber, brush, undergrowth, grass, whether of commercial value or not, which provide watershed protection for irrigation or for domestic or industrial use; or lands in areas which are principally used, or are useful for, range or forage purposes. Preventing and suppressing fires is the responsibility of the state within SRA.

Humboldt County applies standards to proposed development within the SRA to reduce the risk of fire. These standards are a locally adopted alternative version of the state's SRA Fire Safe Regulations (Humboldt County Code Title III, Div 11) as authorized by PRC Section 4290, and have been approved by CAL FIRE as meeting or exceeding state regulations. New development in the SRA is subject to Fire Safe regulations, and the appropriate clearance of vegetation around such development is inspected by CAL FIRE and potentially by Humboldt County with other improvements at the time of construction. With respect to ongoing responsibility for addressing wildland fire hazards such as clearances around homes and along private roads, CAL FIRE states, "the owner of this property is subject to the maintenance requirements of Section 4291 of the Public Resources Code." In other words, property owners are responsible for maintaining appropriate clearances of vegetation on their property.

Approximately 71 percent of Humboldt County is classified as SRA, 26 percent is federal responsibility area (land managed by the federal government, such as Six Rivers National Forest, or tribal land), and 3 percent is local responsibility area. Local responsibility areas include all incorporated cities as well as the Eel River bottoms and bottom lands within the greater Humboldt Bay area, and are areas where local fire related districts (other special district types, in additional to Fire Protection Districts, are responsible for fire protection in Humboldt County) and city fire departments are responsible for wildland fires in addition to structural fire protection. However, most fire related districts within the County are comprised entirely of SRA lands and local agencies are responsible for structural fire protection (see 3.13, Public Services, for a comprehensive discussion of local fire protection services). It should be noted that, although fire related districts are not responsible for wildland fire protection they are in most instances the first units at scene and provide essential initial response services. CAL FIRE retains financial responsibility for grass and forest fires and responds to other fires that may pose a threat to the wildland. A map of CAL FIRE responsibility area With Fire Hazard Severity Zones is available from the Planning and Building Department and the on the County's website at https://humboldtgov.org/277/Large-Format-Maps .

According to the report *Solutions to the Rising Costs of Fighting Fires in the Wildland-Urban Interface,* December 2009, a white paper by Headwater Economics which is an independent nonprofit research group, the cost and suppression complexity of wildland fires has increased across the nation over recent decades. Reasons for these increases include: (1) the buildup of fuels resulting in part from past fire suppression efforts, which makes the probability of large fires more likely; (2) drought conditions and climate change which serve to lengthen the fire season and increase fire intensity; and (3) the development of homes adjacent to forest lands which has forced agencies to focus firefighting and management efforts on protecting private property.

The Headwaters Economics report found that fire-safe practices are important for the parts of the wildland-urban interface that are already developed, but can be a "distraction, focusing energy and resources on how to build a better residential subdivision in hazardous areas, rather than redirecting development, through zoning or other means, to less dangerous places on the landscape." (Headwaters Economics Report, Page 8) The Headwaters Economics report concludes that future increases in suppression complexity and cost would only be reduced as the rate of development in the wildland urban interface areas is diminished.

A report by the California Legislative Analyst's Office (LAO), 2010-11 Budget: Resources and Environmental Protection, echoes the conclusions of the Headwaters Economics report. The LAO found that "increasing residential development in and around SRAs has translated to increased CalFire fire protection costs for several reasons. First, with the presence of life and

structures in or nearby to the areas for which CalFire is responsible to provide wildland fire protection, more resources are often deployed to suppress wildland fires than would be used in nondeveloped areas. Second, the presence of development can limit the fire prevention and suppression options available to wildland fire managers, thereby potentially increasing the fire risk of an area and increasing fire suppression costs. For example, development substantially restricts the ability of fire prevention agencies to use certain techniques such as prescribed burning to reduce the high volume of flammable vegetation intermixed with development. Lastly, the presence of people in wildlands can increase fire protection costs because fire from structures, vehicles, and human activities can quickly spread to the wildland vegetation." (LAO Overview of the 2010-11 Governor's Budget, Resources and Environmental Protection, Page RES-34 through 35).

Community Wildfire Fire Protection Plan. The 2006 Master Fire Protection Plan assessed the risk of fire within the County using the Risk Assessment and Mitigation Strategies (RAMS) planning process. The RAMS is a computer-based modeling system for analyzing fire related fuels, hazard, risk, assets at risk, and suppression capability. The 2013 Humboldt County Community Wildfire Protection Plan, which updated the Master Fire Protection Plan, utilized each of the RAMS factors and more in the risk assessment included in that plan. The Community Wildfire Fire Protection Plan risk assessment is largely qualitative rather than a database driven model like the RAMS. However, the output of the RAMS analysis cannot take into consideration the unique characteristics of each Humboldt County community and watersheds. Plan Section II.5, Risk Assessment Summary, summarizes the CWPP risk assessment. The following table gives a very brief synopsis of the CWPP Risk Assessment.

Table 3.7-4. Summary of the Humboldt County Risk Assessment

Category	Description	Rating
Wildfire Environment		
Risk of Wildfire Occurrence	The possibility of a wildfire occurring based on factors such as fire history and ignition risk	Northeast and extreme southwest parts of the County have a high risk of wildfire occurrence; and coastal areas and river valleys have moderate risk and generally better fire-protection access, which increases initial attack success
Fire Hazard Severity	A measure of how resistant to control a wildfire is once it starts; it is affected by vegetation, topography, and weather	Coastal areas and river valleys with fog influence are rated moderate, western side of the County is rated high, and eastern side of the County is rated very high.

Table 3.7-4. Summary of the Humboldt County Risk Assessment

Category	Description	Rating
Wildfire Environment		
Structural Ignitability	The ability of structures, especially homes, to burn, where newer developments that are built to current building codes receive a "low" ignitability rating compared to older wooden homes which generally have much higher structural ignitability	The complete range from low to very high structural ignitability is found throughout Humboldt County, although most homes tend toward higher structural ignitability.
Interface Fuels	Anything surrounding a structure that can burn is an interface fuel, including ornamental vegetation or the objects found around homes such as patio furniture, as well as the homes themselves	Interface fuels throughout Humboldt County are high to very high.
Humboldt County Values and Assets	Humboldt County is known for its natural beauty and abundant natural resources which are important to the local economy and could be severely impacted by wildfire	The Values and Assets at risk for Humboldt County are given a high to very high rating.
Wildfire Protection Capabilities		
Level of Fire Protection Service	The ability to provide, on a countywide basis, adequate and appropriate level of emergency service, that is, a level of service that is commensurate with the community's risks and the public safety responsibilities of the local fire agency/organization. Fire-protection organizations are called upon to provide a range of emergency-response services, including wildland and structure fire suppression, emergency medical and rescue services, as well as a broad range of other response types.	Overall, fire protection capability for the County is moderate.

Table 3.7-4. Summary of the Humboldt County Risk Assessment

Category	Description	Rating
Wildfire Protection Capabilities		
Fire Protection Support	The ease of fire engine access to homes, adequate water supply and pressure, and community support for fire protection, both financially and through volunteering	Support for fire protection in Humboldt County is generally low and even lower during extreme fire weather events.
Evacuation Vulnerability	The ability for residents and their animals to safely evacuate	The existing road infrastructure is inadequate in most areas of the County for safe and effective evacuation. Therefore, evacuation vulnerability is very high.
Community Preparedness		
Community Fire Safety Efforts	The level of community responsibility for preparing their communities for wildfire	Although a number of communities have taken initiative to increase their fire preparedness, several "Communities at Risk" have multiple unmet hazard mitigation needs. Therefore, community preparedness through fire safety efforts is moderate.
Fire Prevention and Education	The Resources devoted to promoting fire education and prevention programs within local communities	Although public understanding of fire prevention and fire safety is increasing in Humboldt County, education is still needed, especially among the smaller, more remote Communities at Risk. Therefore, community preparedness through fire prevention and education is moderate.

Emergency Management

Chapter 10, of Division 2 of Title II of the County Code establishes the Humboldt Operational Area (OA) and identifies the Sheriff as Director of Emergency Services for the County. The Humboldt OA is composed of the County of Humboldt, serving as the lead agency, and all political subdivisions (cities and special districts). The Office of Emergency Services (OES), which is part of the Special Operations Division within the Sheriff's Department, assists the Sheriff in controlling and directing the effort of the emergency organization of the County, as defined in Section 2210-8 of the County Code.

The OES is responsible for maintaining the Humboldt County Emergency Operations Plan (EOP), which serves to address the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in, or affecting, Humboldt County. The EOP accomplishes the following:

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County.
- Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters.
- Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center activities, and the recovery process.

The EOP is designed to establish the framework for implementation of the California Standardized Emergency Management System (SEMS) for Humboldt County, which is located within the Governor's Office of Emergency Service's Mutual Aid Region II. It is intended to facilitate multi-agency and multi-jurisdictional coordination, particularly between Humboldt County and local governments, including special districts and state agencies, in emergency operations.

The OES also maintains specific hazard response plans for earthquake, flooding, tsunamis, coastal storms, and other events. These response plans are used to determine the most appropriate evacuation routes based on the nature and extent of the hazard. Pre-disaster evacuation route planning is addressed through a variety of efforts including the Federal Emergency Management Agency (FEMA) local Multi-Hazard Mitigation Plan (HMP) program, the seismic retrofit program for state bridges and overpasses, tsunami response planning, and the application of the CAL FIRE SRA standards for emergency access.

Humboldt Operational Area Hazard Mitigation Plan. The federal Disaster Mitigation Act of 2000 (DMA 2000, P.L. 106-390) requires local governments to adopt a federally approved HMP in order to receive pre- and post-disaster mitigation funds. The DMA emphasizes planning for disasters before they occur. In response to this opportunity, a planning partnership of eligible local governments within the Humboldt Operational Area formed to develop a local hazards mitigation plan to address multiple hazards faced by Humboldt County communities.

On December 11, 2007, the Humboldt County Board of Supervisors adopted the Humboldt Operational Area HMP. On January 28, 2008, FEMA approved the HMP. The Final Draft of the HMP can be viewed at http://www.humboldtgov.org/506/Local-Hazard-Mitigation. There are 26 planning partners participating in this program from a broad range of jurisdictions including each of the seven cities and a number of special districts. Each planning partner participated in the development of the countywide plan and their HMP effort is incorporated into the HMP as an "Annex" that contains a description of the local agency, a description of the hazards that affect that agency, and an action plan to address the hazards. This Annex is equivalent to each planning partner having their own plan, which ensures eligibility for hazard mitigation funding from FEMA.

The HMP inventoried potential natural hazards that the defined planning area is most vulnerable to, assessed the risk to the planning area's citizens, buildings and critical facilities, and developed a mitigation strategy to reduce the risk of exposure and allow a swift and organized recovery should a disaster occur. Natural hazards that the HMP addresses include

flood, wildland fire, earthquake, tsunami, severe weather, landslides and other mass movement, dam failure, fish losses, and drought. The HMP process provided the County and the cities with the opportunity to review and expand on policies contained in their planning documents. In developing the HMP, the agencies used the General Plan and the HMP as complementary planning documents that work together to achieve the ultimate goal of reducing the risk of exposure to the residents of the Humboldt OA.

3.7.3 Hazards and Hazardous Materials - Standards of Significance

This analysis uses the significance criteria from the California Environmental Quality Act (CEQA) Guidelines Appendix G. The proposed General Plan Update would result in a significant impact related to hazards and hazardous materials if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
b) 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.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
d) Be located on a site which is included on a list of hazardous materials 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.
e) Result in a safety hazard for people residing or working within 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. .
f) Result in a safety hazard for people residing or working within the vicinity of a private airstrip.
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Items “a” through “d” are discussed in Impact 3.7.4.1: Hazardous Materials. Items “e” and “f” are discussed Impact 3.7.4.2: Airport Safety Hazards. Item “g” is discussed in Impact 3.7.4.3: Emergency Response Plan. Item “h” is discussed in Impact 3.7.4.4: Wildland Fire Risk.

3.7.4 Hazards and Hazardous Materials - Impacts and Mitigation Measures

Impact 3.7.4.1: Hazardous Materials

Implementation of the General Plan Update could result in safety hazards due to the presence or use of hazardous materials associated with new development.

This impact analysis addresses items “a” through “d” of the significance standards listed in Appendix G of the CEQA Guidelines as provided in Section 3.7.3 above. Pursuant to these

standards, the proposed County General Plan Update would have a significant impact if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
b) 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.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
d) Be located on a site which is included on a list of hazardous materials 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.

The development of 3.1 million square feet of commercial and industrial uses is projected to occur during the General Plan Update planning period. These land uses, along with agricultural land uses, typically involve the use, storage, transportation and disposal of hazardous materials. Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Many products containing hazardous chemicals are also routinely used and stored in homes. These products are also shipped daily on the County's highways. Manufacturers, storage facilities, transporters, and users of chemicals are sources of hazardous materials, but there are many others, including service stations, and hospitals. Varying quantities of hazardous materials are manufactured, used, or stored at facilities in the unincorporated area, from industrial plants to local dry cleaning establishments or garden supply stores.

Although hazardous materials are present in uses within all land use designations, for instance various cleaning chemicals, herbicides, and pesticides can be found on farms and in the typical residential garage, those land uses that are more likely to regularly use hazardous materials include industrial, commercial, mixed use, and some public land use designations. Industrial would be considered the land use type with the highest potential to result in the transport, storage and disposal of hazardous materials in quantities that could pose a significant risk to humans or the environment.

Table 3.7-4 below displays how much land is planned for industrial uses in Humboldt County. Including the coastal zone area, which is not the subject of this EIR, there are over 3,370 acres of land planning for industrial purposes. Approximately 48 percent of that land is within the coastal zone, almost all of which is within the Humboldt Bay Area coastal planning area. Within the inland areas, there are approximately 1,740 acres of industrial lands, 26 percent of which is located in the Blue Lake CPA and 16 percent is in the Town of Scotia. With the projected development of industrial lands during the planning period, the potential exists for incidents resulting in significant exposure associated with the transport, storage, and disposal of hazardous materials.

Table 3.7-5. Land Planned for Industrial Uses.

Community Planning Area	Acres by Land Use Designation		
	IG	IR	Total
Arcata	66.3	13.4	79.7
Avenues -Myers Flat	12.9	0.0	12.9
Avenues -Stafford-Redcrest	45.3	0.0	45.3

Community Planning Area	Acres by Land Use Designation		
	IG	IR	Total
Blue Lake	231.1	218.3	449.4
Eureka	0.0	0.0	0.0
Fieldbrook-Glendale	75.2	4.2	79.4
Fortuna	148.6	0.0	148.6
Garberville/Redway/Benbow/Alderpoint	112.2	51.2	163.4
Carlotta/Hydesville	30.7	35.0	65.7
McKinleyville	119.7	2.1	121.8
Orick	0.0	20.2	20.2
Orleans	37.1	0.0	37.1
Rio Dell/Scotia	282.3	0.0	282.3
Willow Creek	65.5	19.9	85.4
Outside CPAs	129.3	17.4	147.2
Total	**1,356.3**	**381.7**	**1,738.5**

As described in the environmental setting, hazardous materials are regularly used, transported, and disposed of in Humboldt County. Although such activities are regulated and monitored by federal, state, and local agencies, accidental release, misuse or natural disasters (e.g., floods or earthquakes) could occur. Increased residential development would result in increased use, storage, and disposal of household hazardous materials within the County. Commercial and industrial growth during the planning period would also result in increased use, storage, and/or disposal of hazardous materials during routine operations. Of particular concern are facilities with USTs or other methods of storage that could be impaired during a seismic event or could otherwise accidentally leak into the soil, water, or air. Such facilities include gas stations, automotive repair shops, and dry cleaners. Groundwater could become contaminated from these unintentional discharges.

The proposed General Plan Update does not contemplate locating new, incompatible land uses on sites which are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 or the Cortese List that would create a significant hazard to the public or the environment. The environmental setting discussion above provides a discussion of the Cortese List. The General Plan Update does not contain specific development proposals for such sites; however, the Plan does encourage the cleanup and appropriate reuse of Brownfield sites. Existing review procedures for ministerial and discretionary projects include referrals to Environmental Health addressing the safety hazards for development of such sites, and mitigating potentially significant impacts to a level of less than significant.

Table 3.7-4, Land Planned for Industrial Uses, identifies the acres within each community planning area that are planned for industrial uses. There are very few changes from a non-industrial land use to an industrial land use proposed as part of the General Plan Update or from an industrial related land use to a residential land use. There are fifteen areas throughout the County where industrial land uses are planned next to residential land uses (RL and RE land use designations), including the coastal-dependent industrial areas in Fairhaven, Samoa, and Fields Landing; lumber mills and other timber operations in Glendale, Manila, Alton, Carlotta, and Rohnerville; and other industrial areas in McKinleyville, Arcata area, Willow Creek, and Garberville. Risks associated with the use of hazardous materials that normally accompany industrial operations are increased when industrial land uses are located next to residential land uses. All of these

areas were planned for industrial uses as part of the prior Framework General Plan and its predecessors.

Other sources of hazardous emissions that could create a potential hazard to the public or the environment relate to naturally occurring asbestos and emissions from radio antennas that broadcast communications signals using electromagnetic energy commonly referred to as "radiofrequency" or "RF". Several areas within the County, primarily in the Salmon Mountains east of Hoopa and south of Orleans, are known to have ultramafic rock types that may contain naturally-occurring asbestos. The General Plan Update contains a Telecommunications Element to addresses telecommunications access, reliability, and capacity.

Projected growth during the General Plan Update planning could result in site disturbing activities on land that may contain naturally-occurring asbestos. The County has identified all parcels which appear to be underlain by ultramafic rock and any site disturbing activities will trigger a referral to the NCUAQMD for appropriate standards and recommendations for review based on specific procedures for determining ultramafic rock composition and the applicability of health and safety control measures. For new proposals that would result in broadcast radio communications signals, the County currently requires that an applicant for a telecommunications facility demonstrate that the proposed facility complies with FCC standards.

Analysis of Relevant General Plan Update Policies

The General Plan Update includes several policies related to industrial hazards and hazardous materials which would serve to lessen potential impacts. Located in the Safety (S) Element, Policy S-P25, Hazardous Industrial Development, requires that the approval of proposed hazardous industrial developments include mitigation measure sufficient to offset increased risks, and that risks to adjacent populations be mitigated through response plans. Policy S-P26, Hazardous Waste, seeks the elimination of use of toxic materials within Humboldt County where possible, and requires the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use is not feasible. It also requires new development that may generate significant quantities of hazardous wastes to provide a plan for disposal that is consistent with applicable state laws and local regulation. Regarding sites that are currently subject to contamination by hazardous materials, Policy ED-P16, Brownfields, located in the Economic Development (ED) Element, would require that the County pursue and distribute funding and technical assistance to assess, clean up, and reuse Brownfields as well as streamline the regulatory review for proposed development in commercial and industrial zoned Brownfields. To reduce hazards to the public from the operation of new wireless facilities, Standard T-S1, Communications Siting Standard (Telecommunications Element) requires that applicants shall demonstrate that proposed wireless facilities operate within Federal Communications Commission (FCC) emission regulations and shall carryout ongoing monitoring for compliance with FCC regulations.

The General Plan Update land use maps places residential land uses adjacent to industrial land uses in numerous locations across the County. Many of Humboldt County's communities developed as mill towns with worker housing adjacent to industrial facilities. Two prominent examples of historic mixed industrial and residential areas include the Towns of Scotia and Samoa, both of which are recent private company town conversions. The Proposed General Plan Update land use map maintains the current distribution of industrial land adjacent to residential land, but does not add to this incompatibility.

In addition, Standard S-S15, Hazardous Materials Handling and Emergency Response, requires that new development that handles toxic, flammable, or explosive materials in certain quantities conform to the applicable state or federal materials handling and emergency response plans. Standard S-S16, Transport of Nuclear Materials, prohibits the transport of nuclear waste through the County, consistent with Section 383-1 of the Humboldt County Code. For site disturbing activities on land that may contain naturally-occurring asbestos, Implementation Measure MR-IM5, Coordination with the Air Quality Management District and AQ-IMx2, Reduce Air Quality Impacts from Surface Mining, the County would defer to the NCUAQMD during discretionary review of proposed mining operations in ultramafic rock areas. AQ-P7, Interagency Coordination, directs the County to coordinate with the NCUAQMD early in the permit review process for site grading and mining projects where there may be naturally occurring asbestos.

The Telecommunications Element contains policies encouraging broadband communications which could result in additional wireless radio facilities as well as multiple antennas co-located on wireless towers. Standard T- S1, Communications Siting Standard, would require that applicants demonstrate that proposed facilities operate within Federal Communications Commission (FCC) emission regulations and guidelines including initial and ongoing monitoring for compliance with FCC regulations.

Conclusion

Local, state, and federal regulations, coupled with the General Plan Update policies and standards would serve to minimize both the frequency and the magnitude of potential releases of hazardous materials through upset, routine use, transport or disposal, and the emission of hazardous materials, but would not eliminate the potential for all such releases. Implementation of the General Plan Update policies and compliance with the applicable laws and regulations would lessen risks associated with the use of hazardous materials and would not create adverse risks to human health or the environment. Policy S-P26, Hazardous Waste, seeks to eliminate the use of toxic materials within Humboldt County, where feasible, and require the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use is not feasible. Policy S-P26 would also require new development which may generate significant qualities of to provide a plan for disposal that emphasizes on-site treatment, neutralization, and recycling which would ensure that new development would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. In addition, state laws and local regulations relating to hazardous materials handling and disposal may preclude on-site treatment, neutralization, and recycling and such activities may result in additional hazards.

Regarding hazardous emissions from new telecommunications sites, Telecommunications Element Standard T-S1, Communications Siting Standard, would establish siting standards and ensure that new antennas meet FCC requirements. Mineral Resources and Air Quality policies and implementation measures MR-IM5, AQ-IMx2, AQ-P7, would ensure that mining and grading projects in areas that may contain naturally-occurring asbestos comply with applicable NCUAQMD rules.

The proposed General Plan Update policies coupled with local, state, and federal regulations described above, lessen potential safety hazards due to the presence or use of hazardous materials associated with new development. Therefore, impacts from projected development during the General Plan Update planning period relating to safety hazards due to the presence or use of hazardous materials associated with new development, would be **less than significant.**

Mitigation

None required.

Impact 3.7.4.2: Airport Safety Hazards

Implementation of the General Plan Update could result in new development, including new urban land uses, in the vicinity of airports that could result in airport safety hazards.

This impact analysis addresses items "e" through "f" of the significance standards listed in Appendix G of the CEQA Guidelines as provided in Section 3.7.3 above. Pursuant to these standards, the proposed County General Plan Update would have a significant impact if it would:

a) Result in a safety hazard for people residing or working within 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. .
b) Result in a safety hazard for people residing or working within the vicinity of a private airstrip.

Projected population growth during the General Plan Update planning period would result in new development, including new urban land uses, in the vicinity of airports. New development near aviation facilities, particularly multi-story structures or developments with aerial features such as antennas, could create hazards to aviation. The Humboldt Airport Land Use Commission (ALUC) is the agency in Humboldt County empowered by state law to ensure the orderly development of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports. The ALUC adopted the ALUCP to reduce hazards that apply to all airports in the County. Reference is made in the ALUCP to the Hoopa Airport, which was operated by Humboldt County until the 1990's, regarding the applicability of the plan to that airport, but there are no airport land use compatibility zones or airport-specific policies for this airport. There is no reference in the ALUCP to the Eureka Municipal Airport.

Pursuant to the Section 1.3.1 of the ALUCP and Section 21676(b) of the Public Utilities Code, Humboldt County would be required to send the proposed General Plan Update policies and land use map to the Humboldt County Airport Land Use Commission for review to ensure consistency with the Airport Land Use Compatibility Plan. State law requires local agencies to modify their general plans and any affected specific plans to be consistent with ALUCPs

The following is an analysis of the mapping of land use designations around airports in the unincorporated area of the County for the purpose of identifying hazards or inconsistencies with the ALUCP. The airport compatibility zones that are specified in the ALUCP are used to guide this evaluation, and are listed below under each airport followed by a compatibility analysis. Maps of the airport compatibility zones may be found in the ALUCP. The airspace protection criteria contained in ALUCPs establishes maximum building heights for airport compatibility zones in accordance with Federal Aviation Regulations.

Arcata-Eureka Airport. An inspection of land use designations within the land use compatibility zone surrounding the Arcata-Eureka Airport indicates that there are conflicts between the current land use designations applied as part of the 2002 McKinleyville Community Plan and 1981 McKinleyville Area Plan, and the Airport Land Use Compatibility Plan. Some of the

proposed changes as part of the General Plan Update would add to the conflict and may result in significant additional hazards to future residents or aviation. The following is an analysis of all General Plan Update land use conflicts surrounding the Arcata-Eureka Airport:

D (Other Airport Environs) Compatibility Zone

- No density limitations, therefore, no impacts associated with the General Plan Update land use map. Hazards to flight are prohibited and deed notices are required for residential development.

C* (Common Traffic Pattern) Compatibility Zone (8 DU/acre, 150 persons per acre)

- Residential Uses. There are approximately 5.9 acres of land planned Residential Medium Density (RM) which would allow up to 30 dwelling units per acre within this compatibility zone, which is in excess of the allowable 8 residential units per acre, and would conflict with the ALUCP
- Mixed Use. There are approximately 4.5 acres of land planned Mixed Use (MU) within this compatibility zone. The proposed General Plan Update allows up to 16 residential dwelling of per acre and a maximum floor to area ratio (FAR) of 3.0; all of the mixed use development is assumed to occur within the same maximum building envelope (3.0 FAR). The allowable residential density exceeds the maximum allowable residential density of the C* (Common Traffic Pattern) Compatibility Zone (8 DU/acre). For non-residential uses, The MU land use designation allows assembly related uses (e.g., churches, meeting halls, and recreation centers), retail, office, transient habitation, and commercial recreation uses. Based on Exhibit C-1 of the ALUCP, the average square feet per occupant for this range of uses would be approximately 48 square feet (the average square feet per occupant of stores =30; assembly=15; office=100). Assuming that the entire area planned MU was to develop with the above mix of non-residential uses at the maximum FAR of 3.0, over 1,000 persons per acre could be accommodated. Therefore, the maximum allowable residential and commercial development of the land planned MU in the C* compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.
- Non-residential Uses. There are approximately 23 acres of land planned Commercial Services (CS) within this compatibility zone. The proposed General Plan Update specifies the FAR for the CS land use designation as 3.0. Based on the Occupancy Levels chart in Exhibit C1 of the ALUCP, the CS land use designation is assumed to be comprised of "All Others" at a minimum of 100 square feet per occupant, or an average of approximately 74 feet per occupant. Based on a FAR of 2.5, 1 acre of land planned CR could result in approximately 589 occupants. Therefore, the maximum allowable development of the land planned CR in the C* compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. Approximately 1.5 acres within the C compatibility zone are planned RL 1-7 and would allow in excess of 4 dwelling units per acre, which would conflict with the ALUCP. Other land that would allow residential uses would allow less than 4 dwelling units per acre, consistent with the ALUCP.
- Non-residential Uses. There are approximately 83 acres of land planned Public Recreation (PR) within the C compatibility zone. The PR land use designation allows assembly uses which, based on Exhibit C1 of the ALUCP, could accommodate up to one person per 7 square feet. Therefore, the maximum allowable development of

the land planned PR in the C compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B3 (Extended Approach Departure Zone) Compatibility Zone (4 DU/acre, 60 persons per acre)

- Residential Uses. Approximately 0.25 acres within the B3 compatibility zone are planned Residential Low Density (RL) and would allow up to seven dwelling units per acre, and approximately 25 acres are planned RL3-8 and would allow eight dwelling units per acre, both of which would conflict with the ALUCP. Approximately one acre is planned Mixed Use (MU), which would allow 16 dwelling units per acre and also conflict with the ALUCP. Other land that would allow residential uses would allow less than 4 dwelling units per acre.
- Non-residential Uses. There is approximately one acre planned MU within the B3 compatibility zone. The MU land use designation allows various commercial uses, including commercial recreation related uses which could include assembly uses at approximately 7 square feet per person which exceeds the maximum allowable number of persons per acre prescribed by the ALUCP.

C1* (Common Traffic Pattern) Compatibility Zone (2.4 DU/acre, 150 persons per acre)

- Residential Uses. Approximately 28 acres within the C1* compatibility zone are planned RL1 and would allow one dwelling unit per acre, consistent with the ALUCP. Approximately one acre is planned Mixed Use (MU), which would allow 16 dwelling units per acre and would conflict with the ALUCP.
- Non-residential Uses. There is one acre of land planned CR within this compatibility zone, which could include assembly uses at approximately 7 square feet per person that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

C1 (Common Traffic Pattern) Compatibility Zone (2 DU/acre, 150 persons per acre)

- Residential Uses. Approximately 17 acres within the C1 compatibility zone are planned RL, RL0-4, or RL1-2 and would allow development in excess of two dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. There are approximately 17 acres of land planned CR within this compatibility zone, which could include assembly uses at approximately 7 square feet per person that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B2 (Extended Approach Departure Zone) Compatibility Zone (0.5 DU/acre, 60 persons per acre)

- Residential Uses. Approximately 17 acres within the B2 compatibility zone are planned RL1 or RL3-8 and would allow development in excess of one dwelling unit per two acres, which would conflict with the ALUCP.
- Non-residential Uses. There are approximately 7 acres of land planned Public Recreation (PR) within the B2 compatibility zone. The PR land use designation allows assembly uses which, based on Exhibit C1 of the ALUCP, could accommodate up to one person per 7 square. Therefore, the maximum allowable development of the land planned PR in the B2 compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP. In addition, there are approximately seven acres planned Commercial Services (CS), which allows heavy commercial uses and compatible light industrial uses not serving day to day needs. The proposed General Plan Update does not specify a FAR for the CS land use designation, but does specify FARs for Mixed Use (MU) – 3.0, Village Center (VC) – 2.0,

and Rural Community Center (RCC) – 2.0. The expected FAR for CS would likely be substantially less than those identified in the General Plan Update because the CS land use designation is more industrial in nature than commercial and would likely use more yard area for storage and truck access. For the purposes of this analysis, a FAR of 0.5 is assumed to apply to the CS land use designation. Based on the Occupancy Levels chart in Exhibit C1 of the ALUCP, the CR land use designation is assumed to be comprised of an average of the following use types: garage, parking -300 square feet per occupant (sq. ft./occ.); mechanical equipment room- 300 sq. ft./occ.; and warehouses - 300 sq. ft./occ; or an average of 300 square feet per occupant. Based on an FAR of 0.5, 1 acre of land planned CR could result in approximately 72 occupants. Therefore, the maximum allowable development of the land planned CR in the B2 compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. Approximately 275 acres within the B1 compatibility zone are planned RL3-8, RL, RL1, RE, RE2.5-5, RE3-5, or RR5-20 and would allow greater than one dwelling unit per ten acres, which would conflict with the ALUCP.
- Non-residential Uses. There are approximately 96 acres of land planned CR, CS, CS/IG or PR within this compatibility zone, which could allow a range of uses that could result in approximately 72 occupants per acre, which would conflict with the ALUCP.

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. Approximately 38 acres within the A compatibility zone are planned RL1, RE, RE2.5-5, or RR5-20 and would allow greater than zero dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. There are approximately 46 acres of land planned CR, CS, or PR within this compatibility zone which could allow a range of uses that could result in approximately 72 occupants per acre, which would conflict with the ALUCP.

Dinsmore Airport. There are current conflicts between existing land uses in the Dinsmore Airport land use compatibility zone, and the GPU proposes changes that may result in additional conflicts that could increase hazards to people.

D (Other Airport Environs) Compatibility Zone

- No density limitations, therefore, no impacts associated with the General Plan Update land use map. Hazards to flight are prohibited and deed notices are required for residential development.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. There are no proposed land use designations within the C compatibility zone that would allow in excess of 4 dwelling units per acre, so there are no conflicts associated with the General Plan Update.
- Non-residential Uses. Other than land held by Six Rivers National Forest that is planned "P", and U.S. Forest Service activities may not be subject to the ALUCP, there are no proposed non-residential land use designations within the C compatibility zone that could exceed the maximum allowable number of persons per acre.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. Approximately 28 acres within the B1 compatibility zone are planned RCC, which would allow up to 4 dwelling units per acre (if community water and packaged wastewater treatment are available, which they currently are not), which is substantially greater than one dwelling unit per ten acres and would conflict with the ALUCP. In addition, 27 acres planned RR5-20 would allow up to one dwelling unit per five acres, which also exceeds the minimum allowable residential density within the B1 compatibility zone.
- Non-residential Uses. The airport (PF) and land planned "P" and held by Six Rivers National Forest are located within the B1 compatibility zone. Approximately 28 acres are planned RCC. Uses within the RCC land use designations would allow a range of non-residential uses that could exceed the maximum allowable number of persons per acre in the B1 compatibility zone.

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. Approximately 12 acres within the A compatibility zone are planned RCC; 15.5 acres are planned RR20, six acres are planned RR40, and 3 acres are planned T, all of which would allow greater than zero dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. Approximately 12 acres are planned RCC. The RCC land use designation would allow a range of non-residential uses that could exceed the maximum allowable number of persons per acre in the A land use designation.

Garberville Airport. There are existing conflicts between existing land uses in the Garberville Airport land use compatibility zone, and the GPU proposes changes that may result in additional conflicts that could increase hazards to people.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. Approximately 66 acres within the C compatibility zone are planned RE1-5 and would allow greater than four dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. There are approximately 8 acres of land planned Public Recreation (PR) within the C compatibility zone. The PR land use designation allows assembly uses which, based on Exhibit C1 of the ALUCP, could accommodate up to one person per 7 square feet. Therefore, the maximum allowable development of the land planned PR in the B2 compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. Approximately 173 acres within the B1 compatibility zone are planned RL, RE1-5, or RA5-20 and would allow in excess of one dwelling unit per ten acres, which would conflict with the ALUCP.
- Non-residential Uses. There are no proposed non-residential land use designations within the A compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. Approximately 0.4 acres within the A compatibility zone are planned RE1-5 and 23 acres are planned RA5-20, and would allow greater than zero dwelling units per acre, which would conflict with the ALUCP.

- Non-residential Uses. There are no proposed non-residential land use designations within the A compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

Kneeland Airport. There are existing minor conflicts between existing land uses in the Kneeland Airport land use compatibility zone. The existing conflicts consist of resource production related land use designations that could allow residential development within the Runway Protection Zone. The GPU does not propose any changes that would result in additional conflicts or hazards to people.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. There are no proposed land use designations within the C compatibility zone that would allow in excess of 4 dwelling units per acre, consistent with the ALUCP.
- Non-residential Uses. There are no proposed non-residential land use designations within the C compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. There are no proposed land use designations within the B1 compatibility zone that would allow in excess of 4 dwelling units per acre.
- Non-residential Uses. There are no proposed non-residential land use designations within the B1compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. Approximately 36 acres within the A compatibility zone are planned AG or T and would allow greater than zero dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. There are no proposed non-residential land use designations within the A compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

Murray Field Airport. There are existing minor conflicts between existing land uses in the Murray Field Airport land use compatibility zone. The existing conflicts consist of resource production related land use designations that could allow residential development within the Runway Protection Zone. All Murray Field Airport Land Use Compatibility Zones are within the Coastal Zone, a significant portion of which is within the City of Eureka. There are no proposed changes within the inland areas that would result in additional hazards to people.

D (Other Airport Environs) Compatibility Zone

- No density limitations, therefore, no impacts associated with the General Plan Update land use map. Hazards to flight are prohibited and deed notices are required for residential development.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. There is approximately 53 acres of land planned RE2.5-5 within the Coastal Zone that would allow residential development at densities that conflict with the C compatibility Zone.

- Non-residential Uses. There are no proposed non-residential land use designations within the C compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. There are no proposed land use designations within the B1 compatibility zone that would allow in excess of 4 dwelling units per acre.
- Non-residential Uses. There are no proposed non-residential land use designations within the B1compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. Approximately 15 acres within the A compatibility zone are planned AE and would allow greater than zero dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. There are no proposed non-residential land use designations within the A compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

Rohnerville Airport. There are existing conflicts between existing land uses in the Rohnerville Airport land use compatibility zone and the GPU proposes changes that may in result in additional conflicts that could increase hazards to people.

D (Other Airport Environs) Compatibility Zone

- No density limitations, therefore, no impacts associated with the General Plan Update land use map. Hazards to flight are prohibited and deed notices are required for residential development.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. Approximately eight acres within the C compatibility zone are planned RE2.5-5, 31 acres are planned RL and 1.2 acres are planned Residential Medium Density (RM). These land use designations would allow in excess of 4 dwelling units per acre, which would conflict with the ALUCP.
- Non-residential Uses. There is approximately eight acres of land planned Commercial General (CG) or Commercial Services (CS) within the C compatibility zone. These land use designations allow development that could exceed 150 persons per acre. Therefore, the maximum allowable development of the land planned CG or CS in the C compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B2 (Extended Approach Departure Zone) Compatibility Zone (0.5 DU/acre, 60 persons per acre)

- Residential Uses. Approximately one acre within the B2 compatibility zone is planned RL, which would allow in excess of 2 dwelling units per acre and conflict with the ALUCP. This is a sliver of land that likely relates to a mismatch between the northern B2 boundary line and the location of SR 36. This is likely a mapping issue and not a conflict with the B2 Compatibility Zone. There are approximately six acres planned RE1-5, which would also allow residential development in excess of the B2 compatibility zone limitation, which would conflict with the ALUCP.

- Non-residential Uses. There are no proposed non-residential land use designations within the B2 compatibility zone that would exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. Approximately 38 acres within the B1 compatibility zone are planned RL, RE2.5-5, and RA5-20 and would allow in excess of one dwelling units per ten acres, which would conflict with the ALUCP.
- Non-residential Uses. There are approximately 56 acres of land planned Commercial Recreation (CR) or Industrial General (IG) within the B1 compatibility zone. These land use designations allow development that could exceed 150 persons per acre. Therefore, the maximum allowable development of the land planned CR or IG in the B1 compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. In addition to over 86 acres of land planned Agricultural Exclusive (AE), there are small fragments of several residentially planned parcels would allow greater than zero dwelling units per acre within the A compatibility zone, which would conflict with the ALUCP.
- Non-residential Uses. There are no proposed non-residential land use designations within the A compatibility zone that could exceed the maximum allowable number of persons per acre prescribed by the ALUCP.

Eureka Municipal Airport. There is no airport land use compatibility zone for the Eureka Municipal Airport. All land within the assumed airport influence area of the Eureka Municipal Airport is located within the Coastal Zone. The General Plan Update plans the land surrounding this airport Industrial/Coastal-Dependent, (MC). Land designated Natural Resources (NR) is located to the north and west along the beach and dune area. Land designated Public Facility (PF) and Residential Estates (RE0-2) defines the Fairhaven area approximately 0.25 miles to the east of the runway.

Land designated Industrial/Coastal-Dependent would allow heavy industrial, warehousing, office, and other uses are normally acceptable, subject to occupancy limitations, in the B through D compatibility zones around airports. Land planned RRE0-2 would be appropriate in the B3 Extended Approach Departure Zone and the C through D compatibility zones.

Shelter Cove Airport. There are no proposed changes to the area within the airport land use compatibility zone for the Shelter Cove Airport as part of the General Plan Update. Non-Coastal Zone, or inland areas, of Shelter Cove are located within D (Other Airport Environs) Compatibility Zone, which contains no density limitations. There are no airport land use conflicts within inland areas.

D (Other Airport Environs) Compatibility Zone

- No density limitations, therefore, no impacts associated with the General Plan Update land use map. Hazards to flight are prohibited and deed notices are required for residential development.

C (Common Traffic Pattern) Compatibility Zone (4 DU/acre, 150 persons per acre)

- Residential Uses. Approximately 20 Coastal Zone acres within the C compatibility zone are planned RL and 15 acres are planned Residential Medium Density (RM),

and would allow in excess of 4 dwelling units per acre, which would conflict with the ALUCP. There are no land use conflicts within inland areas.

- Non-residential Uses. There are approximately six acres of land planned Commercial Recreation (CR) within the C compatibility zone. This land use designation allows development that could exceed 150 persons per acre. Therefore, the maximum allowable development of the land planned CR in the C compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP. There are no land use conflicts within non Coastal Zone areas around the Shelter Cove airport.

B1 (Extended Approach Departure Zone and Adjacent to Runway) Compatibility Zone (0.1 DU/acre, 60 persons per acre)

- Residential Uses. Approximately one acre within the B1 compatibility zone is planned RL and would allow in excess of one dwelling unit per ten acres, which would conflict with the ALUCP. There are no land use conflicts within non Coastal Zone areas around the Shelter Cove airport .
- Non-residential Uses. There are approximately 14 acres of land planned Commercial Recreation (CR) within the B1 compatibility zone. This land use designation allows development that could exceed 60 persons per acre. Therefore, the maximum allowable development of the land planned CR the C compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP. There are no land use conflicts within non Coastal Zone areas around the Shelter Cove airport .

A (Runway Protection Zone) Compatibility Zone (0 DU/acre, 10 persons per acre)

- Residential Uses. There are no proposed land use designations within the A compatibility zone that would allow residential development in excess of zero dwelling units per acre prescribed by the ALUCP. There are no land use conflicts within non Coastal Zone areas around the Shelter Cove airport.
- Non-residential Uses. There are approximately 12 acres of land planned Commercial Recreation (CR) or Commercial General (CG) within the A compatibility zone. These land use designations allow development that could exceed 10 persons per acre. Therefore, the maximum allowable development of the land planned CR or CG in the A compatibility zone could exceed the maximum allowable number of persons per acre prescribed by the ALUCP. There are no land use conflicts within non Coastal Zone areas around the Shelter Cove airport.

Hoopa Airport. The Hoopa Airport is a limited-use public airport that is located on the Hoopa Reservation and is owned and operated by the Hoopa Valley Indian Tribe. The Airport Land Use Compatibility Plan indicates that the plan specifically pertains to the Hoopa Airport, but the ALUCP does not contain compatibility zones or specific policies for this airport.
The land around the airport is planned Tribal Lands. Humboldt County may have the authority to regulate land use activities on less than about three percent of the land area within two miles of the Hoopa Airport runway. Governance Chapter Policy GP-P23, Tribal General Plans, states that within reservation boundaries, the County shall utilize the tribal government's general plan for policy guidance where the County may need to exercise land use or permitting authority on non-trust lands.

Analysis of Relevant General Plan Update Policies

All new development that occurs consistent with the General Plan Update, and located within an airport land use plan, would be subject to zoning restrictions designed to address safety

hazards for people residing or working in such areas. Safety Element Policy S-P24, Airport Safety Combining Zone, would apply the Airport (AP) combining zone to address airport safety and hazards in a manner consistent with the ALUCP. See Noise, Section 3.6.3.4, Airport Noise, for an analysis of potential noise impacts around airports associated with the General Plan Update.

The General Plan Update Safety Element addresses airport safety and land use compatibility. The Safety Element Goal S-G5, Airport Safety, is intended to ensure that land use and development in the vicinity of airports minimizes exposure to unsafe levels of noise and aircraft hazards consistent with the applicable Airport Land Use Compatibility Plan. Safety Element Policy S-P22, Airport Land Use Compatibility Criteria, regulates and plans land use around airports according to the Airport/Land Use Safety Compatibility Criteria (Table 14-A, as amended), which identifies acceptable uses according to the height of the structures (among other criteria), and Standard S-S14, which states that development within the jurisdiction of ALUCPs shall conform to the ALUCP. Safety Element Policy S-P24, Airport Safety Combining Zone, directs that County to use the Airport Safety Combining Zone within airport influence areas to ensure consistent application of restricted heights within defined airport flight obstruction areas. Airport safety is further maintained by Policy S-P23, Obstruction-free Approach Surfaces, which defines the maintenance of obstruction-free approach surfaces at all airports identified on the Approach and Clear Zone plans consistent with FAA requirements as principally permitted.

Conclusion

Development in the vicinity of airports would be required to comply with safety, noise, and compatibility standards contained in the Safety Element which are intended to reduce the likelihood of accidents affecting land uses on the ground. Airport Safety policy S-P21 provides for consistency between the ALUCP and General Plan through regular review of the ALUCP to ensure that it accurately defines planning areas around airports and establishes land use policies and standards appropriate for the public safety and protection of airport operations. Policy S-P22 would regulate land use around airports according to the *Airport/Land Use Safety Compatibility Criteria* and require the County to update these criteria consistent with amendment to the ALUCP. Other policies would facilitate the maintenance of obstruction-free approach surface. Safety Policy S-P24, directs the utilization of an airport safety combining zone to ensure consistent application of the Airport Land Use Compatibility Criteria matrix. However, there is no implementation measure that requires the update of the General Plan Safety Element to be consistent with changes to the ALUCP.

The General Plan Update land use map would result in conflicts around the Arcata/Eureka, Garberville, Kneeland, Murray Field, and Shelter Cove Airports. Airport land use compatibility zones do not exist for the Eureka Municipal and Hoopa Airports, so precise land use compatibility cannot be determined.

Implementation of General Plan Update Safety Element policies and programs that pertain to aviation hazards, as well as compliance with applicable federal, state, and local airport land use compatibility regulations, would reduce potential aviation hazard impacts. However, the analysis above identifies General Plan Update land uses that would conflict with airport land use compatibility plans and could represent a safety hazard for people. Therefore, the following mitigation measures would be required to make the Land Use Diagram consistent with the ALUCP in order to reduce potential impacts to a less than significant level.

Mitigation

3.7.4.2a. Mitigation Measure. To ensure consistency between the ALUCP and the General Plan, prior to adopting the Land Use Diagram:

> Prior to adopting the *General Plan Update, amend land use maps to ensure that maximum allowable residential densities and maximum allowable building occupancies are consistent with the Recommended Compatibility Zones contained in the March 1993 Airport Land Use Compatibility Plan.*
>
> Or, *The following standard shall be added:*
>
> **S-SX. Airport Land Use Compatibility Zone Overlay.** An Airport Land Use Compatibility Zone for all public use airports shall be established that matches the Recommended Compatibility Zones contained in the March 1993 Airport Land Use Compatibility Plan, as amended, for Humboldt County Airports, and that limits the maximum allowable residential density and building occupancy for each land use designation subject to such zones, to the Airport/Land Use Safety Compatibility Criteria of the Airport Land Use Compatibility Plan (Table 14-A).

3.7.4.2b. Mitigation Measure. To ensure consistency between the ALUCP and the General Plan, the following implementation measures shall be added:

> ***S-IMx4. Update Airport/Land Use Safety Compatibility Criteria.*** *The County shall update Airport/Land Use Safety Compatibility Criteria (Table 14-A), consistent with amendments to the ALUCP.*
>
> **S-IMx5. Airport Safety Review Combining Zone.** Amend the Zoning Maps to apply an Airport Safety Review Combining Zone, indicated by "AP", that matches the outer boundaries of the Recommended Compatibility Zones contained in the March 1993 Airport Land Use Compatibility Plan, as amended, for Humboldt County Airports. Until such time as the Zoning Maps are amended, places a note on the record for each parcel in Humboldt County's online permit management system that lies within the outer boundaries of the Recommended Compatibility Zones.

Level of Significance after Mitigation

Mitigation Measure 3.7.2.2.a requires actions which ensure consistency between the ALUCP and the General Plan. Mitigation measure 3.7.2.2.b requires the County to update *Airport/Land Use Safety Compatibility Criteria* consistent with amendments to the ALUCP. Application of these policies would address potentially significant impact by ensuring compatible land uses within the vicinity of airports. With the addition of the above mitigation measures, impacts related to airport hazards from new development allowed under the General Plan Update would be **less than significant.**

Impact 3.7.4.3: Emergency Response Plan

Projected during the General Plan Update could result new land uses in currently undeveloped or underdeveloped unincorporated areas of the County, which could impair implementation of

or physically interfere with the County's emergency response plan or impair the use of emergency evacuation routes.

This impact analysis addresses item "g" of the significance standards listed in Appendix G of the CEQA Guidelines as provided in Section 3.7.3 above. Pursuant to these standards, the proposed County General Plan Update would have a significant impact if it would:

c) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Development projected to occur during the General Plan Update planning period could establish new uses in currently undeveloped or underdeveloped areas. This development could adversely affect the County's ability to implement its emergency response plan or impair the use of evacuation routes during an emergency condition. Impairment or interference with an adopted emergency response or evacuation plan would result in an adverse physical effect to people, or the environment, by potentially increasing the loss of life and property in the event of a disaster.

Development that accommodates large concentrations of people or special needs individuals, such as stadiums or hospitals, in an area with increased hazards, such as a flood or tsunami inundation area, could cause adverse effects related to the implementation of the Multi-Jurisdictional Hazard Mitigation Plan or a Dam Evacuation Plan. Failure to provide reasonable access for emergency equipment and evacuation of civilians can also result in the major loss of life, property, and natural resources. The proposed General Plan Update land use diagram does not substantially change the arrangement of land uses from the prior Framework General Plan and does not proposed large concentrations of people in areas with increased hazards.

The Emergency Operations Plan identifies the County's the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in, or affecting, Humboldt County and establishes an organizational structure, assigns responsibilities, outlines procedures, and details a recovery process. The Humboldt Operational Area Hazard Mitigation Plan evaluates risks associated with natural hazards and provides goals, objectives and actions to reduce impacts from these hazards. In addition, the County Office of Emergency Services has prepared a draft Tsunami Emergency Response Plan that is used to guide emergency operations in the event of a tsunami. This draft plan has been modified several times in the last few years with information and experience gained from large tsunami events in other countries.

Implementation of the proposed General Plan Update does not propose to change the plans or policies of the emergency operations plan, the hazard mitigation plan, or any other emergency plan, although it is possible that land uses and development implemented under the General Plan Update may require the updating of these emergency plans. Construction activities associated with development occurring under the General Plan Update would have the potential to interfere with emergency plans and procedures if appropriate authorities are not properly notified. The construction of multiple projects during the same period of time, and/or multiple roadways used for emergency routes being concurrently blocked, could also have the potential to interfere with emergency plans and procedures

Pursuant to Section 6.1 Application Check, of Chapter 2, Administration, Procedures, Amendments and Enforcement of the Humboldt County Zoning Regulations, the Planning Department refers information relating to planning applications to appropriate agencies and County departments that may have relevant authority or expertise. Referral agencies related to emergency response include fire districts, water and wastewater providers, CAL FIRE, North

Coast Unified Air Quality Management District, and the Humboldt County Departments of Public Works, Environmental Health, and the Sheriff's Office, depending upon the characteristics of the project. The responses to such referrals will indicate whether a project could potentially impact emergency response and if it would, will include measures to reduce the impact to be included as part of the project approval, thereby providing assurance that natural hazards and impacts to emergency response are minimized.

Analysis of Relevant General Plan Update Policies

The General Plan Update would result in the impairment to the implementation of emergency response or evacuation plans. The GPU includes policies, standards and implementation measures to ensure implementation of the Plan does not adversely impact emergency response. Policy S-P27, Pre-disaster Planning and Mitigation, requires that the County proactively reduce known hazards through pre-disaster planning and mitigation efforts. Policy S-P29, Emergency Operations Capability, requires that the County maintain the systems necessary to implement the Humboldt County Operational Area Emergency Operations Plan. Policy S-P30, Tsunami Ready Program, and Standard S-S4 Tsunami Emergency Response Plan, support efforts to make low-lying communities conform to the Tsunami Ready program of the National Weather Service and require that the Tsunami Emergency Response guide interagency response efforts. In addition, S-IM8, Local Hazard Mitigation Plan, and S-IM9, Emergency Operations Plan, demonstrate the County's continuing commitment to pre-disaster mitigation and emergency operations planning.

Standard S-S17, Humboldt County Operational Area Office of Emergency Services (OES), requires that local emergency management and response operations shall be consistent with Humboldt County Operational Area Emergency Operations Plan and Humboldt County Ordinance 2203. Standard S-S18, Consistency with State and Federal Framework, further requires that the County emergency response efforts be consistent with the California Emergency Services Act, the federal National Response Framework and the National Incident Management System (NIMS).

Conclusion

The implementation of these General Plan Update policies would help ensure that adequate emergency access, evacuation, and management procedures are in place, and public safety providers and emergency responders are properly prepared to respond to a major emergency. These policies and programs, in concert with existing project review procedures, would reduce the risks of land uses interfering with or impairing emergency response times and the ability to execute evacuations during emergencies. Therefore, impacts to the Humboldt County emergency response or evacuation plans would be **less than significant**.

Mitigation

None required.

Impact 3.7.4.4: Wildland Fire Risk

Implementation of the General Plan Update could allow establishment of urban land uses, including residences, within high fire danger areas including the wildland urban interface, which could result in increased fire related risk to people and structures

This impact analysis addresses items "h" of the significance standards listed in Appendix G of the CEQA Guidelines as provided in Section 3.7.3 above. Pursuant to these standards, the proposed County General Plan Update would have a significant impact if it would:

d) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

In addition to the potential loss of life and property, wildfires may result in the loss or permanent change of natural resources. Although wildfires are considered a natural process necessary to the functioning of many ecosystems, a wildfire's aftermath typically leaves land scorched and exposed. Lightning causes about 28 percent of the wildfires in Humboldt County, based on the CAL FIRE FRAP Fire Perimeter Database. Locating urban land uses adjacent to, or within, an area containing wildland vegetation such as forests, shrubs, or grasslands (the wildland urban interface) can result in increased fire related risk to people and structures.

The areas with the highest hazard for wildfires are found in foothills and mountainous areas of eastern Humboldt County and in grasslands located throughout the County. However, areas of high fire danger follow the forested areas throughout the County and extend even to the coast and the edges of the urbanized Humboldt Bay Area.

Table 3.7-6. Housing Units Projected within High Fire Hazard Severity Areas.

	High & Very High in Watershed		Dwellings (Projected Growth 2028)				
Planning Watershed	**Acres**	**Percent**	**Urban**	**Rural**	**Ag**	**Timber**	**Total**
1-South Fork Eel	197,678	9.28%	119	11	3	3	**135**
2-Lower Eel	141,524	6.64%	11	2	4	3	**20**
3-Middle Main Eel	135,651	6.37%	0	6	9	2	**16**
4-Lower Klamath	329,110	15.44%	5	1	0	6	**12**
5-South Fork Trinity	190,124	8.92%	0	0	0	1	**1**
6-Lower Trinity	73,036	3.43%	9	1	0	1	**11**
7-Van Duzen	227,038	10.65%	0	9	9	6	**25**
8-Redwood Creek	175,627	8.24%	0	1	2	4	**7**
9-Cape Mendocino	303,974	14.26%	133	8	7	4	**151**
10-Trinidad	61,308	2.88%	0	1	0	4	**5**
11-Mad River	210,364	9.87%	78	6	5	7	**96**
12-Eureka Plain	85,756	4.02%	292	3	0	3	**299**
Total	**2,131,190**	**100.00%**	**648**	**48**	**40**	**44**	**779**

Table 3.7-5, Housing Units Projected within High Fire Hazard Severity Areas, indicates that most of Humboldt County is located within high or very high fire hazard severity areas. Approximately 779 new dwelling units are projected to be developed within high and very high wildfire hazard areas during the General Plan Update planning period. Approximately 83 percent of this development would occur within or directly adjacent to urban areas.

As indicated in the setting discussion above, 72 percent of wildfires in Humboldt County are caused by human activity. Adding additional development into the wildland urban interface areas would add additional ignition sources, add to fire suppression complexity and cost, and put additional lives and property at risk from wildfire.

CAL FIRE has responsibility for vegetation fires within SRA lands, which comprise much of the rural privately owned lands within the unincorporated areas. Fire departments serving the unincorporated areas support CAL FIRE by providing initial response to wildfire incidents. New development within SRA lands would be required to comply with the County Fire Safe Regulations contained in Title II – Land Use and Development Code, Division 11. The Fire Safe Regulations are incorporated in the review process for development applications for lands within the State Responsibility Area. These regulations were prepared pursuant to Public Resource Code Section 4290, which requires the adoption of regulations implementing minimum fire safety standards related to defensible space within SRA land. The Fire Safe Regulations are available at the Humboldt County Planning and Building Department, and on the Department website at: http://www.humboldtgov.org/DocumentCenter/Home/View/278. In addition, recent changes to the Subdivision Map Act require that all subdivisions of parcels located in the State Responsibility Area (SRA) or a very high fire hazard severity zone receive structural fire protection from a public agency or from another entity organized solely to provide fire protection services that is monitored and funded by a county or other public entity (Government Code Section 66474.02).

Analysis of Relevant General Plan Update Policies

With respect to wildland fire risk, the General Plan Update includes policies, standards and implementation measures intended to reduce the exposure of people or structures to wildland fire losses. The Safety Element emphasizes reducing risk and potential for loss through coordinated planning. Policy S-P1, Reduce the Potential for Loss, requires that the County plan land uses and regulate new development in a manner that reduces the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including wildland fire risk. Further, S-P12 Joint Planning and Implementation, requires that the County plan collaboratively with local fire agencies and companies, CAL FIRE, and federal fire organizations on fire prevention and response strategies and that implementation be coordinated to maximize efficiency.

The General Plan also emphasizes the use of subdivision design and the application of appropriate standards as strategies to lessen wildland fire risk. Policy S-P13 Subdivision Design in High and Very High Fire Hazard Zones, requires that subdivisions within SRA and high and very high fire severity classification areas shall consider designs and layout to reduce the risks of fire and improve defensibility. Policy, S-P15, Conformance with State Responsibility Areas (SRA) Fire Safe Regulations, require that all development within SRA high and very high fire severity classification areas conform to Fire Safe Regulations, which provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification and conform to Fire Safe Regulations. Standards S-S9, SRA Fire Safe Regulations, S-S10 and S-S11 California Building and Fire Codes, and S-S12, Fire Hazard Severity Zone Maps, establish criteria that are applied to projects subject to wildland fire hazards to ensure that the above policies are fully implemented.

The General Plan Update carries out broader fire planning that is intended to improve the provision of fire protection services and improve public awareness of the level of fire protection service available throughout the County. Policy S-P16, Level-of-Service Standards, establishes collaboration between the County and other fire protection agencies to develop level-of-

service standards for the provision of all emergency response services and to make such standards available to the public.

Other General Plan Update policies intended to reduce wildland fire risk include: Policy S-P18, Hazard Fuel Reduction, which encourages the use of prescribed burning and other types of hazardous fuel reduction land management activities; Policy S-P19, Fire Safe Education, which directs the County to expand fire prevention and mitigation education capacity in the County; and Policy S-P20, Fire Service Provider Support, which makes information from the County available to fire service providers regarding the creation of districts, increasing organizational capacity, developing funding streams, and improving Insurance Services Office (ISO) ratings to help reduce insurance costs.

The Land Use Element, Section 4.6 Forest Resources, contains policies and programs that are intended to lessen wildfire risk where residential uses are planned adjacent to forest land. Policy FR-P16, Planned Compatible Uses and FR-P18, Fire Safety Hazards would reduce conflicts and fire safety hazards adjacent to forestlands. Standard FR-S2, Forestland-Residential Interface (FRI) would establish standards that are intended to reduce conflicts with timber operations and improve fire safety.

The Community Infrastructure and Services Element contains a series of policies, standards, and programs that are aimed at expanding the capacity of local fire service providers. This Element also ensures that new development is provided with adequate levels of fire protection. These policies direct the County to proactively coordinate with service providers, monitor service capacity in relation to planned development, and encourage the establishment of funding mechanisms to support services and provide the infrastructure needed to serve the development allowable under the GPU. A detailed description of these policies can be found in Section 3.4, Public Services, Impact 3.4.3.2, Fire Protection.

Conclusion

The proposed policies, standards and implementation measures listed above would lessen the exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Coordinated planning with fire protection agencies and conformance with SRA Fire Safe Regulations, which are implemented by, S-P15, Conformance with State Responsibility Areas (SRA) Fire Safe Regulations and S-S9, SRA Fire Safe Regulations t would ensure the provision of adequate water for fire protection that and new development is planned and designed in a manner that can best be protected in the event of a fire. The identification of existing service levels, the establishment of service standards, and fire safety education, would provide guidance to property owners and the County regarding the most appropriate areas to plan and implement development. However, adding additional development within areas of high and very high hazard would expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, impacts in this regard would be **potentially significant**.

Mitigation

3.7.4.5a. Mitigation Measure. To lessen impacts resulting from the exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, the following mitigation is required. Amend Standard FR-S2 Forestland-Residential Interface (FRI), Section E to read as follows:

FR-S2. Forestland-Residential Interface (FRI). Require new residential subdivisions adjacent to TPZ and public forestlands to include forested buffers and building setbacks between residential uses and adjacent timberlands to minimize use conflicts and safety hazards and, if necessary, require fire breaks around all or a portion of the development in consultation with CALFIRE.

For residential development, require compliance with fire safe standards, and ongoing fire protection management programs **developed by qualified experts**.

For residential development in high and very high fire severity zones, require **the establishment and maintenance of ~~a~~** fire break**s** and open space adjacent to forestlands, consistent with CALFIRE recommendations**, and ongoing fire protection management programs developed by qualified experts** to ensure defensible space.

Level of Significance after Mitigation

The proposed mitigation would require that fire protection management programs that demonstrate that fuel breaks are established and maintained o protect residential development from wildfire. . However, for development other than through a subdivision, there is no guarantee that local fire protection will be available to structural fire protection or crucial initial response to wildfire incidents. Therefore, the proposed mitigation would lessen impacts related to wildland fire risk the General Plan Update, but not to a less-than significant level. **This impact is significant and unavoidable**.

NOTE: Impacts relating to flooding and tsunami risk are analyzed in Section 3.10, Hydrology and Water Quality, Impact 3.10.3.4, Housing within a 100-year Flood Hazard Area or Expose People or Structures to Flooding from Levee or Dam Failure, Tsunami, or Mudflow.