HUMBOLDT COUNTY
Headwaters Fund

Headwaters Fund Board (HWFB) Meeting Agenda

507 F Street, Eureka CA, 95501

12/9/25

ADA Accommodations:

The County of Humboldt is committed to providing equal access to all county programs, services, and activities through the provision of accommodations for individuals with disabilities as required under the Americans with Disabilities Act (ADA). With 72 hours prior notice, a request for reasonable accommodation or modification can be made. Please contact the CAO's Office of Economic Development at 707-445-7745, by email gohumco@co.humboldt.ca.us or the ADA Coordinator at 844-365-0352 or by email at ada@co.humboldt.ca.us.

Teams link for presentations only not intended for board member attendance.

Microsoft Teams Need help?

Join the meeting now

Meeting ID: 242 305 617 816
Passcode: 3mC7rw7j

Dial in by phone

+1 949-508-0813,,637899369# United States, Irvine
Find a local number
Phone conference ID: 637 899 369#
For organizers: Meeting options | Reset dial-in PIN

A. **OPENING**

A.1. **CALL MEETING TO ORDER**

A.2. **ROLL CALL**

A.3. MODIFICATIONS TO THE AGENDA

A.4. PUBLIC COMMENT ON NON-AGENDA ITEMS

Allows for public comment on non-agenda topics, time limit set by the Chair

B. CONSENT CALENDAR

B.1. Approval Of Meeting Minutes

A. Discussion

B. Public Comment

C. Action

Recommended Action Approve meeting minutes

Documents:

10-14-25 HWF Minutes Draft.pdf
11-4-25 HWF Minutes Draft.pdf

B.1.a. Future Agenda Items

Documents:

HWF Future Agenda Items.pdf

C. ITEMS PULLED FROM CONSENT

D. ACTION ITEMS

D.1. Spending Plan

A. Discussion

B. Public Comment

C. Action

Recommended Action Approve staff recommended spending plan

Documents:

Annual and Mid Year Report 24-25.pdf

D.2. Grant Application Materials

a. Discussion
b. Public Comment
c. Action

Link to Agenda Template Below:

Link https://cty-lf-web.co.humboldt.ca.us/Forms/headwatersgrant

Documents:

NOFA HWF 25-26 Draft.pdf
Timeline and Changes.pdf

E. DISCUSSION ITEMS

E.1. CA Jobs First/Economic Blueprint Presentation

California Governor's Office of economic Development (GoBiz) to present on the state's Economic Blueprint

A. Discussion

B. Public Comment

Documents:

California-Economic-Blueprint.pdf

E.2. Redwood Region Inclusive And Sustainable Econome (RRISE) Plan Presentaion

California Center for Rural Policy to present on RRISE plan

A. Discussion

B. Public Comment

Documents:

rrrise_regional_plan_part_1_revised_may_2025.pdf
rrrise_regional_plan_part_2_revised_may_2025.pdf

E.3. Humboldt County Comprehensive Economic Development Strategy (CEDS) Presentation

Thomas P. Miller & Associates to present on Humboldt County CEDS

A. Discussion

B. Public Comment

Documents:

Humboldt County CEDS 2025-30.pdf

F. ADJOURNMENT

HUMBOLDT COUNTY
Headwaters Fund

Headwaters Fund Board (HWFB) Meeting Minutes

507 F Street, Eureka CA, 95501

10/14/2025 - Minutes

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A. **CALL MEETING TO ORDER**

Called to order 2:00PM

B. **ROLL CALL**

Board members in attendance: Elizabeth Cameron (Chair), Walter Gray III (Vice Chair), Walt Geist (Treasurer), Michael Fields

C. **MODIFICATIONS TO THE AGENDA**

Motion to receive all grant proposals and to make award determination following presentations by Walt Geist and seconded by Michael Fields. Motion Carried Unanimously.

D. **PUBLIC COMMENT ON NON-AGENDA ITEMS**

E. **CONSENT CALENDAR**

Motion to approve consent calendar made by Walt Geist and seconded by Michael Fields. Motion Carried Unanimously.

E.1. **Approval Of Minutes: 6-10-25 Regular Meeting**

E.2. **Approval Of Minutes: 7-21-25 Special Meeting**

F. **ITEMS SET FOR TIME CERTAIN**

F.1. 3:00 PM **Revolving Loan Fund: Semiannual Lender Reports**

New and existing loan performance was discussed. Staff directed to schedule meeting with HWF officers and lenders to discuss troubled loans in greater detail.

Motion to approve reports made by Michael Fields and seconded by Walt Geist. Motion Carried Unanimously.

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G. ACTION/DISCUSSION ITEMS

G.1. Mini Grant Request From: StartUp Humboldt Innovation Hub

Received presentation from NorCal Small Business Development Center director on the potential opportunities for fostering entrepreneurship through the Innovation Hub and affiliated Pitch Competitions.

Motion to approve request by Walt Geist seconded by Michael Fields. Motion Carried Unanimously.

G.2. Mini Grant Request From: Redwood Coast Chamber Foundation

Received presentation from Redwood Coast Foundation director on the funding needs affiliated with the newly formed Cámara de Comercio Humboldt.

Motion to approve request by Michael Fields seconded by Walt Geist. Motion Carried Unanimously.

G.3. Mini Grant Request From: Humboldt Made

Received presentation from Humboldt Made director on the community Choose Humboldt marketing campaign and the affiliated ask of Headwaters for support.

Motion to approve request by Walter Gray III, seconded by Walt Geist. Motion Carried Unanimously.

G.4. Mini Grant Request From: Forest WRX Alliance

Presentation from CalForest WRX director on the need for greater collaboration and planning activity to support new and innovation wood products.

Motion to deny request by Michael Fields seconded by Elizabeth Cameron. Motion Carried 3:1 with Walt Geist opposed.

G.5. Update On Headwaters Fund Board Recruitment

Staff updated the board on successful board recruitments with new members, Taylor Bowes and Scott Davies seated by the next meeting.

G.6. Update On Headwaters Fund Reconciliation

Staff provided a brief update on work in progress on fund reconciliation and its impacts on program activities.

G.7. Staff Update On 2025 Competitive Grant Cycle Awards

Staff provided updates on progress made in executing agreements, noting that a lot of folks were having insurance issues. Staff are preparing materials and events in the future to better prepare grantees to navigate the county processes.

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G.8. Scheduling Of November Meeting

Discussed the potential need to hold a special meeting in November to support a loan request from Redwood Region Economic Development Commission to support the Southern Humboldt Community Healthcare District. 11/4/25 identified by straw poll as a workable date.

H. ITEMS PULLED FROM CONSENT

I. ADJOURNMENT

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HUMBOLDT COUNTY
Headwaters Fund

Headwaters Fund Board (HWFB) Meeting Minutes

507 F Street, Eureka CA, 95501

11/4/2025 - Minutes

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A. OPENING

A.1. CALL MEETING TO ORDER

Meeting called to order by Chair at 2:02pm

A.2. ROLL CALL

Board Member	Attendance Status
Bowes, Taylor	Present
Cameron, Elizabeth	Present
Davies, Scott	Present
Fields, Michael	Present
Geist, Walt	Present
Gray, Walter III	Absent (notified staff)
Hicks, Rusty	Absent (notified staff)

A.3. MODIFICATIONS TO THE AGENDA

Approval of minutes pulled from Consent by Chair Cameron.

A.4. PUBLIC COMMENT ON NON-AGENDA ITEMS

B. CONSENT CALENDAR

B.1. Approval Of The 10-14-25 Headwaters Fund Board Meeting Minutes

Brief discussion was held on the format of the minutes and changes the board would like to see related to the level of detail presented. Board requested high level summaries of discussions to be included in future minutes.

A motion was made by Walt Geist and seconded by Michael Fields, to bring back the 10/14/25 meeting minutes for review and approval at a future meeting, with additional detail provided. Motion carried unanimously.

C. ITEMS PULLED FROM CONSENT

D. ACTION ITEMS

D.1. Southern Humboldt Community Healthcare District Loan Proposal

Redwood Region Economic Development Commission director and Headwaters staff provided presentation on the proposed use of headwaters fund to support the Southern Humboldt Healthcare District via a bridge loan. The total size of the loan is for $4 million dollars and staff seek authority to take a recommendation to the Board of Supervisors for up to $2 million dollars participation by the Headwaters Fund.

A motion was made by Walt Geist and seconded by Scott Davies to authorized staff to take a request for up to $2,000,000 to the Board of Supervisors, with interest earned on unmatched dollars being remitted fully to the Headwaters Fund.

E. DISCUSSION ITEMS

E.1. Future Agenda Items

Brief discussion of the planned activates for December and February's meetings was held.

F. ADJOURNMENT

Adjourned at 3:05pm

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Headwater Fund Board: Upcoming Agenda Items

February Meeting (Strategic Retreat):

- Finalize Spending plan in the event of FY24-25 Q4 interest apportionment postings falling below the FY 23-24 Q4 posting
- Competitive Grant Rubric Review and finalization
- Mini-Grant Rubric Review and finalization
- Application Questions Finalization
- Staff Recommendations for Updates to Charter and Administrative Manuals
- Discussion: Future Funding Focus (Grant Programs)
- Discussion: Lending Program Priorities and Potential Changes

Other Items:

- Semi Annual Lender Reports

25-26 Spending Plan

FY24-25 INCOME*					
Description	Fund Number	Forecasted Earnings	Actual to Date	% Fiscal Year Completed	% Income Earned
County Pool Interest		$ -	$ 188,056.00	100%	#DIV/0!
RLF Lending Interest	3843	$ -	$ 360,384.00	100%	#DIV/0!
CIF Lending Interest	3846	$ -	$ 11,833.00	100%	#DIV/0!
Endowment Fund Interest	3852	$ -	$ 252,248.00	100%	#DIV/0!
Reclaimed Grants	3852	$ -	$ 2,725.00	100%	#DIV/0!
TOTAL		$ -	$ 815,246	100%	#DIV/0!

FY25-26 SPENDING PLAN					
Description	Fund Number	Budgeted	Allocated/ Awarded	% Fiscal Period Completed	% Allocated/ Awarded
Loan Loss Repayment	3844	$ 305,456	$ -	50%	0%
Mini-Grants	3848	$ 20,000	$ 15,000	50%	75%
Competitive Grants	3848	$ 200,000	$ -	50%	0%
Contingency		$ -	$ -	50%	0%
CPI Adjustment (@ 1.5% of $19.2 Million)	3847	$ 289,790	$ -	50%	0%
TOTAL		$ 815,246.00	$ 15,000.00	50%	2%
Remaining BALANCE		$ -	$ 800,246.00		

FY23-24 LOANS IN DEFAULT					
Fund Number	Fund Name	Lender	Description	Unresolved	Resolved
3843	Revolving Loan Fund	RREDC	Loan #201712	$ 140,814.10	$ -
3843	Revolving Loan Fund	RREDC	Loan #20188	$ 11,781.82	$ -
3844	Revolving Loan Fund	AEDC	Loan #97-02-01	$ 63,017.14	$ -
3846	Revolving Loan Fund	AEDC	Loan #506-02-01	$ 89,842.71	$ -
TOTAL				$ 305,456	$ -

CAPITAL RETURNED IN FY23-24			
Fund Number	Fund Name	Description	Amount
3843	Revolving Loan Fund	Principal Repayment	$ 1,054,672.97
3846	Community Investment Fund	Principal Repayment	$ 1,200,000.0
3844	Loan Loss Reserve Fund		$ -
3848	Grant Fund		$ -
TOTAL			$ 2,254,673.0

County of Humboldt
Headwaters Competitive Grant
Notice of Funding Availability (NOFA)

Purpose

The Headwaters Competitive Grant Fund supports projects that benefit Humboldt County's competitive economic advantage. The Humboldt County Comprehensive Economic Development Strategy (CEDS) outlines nine industry clusters that are targeted for their growth potential. Preference is given to projects that maintain and increase the number of sustainable jobs paying near or above the median income, enhance the quality of life, and promote healthy communities while protecting the natural environment. If you have a great idea that could promote business growth or job creation in Humboldt County, consider applying for a grant award through the County of Humboldt Headwaters Competitive Grant Fund.

Program Year

Fiscal Year 2025-26

Application Deadline

Applications are due April 15th, 2025 at 11:59pm. Late or incomplete applications will not be accepted.

Applications will be available online at https://www.gohumco.com/160/Grant-Fund at 10am PST on, March 1, 2025. Hard copies are available upon request by contacting the Headwaters Fund at (707) 445-7745. Details of the application process are below in the Application Process section.

Governance

The Headwaters Competitive Grant Program is governed by the the Headwater's Fund Charter, Grant Fund Manual and other applicable local and state laws and regulations. Please refer to the Headwaters Grant Fund Manual for criteria and regulations.

Headwaters Fund Charter
Headwaters Fund Manual

Estimated Program Funding

$200,000. The County of Humboldt Office of Economic Development is administering the Headwaters Competitive Grant through the Headwaters Grant Fund. The total allocation for this round of grants is $200,000. The maximum project size will be $100,000, although exceptions

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may be made for unique projects with exceptional impacts in the Funding Focus area. Grant funds will be used to provide funding to those applicants meeting eligibility criteria, as defined in the Headwaters Fund Grant Manual.

Organizational Eligibility

As defined by the Headwaters Grant Manual, to be eligible for funding, applicants must meet all the following criteria:

a. Non-profit organizations, including, without limitation, 501c organizations as well as California registered unincorporated nonprofit associations, non-profit public benefit corporation and mutual benefit corporations. The Project Selection Criteria document (created by Headwaters Fund Board) outlines specific eligibility criteria.
b. Government jurisdictions located in Humboldt County are eligible for Grant Fund grants.
c. The following are ineligible to apply for funding: political lobbying groups (including all 527 organizations), individuals, and businesses.

Cost Eligibility and Funding Match

Eligible Costs:

a. Projects must benefit Humboldt County.
b. All costs are eligible, except the following:
    i. Debt or recovery of expenses already incurred.
    ii. Supplanting of government funds (costs formerly covered by government may be included only if the government funding is no longer available).
    iii. Purchases of capital equipment or property that will be or become privately owned; however, small incentives, promotional items, and equipment purchases under $1,000 for businesses and individuals are eligible.
    iv. Lobbying activities including, without limitations, carrying on political propaganda or otherwise attempting to influence legislation; influencing the outcome of any specific public election; carrying on, directly or indirectly, any voter registration drive.
    v. Causing any private inurement or improper benefit to occur.
    vi. Terrorist activity.

Matching Funds:

a. Competitive Awards require matching funds from non-HWF sources. Implementation grants will be for 50% or less of total project costs. Planning grants will be for 75% or less of total project costs.
b. Documentation of other outside project funding is required and may take the form of:

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i. A copy of grant award letter/contract from other funder(s) showing award amount, costs covered, budget, project description, and other information.
ii. A copy of organization's approved budget documenting dedicated project funds.
iii. If matching funds are not in-hand, and HWF support will be used to garner outside funding, then applicant must provide a detailed fundraising/grant writing plan, including a listing of potential funding sources, progress to date for each source, competitive position for each source, timeline, and commitments made. A letter committing HWF Grant Fund Manual Revised November 5,2019 6 funds, contingent upon receiving other funding, will be provided by the HFB. However funds will not be distributed prior to submission of proof of receipt of matching funds.

c. Grantees shall maintain records of all project costs that are claimed by the grantee as being covered by HWF and other funder(s). Such records are subject to audit (Section 21: Grant Closing Section).
d. If, following receipt of an award, a grantee determines that funding from other source(s) can no longer be used, HWF funding may be reduced, suspended or terminated; the grantee must contact HWF staff immediately. Any HWF-approved adjustments to cash match commitments are made based on the grantee's rationale behind the requested adjustment and on a case-by-case basis.

Application Process

Apply online (Required): If possible, please apply via the online application form. Applications should be submitted electronically. Applications are to be submitted electronically via the online application form found at: **add link**. Electronic attachment formats accept are: PDF, JPEG, of PNG. (documents submitted in different formats may result in an incomplete application determination)

Only complete applications, including all required attachments, submitted before 11:59pm, Sunday, March 15, 2025 will be considered.

Applications may be subject to public disclosure pursuant to the California Public Records Act.

Award Selection

All applications and supporting documents will be reviewed in alignment with the Headwaters Fund Grant Manual, please refer to this document for more detail.

Application review begins with Humboldt County Economic Development staff, who verify that applications meet initial eligibility criteria. Eligible applications are then forwarded to the

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Headwaters Fund Board for individual member ranking. Once rankings are complete, the applications return to a Headwaters Fund Board meeting for selection of a recommended funding slate. The recommended slate is then forwarded to the Humboldt County Board of Supervisors for final approval and award.

Some projects may receive a lower amount than was requested, based on availability of funds. A typical approval process can take 90 or more days from the time of application. Upon approval the applicant will receive a notice of award, contract, fund request form, and W9 form.

Submission of an application in no way obligates the County of Humboldt to award a grant and the County of Humboldt reserves the right to reject any or all applications, wholly or in part, at any time, without penalty.

For More Information

For further information, updates, and application forms for the County of Humboldt Local Equity Grant or the other programs of the Headwaters Fund, please visit our website at https://www.gohumco.com/157/Headwaters-Fund. With specific questions about applications contact Headwaters via email at Headwaters@co.humboldt.ca.us, or call (707) 445-7745.

The County of Humboldt is an Equal Opportunity Employer and complies with Equal Employment Opportunity (EEO) requirements and guidelines. Auxiliary aids and services are available upon request to individuals with disabilities.

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Proposed timeline and document updates

Timeline:

- February 16, 2026: Promotion begins- this includes NOFA, press release, chamber/rotary meetings attended, etc?
- March 1, 2026: Application opens
- April 15, 2026: Application closes
- April 16, 2026: Staff preform initial eligibly review with Vice Chair supporting and verifying decisions of ineligibility
- May 1, 2026: Applications sent to full board for review
- May 15, 2026: Scoring completed by board members
- June 9, 2026: Presentations and finalizing funding recommendations to the BOS
- July 2026: Funding recommendations go to the BOS
- July 2026 Grant awardee workshop to support expedited contracting (Insurance, reporting, promotion, and legal requirements clearly defined)
- August 2026: Contracts Executed

Grant Application:

- Updated dates and logistic information
- Changed Industry Clusters to Align with CEDS
    - Education and Training
    - Healthcare
    - Financial Services
    - Agriculture
    - Arts, Hospitality, and Tourism
    - Construction
    - Renewable Energy
    - Forestry and Logging
    - Aquaculture and Fisheries
- Provided link to CEDS Strategic Framework and ask to align strategies with their proposal
    - 1. Industry Elevation and Diversification
        - 1.1 Advance efforts to cultivate favorable conditions for Humboldt County's legacy industries to thrive.
        - 1.2 Catalyze growth for Humboldt County's emerging industries.
        - 1.3 Foster an effective and valuable small business ecosystem.

        - 1.4 Revise regulations, policies and incentives to boost local industries and drive future investment.
    - 2. Collaboration
        - 2.1 Continue Redwood Region Rise collaboration (beyond CA Jobs First) and actively participate in implementation.
        - 2.2 Set a unified brand and marketing strategy for Humboldt County.
        - 2.3 Develop marketing strategies to attract and retain business.
        - 2.4 Leverage partnerships and marketing to attract and retain residents and workforce.
        - 2.5 Invest in a wide variety of targeted marketing campaigns to draw visitors to the county and region.
    - 3. Natural Assets and Disaster Response
        - 3.1 Prepare for natural disasters.
        - 3.2 Balance increases in use and development with the protection of natural assets.
    - 4. Fundamental Community Needs
        - 4.1 Catalyze the growth of the healthcare industry to expand opportunities and support local demand.
        - 4.2 Enhance housing stock availability and quality at all income and market levels.
        - 4.3 Provide avenues for growth in workforce initiatives, education and training to develop a relevant talent pool for employers and increase wages and promising career opportunities for workers.
    - 5. Infrastructure
        - 5.1. Develop and maintain transportation infrastructure that supports local industries and increases access for residents.
        - 5.2. Increase reliability and resiliency of electric infrastructure.
        - 5.3. Provide support and resources to expand broadband infrastructure.
        - 5.4. Expand water, wastewater and solid waste infrastructure.

CALIFORNIA JOBS FIRST

State Economic Blueprint

February 2025

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To My Fellow Californians:

As we stand at the threshold of a new year, I am filled with immense pride and optimism for the future of our great state. California has always been a beacon of innovation, resilience, and progress. Time and again, we have demonstrated our ability to rise above adversity and set new standards for the nation. Today, I am writing to share our statewide economic vision and to reaffirm our commitment to building a California that works for everyone.

Over the past few years, we have made strides in addressing some of the most pressing issues facing our state, making significant investments into our housing supply, infrastructure, and healthcare and educational systems that have laid a strong foundation for sustainable growth and prosperity. This work has set the stage for our first-of-its-kind investment into bottom-up, regional economic planning.

Through California Jobs First, we have brought together more than 10,000 Californians in regions across the state to define what the future can and should look like in each of their communities. This Economic Blueprint, informed by these local efforts and voices, defines an economic agenda for California that charts a path towards a prosperous and sustainable future for all Californians.

To all those Californians that participated in this effort: I am grateful for your commitment to our shared success. This Blueprint, and each of our regional plans, represents the hope that you have for our collective economic prosperity.

To our business leaders and executives: your role in achieving this vision is crucial. Your commitment to ethical leadership, sustainable practices, and community engagement will be instrumental in creating a vibrant economy that not only generates wealth but also uplifts our communities and protects our environment. I urge you to continue innovating, investing, and collaborating as we work to build a brighter future for all Californians.

We have work to do if we want California to remain the place for dreaming up new ideas and turning them into reality, but I know we are capable of it. Together, let's make sure the future continues to happen here, first.

Gavin Newsom
GOVERNOR

To Our Fellow Californians:

California has created more opportunities, more jobs, and more businesses than any other state, but we need to ensure that we're all moving forward together—and that every region across our state continues to play a critical role in the sustainable growth of the world's fifth largest economy. That's what California Jobs First is all about.

Over the last three years, our teams have worked in partnership with local leaders across the state to develop community-led and regionally-specific economic strategies through the Regional Investment Initiative, the flagship program of California Jobs First. This initiative forged new coalitions in each of our 13 economic regions that brought together voices from business, labor, community, education, local government, and more to collectively design the economic future they envision for their respective communities. Governor Newsom launched the California Jobs First Council to develop a statewide Economic Blueprint driven by these 13 regional strategies that leverage the unique assets, advantages, and opportunities across our state. This Blueprint is groundbreaking—it's the first statewide, bottom-up economic development strategy in the nation and the first economic strategy California has had in over two decades.

This Blueprint provides clear and actionable recommendations to support our regions, employers, and workers through strategic investments, policy actions, and greater overall alignment to ensure that the industries of today and tomorrow provide the good-paying jobs Californians deserve.

This work is critically important, challenging, and successful implementation will take time. We look forward to our continued partnership and collaboration as we work to build a healthy, prosperous future for all Californians.

In partnership,

Dee Dee Myers
DIRECTOR, GO-BIZ

Stewart Knox
SECRETARY, LWDA

Responding to the LA Wildfires

> **Beginning on January 7th, 2025, hurricane-force wind-driven fires resulted in massive urban conflagrations across separate areas of Los Angeles County.**

16,251 structures were destroyed and 29 lives were lost.[1] The four most destructive wildfires in California's recorded history, as well as the nine largest in state history, have all happened within the past decade. These extreme events illustrate that we need to plan for the future amid growing climate volatility in order to build a more climate-forward economy.

SPEEDING RECOVERY AND PROTECTING SURVIVORS

Governor Newsom issued a number of executive orders in response to the Los Angeles firestorms to help aid in rebuilding and recovery, create more temporary housing, and protect survivors from exploitation and price gouging[2]:

- **Providing tax relief to those impacted by the fires.** California postponed the individual tax filing deadline to October 15 for Los Angeles County taxpayers. Additionally, the state extended the January 31, 2025, sales and use tax filing deadline for Los Angeles County taxpayers until April 30 — providing critical tax relief for businesses. Governor Newsom suspended penalties and interest on late property tax payments for a year, effectively extending the state property tax deadline.
- **Rebuilding Los Angeles faster and stronger.** Governor Newsom issued an executive order to streamline the rebuilding of homes and businesses destroyed — suspending permitting and review requirements under the California Environmental Quality Act (CEQA) and the California Coastal Act.
- **Fast-tracking temporary housing and protecting tenants and homeowners.** To help provide necessary shelter for those immediately impacted by the firestorms, the Governor issued an executive order to make it easier to streamline construction of accessory dwelling units, allow for more temporary trailers and other housing, and suspend fees for mobile home parks. Governor Newsom also issued an executive order that prohibits landlords in Los Angeles County from evicting tenants for sharing their rental with survivors displaced by the Los Angeles-area firestorms. For homeowners, California has worked with five major lenders, as well as 270 financial institutions, to provide mortgage relief to their customers.
- **Mobilizing debris removal and cleanup.** With an eye toward recovery, the Governor directed fast action on debris removal work and mitigating the potential for mudslides and flooding in areas burned. He also signed an executive order to allow expert federal hazmat crews to start cleaning up properties as a key step in getting people back to their properties safely. The Governor also issued an executive order to help mitigate risk of mudslides and flooding and protect communities by hastening efforts to remove debris, bolster flood defenses, and stabilize hillsides in affected areas.
- **Safeguarding survivors from price gouging.** Governor Newsom expanded restrictions to protect survivors from illegal price hikes on rent, hotel and motel costs, and building materials or construction. Report violations to the Office of the Attorney General here.
- **Directing immediate state relief.** The Governor signed legislation providing over $2.5 billion to immediately support ongoing emergency response efforts and to jumpstart recovery efforts for Los Angeles. California quickly launched CA.gov/LAfires as a single hub of information and resources to support those impacted and bolsters in-person Disaster Recovery Centers.
- **Getting kids back in the classroom.** Governor Newsom signed an executive order to quickly assist displaced students in the Los Angeles area and bolster schools affected by the firestorms.
- **Protecting victims from real estate speculators.** The Governor issued an executive order to protect firestorm victims from predatory land speculators making aggressive and unsolicited cash offers to purchase their property.

PREPARING FOR TOMORROW

The State embarked on the path to recovery by doubling down on partnerships spanning from local entities within LA County to federal agencies, thereby laying the groundwork for a climate-oriented economic future. This includes engaging the LA County Jobs First Collaborative to embed recovery into their existing regional plan with an additional $3 million investment into the Collaborative. With the issuance of this California Jobs First Economic Blueprint, the Newsom Administration is working to help LA County and its other Jobs First regions with building more sustainable and inclusive economies.

THANK YOU

California is grateful for the tremendous heroism and sacrifice that more than 16,000 first responders demonstrated in the fight to contain the LA wildfires. Thank you for putting your lives on the line to protect Southern California communities and for embodying the spirit of this state.A

HOW TO HELP

California Rises, a collaboration between Governor Newsom and California Fire Foundation, has been re-launched to support firefighters and those impacted by the fires. If you would like to donate or volunteer, please visit CARises.com.

Executive Summary

California has always been a beacon of the future. Our dynamic economy, world class educational institutions, and diverse and skilled workforce have consistently put us at the forefront of innovation and growth.

As a state guided by core values of equity, sustainability, and innovation, we are building a model for continued economic growth and prosperity that benefits all Californians and helps us navigate emerging trends.

This is where California Jobs First comes in. Recognizing the need for an inclusive economic strategy, Governor Newsom launched the state's California Jobs First Regional Investment Initiative (RII) in 2021.[1] RII empowered regions around the state to bring together a diverse set of community members—more than 10,000 Californians—to craft their own economic visions.[2] The result is 13 community-led regional economic plans that reflect the unique strengths and needs of each area.

In March 2024, we launched the California Jobs First Council, bringing together nine state agencies to develop a comprehensive approach to advancing California's economy.[3] Working across our departments, we have now developed a 10-year economic development strategy for California that builds on regional priorities and harnesses our state's greatest strengths. We identified a set of strategic sectors, each represented in at least one regional plan, that capture the breadth and diversity of California's economy, assessing where there are opportunities for near-term job creation and where California has distinct, competitive assets. Over the next two years, we will pilot replicable models for advancing these strategic sectors, supporting job creators not only during their early stages but through the full product lifecycle, with a specific emphasis on manufacturing.

NORTH STAR

Help create, attract, and increase access to good-paying jobs.

GOALS

1. **Support sustainable and equitable growth across regions and populations**
2. **Invest in the workforce for the sectors of the future**
3. **Create an attractive environment for and with job creatorsA**
4. **Strengthen California's innovation economy and entrepreneurial culture**

What follows is a result of this work. This Blueprint outlines how we will achieve the California Jobs First North Star of helping **create, attract, and increase access to good-paying jobs**, focusing on four goals to achieve this objective.

We have developed a set of strategic themes and activities that will advance each of our four goals and help us meet our North Star for a resilient and inclusive California economy.

Achieving the ambitious goals set forth in this Blueprint will require significant partnership and collaboration—across regions, communities, and stakeholders throughout the state. **By working together, we can invest in our strategic sectors to drive sustainable economic growth, innovation, and access to good-paying jobs for all Californians.**

Strategies that will Advance the Goals of California Jobs First:

NORTH STAR

Help create, attract, and increase access to good-paying jobs.

GOALS

Support sustainable and equitable growth across regions and populations	Invest in the workforce for the sectors of the future	Create an attractive environment for and with job creators	Strengthen California's innovation economy and entrepreneurial culture

STRATEGIC THEMES

• Continue to empower regions to advance their strategic priorities through the Regional Investment Initiative • Mobilize broader state resources to support community-vetted regional strategies	• Design skills-based pathways into in-demand occupations for strategic sectors • Lower barriers to accessing job opportunities in partnership with the Master Plan for Career Education • Streamline workforce programs across the state	• Improve, align, and simplify the incentive toolkit • Streamline and expedite the process for siting industrial operations while maintaining our strong environmental protections	• Partner with our educational systems to foster and expand innovation • Develop support systems to drive access to federal innovation programs • Support advancements of strategic sectors in California's innovation ecosystem

Introduction

"Each region of California has its own strengths—we're helping build out each local economy with a bottom-up approach that'll connect more good-paying jobs with California families."

- Governor Gavin Newsom

The Future Happens Here First

CALIFORNIA JOBS FIRST OVERVIEW

> **California is an economic powerhouse on the national and global stage, with the world's 5th largest economy as of 2023.[1]**

The sheer size of California's economy is underpinned by its diversity and dynamism, driven by our leadership across a broad set of sectors: California is home to the global epicenter of technological innovation in Silicon Valley, the entertainment industry capital in Hollywood, and some of the world's most fertile and productive agricultural land in the Central Valley.

Yet despite our deep, historic strengths, we are facing forces that we must carefully navigate to secure California's economic future, including climate change,[2,3] uneven distribution of economic opportunity and benefits,[4] and new disruptive technologies that have the potential to reshape society.[5]

In the face of change, we cannot rest on our laurels or take California's economic status for granted. Instead, we must approach these emerging trends head on with the same resiliency and optimism that has long defined California—looking out and embracing new ideas and solutions while maintaining our distinctly Californian values of equity, sustainability, and innovation.

And that is exactly what we are doing. With California Jobs First, we are taking an even more active and aggressive role in shaping California's economic trajectory in a way that is community-led and climate-forward, showing the world that **the future happens here first.**

Taking Action Today

Early in this Administration, Governor Newsom recognized that a state as large and diverse as California needed community informed, regionally nuanced strategies to achieve sustainable, people-centered economic growth.

In partnership with the Legislature, he turned that recognition into action in 2021 with the creation of the California Jobs First Regional Investment Initiative (RII), a first-of-its-kind, large-scale, and participatory economic development initiative, bringing together a diverse set of community members to build the economic vision for their region.

Through RII, we made strategic investments into regional planning capacity that culminated in the creation of 13 inclusive regional economic plans.[6]

California has Invested $268M to Empower Regions to Advance Their Economies Through the California Jobs First Regional Investment Initiative

Where we are today

OCT 2022

Invested $65M to Set Up 13 Regional Collaboratives

Created inclusive economic planning entities with $5M in funding per region to build infrastructure for local economic planning

MAY 2023

Invested $39M into Pilot Projects

Invested $39M into ready-to-go projects to demonstrate impact of coordinated, sector-focused efforts

MAR 2023-SEPT 2024

Built Local Plans with 10,000+ Residents and Experts

Supported regions with creating community-led, research-backed strategies that define their strategic sectors

MAR 2024

Invested $182M to Support Regional Strategic Projects

Launched the California Jobs First Council and equipped each region with $14M in funding to develop viable projects that advance their strategic sectors

SEPT 2024-JAN 2025

Define State Economic Blueprint for Strategic Sectors

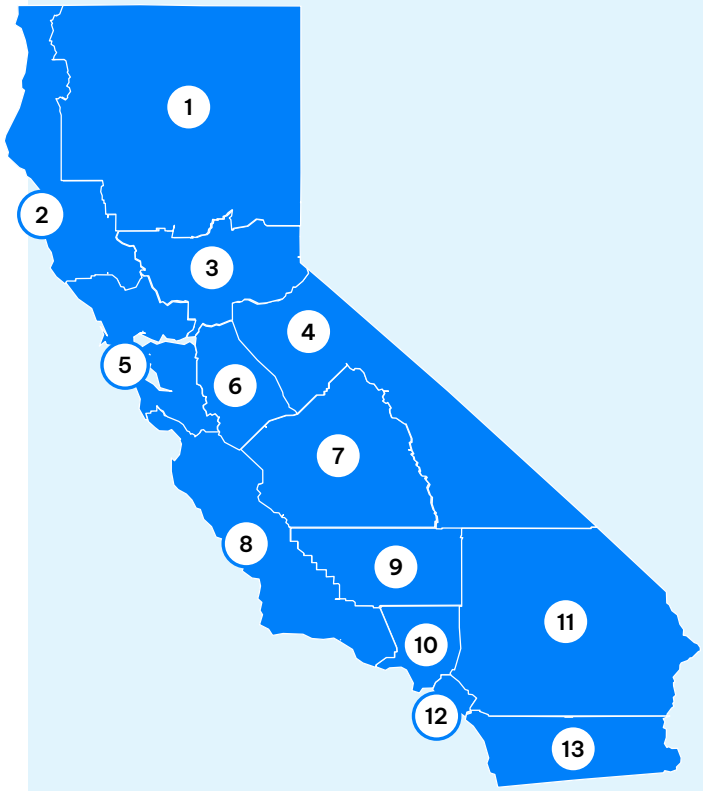
Develop a cohesive Economic Blueprint grounded in a unified set of state-level goals

Developing the 13 Jobs First Regions

> **The creation of California's thirteen economic regions marks a strategic, data-driven approach to advancing resilient economic growth across the state.**

These regions were identified to maximize the potential for collaboration, economic diversity, and job creation. Guided by California's Labor Market Information Division at the California Labor and Workforce Development Agency (LWDA), each region was defined based on unique local factors—like commute patterns, labor market characteristics, and industry strengths—alongside critical elements such as population size, geographic scale, and economic linkages.[7]

By grouping counties with shared economic ties and local connections, California has created an ecosystem of regions that can drive both local and cross-regional initiatives. This approach breaks down geographic and economic silos, encouraging regions to work together on transformational projects that transcend boundaries, from developing good-paying jobs to building sustainable industries. The California Jobs First initiative has empowered these regions with tools and funding to build the local partnerships needed to collectively create regionally-tailored solutions, ensuring that economic resilience is woven into the fabric of communities statewide.



1. North State
2. Redwood
3. Capital
4. Sierra
5. Bay Area
6. North San Joaquin
7. Central San Joaquin
8. Central Coast
9. Kern County
10. Los Angeles County
11. Inland SoCal
12. Orange County
13. Southern Border

WHAT IS THE REGIONAL INVESTMENT INITIATIVE?

A foundational element of California Jobs First is our investment into the Regional Investment Initiative.

The RII has created and empowered 13 regional governance bodies, called 'Jobs First Collaboratives,' to bring together diverse partners and organizations to collectively define an economic vision for the future of their region.

Over the last two years, thousands of Californians have come together to develop regionally relevant plans to create good-paying jobs and thriving communities. Each region convened representatives from local governments, employers, labor groups, community-based organizations, tribal entities, and more, and instituted shared decision making processes that ensure historically underserved groups and worker voices are represented.[8]

With state support, these 'Jobs First Collaboratives' have already seeded innovative projects, including a new accelerator program for biomanufacturing in the North San Joaquin Valley[9] and a hub for food entrepreneurship in the Capital Region.[10]

These governance structures were charged with defining strategies for their regional plans that aligned with the following objectives:

- **Job quality and access:** Prioritize stable jobs with safe working conditions that provide good-paying wages, health benefits, worker advancement, and opportunities to increase access.
- **Equity:** Incorporate the needs of diverse communities and populations historically excluded from planning and economic development processes and engage them in decision making.
- **Sustainability:** Aim to build carbon-neutral, climate-resilient economies by addressing the needs of each region's communities.
- **Economic competitiveness and resilience:** Focus on strategies that help regions leverage emerging opportunities, diversify to navigate economic shocks, compete in the global economy, and bring prosperity to their communities.[11]

Each of the 13 regional plans can be found on the Jobs First website: **jobsfirst.ca.gov**

> **For the first time in California's history, every part of the state has research-backed and community-led strategies for how to grow their economy in a way that benefits all residents.[12]**

California Jobs First has continued to build from this intensive planning process. In March 2024, Governor Newsom launched the California Jobs First Council, bringing together nine different state agencies in a shared mission to streamline our economic, business, and workforce development programs to create more jobs, faster.[12] The Council will help direct a coordinate and comprehensive approach to economic development by channeling the efforts of our agencies, regional and local partners, and communities towards a shared vision for the future-the California Jobs First State Economic Blueprint.

With the creation of the Blueprint, we are taking our efforts to the next level and setting a comprehensive yet flexible economic agenda for the next ten years that can be updated to reflect evolving regional needs and context. The Blueprint aims to align state and regional efforts to accelerate job creation and innovation across California, bringing a whole-of-government approach to advance sectors that will shape California's economic future and build skills-based pathways for Californians to access economic opportunities.

Ultimately, we believe this vision will be best realized locally. Each region has already received strategic investments to help turn these ideas into tangible projects. We will continue to empower regions with tools to execute on the strategies defined in their plans, from working to align the state's economic development-related funding toward California Jobs First goals and objectives, to identifying which programs might be most relevant to building funding stacks for projects that advance regional strategic sectors.

CALIFORNIA JOBS FIRST COUNCIL

Co-Chair: Governor's Office of Business and Economic Development (GO-Biz)

Co-Chair: Labor and Workforce Development Agency (LWDA)

California Department of Food and Agriculture (CDFA)

California Department of Veterans Affairs (CalVet)

California Environmental Protection Agency (CalEPA)

California Health and Human Services Agency (CalHHS)

California Natural Resources Agency (CNRA)

California Public Utilities Commission (CPUC)

Governor's Office of Land Use and Innovation (LCI)

Purpose of the State Economic Blueprint

Inclusive planning efforts not only identified the unique strengths and opportunities of each region, but also elevated the interconnectivity between regions and established the need for greater coordination across the state.

We are now building from the strategies developed by each region over the last two years to establish a cohesive, state-level economic roadmap for the next 10 years.

The Blueprint intends to set a direction for the state, align resources towards a subset of sectors and projects that will chart the economic future for California, and help mobilize capital in support of our economic vision. Through the strategies outlined in the Blueprint, we will also continue to support each of the 13 regions in implementing their economic strategies and attracting additional capital to get transformative projects off the ground.

Developing the State Economic Blueprint and defining its goals is only the first step. Achieving these goals by 2035 requires significant partnership—with regions, investors, employers, labor, academia and more—to implement the changes needed to unlock the full potential of each of our strategic sectors.

California Jobs First North Star & Goals

NORTH STAR

Help create, attract, and increase access to good-paying jobs.

GOALS

1. **Support sustainable and equitable growth across regions and populations:** Advance community-led, regional strategies designed with equity and sustainability at their center
2. **Invest in the workforce for the sectors of the future:** Ensure residents have the skills they need to access opportunities in strategic sectors.
3. **Create an attractive environment for and with job creators:** Make California the preferred destination for businesses to generate ideas and bring them to life.
4. **Strengthen California's innovation economy and entrepreneurial culture:** Foster a dynamic environment of public-private sector collaboration where industry, academia, investors, and entrepreneurs drive new advancements and take risks.

Understanding Today's Reality

"Across California, we are showing how growing our economy and caring for our environment go hand-in-hand. Healthy, productive landscapes—from our farms to forests—drive economic activity and create jobs. Likewise, our growing economy relies on abundant natural resources, like clean air and clean water. California Jobs First is helping leaders across our state shape a vibrant, healthy future for their regions and we're proud to partner in these efforts."A

- **Secretary Wade Crowfoot**
  California Natural Resources Agency (CNRA)

Understanding Today's Reality

California stands at a pivotal moment, where our unparalleled economic and innovation strengths must confront the pressing challenges of today to build a future that is both prosperous and inclusive. In this section, we delve into the current state of California's economy, highlighting both the opportunities and obstacles that shape our path forward.

5th

California's ranking amongst the world's largest economies based on GDP[1]

1st

California's ranking based on venture capital dollars received by its entrepreneurs compared to those in other states[2]

~2.9 million

Number of students attending one of the State of California's post-secondary educational institutions[3]

Nation-Leading Economic Scale, Productivity, & Dynamism

California leads the nation in economic scale, diversity, and dynamism.

Our Gross Domestic Product (GDP) is $3.9 trillion—more than 1.5x that of Texas, the next largest U.S. state—and our five-year growth rate of 6% suggests that we aren't slowing down any time soon.[4] The state's economic prowess can be attributed to several key factors.

Scale and Diversity

California continues to be a hub for economic activity. The state is home to the headquarters of 57 Fortune 500 companies, the most of any state—surpassing both Texas (52) and New York (52).

But size alone isn't what makes us stand out; it is our strength across sectors that is unique, with Fortune 500 companies spanning from financial services (Visa), to entertainment (Walt Disney), to life sciences (Amgen), to technology (Apple).[5] California is truly an economy driven not by a single sector but by several nation-leading ones.

Productivity

Our people and industries are increasingly productive. California ranks third in overall labor productivity,[6] a measure of how much work a person can do in a certain amount of time, and second amongst peer states identified based on similarities in economic size and industry composition.[7] The state has also experienced nearly 3% year-over-year productivity growth from 2019-2023, more than double the national average of 1.3%.[8]

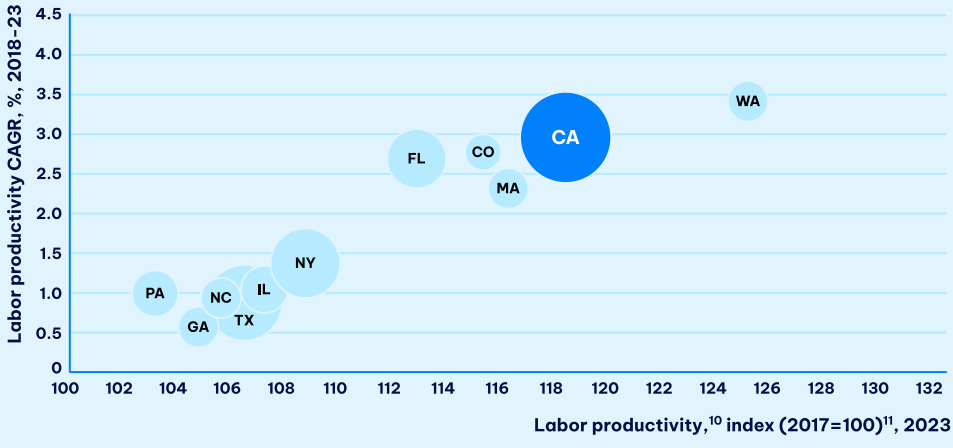
US Labor Productivity & GDP[9]

2018 - 2023

Peer state

CA

1,000 $B GDP 2023



International Interconnectedness

California is competitive on the global stage, with our businesses providing products and services not just to domestic consumers but also the international market. In 2023, we exported nearly $180 billion of goods around the world, including $155 billion in manufactured goods.[12] We are also the leading U.S. importer, with our ports handling more than 40% of national imports.[13]

It's not just our large companies that are internationally relevant; in 2022, small and medium-sized firms with fewer than 500 employees generated 43% of California's exports.[12] California is also a place where companies from around the world want to do business: foreign direct investment supports more than 800,000 jobs—surpassing all other states[14]—and over $84.3 billion in wages for Californians.[15]

TAKING ACTION

Amid these economic strengths, there are policies and processes that increase the real and perceived difficulty of doing business in California. Backlogs in grid connectivity have created risks to timely project delivery,[16] an experience shared with many states facing increased demand for power.[17] And while the California Environmental Quality Act (CEQA) plays an important role in protecting the natural resources of the state, at times it has been used as a wedge to slow down development projects.[18]

The Newsom Administration has Taken Action to Address These Barriers:

- The passage of Senate Bill 149 expanded coverage of the judicial streamlining certification process for CEQA to include green infrastructure and advanced manufacturing processes, helping reduce lawsuit-related delays from 3-5 years to ~270 days.[19]
- In September 2024, the California Public Utilities Commission introduced new energization timelines for our three large investor-owned utilities to expedite the approval process for new residential and commercial buildings as well as electric vehicle (EV) charging stations.[20]
- Through Executive Order N-8-23, the Governor created an Infrastructure Strike Team to streamline and expedite the process for projects offering significant opportunities for infrastructure and job creation.[21]

One-of-a-Kind Innovation, Research, & Educational Ecosystem

A can-do, entrepreneurial spirit has defined California since our early days, helping build our reputation for innovation and research.

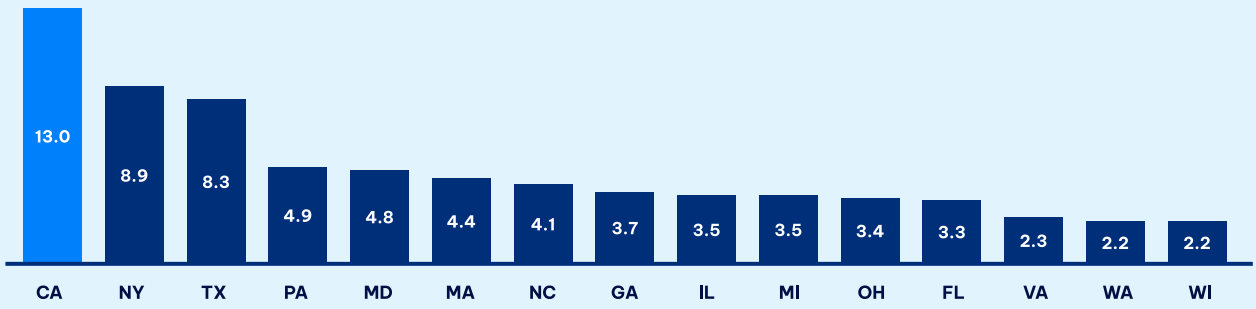
California has been the birthplace of countless new technologies—from the cable car[22] to the first functioning laser[23] to the iPhone.[24] As these innovations have rolled out, Californians have been afforded a front row seat as the future unfolds. Our pioneering nature is grounded in an ongoing, symbiotic partnership between our academic and research institutions and the public and private sectors that spark new ideas and innovation.

Research Assets

California is home to 11 universities in the U.S. designated as having the highest research activity ("R1 universities)",[25] and our universities are home to more Nobel laureates than any other state in the country.[26] Notably, eight of our R1 universities are University of California (UC) institutions,[25] a crown jewel of American public higher education institutions with international recognition. Aided by federal and state funding, these universities invest heavily into their research capabilities: in 2023, California ranked 1st in the nation for annual higher education research and development (R&D) spend with nearly $13 billion invested.[27] The state has also long been home to cutting-edge federal research labs, including 4 of the 20 Department of Energy (DOE) national laboratory locations,[28] which are hotbeds for new discoveries.

Top 15 States by Total Higher Education Research & Development[27]

$B, FY 2023



Public Investment for Emerging Technologies

We are also a direct catalyst for innovation through our investments to help develop and scale new emerging technologies. The California Energy Commission's Electric Program Investment Charge (EPIC) program has invested $1.2 billion into clean energy research, development, and commercialization, unlocking $10.1 billion in private follow-on funding to transform the electricity sector.[29]

This program is one of many examples of the state playing a critical role providing early funding that helps attract private investment;[30] right now, our Carbon Removal Innovation Support Program (CRISP) is doing just that with financial incentives intended to catalyze the development of direct air capture technologies for atmospheric carbon removal.[31]

Private Capital and Investment

Our research strengths and our state-led funding have drawn private investment to California, creating a virtuous cycle for entrepreneurial activity.

Sand Hill Road has become synonymous with the venture capital industry, helping businesses located in California secure more venture capital investment than any other state in the country.[32] Our businesses also invest significantly into R&D alongside their public partners, contributing nearly 40% of national corporate R&D spend.[33]

Innovation

Taken together, the rich partnership between California's institutions and entrepreneurs has unlocked a distinctive recipe for innovation and technology commercialization. We produce more patents per capita than any other state in the U.S.,[34] and four of our higher education institutions rank in the top 20 for technology transfer based on startup formation,[35] helping position California in the top five states by startup density.[36]

These pieces come together into a comprehensive innovation ecosystem, reflected in our #1 ranking on the Kauffman Early-Stage Entrepreneurship (KESE) Index that measures entrepreneurial activity in the United States.[37]

TAKING ACTION

The very technologies that California invents are leading to disruptions that have the power to reshape society. Quantum computing not only has the potential to solve some large-scale problems faster,[38] but also to bypass encryption and cybersecurity measures, putting highly sensitive data at risk.[39]

And while advancements in automation and artificial intelligence (AI) offer the promise to accelerate knowledge creation and productivity gains, they also have the potential to displace jobs and further exacerbate economic inequality unless thoughtfully managed.[40]

The Newsom Administration has Taken Action to Shape How Emerging Technologies Roll Out:

- The California Department of Technology (CDT) released Cal-Secure in 2021, a five-year information security maturity roadmap to address gaps in the state's information and cybersecurity programs.[41]
- In 2023, Governor Newsom signed an executive order to study the development, use, and risks of AI technology throughout the state, and to develop a deliberate and responsible process for deploying AI within state government.[42]
- In September 2024, the Governor signed 17 bills covering the deployment and regulation of GenAI technology, the most comprehensive legislative package in the nation on this emerging industry, including regulation of deepfakes and combating AI-generated misinformation.[43]

A Diverse & Skilled Workforce that Draws on Talent from Around the World

> **California's economy is powered by our people. Not only is California a conveyor belt for talent, but we are also a magnet for human capital from around the world.**

Our inclusive policies and investments into educational and workforce programs create an environment where individuals from various backgrounds can bring their unique perspectives and skills to bear.

Educational Assets

Our educational institutions are recognized on the international stage and provide learning opportunities to millions of students. Two of our universities make U.S. News & World Report's top 10 rankings for best universities.[44] But the state's ongoing commitment to our public educational system is what helps us stand out. Five of the University of California's (UC) campuses make the top 10 list for public universities,[45] and in 2024, the system awarded more than 10,000 degrees in engineering or computer science.[46] California State University, the nation's largest public university system, set a record in 2024 for first-year enrollment with more than 68,500 first-time, first-year students enrolled across the university's 23 campuses.[47] And through the California College Promise Grant, the California Community Colleges Chancellor's Office (CCCCO) is able to waive its fees for nearly half of the 1.4 million students in its system.[48]

CALIFORNIA'S EDUCATIONAL ASSETS LEAD THE NATION

US NEWS & WORLD REPORT BEST

Public University Ranking[45]

#1	UCLA
#2	UC Berkeley
#6	UC San Diego
#9	UC Irvine & UC Davis *(Tied)*

US NEWS & WORLD REPORT BEST

University Ranking[44]

#4	Stanford University
#6	California Institute of Technology

WALL STREET JOURNAL

Social Mobility Ranking[49]

#1	UC Merced
#2	Stanislaus State (CSU)
#3	CSU San Bernardino
#4	Fresno State (CSU)
#5	Cal State LA (CSU)
#7	CSU Long Beach
#9	CSU Northridge
#10	Cal Poly Pomona (CSU)

STUDENTS ENROLLED AT CALIFORNIA EDUCATIONAL INSTITUTIONS3

2.1M
California Community Colleges

461k
California State Universities

295k
University of California

These public educational institutions play an important role in ensuring that higher education is used as a force for economic mobility: the UC system enrolls a higher percentage of Pell Grant recipients than public or private peer institutions,[50] seven of California's selective public colleges are ranked in the top 20 based on the share of students who moved from the bottom fifth of family incomes to the top fifth as adults,[51] and eight are among the top 10 highest ranked universities for social mobility according to the Wall Street Journal.[52]

Diversity

California's diversity is one of our most defining and valuable characteristics, fostering a rich tapestry of cultures, languages, and ideas. As of 2022, no single racial or ethnic group comprised a majority of our population.[53] Immigration in particular has been key to our strength and successes. 27% of Californians are foreign born, nearly two times the U.S. average (14%).[53] We attract more international students than any other state, welcoming more than 140,000 students in the 2023-24 school year.[54] And California companies employ more H-1B visa holders (70,000+ approved in fiscal year 2024) than any other state,[55] helping these employers access critical specialized skills.[56]

This rich diversity is not only the result of happenstance; we have launched initiatives such as the Local Immigrant Integration and Inclusion Grant (LIIIG), which includes efforts to support immigrant entrepreneurs, as part of our approach to helping talent from around the world contribute to our economic success.[57]

We see the impact of this diversity—nearly two-thirds of U.S. unicorns (billion-dollar companies) were founded or co-founded by immigrants or the children of immigrants.[58]

Workforce Alignment

We are increasingly aligning our educational and workforce efforts to the needs of the labor market to intentionally build high-potential career pathways for Californians. Since the first budget during the Newsom Administration in fiscal year 2019-20, we have allocated over $4 billion in workforce development funding to upskill workers in all 13 Jobs First regions,[59] enabling our workforce system partners to build more opportunity for all Californians.

With Executive Order N-11-23, we launched a new Master Plan for Career Education, which visions the systems change needed to create skills-based pathways, expand work-based learning, and strengthen the talent pipeline California needs to maintain our competitive edge.[60] This effort builds from the Governor's earlier commitments to work-based learning, including setting an ambitious target to expand the State's earn-and-learn apprenticeship system to serve 500,000 Californians by 2029.[61]

Since then, we have served nearly 200,000 earn-and-learn apprentices[62] and in fiscal year 2023-24 we were the national leader in active registered apprenticeships with more than double that of Texas, the runner up.[63] We continue to invest in this effort, with the 2023-2024 budget dedicating $221 million to earn-and-learn apprenticeships and workforce initiatives.[64]

$4 Billion
In Workforce Development Funding[59]

500,000
Apprenticeship Goal[61]

TAKING ACTION

In recent decades, our attractiveness as a place to live and work has been impacted by growing cost of living.A

Despite population increases in 2024, significant numbers of Californians are still migrating out to other states,[65] with many citing housing-related costs as a primary driver.[66] Housing has become more expensive and out of reach to many, with over half of California renters spending more than 30% of their income on rent[67] and home values increasing by over 300% in the past two decades.[68] Although we rank 10th nationally in median household income,[69] we rank second to last after adjusting for cost of living[70] with the costs of necessities —including housing, groceries,[71] and infant care[72] outpacing peers.

The Newsom Administration has Taken Action to Address Challenges with Affordability:

- Since taking office, the Governor has signed 42 housing and homelessness-related CEQA reforms to clear the way for local governments to fulfill their legal obligation to site and zone 2.5 million new units,[73] and in 2019, Governor Newsom issued Executive Order N-06-19 calling on the Department of Housing and Community Development (HCD) and the Department of General Services (DGS) to identify underutilized state-owned sites for the development of affordable housing, which is on track to deliver ~5,550 new rental units.[74] The Administration has also dedicated more than $37 billion toward housing strategies in the last three budgets alone.[75]
- The California Public Utilities Commission (CPUC) approved a proposal in May 2024 to reduce the price of residential electricity through a new billing structure authorized by the state.[76]
- In 2021, the California Comeback Plan initiated a path to expand eligibility for transitional kindergarten (TK) to all four-year-olds by 2025-26.[77] The Administration has dedicated significant additional funding in subsequent budgets to ensure effective implementation.[78]
- CalFresh, our food benefits program, was expanded to cover Supplemental Security Income and State Supplementary Payment recipients in 2019.[79] As a result, almost 5 million Californians now receive support to access healthy and nutritious food each month.[80]
- The Governor signed legislation in 2022 to increase Paid Family Leave and State Disability Insurance benefits for California workers[81] and in 2023 to expand their paid sick leave.[82]

Distinct Regional Economies Informed by Unique Natural Resources & Community Assets

California spans over 160,000 square miles, making it comparable in size to countries like Japan and Sweden.[83] Along with this vast scale comes a wide range of topographies and economies defined by these different natural features.A

Natural Resources

California has more than 840 miles of coastline, the highest and lowest points in the continental U.S., more than 25,000 square miles of desert, and the tallest trees on the planet.[84] Our geographic variation is one of the reasons we are home to nine of the country's 61 national parks, the most of any state.[85] These parks drive significant tourism to California (nearly 11.4 million visitors in 2023),[86] contributing to the more than $150 billion travel spend that took place in California in 2023, an all-time high.[87]

Our natural resources also underpin our leadership in other industries, from agriculture to renewable energy. Over one-third of the nation's vegetables and three-quarters of its fruits and nuts are grown in California alone.[88] We also boast an estimated 340,000 acres of land with potential for solar energy development,[89] as well as unparalleled deposits of critical minerals necessary for numerous clean technologies that comprise 15% of global rare-earth element supply.[90]

Place-Based Assets

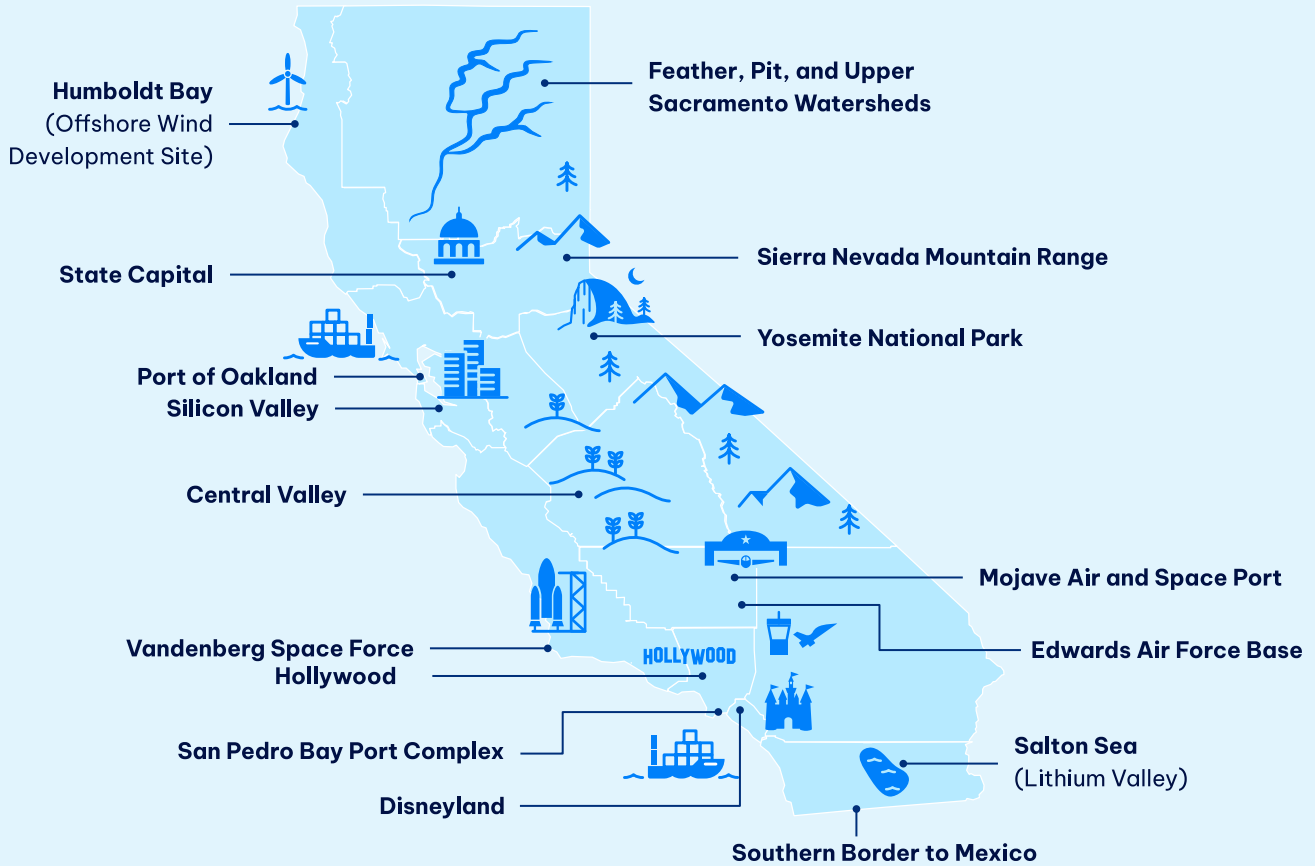
Our natural resources are impressive, but there are also man-made attributes that make us unique.

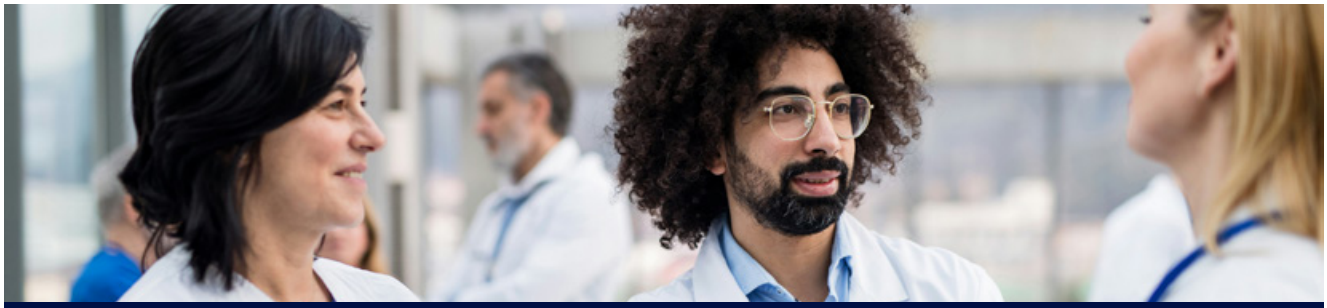
We have invested heavily in our transportation infrastructure to help transmit goods to and from the rest of the world, taking advantage of our position as the Western gateway to the United States. These investments have paid off: California consistently ranks first in the continental U.S. for both inbound and outbound air freight flights, and our ports handle 40% of all containerized cargo entering the U.S. and nearly 30% of the nation's exports.[91] The San Pedro Bay Port Complex leads the way as the 9th busiest port in the world by container volume.[92]

Our geographic location and weather conditions have also contributed to longstanding federal investments into our aerospace and defense launch and test assets, from the Vandenberg Space Force Base, the world's second busiest spaceport,[93] to Mojave Air and Space Port, the nation's first facility to be licensed for horizontal launch of reusable spacecraft.[94]

Each California Jobs First region identified a range of assets in their Regional Plans.

SELECT REGIONAL ASSETS[95]





TAKING ACTION

The distinct assets and characteristics of each region have also contributed, in part, to the disparities that exist between them—from access to services to economic outcomes.

Parts of the state have limited access to healthcare given shortages in primary care physicians.[96] An estimated 3.5 million Californians remain unconnected to internet service due to limited infrastructure, affordability issues, and other barriers, including a large share of low-income households (81%) and individuals who live in rural areas (86%).[97] And while the Bay Area region has experienced nearly 5% year-over-year GDP growth over the last decade, five California Jobs First regions experienced growth below the 2.3% national average.[98]

These inequities exist within regions and geographies as well. Every county in California except San Francisco has populations classified as rural; these rural populations tend to have lower incomes ($83,100 for rural households compared to $92,400 for urban households).[99]

What's more, many of the state's Hispanic, Black, and tribal populations experience poverty and unemployment rates well above their white peers.[100] These disparities have the potential to hinder our ability to achieve equitable growth and fully leverage the potential of all regions and Californians.

The Newsom Administration has Taken Action to Address these Disparities:

- Governor Newsom signed Executive Order N-16-22 directing state agencies and departments to take additional actions to embed equity analysis and considerations in their mission, policies, and practices.[101]
- The Department of Health Care Services (DHCS) partnered with the California Health Care Foundation to launch a Health Equity Roadmap initiative to engage Medi-Cal members of Black, Indigenous, and communities of color in DHCS' collective work to eliminate health disparities and advance health equity for Medi-Cal members.[102]
- The Administration launched the Workforce for a Healthy California Initiative, a multi-year, cross-agency initiative that has awarded over $350 million to programs that are expanding and diversifying the health and human services workforce across behavioral health, primary and specialty care, nursing, allied health, and direct care professions to ensure that California has the workforce to meet the needs of Californians, now and in the future.[103]
- In 2021, Senate Bill 156 committed $6 billion to expand broadband infrastructure and enhance internet access for unserved and underserved communities,[104] and we are on track to surpass 3,000 miles of middle-mile broadband construction by end of 2024.[105]
- Governor Newsom announced the state's support for the return of over 2,800 acres of ancestral land to the Shasta Indian Nation on the 5th anniversary of the state's apology to California Native American peoples in June 2024.[106]

Leadership that Addresses the Impact of Climate Change

California is both an economic leader and climate steward. From being the first in the country to establish limits on greenhouse gas emissions[107] to housing the fourth largest cap-and-trade market in the world,[108] we continue to push forward a comprehensive, long-term approach to addressing climate change.

Clean Energy

We have invested billions on behalf of electric ratepayers to expedite California's transition to clean energy and directed the state's investor-owned utilities to help us achieve our goal of net-zero carbon emissions by 2045.[109] Early efforts helped establish California as the largest solar market in the U.S..[110] Our more recent expansion of battery storage capacity by 15x between 2019 and 2024 will play an essential role in building the necessary capacity to transition to renewable energy sources and meet our targets.[111]

We continue to push forward innovation in clean energy through programs such as the Climate Catalyst Revolving Loan Fund, which is designed to mobilize public and private funding to accelerate the speed and scale of climate solutions.[112]

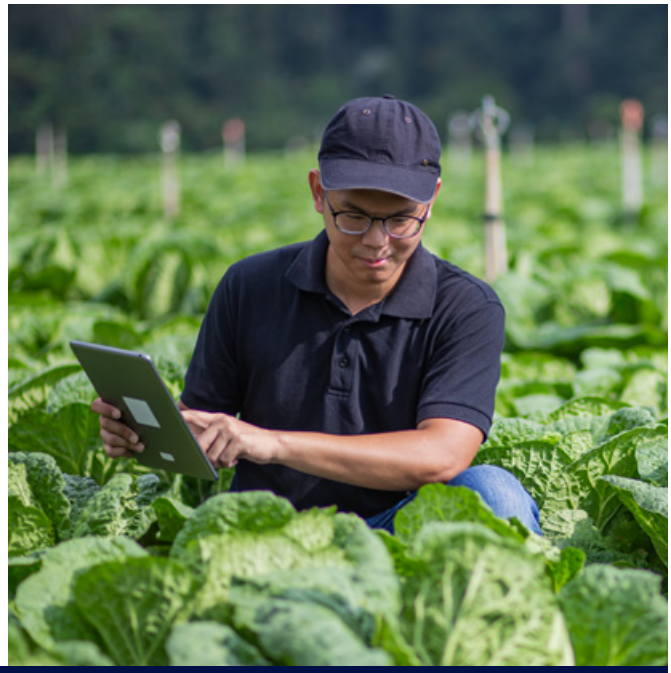
Green Transportation

California has also played an important role helping create the technology and the market for clean transportation. Research at UC Davis contributed to the development of the first plug-in hybrid vehicle, which laid the groundwork for today's zero-emission vehicles (ZEVs).[113] We have also shaped the national market for ZEVs through our policies. In 2020, we adopted a mandate requiring sales of all new passenger vehicles to be zero-emission by 2035.[114] To facilitate this transition, we have committed $10 billion to build out the infrastructure for, and accessibility of, clean transportation, including investments into ZEV purchases for low-income consumers, charging infrastructure in low-income communities, and clean mobility projects.[115] In part resulting from these policies, we are now the leading ZEV market in the nation, accounting for 35% of U.S. ZEV registrations[116] and housing 60 ZEV manufacturers.[117]

Conservation and Nature-Based Solutions

As the most biodiverse state in the nation and one of the world's 36 global biodiversity hotspots,[118] we are well positioned to lead the nation in conservation and nature-based solutions. Governor Newsom issued Executive Order N-82-20 establishing an ambitious goal of conserving 30% of California's lands and coastal waters to help restore biodiversity, expand access to nature, and build resilience to climate change.[119]

Since the signing of the executive order, we have added 1.5 million acres of conserved land, with 25% of California's lands and 16% of its coastal waters protected as of 2024.[120] The Administration has also supported the adoption of forward-looking, nature-based climate solutions,[121] investing around $9.6 billion into projects that combat climate change and store carbon since 2020[122]—many of which provide job opportunities in rural communities around our state.



TAKING ACTION

Climate change is impacting the realities of daily life around the world, and we are not immune to the challenges that are emerging.

California has become increasingly dry over the last 130 years, with droughts like the one from 2012-2016 threatening the water supply for individual use and economic activity—most notably for agricultural production.[123]

Progressively powerful storms, flooding, and sea level rise also threaten our state, increasing risk and costs.[124] The Federal Emergency Management Agency (FEMA) ranks California #1 nationally for expected annual loss from natural hazards, totaling more than $16 billion.[125] Higher risks of natural disasters mean higher risks of associated property damage, contributing to growing challenges within the homeowner insurance market, where seven of the top 12 insurance groups in the state have paused or restricted their policy writing since 2022.[126]

The Newsom Administration has Taken Action to Prepare For Climate Change Impacts:

- The Newsom Administration is investing $2.5 billion to implement the Governor's Wildfire and Forest Resilience Action Plan in addition to $200 million annually to support forest health and fire prevention programs. The Governor's fiscal year 2024-25 budget allocates a total of $4 billion toward wildfire response and prevention.[129]
- The Administration has committed $8.7 billion to drought resilience and response,[127] with the State Water Resources Control Board distributing approximately $880 million in fiscal year 2023-24 to improve climate resilience and boost water supplies in communities around the state.[128]
- In 2021, Senate Bill 1 established the Sea Level Rise Adaptation Planning Grant Program, which aims to support coastal communities in developing sea level rise resiliency through consistent adaptation planning.[130] The Administration has also committed a total of $492 million to flood investment projects.[131]

Charting Tomorrow's Future

"Regional and community input have been instrumental in defining our strategic sectors for the next decade, each of which were identified by at least one regional plan. This collaborative approach ensures that our economic strategies are deeply rooted in the respective strengths and needs of each region."

- **Director Sam Assefa**
  Governor's Office of Land
  Use and Climate Innovation (LCI)

"Through California Jobs First, we will continue building a culturally competent and linguistically diverse healthcare workforce, using health careers as pathways for economic opportunity while providing quality care to our communities. California Health and Human Services Agency remains committed to these efforts to ensure improved health outcomes, overall affordability and economic mobility for all."A

- **Secretary Kim Johnson**
  California Health and
  Human Services Agency (CalHHS)

Sector Framework

Over the last two years, each of the 13 Jobs First Collaboratives have built strategic plans identifying the sectors that will shape their future economies based on independent qualitative and quantitative research, including extensive community input.[1]

Our team then reviewed these regional plans, identified common themes, and created state-level definitions.

The strategic sectors that emerged from this process are broad, reflecting the priorities of distinct regions in a state with an economy larger than most countries,[2] while still identifying where we are best positioned to compete on the national and international stage.

We understand that there are meaningful differences across these strategic sectors and subsectors based on their maturity, growth trajectory, and quality of career opportunities. To help characterize some of these differences, we analyzed state-level data on sector groupings and developed four categories. Using a data-driven approach, we then aligned each subsector—all of which were identified by at least one Jobs First Collaborative—to one of these categories.

Sectors in each of these categories will likely require different types of state support.

For example, many of the sectors in the **"Strengthen"** category are our historic assets, and we have built out infrastructure to support them—from the Film & TV tax credit administered by the California Film Commission[3] to the public-private partnership between the Office of Tourism and Visit California.[4]

For sectors in the **"Accelerate"** category, near-term investments, both funding and otherwise, may be needed to help our state and regions capture potential growth expected in these industries.

Some of the emerging sectors in the **"Bet"** category may benefit from an entirely different toolkit that helps our entrepreneurs and researchers access the capital and support they need to bring their ideas to life.

We continue to make significant investments into the **"Anchor"** category, from investing over $40 billion to boost affordable housing since 2019[5] to allocating more than $6 billion in the 2024-25 budget for childcare programs.[6]

Customizing our support to the specific needs of each category—and even each sector—will ensure we are allocating our resources most effectively to help us maintain our competitive edge.

SECTOR CATEGORIES

Strengthen

Sectors where California has an established competitive position and / or significant employment, but where there is leveling growth or wages[7]

Accelerate

Sectors with moderate to high projected growth that are ready for expansion, where additional investments (e.g., capital, infrastructure) could "bend the curve" to generate growth[8]

Bet

Emerging sectors with significant investment or high strategic importance to the innovation ecosystem[9]

Anchor

Regional anchors that are critical for attracting and supporting industry activities while often providing quality, good-paying jobs within local communities[10]

California's Strategic Sectors

Strengthen

- **Creative Economy**
  - Film, TV, & the Arts
- **Tourism & Outdoor Recreation**
- **Manufacturing**
- **Working Lands & Water**
  - Agricultural Production
  - Food Processing
- **Financial & Professional Services**
- **Transport & Logistics**

Accelerate

- **Aerospace & Defense**
  - Aircraft
  - Shipbuilding
  - Space, Defense, & Satellites
- **Life Sciences**
  - Medtech
  - Pharma / biotech
- **Working Lands & Water**
  - Agtech & Farm Equipment
- **Clean Economy**
  - Batteries
  - Onshore Wind
  - Solar
  - ZEVs
- **High-Tech**
  - Hardware
  - Semiconductors & Microelectronics
  - Software & Services

Advanced & Precision Manufacturing[1]

Bet

- **Clean Economy**
  - Carbon Management
  - Critical Minerals
  - Hydrogen
  - Offshore Wind
- **High-Tech**
  - Artificial Intelligence
  - Fusion
  - Quantum
  - Robotics
- **Working Lands & Water**
  - Bioeconomy
  - Blue economy / tech

Anchor

- **Childcare**
- **Healthcare**
- **Education & Skilled Workforce**
- **Housing**
- **Infrastructure**
  - Broadband
  - Transmission & Distribution
  - Transportation Infrastructure
  - Water

1.High-value advanced and precision manufacturing play a major role in many of the sectors and subsectors within the 'Accelerate' category
Source: Lightcast, Moody's Analytics, MIT Living Wage, Pitchbook, US Cluster Mapping Project, California Jobs First Regional Plans Part 2, meetings with California Jobs First Regional Collaboratives conveners

Sector Pilots

With an economy as diverse and dynamic as ours, trying to solve for the specific needs of the strategic sectors and more than thirty subsectors, all at once, has the potential to limit our impact.

With that in mind, we have identified four pilot sectors and subsectors from the **"Accelerate"** category as a starting point to develop a new, replicable model for accelerating industry attraction and expansion and increasing access to good-paying jobs.

Across these pilot sectors, we want to be the place where ideas are generated and where products are made. We will draw from our research and development strengths to encourage employers to invest in other parts of the value chain in California, with a specific emphasis on manufacturing.

As the state with the largest number of manufacturing jobs—more than 1.3 million—we have a strong base to grow from, and we are particularly well-positioned for the high value-add precision and advanced manufacturing activities required for each of the pilot sectors.[11] We want to remain the state where companies choose to build things and have the talent and opportunities to do so.

Various Jobs First Collaboratives have identified these pilot sectors and subsectors as priorities for their regions. While our support for the four pilots will span statewide, we will build from this strong foundation of regional commitments to advance these sectors and drive access to good-paying jobs in communities around California.

Over the next two years, we will test out targeted strategies to grow the presence of these pilot sectors in California. In parallel, we will help regions implement their comprehensive plans by aligning state agency funding to their identified needs and working to build their capacity to execute. We will extend the pilot model to additional sectors as the Blueprint is implemented over the next 10 years.

Agtech & Farm Equipment

Life Sciences

Semiconductors & Microelectronics

Space, Defense, & Satellites

Advanced & Precision Manufacturing

Introducing the State's Strategic Sectors

California's State Economic Blueprint identifies key strategic sectors that are vital for driving our state's future growth and innovation.

These sectors, ranging from high-tech to tourism and outdoor recreation, represent the diverse strengths of both our urban and rural economies and are essential for creating, good-paying jobs for all Californians.

What follows is an overview of each of the state's strategic sectors, including where regions plan to advance supporting efforts. Regional strategies are expected to continue to evolve; we recommend revisiting regional alignment to the state's strategic sectors every two years.

KEY TERMS

Pathway Roles

Pathway roles are accessible occupations that can foster economic mobility and advance our goal of supporting equitable economic growth. Pathway roles are defined as occupations that pay more than a third of the region's median wage and where individuals aged 25 or above and without a college degree have historically been able to enter from lower-paid occupations and leave for higher-paid ones.[12]

Forecast Employment Change Above CA Average

Indicates where forecasted employment change from 2024 to 2029 within occupations in the relevant sector surpasses the forecasted employment change for the same timeframe across all occupations in California (0.9%).[13]

OVERVIEW

Aerospace & Defense

California has a long history designing and building aerospace & defense products and continues to be a leader in the sector today.

By leveraging its experienced workforce, existing infrastructure, and public-private funding, **California is poised to launch into the future** of aircraft, space, and satellite development and manufacturing.

California Can Capitalize on Global Opportunities in Aerospace & Defense Subsectors

Sector Category: Accelerate

Representative California Aerospace & Defense Employers

Aircraft

Propelled by continual development in aircraft technologies, the global aircraft market was valued at ~$420 billion in 2024, with an expected 3.5% CAGR for the next decade[1]

BOEING · ZEROAVIA · supernal · STRATOLAUNCH · ARCHER · AMPAIRE · Jetzero

Space, Defense, and Satellites

The global space sector (including defense and satellites) reached ~$440 billion in 2023 and is expected to grow at a ~7.5% CAGR for the next decade, driven by satellite technologies and space exploration[2]

SPACEX · ANDURIL · NORTHROP GRUMMAN · LOCKHEED MARTIN · Raytheon Technologies · AeroVironment · GENERAL ATOMICS

Aerospace & Defense

California is Leveraging its Assets to Accelerate Aerospace & Defense

California has a **robust aerospace & defense economy**, accounting for an estimated $35 billion of annual gross domestic product output[3] and comprising 10% of total U.S. defense spending as of 2022 (ranking #1 in defense grant spending)[4]

- In 2023, **aircraft parts were among California's top exports** ($6.8 billion)[5]
- California ranks **3rd of U.S. states in its share of national security contracts**, with more than $35 billion across three departments[6]
- California **receives 25% of NASA's procurement spend** ($5.8 billion), more than any other state in the country[7]

California is home to an ecosystem of companies

- **All five aerospace "traditional primes"[8] can trace their origins or growth to California** and maintain facilities around the state, including satellite and aircraft manufacturing and assembly plants, research and development labs, and aerospace radar and sensing technology programs[9]
- The state also hosts a **support network of small-to-midsize companies**, such as Aero Products, RBH Aerospace, Pacific Aerospace Corp, and others, that supply advanced components, materials, and technologies to the sector[10]
- **A third of all American space tech companies and 10% of space tech companies globally** are in California[11]

California has a **wide range of aerospace and defense assets**, including military bases, spaceports, and launch facilities

- **Coastal:** Vandenberg Space Force Base, the Naval Air Station North Island, and the headquarters of the U.S. Space Systems Command at the LA Air Force Base[12]
- **Inland:** Edwards Air Force Base and Naval Air Weapons Station China Lake[12]

California is a major player in **public and private aerospace and defense R&D**

- **Home to four NASA research centers** (Ames Research Center, Armstrong Flight Research Center, Jet Propulsion Laboratory, Goldstone Deep Communications Complex),[13] the headquarters of the **Defense Innovation Unit** that accelerates Department of Defense's adoption of commercial technology,[14] and **one of five Defense Advanced Research Projects Agency (DARPA) accelerators** that helps commercialize emerging technologies[15]
- **California accounted for 16% of aircraft patents and 23% of space, defense, and satellite patents** in the U.S. from 2015-2023[16]
- **California company spending** on aircraft, aircraft engine, and parts and guided missile, space vehicle, and related parts R&D **comprised ~19% and 36% respectively of nationwide corporate R&D spending in 2021**[17]

California's aerospace & defense sector is **underpinned by its workforce and educational institutions**

- California is **home to over 11,000 aerospace engineers**, more than any other state,[18] and ranks #1 in total number of defense personnel[19]
- The state is also home to **two of the top three universities** for aerospace engineering (Stanford, Caltech)[20] as well as over 240 aerospace and defense-related Eligible Training Provider List (ETPL) programs aligned to California's top 15 aerospace & defense occupations[21]

The state's workforce, assets, and public and private research have **attracted substantial VC dollars**, with California attracting **nearly half of the nation's space tech investment capital** over the last 11 years[11]

- From 2020-2023, California **space tech companies received ~$2.9 billion in VC funding** annually (70% of total space tech VC funding in the U.S.)[22]

How We Are Supporting the Aerospace & Defense Sector

- **Space Industry Task Force:** Aims to expand California's space industry by fostering partnerships, attracting new businesses, and advancing research and development in space technology across the state[11]
- **California Space Flight Property Tax Exemption:** Exempts qualified space flight property—such as satellites, space vehicles, launch vehicles, and fuel exclusively for space flight—from property taxes[23]
- **Central Coast Space Master Plan:** Establishes the Central Coast as a space hub by attracting companies, improving infrastructure, and promoting a regional space identity[24]
- **CalCompetes:** Provides tax credits to aerospace & defense companies, including~$80 million to 5 businesses since 2022 that created over 2,400 aerospace & defense jobs[25]
- **Research and Development Tax Credit:** Allows companies to reduce their tax liability based on qualified research expenditures with a credit for up to 15% for qualified in-house research expenses and 24% for payments to outside contractors[26]
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to advanced manufacturers to reduce equipment purchasing costs[27]
- **Manufacturing and R&D Partial Sales and Use Tax Exemption:** Offers a partial exemption in state sales and use tax (3.9375%) to qualified manufacturers and businesses[28]

Aerospace & Defense

Workforce Profile: College of the Canyons & Santa Clarita Valley EDC

As part of the High Road Training Partnerships program, the College of the Canyons (COC), a community college in Santa Clarita, and the Santa Clarita Valley Economic Development Corporation (SCVEDC), a private-public partnership focused on business attraction and assistance, are working together to grow the region's advanced technologies sector, including aerospace technologies.

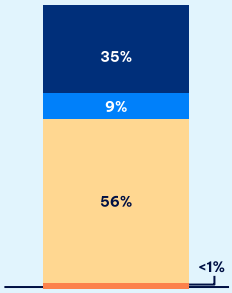
To develop the regional workforce, the COC and SCVEDC plan to establish an Advanced Technology Center (ATC) and work with employers to develop Pre-Apprenticeship and Apprenticeship programs. The project will convene key stakeholders, including ITT Aerospace and Northrop Grumman, to create apprenticeship standards and guidance for advanced technologies / manufacturing, facilitate ongoing discussions on the industry's future, and centralize information on training opportunities.[29]

Aerospace & Defense Offers Opportunities for All Californians

The aerospace & defense sector is a **critical part of California's economic strength and future growth, creating high-paying jobs across urban and rural regions of the state:**

- Annual compensation for aerospace & defense workers is 50% higher than average U.S. private sector wage[3]
- Over a third of top aerospace & defense occupations typically **do not require a bachelor's degree**[3]
- California has **substantial place-based assets located around the state**, including testing / launch facilities and military bases[12]

Typical Educational Attainment Required Across Occupations for Aerospace & Defense in California, 2023, %[30]



Hourly Wage by Educational Attainment

$25.08	High school or less
$36.92	Some college / Associate's
$62.35	Bachelor's
$80.22	Master's or PhD

Top Occupations Within the Aerospace & Defense Sector in California, 2023[30]

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role?[31]	Forecast sector employment change above CA average?[32]
Software Developers	8.4k		
Business Operations Specialists, All Other	5.8k		
Aerospace Engineers	5.3k		
Miscellaneous Assemblers & Fabricators	4.3k		
Inspectors, Testers, Sorters, and Weighers	3.8k		

~115K

Aerospace & Defense Workforce

In CA in 2023[3]

~3.9

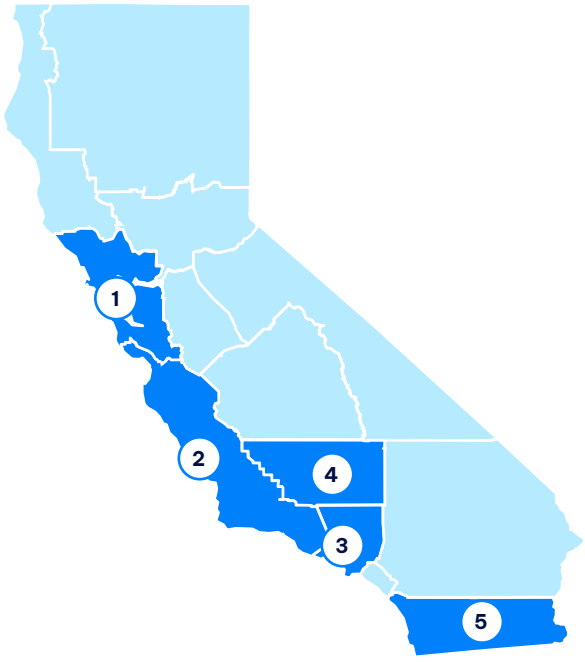
Employment Multipliers

Number of indirect jobs created by aerospace & defense jobs in CA[3]

Aerospace & Defense

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **five identified aerospace & defense as a regional strategic sector**. Each Collaborative also identified subsector categories within the aerospace & defense to focus their attention and resources.[34]



Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

Skydio, a drone manufacturer based in San Mateo, plans to invest ~$20 million to expand operations, creating over 440 new jobs

Rocket Lab, a commercial space launch company based in Long Beach, invested more than $25 million to expand operations, creating nearly 150 new jobs

Pyka, an autonomous electric aircraft manufacturer based in Alameda, plans to invest more than $9 million to expand operations, creating over 130 new jobs

Joby, an electric aircraft manufacturer, plans to invest more than $40 million to expand operations in Santa Cruz and Marina, creating over 700 new jobs

Sector Category: Accelerate

Aircraft | **Space, Defense, and Satellites**

1 Bay Area

Dynamic hub for advanced research, technology development, and manufacturing, including several Lockheed Martin facilities and the NASA Ames Research Center at Moffett Field.[35] Supports thousands of high-wage jobs and contributes to national security and space exploration through projects like hypersonic flight research and satellite technologies.

2 Central Coast

Diverse aerospace manufacturing capabilities, including satellites, aircraft engine and engine parts, space vehicles, and other measuring and controlling devices, accounting for $1.3 billion of regional exports and 2,600 jobs. Growing space operations anchored by Vandenberg Space Force Base (VSFB), the nation's second busiest spaceport.

3 Los Angeles County

Aerospace & defense accounts for ~60,000 workers in the region. Home to "Space Beach," a space technology hub anchored by companies like SpaceX and Northrop Grumman alongside strong R&D infrastructure supported by institutions like NASA's Jet Propulsion Laboratory, Aerospace Corporation, CalTech, UCLA and USC. Led all U.S. counties with $3.5 billion in new direct contracts from the Department of Defense, including 36% of all national DARPA contracts awarded.

4 Kern County

Robust R&D and engineering ecosystem centered around California State University Bakersfield as well as several military installations including Edwards Air Force Base, Mojave Air and Space Port, and NASA's Armstrong Flight Research Center. Recently received $2 million federal investment in the B3K Aerospace Innovation Hub,[36] which aims to boost technology transfer and commercialize aerospace innovations from the county's defense and research installations.

5 Southern Border

Strong aerospace & defense manufacturing sector, particularly in unmanned aerial systems, satellite communications, and defense technology. San Diego is anchored by companies including General Atomics, General Dynamics, and Viasat, as well as research institutions like UC San Diego. The Naval Air Facility Air Centro's uncongested airspace and proximity to both San Diego and Mexicali's aerospace industries also positions the region as a testing ground for rocket and jet technologies.[37]

OVERVIEW

Clean Economy

In pursuit of sourcing 100% of its energy from renewable and zero-carbon resources by 2045 and building on a rich history of clean energy production, California's robust and market-driven clean economy spans multiple subsectors and reaches nearly every region in the state.

As a top state for solar and wind generation[2] and a leading market for Zero Emission Vehicles (ZEVs),[3] California is well positioned to accelerate its existing clean economy industries and become a leader in clean technology innovation across emerging sectors such as carbon management, critical minerals, offshore wind, and hydrogen, while ensuring communities most impacted by these activities share in the economic benefits.

California Can Capitalize on Global Opportunities in Clean Economy Subsectors

Sector Category: ● Accelerate ● Bet	Representative California Clean Economy
Batteries Due to rising demand for ZEVs and renewable energy storage, the $125 billion global battery market is expected to grow at a 17% CAGR[4]	Sila, amprius, ENEVATE
Onshore Wind Propelled by global demand for renewable energy, in 2023, the global onshore wind market was valued at ~$78 billion, with an expected ~11% CAGR[5]	TERRA-GEN, Pattern
Solar As governments sponsor rebates to install solar panels, the ~$250 billion global solar market is expected to grow at a 6% CAGR[6]	SINOTEC SOLAR, SPI, Terabase
ZEVs Driven by rising consumer interest in ZEVs the ~$200 billion market is forecasted to grow at a ~20% CAGR[7]	GILLIG, RIVIAN, Ryvid
Carbon Management The ~$11 billion global carbon management market is expected to grow at a ~9% CAGR[8]	CALIFORNIA RESOURCES CORPORATION, Blue Planet.
Critical Minerals As clean energy technologies including energy storage systems, and solar PV installations, develop, the global critical minerals market reached a $320 billion valuation in 2022[9]	MP MATERIALS, 5E ADVANCED MATERIALS
Offshore Wind As demand for renewable energy, particularly for coastal cities, grows the $33 billion global offshore wind market is projected to grow at a ~19% CAGR for the next decade[10]	GOLDEN STATE WIND, FLOATING ENERGY, VINEYARD OFFSHORE
Hydrogen The $148 billion global hydrogen generation market is projected to grow at a ~6% CAGR for the next decade[11]	VERDAGY, Bloomenergy

Clean Economy

California is Building on its Strengths to Further Develop its Clean Economy

As a state at the forefront of climate and clean energy innovation, with renewable energy supplying 54% of California's electricity compared to 40% for the U.S. overall,[12] the state is poised to lead on the future of the clean economy

California's clean energy sector is supported by **strong research institutions** and innovation assets

- **National research labs:** Lawrence Berkeley and Lawrence Livermore
- **University labs:** Stanford's Precourt Institute for Energy and Woods Institute for the Environment and UC Berkeley's Energy and Resources Group (ERG)[13]
- **Incubators:** Cyclotron Road (Bay Area), BlueTech Valley (Central San Joaquin), LACI (LA County), and the Southern California Energy Innovation Network (Southern Border)[14]

The state also **benefits from VC dollars**

- From 2020 to 2023, California received an average of $115 million per year in VC funding and accounted for 27% of U.S. VC funding for clean economy startups[15]

Accelerate

California is a **leader in battery and ZEV production**

- **Several advanced battery manufacturers operate in California**, such as QuantumScape and Enovix,[16] supporting the state's ~750% increase in battery storage over the past four years[17] and ongoing efforts to expand its ZEV infrastructure
- California is also a leader in ZEV research and production as the home to the first mass-produced ZEV (General Motors EV1), the birthplace of Tesla and Gillig [19], and a top state for ZEV exports in 2023 [20]

California also has a robust solar and wind energy sector

- California **produces more than double the solar energy output of any other state**[21] and its solar market is valued at roughly $100 billion [22]
- In 2023, the state also ranked in the top ten for wind power production[21]

Bet

By leveraging its existing strengths in the clean economy, **California can help commercialize and scale emerging clean technologies** in a new way that integrates community voice

- Offshore wind projects near Morro and Humboldt Bay are expected to create nearly 6,000 annual operation and maintenance jobs and contribute $45 billion to the state's economy[23]
- California is well positioned to lead in the hydrogen market following the U.S. Department of Energy and California's Alliance for Renewable Clean HydrogenEnergy Systems (ARCHES) signing a **$12.6 billion agreement to build a clean, renewable Hydrogen Hub in California**[24]
- California is also developing its carbon management and critical mineral sectors, including a recently approved carbon management project in Kern County projected to provide $64 million per year in tax revenues and create thousands of jobs[25], and the recently designated "Lithium Valley" in the Inland SoCal Region which contains enough lithium to support ~400 million batteries for ZEVs[26]

How We Are Supporting the Clean Economy Sector

- **Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES):** Accelerates the development and deployment of California's renewable hydrogen market through non-profit public- private partnership[27]
- **Electric Program Investment Charge (EPIC) Program:** Invests more than $130 million annually to expand the use of renewable energy and advance electric technologies for buildings, businesses, and transportation[28]
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to manufacturers that promote alternative energy (prioritizing lithium projects) and advanced transportation as well as tax-exempt bonds to finance green projects[29]
- **California Energy Commission (CEC) Clean Transportation Program:** Provides funding to support in-state manufacturing of zero-emission vehicles (ZEVs) and ZEV-related supply chains[30]
- **California Pollution Control Financing Authority:** Administers programs that incentivize capital investment in targeted economic activities, including issuing Green Bonds for pollution control and climate-focused environmental projects[31]
- **CalCompetes:** Provides tax credits to clean economy companies, including ~$90 million to eight clean economy companies since 2022, creating nearly 2,400 clean economy jobs[32]

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

BESS Manufacturing, a battery energy storage system manufacturer, plans to invest more than $255 million to expand operations in Merced, creating over 850 new jobs

Paired Power, a battery energy storage system manufacturer, plans to invest more than $3 million to expand operations in Campbell and the Central Valley, creating over 60 new jobs

AES Clean Energy Development, a renewable energy services provider, plans to invest more than $1.5 billion to expand operations in Adelanto, Bakersfield, Blythe, Lancaster, San Jose, creating over 120 jobs

Clean Economy

Workforce Profile: GILLIG

GILLIG, founded in California in 1890 as a carriage and wagon shop, has transformed into the leading manufacturer of public transit buses for municipalities and cities in the United States.[32] The company offers a diverse range of clean energy transit solutions, including zero-emission Battery Electric and low-emissions Hybrid vehicles—with plans to explore new hydrogen solutions.[33]

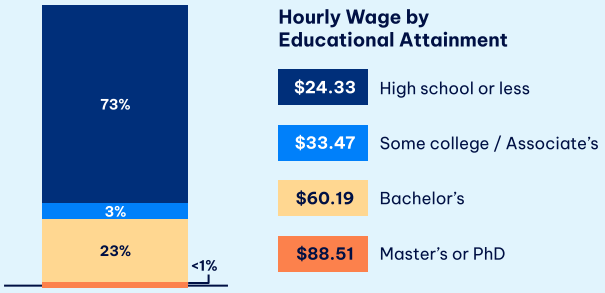
Recently, GILLIG and Teamsters Local 853 received funding from High Road Training Partnerships (HRTP) to support high-quality jobs, establish a new training department within GILLIG, and build the plan for future HRTP training work and certification development.[34]

The Clean Economy Offers Opportunities for All Californians

As the California's energy production shifts towards renewable sources, the **clean economy workforce** is expected to grow across a variety of subsectors. As the clean economy continues to develop, it will create **high-quality, good-paying jobs,** many of which are **available to those without postsecondary education:**

- Clean energy jobs are more likely to include healthcare and retirement benefits than jobs across the rest of the private sector[35]
- For some subsectors, such as hydrogen, large federally-funded programs like ARCHES are **expected to create hundreds of thousands of jobs**, drawing on California's Building Trades Unions to build new infrastructure as well as creating permanent roles to manage the newly-built facilities[36]

Typical Educational Attainment Required[37] Across Occupations for Clean Economy in California, 2023, %[38]



Top Occupations Within the Clean Economy Sector in California, 2023 [38]

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role[39]	Forecast employment change above CA average?[40]
Assemblers and Fabricators	19.5k		
Laborers, Stock, and Material Movers	1.5k		
Software Developers	1.3k		
Inspectors, Testers, Sorters, and Weighers	1.2k		
Supervisors of Production and Operating Workers	1.1k		

~2.9%

Workforce Growth

Projected annual CA employment growth from 2023-2033[41]

6.1

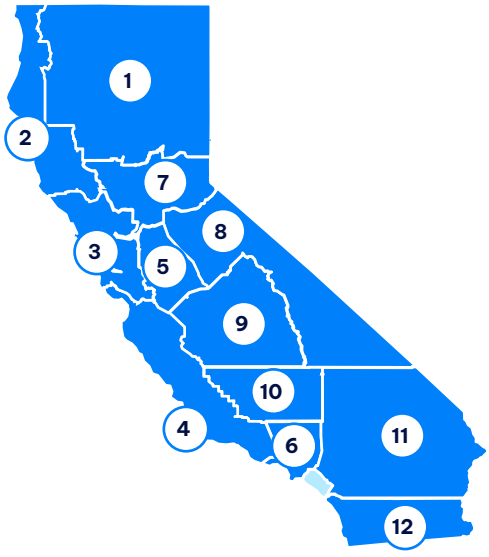
Employment Multipliers

Number of indirect jobs created by clean economy jobs in CA[41]

Clean Economy

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **12 identified clean economy as a regional strategic sector**. Each Collaborative also identified subsector categories within the clean economy to focus their attention and resources.[42]



1 North State

Exploring CO2 storage potential, with Glenn and Butte Counties offering significant sedimentary storage capacity (1.6–29 billion tons of CO2) alongside hydrogen production from biomass.

2 Redwood

Nascent solar and on / offshore wind economies, including solar array deployment on brownfield redevelopment sites in Hoopa and the Blue Lake Rancheria Microgrid Initiative. Offshore wind projects already in development near Humboldt Bay.

3 Bay Area

Plans to establish a battery manufacturing hub and assemble clean energy equipment such as wind turbines for onshore and offshore wind projects.

4 Central Coast

Home to the largest of two federally designated floating offshore wind energy areas in the state.

5 North San Joaquin

Emerging hub for solar and hydrogen (abundant sunlight, land; ARCHES supporting several hydrogen projects), EV manufacturing (e.g.,Tesla's manufacturing facility in Lathrop producing parts / components for EVs), and carbon management (geological features offer substantial capacity for underground carbon storage).

6 Los Angeles County

Emerging battery sector (e.g., Southern California Edison programs to pilot clean energy solutions) alongside robust solar industry assets (solar farms, community solar projects). New hydrogen innovation efforts enabled by Cal State LA's Hydrogen Research and Fueling facility and ARCHES initiative. Exploring investments into ZEV production leveraging existing company base.

7 Capital

Emerging battery economy enabled by robust existing semiconductor industry, including strong base of chip manufacturers including Intel, Solidigm, and Bosch and mobility players / organizations like Siemens Mobility and the California Mobility Center.

8 Sierra

Exploring the feasibility of developing hydrogen storage and manufacturing facilities as part of the ARCHES initiative.

9 Central San Joaquin

Ample land to develop solar sites (solar deployment expected to grow 16% annually between 2025-2045) with plans to develop battery and ZEV component manufacturing. Department of Energy is investing in several carbon management projects in the region supported by transportation networks that allow for efficient movement of captured carbon.

10 Kern County

Major wind (total wind power capacity of 4GW and more turbines than the entire northeast U.S.) and solar producer, with high potential for carbon management and storage technologies to provide transition opportunities for oil & gas workers in the region.

11 Inland SoCal

Proximity to Lithium Valley offers opportunities within the battery and ZEV manufacturing supply chain.

12 Southern Border

San Diego ranks #2 in the country for solar deployment and is supporting on / offshore wind projects. Exploring opportunities in battery manufacturing building from Lithium Valley asset (highest concentration of lithium contained in geothermal brines in the world).

Sector Category: Accelerate Bet

Batteries · Onshore Wind · Solar · ZEVs · Carbon Management · Critical Minerals · Offshore Wind · Hydrogen

OVERVIEW

High-Tech

California's high-tech sector stands as a cornerstone of the state's economy, known for its influential role in driving the state's reputation for innovation and outsized productivity.

The high-tech sector in California has been catalyzed by significant investments in research by leading universities (e.g., University of California (UC) Berkeley, Stanford, CalTech),[1] alongside private funding from venture capital (VC) firms.[2]

California Can Capitalize on Global Opportunities in High-Tech Subsectors

Sector Category: ● Accelerate ● Bet	Representative California High-Tech Employers
Hardware Driven by demand for smart devices, the ~$1.7 trillion IT devices market is expected to grow at a 9.6% CAGR through 2033[3]	Apple, Cisco, Intel, Western Digital
Semiconductors & Microelectronics Global 2024 semiconductor sales are expected to reach $588 billion, driven by sales of GenAI chips and consumer electronics[4]	Broadcom, NVIDIA, Lam Research, Qualcomm, AMD
Software & Services The global software market is expected to surpass $700 billion in revenue in 2024 and to grow ~11% annually through 2034[5]	workday., Netflix, Alphabet, Meta, airbnb, salesforce, esri
Artificial Intelligence (AI) Investment in Generative AI (GenAI) has grown rapidly ($57 billion equity investment in 2019 to $86 billion in 2024)[6]	OpenAI, ANTHROP\C, perplexity
Quantum Quantum technology expected to create trillions of dollars of value over the next decade, with substantial (50%) growth in public funding in 2022[7]	Google Quantum AI, rigetti
Robotics Over the next decade, robotics will increasingly account for a large share of capital spending, particularly for retail and consumer goods companies[8]	PROCEPT BioRobotics, serve, ZOOX, WAYMO

High-Tech

California's World-Class High-Tech Ecosystem Sets the Stage for its Continued Success

California's high-tech sector accounted for **~$620 billion of U.S gross regional product** in 2022,[9] the highest of any state

- California is home to some of the largest high-tech businesses, including **$4 trillion market capitalization companies** (Apple, Nvidia, Alphabet, Meta)[10]
- California's **strong existing presence in hardware, software and services, and semiconductors** (including the most semiconductor manufacturing establishments and jobs in the U.S.[11]) **positions the state to lead on emerging high-tech subsectors** including AI (California is home to 35 of the top 50 AI companies in the world[12]), quantum computing, and robotics

California research institutions house several supercomputers, including **El Capitan, the most powerful system in the world** located at Lawrence Livermore National Laboratory[13]

Higher education institutions in California **produce more graduates within computer and information sciences fields** (~23,000 in 2022) than any other state[14] and have strong research programs across several subsectors

- **Artificial intelligence:** California has three of the top ten AI programs at UC Berkeley, Stanford, and UC San Diego[15]
- **Quantum computing:** Research centers at the University of Southern California (USC), UC Berkeley, UCLA, and Stanford as well as the Google Quantum AI Campus affiliated with UC Santa Barbara (UCSB) and the Amazon Web Services (AWS) Center for Quantum Computing at Caltech[16]
- **Robotics:** Advanced robotics research centers at USC, UCLA, and Stanford[17]

California businesses also invest heavily in R&D; California companies comprise 55% and 52% of nationwide corporate R&D spend on computer & electronic products and semiconductor machinery & components respectively[18]

California's **research strengths and exceptional talent base have helped attract the highest VC investment in the country** ($81 billion)

- California's VC investments in the Software as a Service (SaaS) and AI & Machine Learning tech verticals comprise 51% and 56% of total U.S. VC investment in those areas[2]

How We Are Supporting the High-Tech Sector

- **California Community College Partnership with Nvidia:** Connects community colleges with Nvidia-developed AI resources and training materials, including curriculums and certifications, to bolster innovation in the state and help students get jobs in high-demand sectors[19]
- **Research & Development (R&D) Tax Credit:** Allows businesses to qualify for an income tax credit if they paid for or incurred qualified expenses while conducting research in California[20]
- **CalCompetes:** Provides tax credits to high-tech companies, including ~$90 million to six businesses during the last round of funding, creating over 3,000 high-tech jobs[21]
- **Employment Training Panel (ETP):** Prioritizes high-tech upskilling, providing funding to employers to assist in upgrading the skills of their workers through training that leads to good paying, long-term jobs[22]
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) Full Sales and Use Tax Exclusion (STE) Program:** Allows select manufacturers, including semiconductor companies, to exclude purchases of "qualified property" from state and local sales and use taxes[23]

High-Tech

Workforce Profile: NPower California

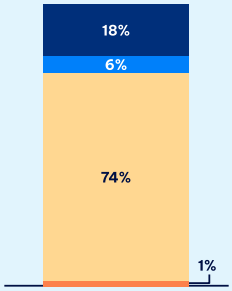
NPower California, a nonprofit focused on launching digital careers for military-connected individuals, young adults, and women from under-resourced communities, is a recipient of the Breaking Barriers to Employment program grant from the California Workforce Development Board.[24] Through the Breaking Barriers program, NPower has served over 100 military veterans, veteran spouses, and young adults from low-income communities in Los Angeles County. In June, NPower graduated its first Breaking Barriers cohort from the NPower Fundamentals program, with 20+ students already placed in full-time tech jobs.[25]

High-Tech Offers Opportunities for All Californians

The high-tech sector is a core piece of California's economic health and future growth, **offering high-paying jobs, enabling innovation across all of California's strategic sectors, and attracting significant investment** to the state:

- The average annual compensation per worker in high-tech is more than double the average U.S. private sector wage, and **among non-college-educated workers, the sector pays approximately 50% more than non-high-tech industries**[26]
- The **high-tech sector in California has a substantial share of pathway roles**, or roles with increased potential for career advancement and opportunities to transition to higher paid roles, with the top five high-tech pathway roles accounting for 14% of the state's total high-tech workforce[27]
- California has **several high-tech metros**, including San Francisco, Los Angeles, and San Jose, which has the highest concentration of net tech employment as a percentage of its overall employment base[28]

Typical Educational Attainment Required[29] Across Occupations for High-Tech in California, 2023, %[30]



Hourly Wage by Educational Attainment

$27.32	High school or less
$34.57	Some college / Associate's
$67.72	Bachelor's
$75.69	Master's or PhD

Top Occupations Within the High-Tech Sector in California, 2023[30]

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role?[31]	Forecast sector employment change above CA average?[32]
Software Developers	178.0k		✓
Computer & Information Systems Managers	39.6k		✓
Computer Occupations, All Other	31.3k	✓	✓
Sales Representatives of Services	26.8k	✓	✓
Computer User Support Specialists	23.2k	✓	✓

2%

Workforce Growth

Projected annual CA employment growth from 2023-2033[33]

6.1

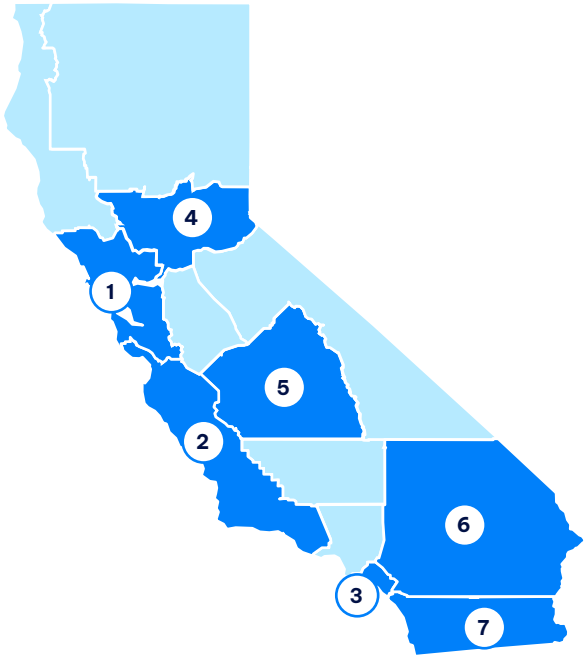
Employment Multipliers

Number of indirect jobs created by high-tech jobs[33]

High-Tech

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **seven identified high-tech as a regional strategic sector**. Each Collaborative also identified subsector categories within high-tech to focus their attention and resources.[34]



Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

helm.ai — **Helm.ai**, an autonomous AI company, will be expanding operations in San Francisco and the broader Bay Area, creating over 700 new jobs

euvtech — **EUV Tech**, a semiconductor manufacturer, will be expanding operations in Martinez, creating 50+ new jobs

Microsoft — **Microsoft** plans to invest $400 million to expand operations in Mountain View, Carpinteria, Irvine, San Francisco, and Sunnyvale, creating over 1,700 jobs

BOSCH — **Bosch** plans to invest more than $1.5 billion in a semiconductor facility located in Roseville

1 Bay Area

Employs ~400K tech workers, more than any other market in the US[35]; key player in semiconductor and microelectronics manufacturing with the largest concentration of semiconductor jobs in the United States and top research universities including Stanford and UC Berkeley.

2 Central Coast

Specializes in microelectronics, including Santa Barbara emerging as a quantum player, anchored by Google's Quantum AI campus and strong research universities including Cal Poly-San Luis Obispo and UC Santa Barbara (Nanotech Lab, Materials Research Lab, and Quantum Foundry).

3 Orange County

History of chip manufacturing though anchor companies including Broadcom, Tower Semiconductor and Skyworks Solutions and strong research universities, such as UC Irvine.

4 Capital

The Greater Sacramento area has 26x more concentrated semiconductor growth capital than the U.S. average,[36] anchored by solid-state memory applications and products R&D, with leading chip manufacturers including Intel, Solidigm, and Bosch.

5 Central San Joaquin

Working to attract circular manufacturers in computer and electronic product manufacturing, with plans to reskill and upskill its existing base of ~50K manufacturing jobs.

6 Inland SoCal

Hub for cybersecurity services, anchored by the Cybersecurity Center at Cal State San Bernardino, which has received multiple high profile federal training excellence designations and initiated a first-in-the-state cybersecurity apprenticeship program.

7 Southern Border

Home to over 4.5K manufacturing businesses, including robotics and automation, supporting ~121K jobs, and anchored by companies including Shield AI and Brain Corp and UC San Diego (Robotics Institute).

Sector Category: Accelerate | Bet

Hardware | Semiconductors | Software & Services | Artificial Intelligence | Quantum | Robotics

OVERVIEW

Life Sciences

As the birthplace of biotechnology, dating back to the founding of Genentech in 1976 in South San Francisco and the commercialization of recombinant DNA technology,[1] California is one of the national leaders in life science innovation.

Anchored by the Bay Area, Los Angeles County, and Southern Border regions, California is known for its history of innovative medical technology (medtech) and pharmaceutical companies, contributing to the rise of the state's pioneering biotech economy.[2] California's life sciences sector is bolstered by its leading research institutions (including Stanford; University of California, Berkeley; and University of California, San Francisco), and large share of venture capital investment relative to other states.[3]

California Can Capitalize on Global Opportunities in Life Sciences

Sector Category: Accelerate	**Representative California Life Sciences Employers**
Medtech Driven by R&D investment in advanced medical devices and easy approval for those devices by regulatory authorities, the global medtech market was valued at ~$640 billion in 2024, with an expected 6% CAGR for the next decade[4]	INTUITIVE, Agilent, ResMed, Applied Medical, FUJIFILM, Edwards Lifesciences, CooperCompanies
Pharma / Biotech The global pharma / biotechnology sector reached ~$1.4 trillion in 2023 and is expected to grow at a ~12% CAGR for the next decade, largely driven by advancements in genomics and Polymerase Chain Reaction (PCR) technologies as well as favorable government policy and increased healthcare infrastructure[5]	illumina, BIOMARIN, Takeda, Genentech, AMGEN, GILEAD

Life Sciences

California is Building on its Strengths to Accelerate Life Sciences

In 2023, the state **exported $9.3 billion in pharmaceutical and medicine products** and was the #1 exporter of medical equipment and supplies, with $6.6 billion in exports[3]

California invests heavily in life sciences R&D

- The state invests **$55 million of its higher education R&D into life sciences, the most of any sector**[7]
- California **accounted for 30-40% of the total annual patent applications filed nationally in life science sectors from 2018 to 2023**—the largest single U.S. state total
- California leads states in life sciences degrees conferred in 2022 (~91,000, as much as New York,Massachusetts, and Texas combined) and is **24th among U.S. states in percentage of graduates in STEM fields**[8]

California life science companies receive more VC funding than any other state (~$60 billion in private investment[6] in 2023)[2]

- Life sciences comprises California's third top sector for VC funding[3]
- California receives the most federal funding from the National Institutes of Health (NIH) and National Science Foundation (NSF) out of any state[2]

Medtech: With roughly 13,600 medtech enterprises and 19 global-scale medical devices companies headquartered in California, the state accounts for **~30% of the medical device industry revenue across the US**[9]

- California has a strong medtech workforce of over 100,000, with the subsector contributing ~$32 billion in nominal GDP in 2023[10]

Pharma / Biotech: California is home to **three life science markets ranked in the top ten** in the U.S. in R&D, manufacturing, or medtech (San Francisco, San Diego, and LA / Orange County)[11] and ~16K life science establishments, including some of the largest biotech and pharmaceutical companies in the world, such as Genentech, Illumina, Amgen, and Gilead[2]

- California's biotech R&D workforce is nearly 70,000, with pharma / biotech adding ~$65 billion in nominal GDP in 2023[10]
- California universities had multiple research breakthroughs over the past few years, including discovering MYC Protein at UC Riverside, advancing chemotherapy treatments at UC Santa Barbara, and developing the Human Pangenome Project at UC Santa Cruz[12]

How We Are Supporting the Life Sciences Sector

- **Research and Development Tax Credit:** Allows companies to reduce their tax liability based on qualified research expenditures with a credit for up to 15% for qualified in-house research expenses and 24% for payments to outside contractors[13]
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to advanced manufacturers (including industrial biotechnology) to reduce the equipment purchasing costs[14]
- **CalCompetes:** Provides tax credits to life sciences companies, including ~$10 million to four businesses since 2022, creating over 300 life sciences jobs[16]
- **Employment Training Panel (ETP):** Supports life sciences employers with upskilling their workforce[17]
- **Manufacturing and R&D Partial Sales and Use Tax Exemption:** Offers a partial exemption in state sales and use tax (3.9375%) to manufacturers and businesses primarily engaged in R&D related to life sciences industries[15]

Life Sciences

Personal Stories: Luissaidee

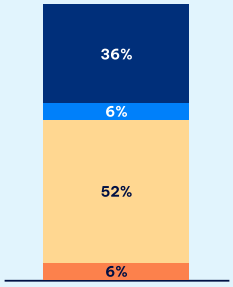
Contra Costa Medical Career College sponsored by Rubicon Programs, a nonprofit providing comprehensive workforce development and reentry programs to over 2,000 Bay Area residents annually,[18] helped Luissaidee, a Lab Assistant II and mother of two, land her dream job. In 2023, Rubicon Programs provided services for over 2,700 people, including helping 225 participants secure jobs.[19]

Why Life Sciences is a Strategic Sector for California

The life sciences sector is a crucial driver of **California's economic strength and future growth, creating high-paying jobs** (including many accessible entry-level positions) while **supporting the healthcare industry statewide and nationally:**

- Annual compensation for life science workers is more than double the average U.S. private sector wage, and over a third of top life science sector occupations typically **do not require a bachelor's degree**[20]
- As one of the most diverse states in the country,[21] California's life sciences sector has the **potential to leverage its uniquely diverse workforce to address health questions with a focus on equity** in life sciences innovation

Typical Educational Attainment Required Across Occupations for Life Sciences in California, 2023, %[20, 22]



Hourly Wage by Educational Attainment

$22.26	High school or less
$32.79	Some college / Associate's
$62.59	Bachelor's
$66.90	Master's or PhD

Top Occupations Within the Life Sciences Sector in California, 2023[20]

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role?[23]	Forecast sector employment change above CA average?[24]
Software Developers	9.5k		✓
Assemblers and Fabricators	9.0k		
Inspectors, Testers, Sorters, and Weighers	5.0k	✓	✓
Medical Scientists	5.0k		✓
Packaging and Filling Machine Operators	4.4k		

~466K
Life Sciences Workforce
Across all subsectors in CA[25]

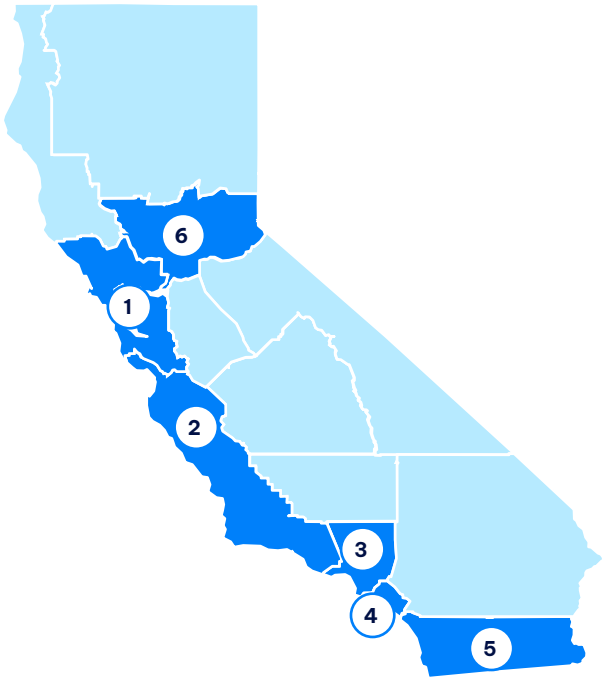
5.0
Employment Multiplier
Number of indirect jobs created by life sciences jobs in CA[10]

$414B
Annual Economic Output
From life sciences sector in CA[2]

Life Sciences

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **six identified life sciences as a regional strategic sector**. Each Collaborative also identified subsector categories within life sciences focus their attention and resources.[26]



Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

Agenus, a biopharmaceutical company, plans to invest more than $225 million in expanding operations in Vacaville, Emeryville, and Berkeley, creating over 350 new jobs

Element Biosciences, a biotech company based in San Diego, plans to invest more than $125 million in expanding operations, creating over 420 new jobs

MicroVention, a medical devices manufacturer based in Aliso Viejo, plans to invest more than $54 million in expanding operations, creating over 220 new jobs

Sector Category: Accelerate

Medtech **Pharma / Biotech**

1 Bay Area

In 2023, the Bay Area's biotech industry contributed ~$140 billion to regional economic output, supported ~330,000 jobs, and brought in over $2 billion in NIH grants.[27] The region is home to world class research institutions including UCSF, Stanford, and UC Berkeley, and several cutting-edge medtech and biotech companies including Intuitive Surgical, Align, Genentech, and more.

2 Central Coast

Thousand Oaks biotech hub is anchored by Amgen. strong research universities led by UC Santa Cruz (strengths in drug discovery, genomics, and RNA biology). The region is involved in the UC Berkeley- based California Institute for Quantitative Biosciences and University of California Drug Discovery Consortium and is home to several medtech companies including Wyatt Products and Cognixion.

3 Los Angeles County

LA's biotech industry generated ~$70 billion in economic output in 2023, supported ~220,000 jobs, and brought in over $1.5 billion in NIH grants.27 LA is home to leading research institutions including UCLA, Caltech, and University of Southern California, over 3,100 life science companies and research facilities, with major medtech and biotech employers including Amgen, Takeda, Grifols, Kite Pharma, and Xencor.

4 Orange County

Strong base of ~20,000 jobs in medical supplies and equipment manufacturing (dominated by Surgical and Medical Instrument Manufacturing and Dental Laboratories). The region's innovation is driven by incubators and accelerators such as Octane OC and The Cove @ UCI with partnerships between academia and local industry leaders such as Edwards Lifesciences, Applied Medical, and Medtronic.

5 Southern Border

In 2023, San Diego's biotech industry generated ~$60 billion in economic output, supported ~180,000 jobs, and brought in over $2 billion in NIH grants.[27] The regional higher education ecosystem is anchored by Scripps Research Institute and the Salk Institute; the region is home to several cutting-edge biotech companies including Illumina and Pfizer.

6 Capital

Over the past ten years, the region produced 4,400 new patented therapies and 130 regional startups securing growth capital totaling $1.7 billion. The region is home to UC Davis and the future Aggie Square, a 1.1 million-square-foot district focused on translating food and biotechnology innovations into needed products and services, with a number of medtech and biotech companies including StemExpress, Penumbra, and OrcaBio.[28]

OVERVIEW

Working Lands & Water

California's working lands and water sector is a powerhouse of agricultural production and innovation, driving the state's economy across a diverse set of subsectors.

Working lands in California is anchored by the Central Valley, which leads the country in agricultural production and food / beverage processing. California's robust agtech industry is driven by substantial Silicon Valley investment (e.g. AgFunder, SVG Ventures), while the state's nascent bioeconomy and blue economies are enabled by substantial organic resources (wood products, biomass) and access to the coastline.[1]

California Can Capitalize on Global Opportunities in Working Lands & Water Subsectors

Sector Category: ● Strengthen ● Accelerate ● Bet	Representative California Working Lands & Water Employers
Agricultural Production The global gross production value of the agricultural production market is projected to reach $4.6 trillion in 2024 and expected to grow at a ~4% CAGR through 2029[2]	Sunkist, Harris Ranch, Lundberg Family Farms, Calavo
Food Processing Driven by growing sustainable food consumption, global revenues in the food and beverage market are expected to reach nearly $10 trillion in 2025[3]	Beyond Meat, Amy's, Ghirardelli, Drinkpak, Blue Diamond Almonds
Agtech & Farm Equipment Agrifoodtech startups raised $6.7 billion globally, with investments into farm robotics / equipment growing 9% year-over-year for the past five years to $760 million in 2023	Apeel, Blue River Technology, FarmWise, Monarch
Bioeconomy The global bioeconomy has an estimated value of $4 trillion and according to some projections, may grow to $30 trillion, driven by increasing emphasis on managing climate change[5]	Lygos, Origin, viridos
Blue Economy / Tech The global ocean economy generates $3-6 trillion per year, with fisheries and aquaculture contributing ~$100 billion per year and supporting 260 million jobs worldwide[6]	CALWAVE, AEMETIS, OceanWell

Working Lands & Water

California's Strong Base in Agriculture and Food Production Supports the Success of its Working Lands & Water Sector

Strengthen

As the **nation's leading state in agricultural production and exports**,[7] California cultivates over a third of the country's vegetables and nearly three-quarters of its fruits,[8] generating at least $100 billion in agricultural production-related economic activity each year[9]

- The state is **home to some of the best agricultural science programs in the world**, including UC Davis (ranked 13th best Agricultural Science university in the world and 3rd in the U.S.)[10]
- California is also **home to ~70,000 farms & ranches,**[9] **with ~24 million farm acres in operation**,[11] mostly in the Central Valley[12]
- As of 2017, California **led the country in number of food and beverage processing plants**,[13] including wineries (nearly 1,500), fruit and vegetable processing (333 plants), and coffee and tea manufacturing (100 plants); the subsector employed an estimated 236,000 people in 2023[14]

Accelerate

Grounded in California's strengths in agricultural production and food processing, **the state leads the country in agtech and farm equipment technologies**

- Agtech startups in California **attracted an average of ~$1.5 billion in VC funding from 2020-2023**, accounting for 37% of U.S. VC funding[15]
- Recently, the Capital and North San Joaquin Valley regions were **recognized as a Regional Innovation Cluster for AgriFood technologies**, the only national AgriFood innovation cluster award, by the U.S. Small Business Administration (SBA)[16]

Bet

Looking forward, California **has an opportunity to develop its bioeconomy**, with a focus on sustainable and regenerative practices, by utilizing its substantial biomass resources (47 million dry tons in estimated biomass resource potential from logging debris, urban wood waste, and agricultural wastes[17]) and developing its bioindustrial and biocircular manufacturing capabilities. California also has the potential to **bolster its blue economy by leveraging the state's coastline**

- **In 2023, biomass provided ~5% of California's in-state generated energy supply**;[18] the industry reports that it reuses over 7.3 million tons of the state's solid wastes and residues annually[19]
- California plans to develop its bioeconomy by **enhancing forest restoration and funding innovation programs to develop bio-based products**, such as biofuels, while streamlining regulations and establishing tracking systems[20]
- California's **blue economy has an estimated $40 billion economic impact**, with annual revenues at blue economy businesses increasing by 18% and jobs by 163% over the past ten years[21]

How We Are Supporting the Working Lands & Water Sector

Forest Biomass to Carbon-Negative Biofuels Pilot Program: Creates carbon-negative hydrogen and / or liquid fuel from forest biomass from forest vegetation management within California's Sierra Nevada [22]

Organics Grant Program: Helps grow California companies engaged in food and yard waste recycling to cut climate pollution and create green jobs. The latest investment of $130 million will lead to 114 new jobs for California's clean economy and keep over 7.7 million tons of organic waste out of landfills[23]

Food Production Investment Program: Helps accelerate adoption of state-of-the-art energy farming technologies that substantially reduce energy use, costs, and GHG emissions[24]

Farm Equipment and Machinery Sales & Use Tax Exemption: Provides a partial exemption on taxes related to the sale, storage, or use of farm equipment, machinery and their parts[25]

CalCompetes: Provides tax credits to working lands and water companies, including $50 million to 11 businesses since 2022, creating over 1,000 working lands and water jobs[26]

Upskilling & workforce initiatives:

- **AgTEC Workforce:** Improves the skills of agricultural workers in the San Joaquin Valley by aligning community colleges with industry approved certificate programs to increase wages[27]
- **Labor Workforce Development Agency (LWDA):** Funds outreach, employment, and training services to farmworkers through initiatives such as La Cooperativa Campesina de California[28]
- **Specialty Crop Workforce Development Program:** Engages specialty crop employers, develops training and curriculum, and conducts outreach and education to farmworkers[29]

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

Sakata Seed America, a plant and seed manufacturer, plans to invest more than $25 million to expand operations, creating over 50 jobs

Baldwin Richardson Foods Co., a beverage manufacturer, plans to invest ~$50 million to expand operations, creating over 140 jobs

Working Lands & Water

Workforce Profile: Center for Land-Based Learning

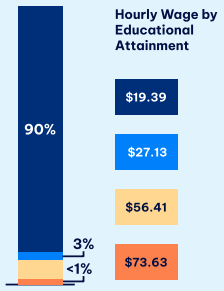
The Center for Land-Based Learning, a High Road Training Partnership grantee, aims to train incumbent English-language learner workers in farm management and agricultural operations across California.[30] As a leading agricultural workforce development organization in California, the Center for Land- Based Learning offers a variety of training and career advancement programs, including the California Farm Academy's Beginning Farm and Ranch Manager Apprenticeship, a two-year program of paid on-the-job training and instruction. The Center also runs Spanish- language Leadership Training, an initiative designed to provide Spanish-speaking farm employees with essential language skills and management training to advance their careers.[31]

Working Lands & Water Offers Opportunities for All Californians

Building on a long history of agricultural production, California's working lands and water sector has the potential **to evolve in the coming decades to reflect the state's commitment to building a working lands and water economy centered on living-wage jobs and the implementation of sustainable farming and food production practices:**

- With legislation such as the Sustainable Groundwater Management Act (SGMA) and funding from Proposition 4, the state is investing in climate-focused farming techniques to create a working lands and water economy that will benefit Californians for decades to come by **doubling down on climate-focused farming techniques and long-term resource management**[32]
- The working lands and water sector also has **opportunities to upskill and reskill** its workforce to build pathways into higher wage jobs with greater upward mobility for farm workers

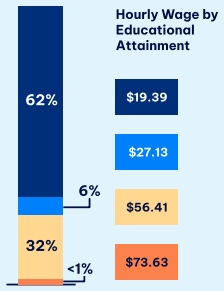
Typical Educational Attainment Required[33] Across Occupations for Working Lands & Water in CA, 2023, %[34]



Top Occupations Within the Working Lands & Water Sector in CA, 2023[34]

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role?[35]	Forecast sector employment change above CA average?[36]
Farmworkers and Laborers (Crops)	203.3k		
Agricultural Managers	36.5k	✓	
Packaging and Filling Machine Operators	24.3k		✓
Laborers, Freight, and Material Movers	20.9k		✓
Farmworkers and Laborers (Animals)	19.2k		

Typical Educational Attainment Required[33] Across Occupations for Agtech in CA, 2023, %[34]



Top Occupations Within the Agtech Sector in CA, 2023[37]

Top 5 Occupations	Share of postings by agtech companies,[37] 2023 Total	Pathway role?[35]	Forecast sector employment change above CA average?[36]
Customer Service Representatives	8.6%	✓	
Software Developers	7.9%		✓
Heavy and Tractor-Trailer Truck Drivers	6.1%	✓	✓
Agricultural Technicians	6.1%		✓
Farmers, Ranchers, and Agricultural Managers	4.4%	✓	

Education Level: High school or less | Some college / Associate's | Bachelor's | Master's or PhD

~13%
Annual Exports
Share of U.S. agricultural exports in 2022[38]

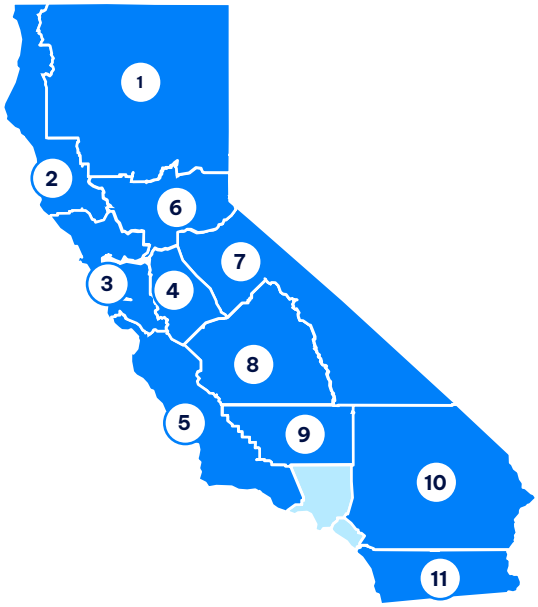
$145M
USDA National Institute of Food and Agriculture Grants
In fiscal year 2023 grants to CA[39]

~700K
Working Lands & Water Workforce
Across all subsectors in CA[14]

Working Lands & Water

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **11 identified working lands and water as a regional strategic sector**. Each Collaborative also identified subsector categories within the clean economy to focus their attention and resources.[40]



1 North State

Roughly $4.5 billion agricultural production subsector, anchored by rice (~$900 million), almonds (~$770 million), and walnuts (~$720 million). Positioned to develop a circular bioeconomy based on wood utilization facilities.

2 Redwood

Hub for commodities including wood (produced 54% of statewide lumber market in 2023), seafood (12% of statewide aquaculture production by market value), livestock, wine, and cannabis.

3 Bay Area

Focus on sustainable agricultural practices and agtech innovation. Emerging efforts to prioritize recruiting and upskilling indigenous and immigrant farmworker populations.

5 North San Joaquin

Grossed nearly $11.5 billion from agricultural goods in 2022. Recently certified as an AA-rated Bioeconomy Development Opportunity Zone (BDO Zone), the first in the state, by the BDO Zone Initiative, building from progress advanced by BEAM Circular, a bioeconomy focused initiative that received funding from the Regional Investment Initiative.

6 Central Coast

Home to 125,000 individuals engaged in agricultural production, several notable agtech companies (ncluding FarmBot and FarmNG), and top research institutions (UC Santa Barbara, UC Santa Cruz). Strong geographic positioning and existing state / federal assets (research labs, initiatives) for blue economy.

7 Capital

Agriculture, food, and wood economy jobs accounted for about 40% of total employment in the four tradable sectors as prioritized by the region in 2022. Regional leader in investment intensity in agricultural innovation (3-30x the national average), anchored by UC Davis, a leading institution worldwide for agriculture and forestry.

8 Sierra

Developing a workforce plan for managing ecosystems and establishing a biomass-based economy by converting low-value biomass materials for export for more extensive bioeconomy uses such as biofuels or wood products.

9 Central San Joaquin

Produces 25% of the nation's food, 60% of its fruits and nuts, and 30% of its vegetables, with an annual agricultural economy output of $70 billion. Well-positioned to advance the bioeconomy subsector using renewable organic material from plants and animals to produce biofuels.

10 Kern County

Robust agriculture industry (80,000 jobs or about 15% of total employment) with plans to invest in agtech and the bioeconomy (focus on biofuels).

11 Inland SoCal

Nascent center for water quality innovation (e.g. onsite water treatment, and recycling, uncovered filtration systems) to offset waste from advanced manufacturing processes.

12 Southern Border

Agriculture contributes $5 billion to the Imperial County economy. San Diego County generates $1.8 billion in agriculture and seafood sales, is home to several state-of-the-art water treatment and desalination facilities, and is an emerging hub for agtech (e.g. AgX Initiative).

Sector Category: Strengthen · Accelerate · Bet

Agricultural Production · **Food Processing** · **Agtech & Farm Equipment** · **Bioeconomy** · **Blue Economy / Tech**

OVERVIEW

Manufacturing

In 2023, California was home to the largest manufacturing workforce in the United States.[1] Moving forward, the state can lean into its strengths in high value-add manufacturing, including precision and advanced manufacturing, to support its "Accelerate" and "Bet" sectors.

California is Leaning Into its Value-Add Manufacturing Strengths

- California has a **strong manufacturing economy**, generating ~$397 billion in annual gross domestic product output in 2023[1]
- California's **1.3 million manufacturing jobs** account for **about 7% of its workforce**[1]

Value-Add Manufacturing Across Sectors

- California's advanced & precision manufacturing capabilities **support many of the state's strategic sectors:**

Aerospace & Defense

Clean Economy

High-Tech

Life Sciences

Working Lands & Water

Advanced & Precision Manufacturing

Defining Manufacturing Subsectors in California

Sector Category: Strengthen Accelerate

General

Producing goods on a large-scale using machinery and assembly lines, typically for mass-market products[2]

Precision

High-accuracy production processes, often used for intricate components in industries like aerospace or life sciences[3]

Advanced

Technology-driven manufacturing incorporating automation and robotics for enhanced efficiency and customization[4]

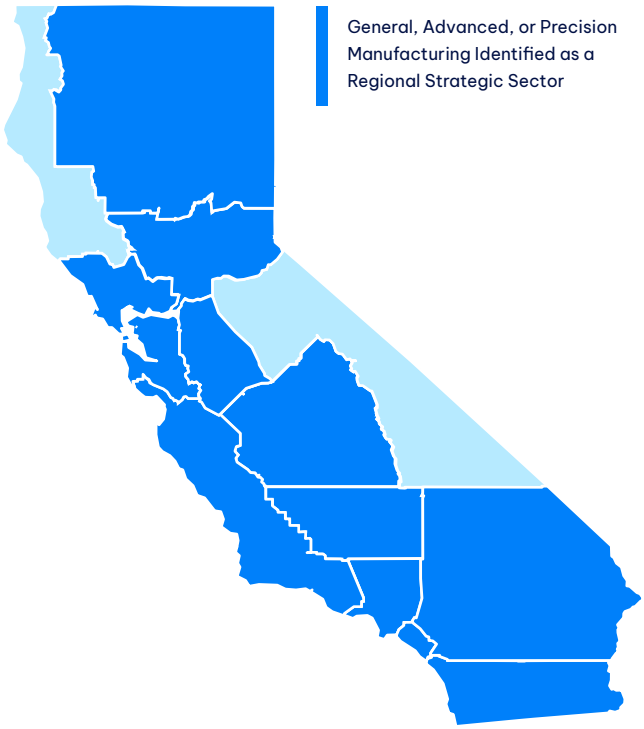
Manufacturing

How We Are Supporting the Manufacturing Sector

- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to advanced manufacturers to reduce the equipment purchasing costs[5]
- **Manufacturing and R&D Partial Sales and Use Tax Exemption:** Offers a partial exemption in state sales and use tax (3.9375%) on qualified purchases to businesses engaged in manufacturing, research and development (R&D), and electric power generation[6]
- **Capital Investment Incentive Program:** Authorizes local governments to rebate a capital investment incentive amount to a manufacturer that is equal to the property taxes owed on the manufacturing property[7]
- **Made in California Labeling Program:** Builds consumer awareness around products produced within the state ecosystem[8]
- **Industrial Development Bond:** Offers tax exempt securities up to $10 million to provide money for the acquisition, construction, rehabilitation, and equipping of manufacturing and processing facilities for private companies[9]
- **Employment Training Panel (ETP) partnership with California Manufacturing Technology Consulting (CMTC) and California Manufacturers & Technology Association (CMTA):** Provides small and medium-sized California manufacturers with subsidized, high-quality training[10]
- **California Energy Commission Manufacturing Grants:** Provides support to ZEV manufacturers through the Clean Transportation Program and to food processors through the Food Production Investment Program[11]

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **11 identified general, precision, or advanced manufacturing as regional strategic sectors**[12]



- **North State:** Opportunities to build from its natural resources to engage in value-add timber manufacturing
- **Capital:** Precision manufacturing employs ~20,000 people, accounting for ~$4 billion in gross regional product
- **Bay Area:** Manufacturing employs ~400,000 people, concentrated in southern and eastern areas of region
- **North San Joaquin:** General and advanced manufacturing employs ~60,000 people (~10,000 people employed in advanced)
- **Central San Joaquin:** ~50,000 manufacturing jobs, mostly food-based; new opportunities in circular and clean energy manufacturing
- **Central Coast:** Precision manufacturing employs ~34,000, accounting for ~$15 billion in regional exports
- **Kern County:** Advanced manufacturing concentrated in working lands, clean energy, and aerospace and defense
- **Los Angeles County:** Strong advanced manufacturing workforce, with nearly ~200,000 in aerospace manufacturing alone
- **Orange County:** Computer / electronic product and miscellaneous manufacturing (dominated by medical device manufacturing), accounts for ~50,000 jobs
- **Inland SoCal:** Nearly 100,000 manufacturing jobs in the region, with a greater share identified as quality or promising based on regional analysis relative to the overall economy
- **Southern Border:** Manufacturing (precision & advanced) employs ~120,000 people, generating $28 billion in economic activity

Manufacturing

Manufacturing Offers Pathways to Good-Paying Jobs

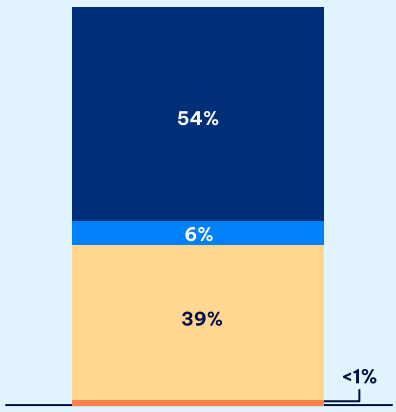
- In 2023, manufacturing employed more than a million Californians, with average hourly wages of $36[1]
- Manufacturing is relatively accessible to all education levels, with many roles requiring only a high school degree or G.E.D.[13] and opportunities to earn more through specializations or apprenticeships in fields like CNC machining and advanced welding[14]

Top Occupations Within Manufacturing in California, 2023[13]

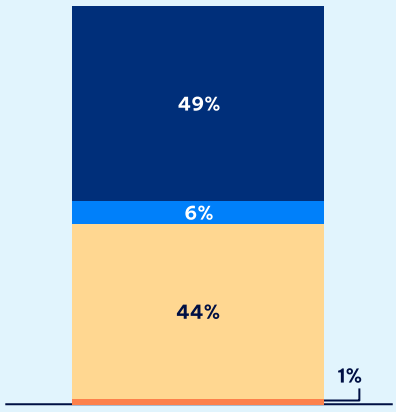
Top 10 Occupations	Total employment, 2023 Thousand	Pathway role?[15]	Forecast sector employment change above CA average?
Miscellaneous Assemblers and Fabricators	83.2k		
Software Developers	43.6k		✓
Laborers and Freight, Stock, and Material Movers, Hand	39.7k		
Electrical, Electronic, and Electromechanical Assemblers*	37.6k		
Inspectors, Testers, Sorters, Samplers, and Weighers	35.5k	✓	
First-Line Supervisors of Production and Operating Workers	33.4k		
Packaging and Filling Machine Operators and Tenders	32.0k	✓	
Sales Representatives, Wholesale and Manufacturing	26.4k		
Shipping, Receiving, and Inventory Clerks	24.6k		
General and Operations Managers	21.0k		

*Except Coil Winders, Tapers, and Finishers
** Except Technical and Scientific Products

Typical Educational Attainment Required Across Occupations for Manufacturing in California, 2023, %[13, 16]



All Manufacturing



Advanced & Precision Manufacturing

Education Level:

- High school or less
- Some college / Associate's
- Bachelor's
- Master's or PhD

OVERVIEW

Creative Economy

> **The creative economy has deep roots in California's history and continues to be an engine for innovation, cultural expression, and economic growth.**

California is renowned for its long and storied history in film and television production as the home to Hollywood and many of the world's largest studios,[1] and as the birthplace of some of the technologies that gave rise to its international influence—including the development of the first electronic television in San Francisco.[2]

But California's creative economy doesn't end there. Major music and sound recording companies, publishers, design schools (e.g., California Institute of the Arts and NewSchool of Architecture and Design[3]), and performing arts venues (such as the Greek Theater and Paramount Theatre[4]) can be found around the state, reflecting California's significant role across the creative industries.

California's Creative Economy Powers Economic Growth and Provides High-Quality Jobs

Although there is increasing competition in TV and film production, California **remains a creative economy powerhouse:**

- In 2023, **California was home to ~220,000 creative economy jobs, one in every four creative economy jobs in the U.S.**[5]
- The **average salary paid to creative workers in 2023 was ~$160,000**, more than 50% higher than the California average[6]

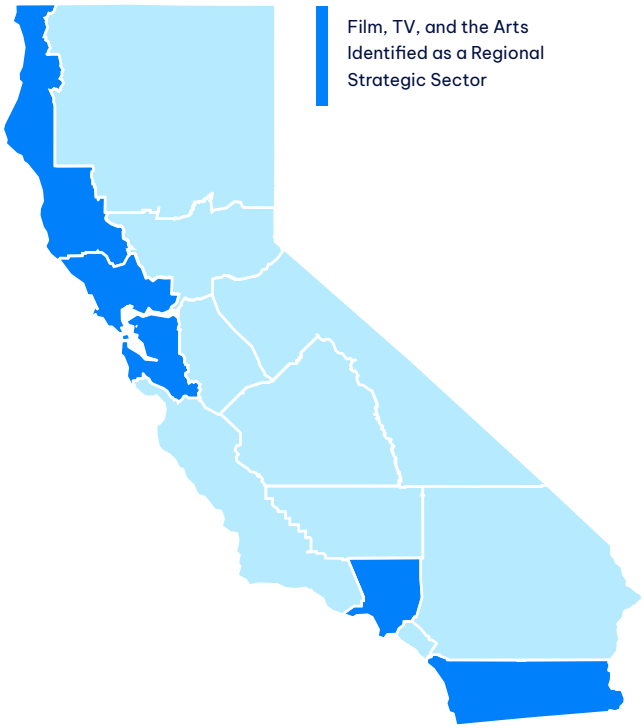
Workforce Profile: BRIC Foundation

The BRIC Foundation is a nonprofit dedicated to effectively preparing underrepresented workers to thrive in Arts, Media, and Entertainment (AME) jobs.[8] Since 2018, BRIC has worked with over 3,000 underserved high schoolers on creative projects with an emphasis on career readiness and has developed an apprenticeship program with 18 employer partners.[9] Last year, BRIC secured a three-year, $3.5 million contract from the California Workforce Development Board to support a network of registered apprenticeship program sponsors and community-based organizations that provide paid on-the-job training, continuous mentorship, career coaching, and ongoing support for participants.[10]

Creative Economy

How We Are Supporting the Creative Economy Sector

- **California Film and TV Tax Credit Program:** Provides refundable tax credits based on qualified expenditures for eligible productions that are produced in California[11]
  - **Recent proposal by Governor Newsom to increase California's Film & Television Tax Credit Program from $330 million to $750 million annually** to attract more entertainment projects back to California[11]
  - Since 2009, the program has **generated over $26 billion in economic activity and supported ~200,000 jobs**, with studies showing that every tax credit dollar yields substantial returns in GDP, wages, and local tax revenue[11]
- **California Film Commission:** Supports productions of all sizes and budgets, including film and TV tax credits, an extensive digital location library, free online permitting, low-cost use of state properties as shooting locations, and production assistance[12]
- **Employment Training Panel (ETP):** Provides funding to help employers within the creative economy—from film and TV to music and the performing arts—upskill their workforce[13]
- **California Arts Council:** Promotes and supports arts and culture across the state by providing grants, fostering accessibility and equity in arts programming, and enriching community engagement, arts education, and creative industries[14]
- **Soundstage Filming Tax Credit Program:** Allows a tax credit in an amount equal to 20% or 25% of qualified expenditures for the production of a qualified motion picture in CA at a certified studio construction project[15]
- **Tele-production and Post-Production Equipment Exemption:** Exempts sales of tele-production and post-production equipment to businesses primarily engaged in those activities from the state's sales and use tax rate[16]
- **Motion Picture Production Services Exemption:** Exempts transfers of qualified motion pictures or related rights or services involved in production of those qualified motion pictures from the state's sales and use tax[16]
- **Leases of Motion Picture and Television Films and Tapes Exemption:** Exempts leases of motion pictures, animated films, and TV shows from tax, as they are not treated as sales, with the lessor considered the end consumer of the leased property[16]



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **four identified film, TV, and the arts as regional strategic sectors:**[17]

- **Redwood:** Production and film tourism hub in Humboldt, anchored by Humboldt-Del Norte Film Commission, seasonal festivals and heritage sites celebrating indigenous and other local cultures[18]
- **Bay Area:** Arts and culture sector in the Bay Area employed more than 82,000 workers in 2022, including employees of museums, art galleries, historical sites, performing arts companies, and the film industry, as well as independent artists, writers, performers, and recreation / spectator sports; arts, entertainment, and recreation sector projected to grow nearly 57% from 2020 to 2030, adding more than 14,600 jobs
- **Los Angeles County:** Video Production and Distribution sector accounts for ~140,000 jobs in the county with an average wage of ~$125,000; home to seven of the top twenty-five film schools in the country and the largest inventory of indoor filmable sound stages in the United States
- **Southern Border:** Generates $10.8 billion dollars in total economic impact annually; supports 170,000 direct and indirect jobs

OVERVIEW

Financial & Professional Services

Accounting for about 8% of California's gross domestic product (GDP),[1] the state's financial & professional services sector supports the rest of the state's economic activities.

- **Financial services,** including banking, investing, and insurance, provide capital and risk management needed for business expansion, innovation, and job creation across sectors[2]
- **Professional services,** ranging from accounting to legal support to marketing and publishing, deliver expertise that helps businesses navigate complex regulatory environments, optimize operations, and strategize for growth[3]
- Both services **not only directly contribute to the economy but also foster economic stability, innovation, and productivity**

California's Financial & Professional Services Sector Provides Thousand of High Paying Jobs

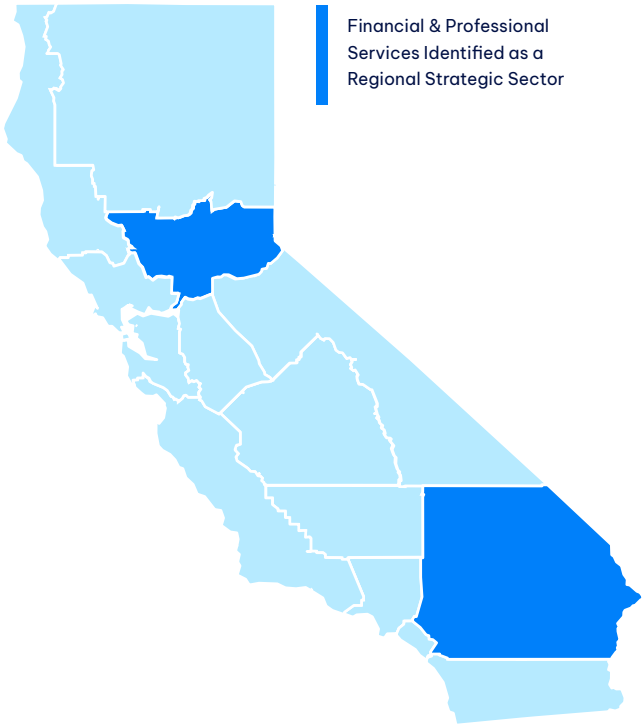
In 2023, **tourism provided employment for 1.2 million Californians** and generated $150 billion in visitor spending (surpassing the prior record of ~$145 billion in 2019) and **$12.7 billion in state and local tax revenues**[1]

- In 2023, California's financial services sector accounted for approximately 190,000 jobs, while the professional services sector supported around 670,000 jobs, including roughly 560,000 in business services and 110,000 in marketing and publishing[1]
- Careers in financial & professional services often **offer flexible working arrangements, benefits packages, and opportunities for career growth**[4]

Financial & Professional Services

How We Are Supporting the Financial & Professional Services Sector

- **Exemption from the Minimum Tax for First-Year Corporations and Exemption from the Annual Tax for First-Year Limited Liability Companies (LLCs), Limited Partnerships (LPs), and Limited Liability Partnerships (LLPs):** Exempts corporations from paying a minimum franchise tax of $800 in their first year. LLCs, LLPs, and LPs also have an $800 annual tax, with an exemption in their first year for tax years 2020, 2021, and 2022[5]
- **Employment Training Panel (ETP):** Provides funding to employers in finance, insurance, and professional services, insurance to upskill their workforce[6]
- **California Capitol Access (CalCap) and iBank Loan Guarantee Programs:** Encourages lenders to provide financing to small businesses, including professional services firms[7]
- **CalCompetes:** Provides tax credits to financial & professional services companies, including more than $17 million since 2022[8]



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **two identified financial & professional services as regional strategic sectors:**[9]

- **Capital:** ~60,000 jobs in business services (~20,000 in technical services and ~25,000 in business administration), generating ~$12 billion in gross regional product with an average salary of ~$115,000
- **Inland SoCal:** Plans to create pathways into management careers, providing opportunities for skills development, leadership training, and career advancement, particularly among those from groups historically underrepresented in corporate leadership and develop an entrepreneurial ecosystem for high-growth startups and main street businesses

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

Clutch

Clutch, a business management consulting services company based in **Sacramento**, plans to invest ~$15 million to expand operations, creating over 520 new jobs

SYSTEM1

System1, an online advertising company based in **Marina Del Rey**, plans to invest ~$7 million to expand operations, creating almost 200 new jobs

OVERVIEW

Tourism & Outdoor Recreation

> **Hollywood. Beaches. Yosemite. Disney. Highway 101. Golden Gate Bridge. Tahoe. Napa Valley…And that's not even scratching the surface. Thanks to its exceptional natural beauty and tourist attractions, California leads the nation in total spending on tourism.[1]**

While the pandemic caused temporary declines in tourism, the number of tourists to California has **returned to record highs**, attracting ~260 million vistors in 2023 and generating billions for California businesses.[2] California is committed to continuing to support the tourism and outdoor recreation sector with an emphasis on **fostering good-paying jobs.**

California's Tourism and Outdoor Recreation Sector Provides Millions of Jobs and Drives Billions in Visitor Spending

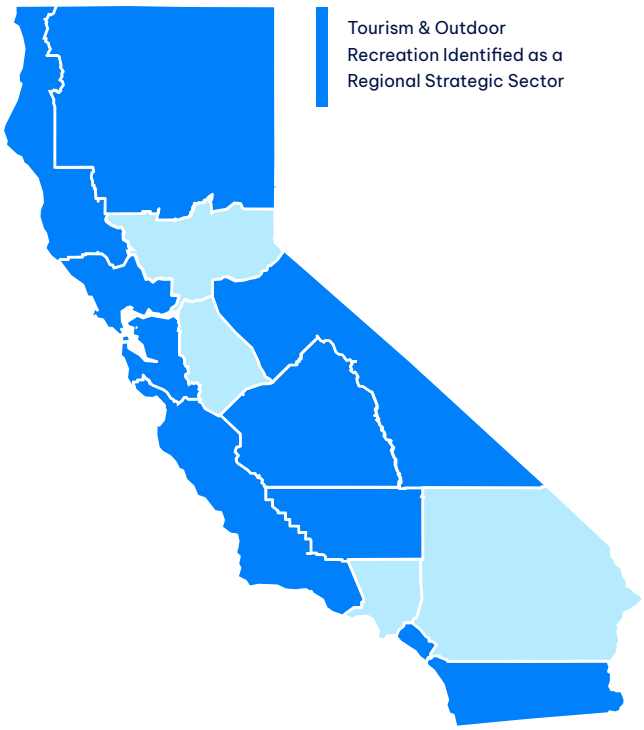
In 2023, **tourism provided employment for 1.2 million Californians**, generated **$150 billion in visitor spending** (surpassing the prior record of ~$145 billion in 2019), and **$12.7 billion in state and local tax revenues**[3]

- The state has the **largest outdoor recreation industry economy in the nation**, contributing ~$81 billion in GDP and supporting 545,000 direct jobs[4]
- Every year, **~68 million people visit California's state parks**[5] and in 2023, **~36 million people** visited the state's nine national parks and 19 designated sites, spending $3.2 billion, **supporting ~40,000 jobs**, and providing $5.1 billion to the state economy[6]
- In January 2025, President Biden added **two new national monuments** covering more than 840,000 acres that will protect sacred tribal lands and enhance regional recreation opportunities[7]

Tourism & Outdoor Recreation

How We Are Supporting the Tourism and Outdoor Recreation Sector

- **California Office of Tourism:** Supports the promotion of California as a global tourism destination, provides information services to visitors, and funds Visit California[8]
- **Visit California:** Develops and maintains marketing programs promoting California as a travel destination; received ~$120 million from the state in 2023-24[9] and a one-time $95 million stimulus in 2021 to boost California's tourism economy[10]
- **State Parks:** In 2024-25, California's budget allocated over a billion dollars to support its state parks, including ~$880 million for state operations and ~$140 million for local assistance[11]
- **Route to Parks Grants:** Reduces transportation barriers to help people access state parks and encourage outdoor recreation and tourism[12]
- **Land and Water Conservation Fund:** Provides funding for the acquisition or development of land to create new outdoor recreation opportunities for the health and wellness of Californians[13]



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **nine identified tourism & outdoor recreation as regional strategic sectors:**[14]

- **North State:** Developing a regional tourism marketing plan and coordinating with local businesses to provide destination and ecology-based experiences to visitors, such the Sierra Buttes Trail Stewardship's Connected Communities Trails Master Plan and agri-tourism activities
- **Redwood:** The area's state and national parks attract approximately 5 million visitors annually who generate about $1.3 billion in spending—about $4,000 per Redwood resident
- **Sierra:** Outdoor recreation and tourism represents ~25% of all regional employment; however, there is opportunity for wage improvement, as many jobs pay less than $50,000 annually
- **Bay Area:** In 2023, San Francisco welcomed ~23 million visitors who spent $8.8 billion[15]
- **Central San Joaquin:** Plan to develop agri- and eco-tourism sector to educate the public, create hundreds of direct and indirect jobs, and conserve land
- **Central Coast:** Strong base of tourism assets, with hospitality accounting for ~18% of region's overall employment growth from 2012 to 2022
- **Kern County:** Opportunities for small businesses and hospitality services to support the region's scenic and recreational areas, like the Kern River Valley
- **Orange County:** Driven by local assets including Disneyland and Anaheim Convention Center, the region has a strong accommodations industry, providing ~25,000 jobs in 2023
- **Southern Border:** Imperial County's historical tourism sector is one of its fastest growing; San Diego plans to expand its cultural and agri-tourism sectors

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

VIKING RIVER CRUISES

Viking River Cruise, a River and Ocean Cruises company based in Woodland Hills, plans to invest ~$9 million to expand their headquarters, creating over 180 new jobs.

OVERVIEW

Transport & Logistics

> **California's transport & logistics sector is diverse, spanning goods transport across air, ground, rail, and water and a broad network of warehouses and wholesalers.**

The State has i**nvested significant dollars towards greener, more equitable transport and logistics initiatives**, positioning California **to continue setting the standard in sustainable and inclusive development.**[1]

Although the transport & logistics sector faces challenges around environmental and public health impacts,[2] working conditions,[3] and job displacement due to automation,[4] **California has an opportunity to encourage efforts to institute practices that protect workers, the environment, and nearby communities impacted by polluting activities.**

California's Transport & Logistics Sector is a Major Employer and Economic Force in the State

- California leads the nation with **$659.1 billion in goods exported**,[5] with the transport & logistics sector employing over **830,000 Californians**[6]

Transport

- **Air:** With 15 airports with major cargo operations, California is the #1 state in the U.S. for inbound and outbound freight flights. Los Angeles International Airport (LAX) ranks 8th busiest cargo airport in the nation, handling over 2.1 million metric tons of cargo annually[7]
- **Ports:** The San Pedro Bay Port Complex, comprised of the Port of Los Angeles and the Port of Long Beach, is ranked 9th in the world by container volume, comprising 75% market share on the West Coast and 29% nationally[8]
- **Rail:** The state has the largest intermodal rail system, spanning 5,000 miles[5]
- **Highways:** California's highways extend over 50,500 miles,[5] creating an efficient network for truck transportation; the state employed approximately 200,000 heavy and tractor-trailer truck drivers in 2023[9]

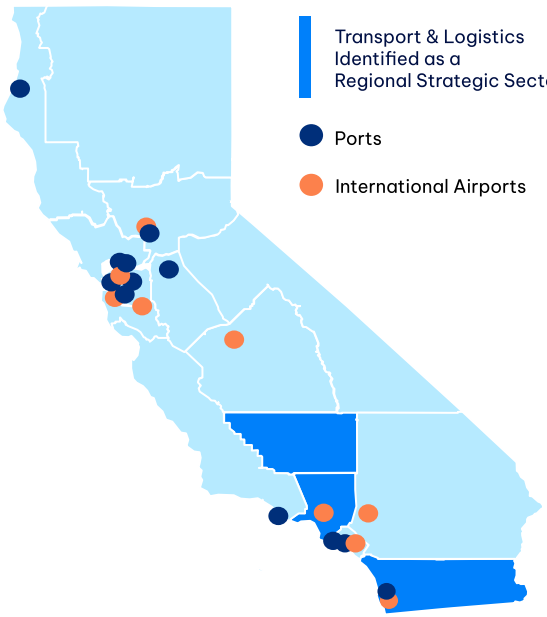
Logistics

- **Wholesale:** The wholesale industry, which supports the trade of food products, furniture, metals, and more, employs over 450,000 Californians[6]
- **Warehousing:** The state is home to 1.17 billion square feet of warehouse space, the most in the country, with the Inland SoCal region alone accounting for over 562 million square feet[5]

Transport & Logistics

How We Are Supporting the Transport & Logistics Sector

- **Port and Freight Infrastructure Program (PFIP):** Channels approximately $1.2 billion into developing a more sustainable and efficient supply chain, with numerous projects incorporating zero-emission infrastructure including:[10]
  - **Port Action, Climate, and Environment Development (PACED):** A $216 million project that received $79 million from PFIP to enhance port container and automobile import / export line of business[10]
  - **Freight Air Quality Solutions (FAQS):** A $240 million project that received $76 million from PFIP for the deployment of Direct Current Fast Chargers and hydrogen refueling dispensers at seven locations to support zero-emission drayage fleets[10]
- **The California Trade Corridor Enhancement Program (TCEP):** Provides $300 million annually to tackle factors such as freight reliability, transportation congestion reduction, air quality impact, and economic / jobs growth[11]
- **California Containerized Ports Interoperability Grant Program:** Invests $27 million into improving and supply chain functionality across 5 ports, including the Ports of Los Angeles, Long Beach, Oakland, San Diego, and Hueneme[12]
- **California Freight Advisory Committee:** Advisory body that advises on freight-related priorities and needs[13]
- **Employment Training Panel (ETP):** Provides funding to transport & logistics employers to upskill their workforce[14]



Personal Story: Marisol

Thanks to the Valley Transportation Authority (VTA) Joint Work Investment program, Marisol, a bus operator and single mother of three has been launched into a new career. Through the VTA's apprenticeship program, participants like Marisol can earn up to 18 college credits at Mission College in Santa Clara, allowing her to earn a Certificate of Achievement in Transportation while working. In 2019, VTA's program was the first in the country to offer a bus operator apprenticeship officially sanctioned by the U.S. Department of Labor.[15]

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **three identified transport & logistics as regional strategic sectors:**[16]

- **Kern County:** Highlights the importance of the sector's job accessibility and growth as a way to provide near-term jobs for severely disinvested communities struggling with chronic unemployment
- **Los Angeles County:** In LA County alone, 1.3 million jobs are goods movement related; 350,000 more jobs will likely be needed to maintain the flow of goods in the LA metro area by 2030
- **Southern Border:** Leveraging its location near urban centers, competitive land costs, and access to major transport hubs, the region has become a leader in logistics, with Calexico Port commercial truck crossings rising from 300,000 in 2010 to over 450,000 in 2023 and updates to the single largest commercial border crossing in North America underway at Otay Mesa Port of Entry[17]

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS[16]

OK Produce, a produce wholesaler, plans to invest more than $36 million to expand its operations in Fresno in addition to creating 130 jobs.

FN Logistics, a family-owned and operated company that provides warehouse, logistics, and distribution services to online clothing retailer Fashion Nova plans to invest nearly $114 million to expand its presence in Santa Fe Springs supporting more than 3,000 new employees.

Anchors

Across the state's 13 Jobs First Regional Collaborative, **eight anchors**—education, healthcare, housing, childcare, and critical infrastructure, including transmission and distribution, water, transportation, and broadband—have been identified as critical for **supporting and sustaining regional economies and local communities**. Together, **these anchors fuel California's global competitiveness and strengthen the fabric of our communities.**

Anchors	Importance to the California Economy	Selection of Key Initiatives
Education & Skilled Workforce	Education plays a **crucial role in developing a skilled workforce** that meets industry needs. As the economy evolves, the state's education systems must adapt to meet the workforce demands of the future.[1] California has the **largest higher education system in the nation**.[2] Additionally, in the 2023-2024 school year, ~5.8M K-12 students were enrolled in one of 9,997 schools across 1,019 school.[3] The system is stressed, and **persistent achievement gaps** continue to exist among disadvantaged students and across geographies.[4]	California has developed a **Master Plan for Career Education to create a coordinated approach to building California's talent pipeline** focused on breaking down silos between sectors, strengthening career pathways, prioritizing paid earn-and-learn programs, and enhancing access to education and career training.[1] Additionally, to encourage clear pathways from education to careers, CA developed the Regional K-16 Education Collaborative Grant program.[5]
Healthcare*	A robust healthcare system is linked to increased labor force participation and reduced absenteeism from illness.[6] **Improving access to quality healthcare**, particularly in rural regions, is **critical for community well-being, as well as attracting potential employers and employees.**[7] California's healthcare system is expansive, covering the state's 39 million residents, with ~15 million enrolled in Medi-Cal, 8 1.[7] million in Covered California,[9] and over 400 hospitals statewide.[8] However, **many rural hospitals face funding shortfalls** that result in decreasing services,[10] and many predominantly rural counties have **fewer per-capita primary care physicians.**[11]	The state is **expanding its behavioral health system** with the $6.4 billion in bonds approved via a ballot measure (Proposition 1) in 2024. Proposition 1 aims to increase the state's capacity to provide behavioral health and housing services to vulnerable populations with the highest needs.[12] In May 2023, **California allocated $300 million in zero-interest loans to 17 community hospitals** facing financial distress through the Distressed Hospital Loan program, providing the critical capital needed for these hospitals to remain open.[13]
Housing*	An **adequate housing supply allows people to live in their preferred locations and near their workplaces**, with one study finding that 75% of surveyed employers reported high housing costs negatively impacted employee retention.[14] **Increasing housing availability also helps stabilize the state's workforce and reduces homelessness-related costs.**[15] High housing costs contribute to affordability challenges for many Californians. The state's median home price reached ~$800,000 as of 2024,[16] and over half of renters in 27 of California's 58 counties are moderately or severely cost burdened.[17]	To expand access to housing, the state created the Housing Accountability Unit under the CA Department of Housing and Community Development (HCD) to hold localities accountable for creating **2.5 million new units by 2030, including 1 million affordable units.**[18] The HCD also offers a robust set of grants such as Homekey+. This initiative, funded through ballot measure Proposition 1 in March 2024, provides **$2.2 billion to build permanent housing** for veterans and individuals with mental health or substance use challenges who are at risk of or experiencing homelessness.[19]
Childcare	Childcare is essential for many Californians, helping with the balance between work and family responsibilities and contributing to higher workforce participation among parents, particularly women.[20] ~6.3 million children aged 0-12 are served through **10,800 licensed childcare centers and more than 33,300 family childcare homes.**[21] However, the **cost of childcare remains a major challenge** in California; in 2020, the annual price for infant care was $16,900, making it the 48th most expensive in the United States.[22]	In 2021-22, the state committed to funding 200,000 new childcare slots by 2026-27,[23] and has **successfully created 119,000 new slots as of 2024.**[24] Additionally, the state signed legislation recognizing 40,000 family childcare providers under the Child Care Providers Union as a formal union, establishing a framework to support the childcare system and its workers.[25]

* Although many of these anchors provide good-paying jobs, the Blueprint will focus on healthcare and construction (underpinning housing and infrastructure)

Anchors: Infrastructure*

Anchors	Importance to the California Economy	Selection of Key Initiatives
Transmission & Distribution	Energy is a basic building block for industry and residential activities in communities around the state. Robust transmission & distribution networks enable access to a reliable grid capable of withstanding extreme weather, while also promoting affordable power through increased efficiency of energy systems.[26] Modernizing infrastructure can be key to meeting the rising electricity demands of CA's growing economy.[27] California's transmission & distribution network spans **~26,000 miles of high-voltage transmission lines and ~240,000 miles of distribution lines**,[28] serviced by more than 31,000 prevailing wage roles at the state's Investor-Owned Utilities.[29]	California has added **17,200 megawatts of energy resources** to the CA Independent System Operator (CAISO) transmission system from 2020 to 2023, expanding capacity to meet CA's climate goals and reliability needs.[30] The California Public Utilities Commission is also addressing future distribution planning and energization needs through its ongoing proceedings, with key successes including establishing set energization timelines.[31]
Water	Access to water is critical for maintaining healthy ecosystems, enabling the production of food, and providing clean drinking water to communities statewide.[32] California's water infrastructure delivers water to millions of residents and irrigates ~750,000 acres of farmland.[33] Currently, 98% of Californians receive safe drinking water, but **around 700,000 people**—mainly low-income residents in rural and some Native American communities—receive **water that does not consistently meet quality standards,**[34] reflecting a $3.8 billion funding need over the next 5 years to address drinking water infrastructure for failing systems.[35]	In November 2024, **California passed Proposition 4, authorizing $3.8 billion in bonds to improve water quality**, reduce the risk of flooding and droughts, and restore rivers and lakes.[36] Furthermore, the State Water Resources Control Board distributed **$880 million in funding in fiscal year 2023-24 to projects improving water infrastructure** and access to safe drinking water, ultimately benefiting around 12 million Californians.[37]
Transportation Infrastructure	Investing in transportation infrastructure **enhances mobility and connectivity**, allowing workers to commute to their workplace and enabling businesses to transport their products.[38] California's transportation infrastructure encompasses over **182,000 miles of public roads, ~26,000 bridges, 24 public use airports, and 10 major water ports.** However, challenges persist, with an estimated ~24% of roads designated as in poor condition as of 2022.[39]	California has successfully employed a mix of state and federal funding to boost its transportation infrastructure. In October 2024, the **Transit and Intercity Rail Capital Program (TIRCP) announced over $1.3 billion in funding** for 27 public transportation projects, building on previous investments to total over $4.8 billion since 2023.[40] The state has also **secured $41.9 billion in federal funding** through the Infrastructure Investment and Jobs Act (IIJA),[41] including support for Brightline West, an all-electric high-speed rail line connecting Las Vegas with Southern California.[41]
Broadband	Broadband access helps enable at-home technology use, expands digital workforce opportunities, and increases access to virtual healthcare services.[42] Increasing broadband access and adoption in rural regions is also **linked to increased job and population growth, higher rates of new business formation and home values, and lower unemployment rates.**[43] **91% of Californians are connected to broadband**, leaving 3.5 million without connection to internet services. Furthermore, there are more than 450,000 locations across California that are either unserved or underserved.[44]	In 2021, **California allocated $6 billion toward broadband infrastructure and bridging the digital divide**, funding programs such as middle mile and last mile infrastructure build outs as well as loan loss reserves for locally driven infrastructure development.[45] California has also participated in federal programs, **receiving $1.86 billion through the Broadband Equity, Access, and Deployment (BEAD) program** to expand broadband.[46]

* Although many of these anchors provide good-paying jobs, the Blueprint will focus on healthcare and construction (underpinning housing and infrastructure)

OVERVIEW

Construction

> **The construction and building industry in California helps provide housing and critical infrastructure for all Californians, generating over $78 billion in economic activity in both the residential and non-residential construction sectors in the process.[1]**

Globally, there is increased interest in eco-friendly construction, driven by shifting consumer preferences and a push for net-zero emissions.[2] California has helped lead the way with legislation such as CALGreen, the first in the nation state-mandated green building code designed to reduce greenhouse gas emissions and improve energy efficiency.[3]

Demand for construction workers, especially in eco-focused fields like electrical work, is expected to grow as California updates building codes to prioritize electrification, retrofits older structures to meet new sustainability standards, and builds out new clean energy infrastructure.[4]

How We Are Supporting Our Construction Workforce

- **Equal Representation in Construction Apprenticeship Grant:** Increases opportunities for women, non-binary, and underserved communities to enter and stay in high-paying jobs in the construction industry by distributing $25 million to cover the costs of childcare and bolstering outreach[5]
- **High Road Construction Careers (HRCC):** Connects local construction trades councils with community colleges, workforce boards, and community-based organizations to create pathways to state-certified apprenticeships[6]
- **High Road Training Partnerships (HRTP):** Builds industry-led partnerships to develop skills employers need and create opportunities for low-income workers[7]
- **Employment Training Panel (ETP):** Funds employers and other organizations to assist in upgrading apprentices and workers' skills through training that leads to high wage, high skill jobs with construction as a priority industry; allocated ~$95 million in fiscal year 2024-25 to single employers, small businesses, critical proposals, multiple employer contracts, and apprenticeship programs[8]

Construction

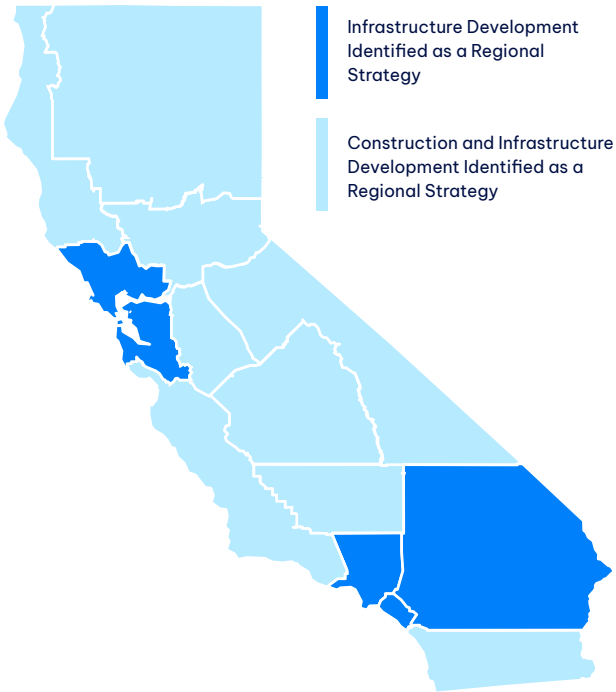
Personal Stories

"My hope is that I inspire other women to consider a career in construction because it is respected, well-paid, and offers great benefits."[9]

Through the North Bay Trades Introductory Program (TIP), a certificated apprenticeship readiness program that prepares participants for state-registered trade apprenticeships in building and construction through skills training, industry connections, certifications, and field experiences[10]—Jocelyn, a skilled elevator mechanic, was able to learn her trade. At TIP, Jocelyn received classroom instruction and hands-on training to prepare for a career in the construction industry. After graduating from the program, Jocelyn has continued to speak to high school women, TIP applicants, and policymakers to share her experiences as a woman in the trades and promote programs like TIP.[9]

Construction Offers Pathways to Accessible, Good-Paying Jobs

- In 2023, **construction provided employment for around a million Californians**, with a range of hourly wages by role, from construction laborers (~$27 per hour) to carpenters (~$32 per hour) to general / operating managers (~$58 per hour)[11]
- The **construction sector in California is accessible to all education levels**, with **12 of the 15** of the top occupations **by employment accessible** to individuals with a high school degree or less[12] and **construction and building tradespeople needed across all regions of the state**[13]
- There are many pathways to **enter the construction and building trades, including through apprenticeships and vocational training programs,**[14] as well as **opportunities to earn higher wages though additional specialization**[15]
- California also has an opportunity to **diversify its construction workforce**; nationally, the construction industry was comprised of 10.8% women, 6.7% black or African American, 1.7% Asian, and 34% Hispanic or Latino workers as of 2023[10]



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **12 identified infrastructure or housing as a foundational anchor, with four explicitly identifying construction as a priority:**[13]

- **Bay Area:** Construction sector employs ~235,000 workers in the region as of 2022 (including management and office / administrative support); growing emphasis on incorporating decarbonization, green materials, and clean energy
- **Los Angeles County:** Construction industry employs ~120,000 people and is forecasted to grow 8.5% per year through 2028, driven by one-time events (e.g., 2028 Olympics, LA metro expansions) and regional trends (e.g., need for housing, legacy building retrofits)
- **Orange County:** Construction industry employs ~90,000 people; focused on building affordable housing, implementing green technology, and creating more accessible, high-wage jobs
- **Inland SoCal:** Identified need for skilled tradespeople to support energy infrastructure projects, building retrofits, and other activities related to climate action and regional growth

OVERVIEW

Healthcare

> **California's healthcare workforce plays an essential role in ensuring Californians can live, work, and have access to quality healthcare in all parts of the state.**

With California's aging population, there is a rising demand for healthcare professionals, especially in nursing and primary care, leading to increased recruitment and training initiatives across the state.[1]

There is a growing need for a more diverse workforce to better serve the state's culturally- and linguistically-varied population.[2]

The rise of telehealth has also created new employment opportunities in IT, data analysis, and remote care, reflecting an industry shift toward digital health solutions and remote patient monitoring.[3]

How We Are Supporting Our Healthcare Workforce

- **Song-Brown Registered Nurse Education programs:** Aims to increase the number of students and residents receiving quality primary care education and training in areas of unmet need throughout California[4]
- **Workforce for a Healthy California Initiative:** Offers grant opportunities to support training providers, community-based organizations, education institutions, and health employers to build and train the health workforce including:[5]
  - **Funding** to support nursing and social work education, emergency medical services (EMS) recruitment and training programs, primary care residency programs, and mental and behavioral health service providers, among others[5]
  - **$90 million awarded to Healthcare High Road Training Partnerships** between community-based organizations, local workforce boards, labor unions, educational institutions, and employers to support training and career advancement programs in the healthcare sector for individuals who typically face barriers to employment[6]
- **CalGrows:** Provided free training and up to $6,000 in incentives to caregivers for older adults and adults with disabilities, aiming to strengthen California's healthcare workforce and support caregivers' career growth[7]
- **Eligible Training Provider List (ETPL) programs:** Provides over 550 healthcare-related ETPL programs around the state aligned to California's top 15 healthcare occupations[8]
- **Proposition One:** Aims to strengthen California's behavioral health system, including by making significant investments into workforce education and training[9]
- **Behavioral Health Community-Based Organized Networks of Equitable Care and Treatment (BH-CONNECT):** Invests $1.9 billion into California's behavioral health workforce and allows for up to six months of transitional rent to support those in recovery[10]

Healthcare

Personal Story: Lisa

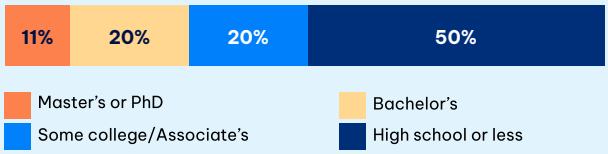
Shirley Ware Education Center Health Care Workers Union Local, a High Road Training Partnership (HRTP), has been creating pathways for California residents from disadvantaged backgrounds to access high quality jobs in the healthcare industry since 1998.[11]

Thanks to this program, Lisa, a licensed vocational nurse, advanced her career through continuing education classes. Through her hard work, support from her counselor, and the program's resources, Lisa was able to transition from a certified nursing assistant to a licensed vocational nurse.[12]

Healthcare Offers Pathways to Accessible, Good-Paying Jobs

- In 2023, California's healthcare sector **provided employment for around two million workers**, with a **range of hourly wages**, from home health and personal care aides and medical assistants earning ~$16 and ~$22 per hour respectively, to registered nurses (RN) earning $64 per hour[13]
- The healthcare sector in California has 6 of 15 of the top healthcare occupations available to individuals with a high school degree or less[14]

Typical Educational Attainment Required[14] Across Occupations for Healthcare in California, 2023, %[13]



Top Occupations with Wages Above $19 Per Hour Within Healthcare in California, 2023[13]

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role?[15]	Forecast sector employment change above CA average?[16]
Registered Nurses	277.2k		✓
Medical Assistants	102.3k		✓
Medical Secretaries and Admin Assistants	100.6k	✓	✓
Nursing Assistants	95.7k		✓
Licensed Practical & Vocational Nurses	65.7k	✓	✓

REGIONAL OVERVIEW

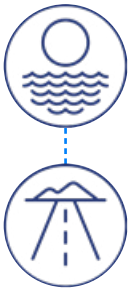
Across the state's 13 Jobs First Collaboratives, **all 13 identified healthcare workforce development as an important strategy in their regional plans.**[17] To develop their healthcare workforces, regions are focused on:

- **Developing appropriate skill-based education**, training opportunities, and programs
- **Creating upskilling and upward mobility pathways** for local workers to move into higher-wage healthcare jobs
- **Building robust local workforce pipelines** between educational and healthcare institutions

Several regions, including the North State, Redwood, Sierra, and others, **identified expanding healthcare access to rural and underserved areas as a regional priority and are focused on:**

- **Investing in rural policy advocacy** to advance solutions responsive to rural regions
- **Developing a shared rural California advocacy campaign** to increase funding and access to rural healthcare and increase awareness of local health needs
- **Expanding mobile and telehealth services** to reach remote and underserved areas

California's Strategic Sectors Build on Each Other to Create a Dynamic State Economy: California is home to multiple leading sector clusters and benefits from the innovation and growth potential that arises from the intersection of these sectors.

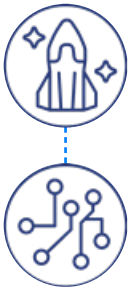


Working Lands & Water

Transportation & Logistics

California's **transportation infrastructure—and its ports in particular—plays a critical role enabling international and inter-state trade** of California's agricultural products

- In 2023, the **San Pedro Port Complex ranked No. 9 in the world by container volume**, comprising 75% market share on the West Coast and 29% nationally[1]
- The Port of Los Angeles is responsible for large-scale agricultural exports, with pet / animal feed and soybeans ranking in its top five exports[1]
- The **Port of Oakland is also considered a critical port for agriculture distribution** given its central location, proximity to the Central Valley, and direct rail link to the Midwest[2]

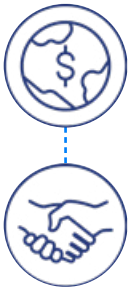


Aerospace & Defense

High-tech

California's **high-tech sector enables the development of cutting-edge aerospace and defense technologies and equipment**

- Advances in artificial intelligence and robotics have **created new aerospace and defense products**, such as advanced autonomous drones, advanced satellite communications, and cybersecurity solutions[3]
- **High-tech breakthroughs also support the space sector**, with software enhancing spacecraft autonomy, navigation, and communication systems[4] and developments in hardware and semiconductors enabling more efficient, miniaturized components for satellites and spacecraft[5]



Clean Economy

Finance & Professional Services

California's clean economy is tightly interwoven with its financial & professional services sector, which provides essential funding, expertise, and advisory services for sustainable growth and innovation

- **VC and private equity firms fuel capital intensive clean tech and renewable energy projects** by directing investments into solar, wind, zero-emission vehicle, and carbon management projects[6]
- The **state's banking sector also supports clean economy businesses with sustainable finance products**, such as green bonds and ESG (environmental, social, governance) advisory services, enabling companies to access capital aligned with eco-friendly goals[7]

Working Lands & Water | **Agtech** | **High-tech**

An **advanced agtech ecosystem has emerged from the combined strengths of California's working lands & water and high-tech sectors**

- High-tech innovations are transforming traditional agricultural practices through tools like **precision farming, drone-based crop monitoring, and Internet of Things (IoT)-enabled soil sensors**, which help farmers optimize water use, monitor soil health, and predict crop yields with greater accuracy[8]

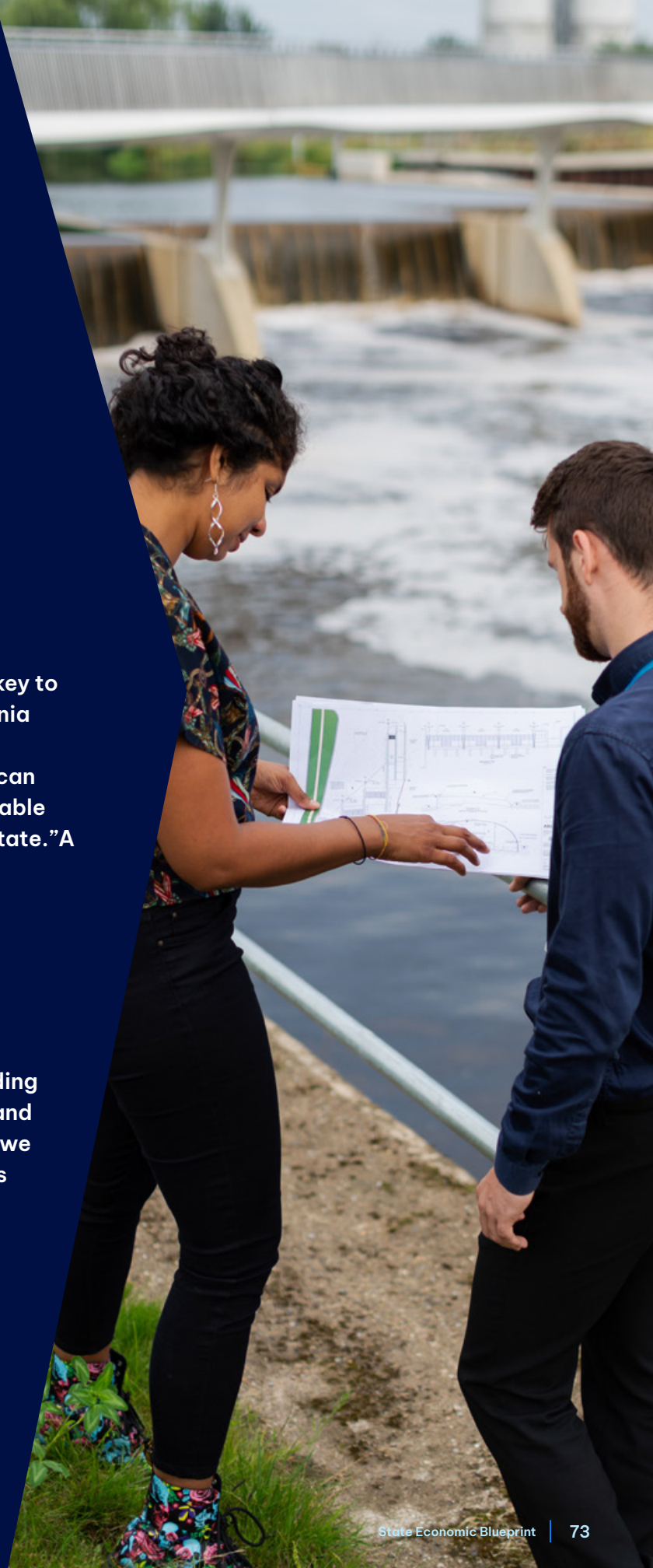
Bridging the Gap

"Whole-of-government collaboration is key to achieving the ambitious goals of California Jobs First. By working together and leveraging our collective resources, we can build a clean economy and drive sustainable and equitable development across the state."A

- **Secretary Yana Garcia**
  California Environmental Protection Agency (CalEPA)

"Mobilizing state resources is crucial to helping regions effectively execute their strategies. By aligning our efforts, including essential infrastructure like broadband and transmission and distribution networks, we can make sure every community receives the backing they need to achieve their economic goals."

- **President Alice Reynolds**
  California Public Utilities Commission (CPUC)



Bridging the Gap

In the following section, we outline strategies for the next 10 years intended to help regions execute their plans and make this Blueprint a reality.

To implement these strategies, we will modernize how we organize the Labor and Workforce Development (LWDA) and the Governor's Office of Business and Economic Development (GO-Biz) to support each of the strategic sectors. This includes standing up the Office of Regional Economic Development Initiatives at GO-Biz to lead sector-building efforts in partnership with the Jobs First Council while supporting regions with advancing their regional plans and aligning the team at the California Workforce Development Board (CWDB) to support workforce development for California Jobs First sectors.

We will continue to help regions execute their strategic priorities, focusing our initial efforts in the next two years on the four pilot sectors and subsectors (agtech & farm equipment, life sciences, semiconductors & microelectronics, and space, defense, & satellites) to prove that this approach can drive impact before expanding to the remaining strategic sectors by 2035.

Support Sustainable & Equitable Growth Across Regions and Populations

STRATEGIC THEME:

Continue to Empower Regions to Advance their Strategic Priorities through the Regional Investment Initiative

California Jobs First and the Regional Investment Initiative are committed to building a new model of economic development that centers disadvantaged communities and empowers our regions to chart more sustainable and equitable economic futures. This commitment continues as we transition from the substantial planning work that took place over the last two years into the next phase: implementation. The Administration has funded the 13 Jobs First Collaboratives for an additional two years, helping bridge this transition as they each work to turn their strategies into realities. We will continue to partner closely with regions to help them execute these strategies:

1. **Onboard and train regional sector coordinators** to advance the strategies developed during the initial training phase. We have provided funding to each region to bring on four sector coordinators and align them to the sectors that, based on the substantial research and community engagement completed during the planning process, the region believes requires immediate action. Regions are beginning this hiring process now; to maximize the impact of these sector coordinators, we will invest in GO-Biz -led trainings to onboard them to this initiative, covering topics such as best practices for grant writing to secure federal and philanthropic grants and how to best collaborate across regions.

CONNECTING ACROSS REGIONS

The four regions that comprise the space triangle—the Central Coast, Inland SoCal, Kern County, and LA County—are strengthening their communities and the state by collaborating to expand aerospace and defense in California. Each have prioritized this sector and plan for their sector coordinators to work in partnership to attract investment and promote job creation.

2. **Help Collaboratives build out Activation Plans** for each sector they assign a coordinator through the delivery of targeted technical assistance. Activation Plans will allow each region to outline the critical next steps for implementing the strategies identified by the diverse members of their community. These plans will also provide a roadmap of opportunities for partnership and investment, helping potential partners identify ways to immediately support community-backed projects. While the specific Activation Plans will be held internally by each region, they are structured around common elements—strategy, tactics, and actionable steps—that outline the pathway to economic progress. Each region will complete their first Activation Plan by January 31st and all Plans for sectors supported by their regional sector coordinators by June 30th of 2025.

Strategy: The region's specific sector play and how the Collaborative will organize, resource, and track progress towards this sector play

Tactic: The steps the Collaborative and its partners will take over the next 12-18 months to achieve the region's sector strategy

Tasks: The actions that individuals or organizations are responsible for, and by when

3. **Help regions identify additional funding.** To implement their Regional Plan, Collaboratives will need to identify more than California Jobs First funding. We have developed a Playbook that helps align regional economic strategies with California's broader economic goals to help support regions in demonstrating their investment readiness, and equips them with information on federal and state funding opportunities that can support their efforts. We will also host a series of webinars and in-person convenings that provide opportunities for regions to learn about how to secure funding for their projects and to engage with private and philanthropic investors that can serve as potential funders.

   View the Playbook here: **jobsfirst.ca.gov**

4. **Allocate Regional Investment Initiative implementation dollars to help regions advance strategic sectors.** The state has allocated around $125 million to help regions advance their projects with a primary emphasis on the sectors in the "Accelerate" category where there is near-term potential for growth in good-paying jobs—particularly within pilot sectors—and a secondary emphasis on sectors in the "Bet" categories where there is an opportunity to lay the groundwork for future growth. All 13 regions have identified priorities that align to sectors in either the "Accelerate" or "Bet" categories of the sector framework, making them eligible to apply for implementation funding.[1] The state will also dedicate $15 million of funding towards the Tribal Investment Initiative to ensure California Native American Tribes are able to access funding to support economic development within their communities.

$125M

Funding to Help Regions Advance Their Strategic Sectors

$15M

Funding Towards the Tribal Investment Initiative

STRATEGIC THEME:

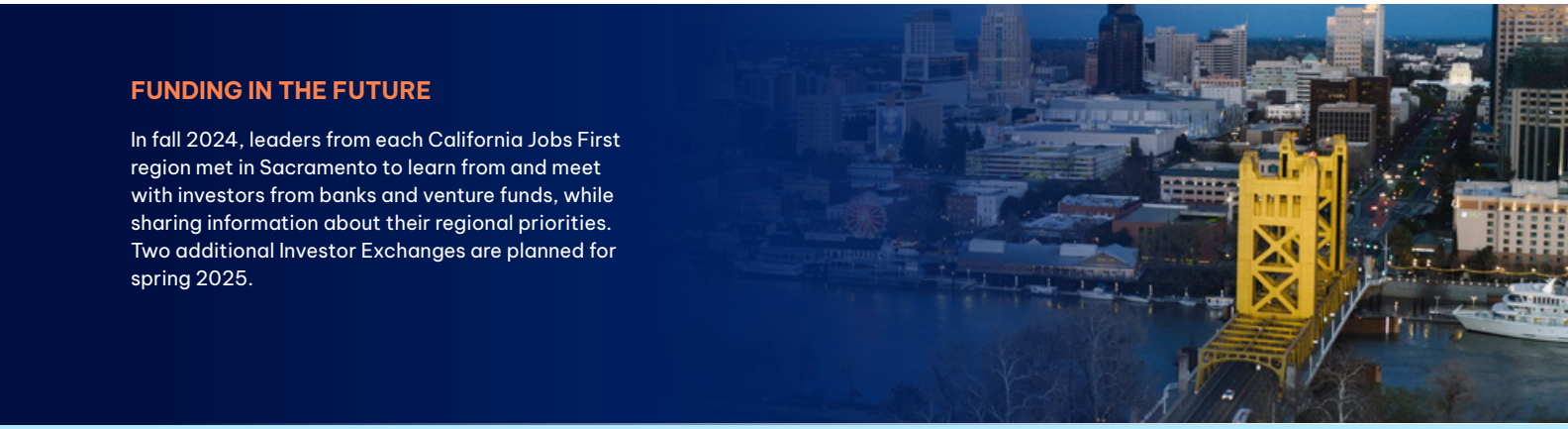
Mobilize Broader State Resources to Support Community-Vetted Regional Strategies

Through the engagement of the Jobs First Council and via dedicated investments into ecosystem coordination, we aim to direct funding and energy in a way that maximizes the impact of every dollar. We will specifically pursue the following actions:

1. **Coordinate sector working groups** to support sector-building activities for each of the four pilots, the "Bet" sectors, and the healthcare workforce. GO-Biz and LWDA will convene relevant state agencies and regional representatives to coordinate activities across regions and help implement aligned regional projects. For pilot sectors, these working groups will focus on identifying and resolving specific permitting, regulatory, or siting challenges that stand in the way of successful execution of strategic projects. These working groups will also develop coordinated workforce development and business outreach strategies to help foster sector activity around the state.

FUNDING IN THE FUTURE

In fall 2024, leaders from each California Jobs First region met in Sacramento to learn from and meet with investors from banks and venture funds, while sharing information about their regional priorities. Two additional Investor Exchanges are planned for spring 2025.



2. **Align state funding to regional strategies.** We will pilot a new model that identifies projects aligned to Jobs First regional strategies as "critical proposals" following a similar process used in the partnership between GO-Biz and the Employer Training Panel at LWDA.[2] Jobs First agencies will factor in certification as a "critical proposal" in the decision making criteria for their grants or other funding opportunities, helping guide state funding towards the most strategic uses. As a test case, LWDA may explore using this approach for its upcoming High Road Training Partnership grant program expected to open in early 2025.
3. **Strengthen coordination of investments across agencies and departments** to maximize impact for regions and projects. Looking at competitive funding opportunities (e.g., grants, loans, tax credits) housed under the Jobs First Council, there is more than $1.7 billion available in fiscal year 2024-25 to support development of the state's "Strengthen," "Accelerate," and "Bet" sectors across 59 different programs and more than $11.2 billion supporting the state's "Anchors" across another 111 programs. Several funding opportunities target the same sectors and subsectors; for example, four different agencies (i.e., California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), and California Department of Food and Agriculture (CDFA)) have 14 different grants in service of the state's agricultural production subsector for programs spanning workforce training to upskill farmworkers, promotion of specific products, cleanup of agricultural properties, and conservation projects to support sustainable agriculture practices.[3] Currently, each of these programs are deployed independently, making it more difficult to drive impact at scale. Going forward, GO-Biz will pilot efforts to convene multiple agencies and departments working to advance the state's pilot and strategic sectors to identify opportunities to better coordinate their funding to amplify the impact of our limited dollars.
4. **Dedicate staff** at GO-Biz to help regions identify and access funding critical to their communities. As regions build out the ecosystem around select strategic sectors, we want to provide a resource that can help them navigate and access the opportunities that already exist through state, federal, or philanthropic funds.

5. **Explore options for creating state matching funds** that provide follow-on funding for regional and local governments who make investments into projects identified through the Jobs First process. These matching funds could be prioritized to support projects going after federal dollars that require local cost sharing, extending the impact of our dollars even further.

In fiscal year 2024-25, Jobs First agencies will distribute $12.8 billion in funding that advances the state's strategic sectors:[3]

$1.7B

To Support "Strengthen," "Accelerate," and "Bet" Sector Development

$11.1B

To Support "Anchor" Development

Invest in the Workforce for the Sectors of the Future

> **The new Master Plan for Career Education addresses the pain points that have made it challenging for Californians to learn—and get credit for—the skills they need for rewarding, good-paying jobs.A**

The Plan Has Identified Four Primary Recommendations:

1. Create state and regional coordinating bodies that make it easier to access information, funding, and support
2. Align TK-12, postsecondary, and workforce training opportunities so it is easier to build skills in a variety of settings
3. Create incentives and improve coordination so that more people can participate in hands-on learning
4. Make it easier to access public benefits so that learners can afford to participate in education and training, improving universal access[4]

The California Jobs First Blueprint and the Master Plan for Career Education will work hand-in-hand to advance our shared objectives of increasing access to good-paying jobs. The Master Plan will lead on several of the strategies outlined here that are critical to the success of California Jobs First.

To learn more about the Master Plan for Career Education, visit: **careereducation.gov.ca.gov/master-plan-engage**

STRATEGIC THEME:

Design Skill-Based Pathways into In-Demand Occupations for Strategic Sectors

In today's rapidly evolving economy, it is critical we equip our workforce with specialized skills and competencies that help workers access good-paying jobs and enable us to maintain our competitive edge in the sectors of the future. By developing targeted educational and workforce training programs that align with the specific needs of the strategic sectors, we will not only ensure that individuals are better prepared to enter high-demand fields but also support the sustainable development of our economy. We are already taking action to design skills-based pathways that address current labor market demands, anticipate future trends, and help connect California workers to jobs.

Going forward, we will:

1. **Take a data-driven approach to design**, aligning workforce training programs to the specific skills needed within strategic sectors. We have started to lay the groundwork for this work by developing a methodology that can be replicated and scaled:
   - Identify promising occupations within strategic sectors that are accessible to Californians without a Bachelor's degree, that can serve as pathway roles that offer progression to higher-wage opportunities,[5] and where there is projected employment growth (see "Analysis of Top Occupations Within the Manufacturing Sector in California" below as an example).

Analysis of Top Occupations within the Manufacturing Sector in California[6]

Top 15 Occupations	Total employment, 2023 Thousand	Median hourly wage and typical education required, 2023	Pathway role[5]	Forecast change in sector employment, CAGR 2024–'29
Assemblers and Fabricators	83.1k	$21.30		0.3%
Software Developers	43.4k	$81.09		2.1%
Laborers and Material Movers	39.6k	$19.49		0.2%
Electrical and Electromechanical Assemblers	37.5k	$22.09		0.5%
Inspectors, Testers, Sorters, and Weighers	35.5k	$23.32	✓	0.1%
Supervisors of Production Workers	33.4k	$35.73		0.6%
Packaging and Filling Machine Operators	32.0k	$18.65		0.8%
Sales Representatives (Wholesale and Manufacturing)	26.4k	$34.90	✓	-0.1%
Shipping, Receiving, and Inventory Clerks	24.6k	$20.40		-1.0%
General and Operations Managers	20.9k	$58.72		0.5%
Industrial Production Managers	17.5k	$61.97		0.3%
Packers and Packagers, Hand	17.2k	$17.65		0.0%
Machinists	17.0k	$28.24	✓	0.8%
Production, Planning, and Expediting Clerks	17.0k	$28.93		0.1%
Industrial Engineers	16.8k	$53.74		2.2%

Typical Education Level Required,[7] 2023 — High school or less; Bachelor's; Deep dive occupation to follow

Specialized Skill Demand and Deficits for Inspectors and Machinists[6]

	Fastest growing specialized skill[8] companies are seeking to hire[9]	Skill demand trends: Job postings requesting skill, 2023	Skill demand trends: Change in share of posts requesting skill, p.p. 2019-'23	Comparative skill deficits: Share of postings and online profiles listing skill	Comparative skill deficits: Share of postings vs. profiles listing skill p. p.
Inspectors, Testers, Sorters, and Weighers	Quality Management Systems	2.1k	1.0%	1.4%	14%
	Calipers	2.1k	2.2%	1.4%	13%
	Micrometer	1.9k	1.1%	1.4%	12%
	Quality Management	1.8k	1.0%	1.4%	11%
	Product Testing	1.2k	40.9%	1.4%	8%
Machinists	CNC Machining	0.5k	1.2%	1.4%	14%
	Machine Setup	0.5k	2.2%	1.4%	17%
	Metal Lathes	0.4k	0.6%	1.4%	13%
	Deburring	0.4k	1.3%	1.4%	14%
	Blueprint Reading	0.3k	1.4%	1.4%	8%

Online Profiles Job Postings, 2023

- Map in-demand skills for promising occupations in strategic sectors in close partnership with employers. Initial analyses reflect growth in demand for specialized skills within occupations (e.g., ability to use deburring tools for machinists reflected in the chart above) and potential supply gaps, as indicated by existing job postings and profiles (see comparative skill gaps, also in the chart above). However, we know that employer needs are also rapidly evolving and building effective workforce programming that addresses employer's specific, forward-looking needs will require greater industry input. In partnership with GO-Biz, the California Workforce Development Board (CWDB) at LWDA will lead employer engagement efforts to understand the specific workforce needs for their sector.
- CWDB will align its existing staff to support this work, charging them with using labor market data and information from employers on promising occupations and required skills to identify potential gaps in our existing workforce portfolio. CWDB will then engage educational and workforce partners from around the state to develop new programming or to support the creation of curriculum aligned to these in-demand occupations and skills that can be shared broadly across institutions.

ADVANCING AI

Understanding the importance of AI to our future, we embarked on a first-of-its kind collaboration between the state and Nvidia in summer 2024. The partnership will help students in California's community colleges prepare for careers that will drive their prosperity and our state's competitiveness.[10]

2. **Encourage alignment of local and regional workforce systems** to strategic sectors. Ultimately, a significant portion of workforce program design and delivery will take place at the local level, often via California's 45 local workforce development boards (WDBs)[11] which oversee the delivery of workforce services relevant to their residents and businesses.[12] We will equip partners with the information they need to align state and regional sector priorities, including community and population needs, by publishing detailed labor market data that extends to the regional level, creating a shared fact base that can inform local decision making. We will also partner with select WDBs to test what it would take to realign their training programs towards in-demand career pathways and skills identified as priorities within regional strategies, demonstrating how community-informed economic development and locally-led workforce development can work together to deliver tangible outcomes for Californians.
3. **Support employers in developing programming** aligned to the state's strategic sectors. We will encourage LWDA's Employer Training Panel (ETP) representing business, unions, and state government to designate strategic sectors, beginning with the four pilots, as priorities for funding, explore specific funding allocations for these sectors, and consider options for increasing financial support for the program. Because ETP provides funding directly to employers and allows them to determine their own training needs, this programming will reflect what employers believe is necessary to upskill their workforce.[13]

STRATEGIC THEME:

Lower Barriers to Accessing Job Opportunities in Partnership with the Master Plan for Career Education

Postsecondary educational programs can provide knowledge and skills that are critical for workplace success. However, many Californians find that the financial burden of education poses a significant barrier to pursuing post-secondary education, particularly as driven by the high cost of living. As a result, these credential requirements can stand in the way of connecting high-potential candidates with job opportunities.[14]

In response to some of these barriers, there has been a growing shift globally towards competency-based frameworks and hands-on learning opportunities. We are already taking the following steps to support this transition:

1. **Introduce new policies to encourage recognition of credit for prior learning** that acknowledge demonstrated competencies from other contexts. For many learners, these policies help ensure they successfully complete credentialing programs that can help them advance their careers: evidence has found that adult learners who receive credit for prior learning are almost twice as likely to complete a program of study than those who did not (49% vs 27%).[15] LWDA and California Community Colleges Chancellor's Office (CCCCO) are making sure that higher education institutions around the state consistently recognize the learning opportunities that happen outside of the classroom—whether through military service, workforce training, or other contexts.

2. **Foster the creation of new earn-and-learn apprenticeship partnerships**, with an emphasis on employers aligned to strategic sectors. Governor Newsom set an ambitious goal to expand our earn-and-learn apprenticeship system to serve 500,000 apprentices by 2029.[16] The state is making significant progress: as of December 2024, we have served nearly 200,000 apprentices.[17] We continue to make investments to help us achieve our goal, having dedicated over $221 million in the fiscal year 2023-24[18] budget with an additional $188 million expected for fiscal year 2024-25.[19] Going forward, we will emphasize developing employer partnerships in strategic sectors. We will explore additional opportunities to provide financial incentives to both employers (e.g., by mirroring tax incentive structures as used by the Inflation Reduction Act[18]) and wraparound services that can provide the support individuals need to successfully participate in earn-to-learn programs.[20]

STRATEGIC THEME:

Streamline Workforce Programs Across the State

California's workforce programs provide diverse offerings that cater to a variety of different populations and sectors. However, these programs can, at times, be complex or difficult for both workers and employers to manage. By streamlining these programs, the state can promote greater alignment in the quality and transparency of jobs and programs, while simplifying the process for users.

1. **Align workforce programs across state agencies.** Although LWDA is the primary lead for our efforts to promote good jobs for all, a significant number of state agencies independently operate workforce programs aligned to their missions. To improve outcomes across programs and make administrative tasks simpler, we will identify key standards for all workforce programs to adopt, and where it will create the most benefit for Californians, administer programs through LWDA and its departments. We will pilot this operating model with one or more agency partners in 2025.
2. **Harmonize reporting requirements** across workforce programs at all agencies. We are in process of developing the Cradle to Career Data System, a statewide longitudinal tool that will help students reach their goals and deliver information on education and workforce.[21] Through this effort, we are working on streamlining data reporting and visualization for our broad array of programs to provide insights that can be used by education, workforce training providers, and public benefit systems to increase the impact of our programs.

Create an Attractive Environment for Employers

STRATEGIC THEME:

Improve, Align, and Simplify the Incentive Toolkit

California offers a range of incentives to encourage employers to hire Californians and expand their footprint in the state, but we have an opportunity to expand and better coordinate these incentives over the next several years to craft a more cohesive and powerful mechanism to attract and retain employers in the state. Working in close partnership with employers to test and refine specific program updates, we will explore the following actions:

1. **Improve** our toolkit by exploring updates to existing incentives programs and the introduction of new ones to meet the goals of California Jobs First. The state has several large-scale incentive programs, including the California Competes Tax Credit (CalCompetes),[22] the R&D tax credit,[23] the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) full sales and use tax exclusion program,[24] and the Employment Training Panel (ETP)[25] where there may be opportunities to make it easier for companies to access these incentives that help foster the creation of good-paying jobs in the state. We will examine these incentives, consider possible additions to the portfolio, such as establishing a flexible fund dedicated to supporting manufacturing across the state's strategic sectors, and develop recommendations for changes that will increase California's competitiveness as businesses decide where to locate their facilities. While broader changes are considered, we will look to reinvest in the CalCompetes grant to support businesses that want to locate or stay and grow in California.

2. Using existing administrative authority, **align existing programs**, such as CalCompetes and CAEATFA, with strategic sectors. This alignment could involve prioritizing strategic sectors in the evaluation criteria of competitive programs or allocating separate funding pools for these sectors. For example, the CAEATFA program previously favored lithium as an emerging strategic industry in its evaluation criteria.[26] CalCompetes, on the other hand, does not currently prioritize any given industry. Additionally, we can broaden the reach of these programs by specifically marketing incentives to employers in strategic sectors, thereby increasing their effectiveness as an attraction tool. Aligning these programs would allow concentration of resources toward our strategic sectors, which will in turn lead to more cohesive programming to advance our state goals.

3. **Simplify** our incentive toolkit to improve navigation for businesses to better understand what to apply for and when. We plan to do this through the following:
    - **Simplify the requirements for specialized tax credit programs** such as the New Employment Credit and Homeless Hiring Tax Credit. These programs offer tax credits for hiring qualified employees, with the goal of promoting employment among target groups such as those in Designated Geographical Areas (DGA), veterans, and individuals who are currently or formerly unhoused.[27] Currently, the complexity of these programs makes them difficult for employers to take advantage of, resulting in underutilization and limited impact.[28] Easing the requirements could lead to greater program adoption and thereby drive greater impact for these populations.
    - **Align application cycles and award announcements** to a unified timeline to allow employers to plan ahead and make informed financial decisions based on all available incentives.
    - **Create an easy-to-navigate, customer-centric resource for our incentive programs**, providing employers with a single, consolidated point of reference for our full portfolio of support. This could include a single intake form that then provides line-of-sight into which incentives an employer is eligible.

STRATEGIC THEME:

Streamline and Expedite the Process for Siting Industrial Operations While Maintaining Our Strong Environmental Protections

Availability of suitable sites is crucial to employers' decision-making when selecting locations. A lack of available sites and a cumbersome process for securing those sites can quickly deter employers from selecting a state for their operations. Currently, our limited supply, minimal communication, and at times challenging process for siting can make it more difficult for employers to establish operations here. To enhance our siting process, we can implement strategies to improve across four key areas:

1. **Create a portfolio of available economic development sites** in partnership with local and regional economic development entities. In collaboration with economic development organizations and other stakeholders, we will support the development of an online site portfolio that allows prospective employers to view relevant information such as site size, land features, proximity to infrastructure, and site readiness. This resource would offer businesses visibility into potential site options and simplify the decision-making process for locating sites. GO-Biz, the California Department of Toxic Substances Control (DTSC), the California State Water Resources Control Board, and regional entities can also develop a common definition for "shovel-ready," and state and local governments can use both existing funding (e.g., brownfield restoration[29]) and identify additional funding to develop traditional and mega-sites.[30]

2. Ensure timely connection to energy to address one of the most significant challenges facing employers considering siting in California in partnership with our local government partners. Currently, industrial customers in the state expect grid connection wait times of a year or more.[31] In response, the CPUC established new statewide energization timelines in September 2024 (D. 24-09-020) to accelerate the process for new and upgraded electrical services. If the proposed targets are met, the timelines for new grid connections could be shortened by up to 49% compared to current operations.[32] The CPUC is preparing for Phase 2 of the proceedings to explore additional strategies for advancing energization in the state. Solutions may range from creative financing options for employers to invest in short term energy infrastructure, to expanding data transparency around existing grid capacity across available sites. In parallel, GO-Biz is implementing AB 585 (Ch. 336, Stat. 2023), which requires it to assess challenges to deploying clean energy projects.[33] It will complete this work in coordination with the CPUC, California Energy Commission, and California Air Resources Board, and the Infrastructure Strike Team will incorporate the findings into its work.

3. **Build on momentum for improved coordination, shortened timelines, and tracking of permitting** advanced through the Infrastructure Strike Team's (IST) work. Siloed approaches to permitting and regulatory approvals can be lengthy.[34] Addressing this challenge requires building greater collaboration across and between local, state, and federal entities to facilitate fast and effective project delivery, for example, through concurrent versus sequential processes and reviews. We will explore building on the work of the IST and specific departments and explore scaling with a particular emphasis on pilot sectors. Additionally, we will work with the legislature to pursue new efforts to expand existing mechanisms to cover additional project types, such as California Environmental Quality Act (CEQA) judicial streamlining,which expedites judicial review of CEQA lawsuits to 270 days,[35] as well as the California Energy Commission's (CEC) Opt-In Certification, which streamlines permitting for renewable energy projects.[36] Agencies will also review opportunities for alignment with federal regulatory processes, such as the National Environmental Policy Act (NEPA), to further reduce redundancies between state and federal requirements.

Strengthen the California Innovation Economy

STRATEGIC THEME:

Partner with our Educational Systems to Foster and Expand Innovation

California's universities operate at the forefront of research and innovation, making discoveries that change California and the world, including the invention of the internet[37] and the genome editing technology known as CRISPR-Cas9 that is reshaping research in biology, agriculture and medicine.[38] Technology transfer plays a crucial role in transforming academic discoveries from ideas to realities. While several universities in the state (e.g., Stanford University, University of California – San Francisco) are national leaders in startup formation,[39] others would benefit from targeted support to enhance their commercialization efforts. Led by a newly appointed role at GO-Biz, we will pursue the following efforts to help translate research into market-ready products:

1. **Launch a pilot program to scale best-in class processes for commercialization** for public educational institutions across the state. This process may include establishing new support structures for tech transfer offices, as well as building mechanisms for encouraging partnerships with VCs to tap into industry resources.
2. **Support follow-on funding for the Innovation and Entrepreneurship Expansion program at the** University of California (UC) and expand to both the California State University (CSU) system and the California Community Colleges. We can build from the successes of our original program, which provided $2.2 million to each of the 10 UC campuses to build out innovation infrastructure, incubators, and entrepreneurship programs and spurred $270 million in follow-on funding for startups involved in its programming.[40]
3. **Create a marketplace for patent transference** across our universities and community colleges. Doing so will allow us to draw upon the individual strengths of each university, allowing patents to be transferred to the institutions with the most experience commercializing products in specific fields.

STRATEGIC THEME:

Develop Support System to Drive Access to Federal Innovation Programs

While state dollars play an important role in accelerating innovation across California, they are often insufficient on their own. Federal innovation programs, from one-time funding opportunities (e.g., the Department of Energy's Regional Clean Hydrogen Hubs program[41]) to ongoing programs such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) program,[42] provide additional resourcing to make large-scale bets on new but uncertain technologies or to help startups develop their technologies and move closer to commercialization.

To help entrepreneurs, regions, and research institutions access these programs, we can provide technical assistance and fund matching opportunities in the following ways:

1. **Designate GO-Biz to apply on behalf of the state for the Federal and State Technology (FAST) Partnership program**, which provides funding to organizations aiming to expand the pool of SBIR / STTR applicants, particularly in underrepresented groups, through training, outreach, and technical assistance on applications.[43] By submitting a centralized application, we can help direct this support to strategically advance state and regional priorities.

2. **Leverage GO-Biz's Technical Assistance Program to provide "Phase 0" assistance** to help entrepreneurs and small businesses strengthen their initial SBIR / STTR proposals. Several states offer cash grants or provide proposal development services to support applicants through the process.[44]
3. **Launch a matching fund for SBIR / STTR awardees** to amplify the impact of federal funding. Currently, more than half of states have an SBIR / STTR matching program, with the largest programs matching up to 50% of the federal program funds.[45]
4. **Create pathways for enhancing the competitiveness of local applications to federal programs**, either through state matching funds or formal processes to designate letters of support. These measures could help broaden access to federal programs across California and increase funding opportunities for entrepreneurs statewide.

STRATEGIC THEME:

Support Advancements of Strategic Sectors in California's Innovation Ecosystem

As a leader in innovation, we boast an expansive ecosystem of programs driving progress statewide. However, our efforts have historically lacked coordination across our vast array of partners and programs. With this Blueprint, we aim to add clarity around the state's goals and align our innovation ecosystem to the state's sectors and regional strategic sectors to better support California's economic competitiveness and ensure the state's resources are fully behind our economic priorities.

Example activities that will support this effort include:

- **Dedicate leadership within GO-Biz** to support the advancement of innovation and emerging technologies within the state. This role will directly coordinate with the Regional Economic Development Initiatives (REDI) team and the business development teams, including California Business Investment Services (CalBIS), to advance the "Bet" sectors and lead innovation efforts within GO-Biz.
- **Leverage the Accelerate California Inclusive Innovation Hubs**, which are a network of innovation hubs around the state that provide a range of services to entrepreneurs (e.g., guidance on how to raise funding, connections to industry mentors), to support Jobs First efforts.[46] The California Office of the Small Business Advocate (CalOSBA) will work to align these innovation hubs to the priorities identified through the regional planning process, while also fostering collaboration to encourage resource sharing and to minimize competition between hubs.

Additionally, we will work to coordinate across the broader innovation ecosystem, from the network of private accelerators and incubators to some of the programs run by our federal partners. Doing so will ensure we are working in partnership with each other to maximize the impact of our investments and to encourage the next moonshot to happen here in California.

STREAMLINED LETTERS OF SUPPORT

To support California-based applications to the federal CHIPS for America program, the state developed a process to designate letters of support. This successful process could be expanded to support additional federal grant program opportunities.

Early Signs of Success

"California Jobs First is building on early momentum, including NSF Engine Awards to BEAM Circular to advance the bioeconomy in the North San Joaquin Valley and to the Southern California Tribal Chairman's Association to support the clean energy economy. These early successes highlight the initiative's potential to accelerate economic development for diverse regions and communities around the state."

- **Secretary Karen Ross**
  California Department of Food & Agriculture (CDFA)

Early Signs of Success

Certification of Regional Plans as Comprehensive Economic Development Strategies (CEDS)

As of January 2025, all 13 Regional Investment Initiative (RII) regional plans have been submitted to the U.S. Economic Development Administration (EDA) for certification as CEDS, which are strategic plans for regional economic development intended to foster strategic regional, and public-private collaboration to strengthen and diversify local economies. A key advantage of CEDS certification is eligibility for EDA funding.[1] Funding opportunities include programs such as Economic Adjustment Assistance (EAA), which offers a range of technical, planning, and implementation assistance such as grants for infrastructure and site development.[2] Obtaining certification as CEDS will open the door to significant funding and support mechanisms for regions, enabling them to better achieve the goals and priorities outlined in their plans. We believe this certification will also act as a positive signal to increase a region's competitiveness for federal programs and private sector investments.

Regional Investment Initiative Pilot Program Progress

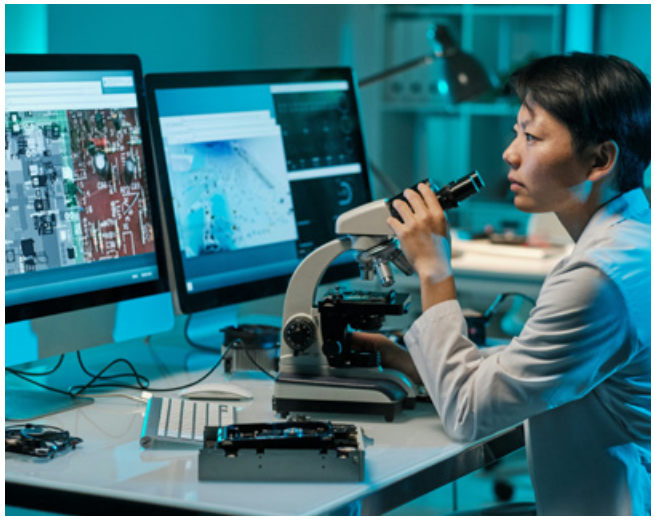
In May 2023, the State invested $39 million into eight ready-to-implement pilot projects chosen to demonstrate the effectiveness of a community-led approach to economic development.[3] Each of these projects align with the goals and priorities of the regional collaboratives and provided regions with the opportunity to present innovative projects that support their communities.

To date, a little over 10% of the awarded funds have been spent, with much of the projects' impact expected to unfold in the coming years.[4] Example pilot projects include the following:[5]

- **Pacific Asian Consortium in Employment (PACE) Green Loan Fund (PGLF):** $5 million awarded to PACE to fund its Green Loan Fund, a revolving loan designed to support the development of green businesses in Los Angeles County. This project aims to advance the clean economy sector by providing economic opportunities to underserved communities through access to low-cost capital. This project is anticipated to create a minimum of 75 jobs for low-income individuals and support at least 20 small businesses, 15 of which are identified as underserved. As of April 2024, the Green Loan Fund has already approved its first green loan request for $350,000, to be used to maintain six full-time positions, retain 20 full-time union jobs, and create four additional full-time positions.[5] Our RII dollars may have encouraged other funders to act; PACE has since secured $1 million additional funding from philanthropic sources.[6]

- $3.2 million awarded to the Noyo Harbor District in Fort Bragg to support their Noyo Harbor Revitalization Project. The project has identified three goals: to install a new solar-powered ice making facility, to create and sustain an entrepreneurial marine-based business training program, and to stand up a 'Community Fish Market Incubator' to provide additional sales outlet for the fishing fleet.[7] The installation of the new ice making facility is expected stabilize and retain over 300 deckhand / captain, processor and shipper jobs in the Harbor, and transition 100 jobs to higher wage positions.[8]
- **Latino Workers and Entrepreneurs Resiliency Pathway:** $3.5 million awarded to Latino Workers and Entrepreneurs Resiliency Pathway, a collaboration between Ventures and El Pajaro Community Development Corporation (El Pajaro CDC). This project aims to provide financial education and access to capital to promote economic mobility for rural, Latino, and immigrant populations in the Central Coast, particularly in the clean economy and healthcare sectors. Potential programming includes workshops on credit building and financial services, as well as providing capital through loans and grants. Projects already implemented include adult school programs in partnership with the North Monterey County Unified School District, as well as workshops for youth in collaboration with the County Parks of Santa Cruz. In addition to state allocations, the project has secured $75,000 in funding from philanthropic sources.[9]

To continue momentum from these early pilots, we plan to invest an additional $125 million to support implementation of projects and project clusters that will catalyze sector-driven regional economic development and the creation of good-paying jobs around the state.A



Selection of Sunnyvale as Location for the CHIPS for America Design and Collaboration Facility

In November 2024, the Department of Commerce along with Natcast, an operator of the National Semiconductor Technology Center (NSTC), announced Sunnyvale, California as the anticipated location for the CHIPS for America Design and Collaboration Facility (DCF).[10] Sunnyvale, located in the heart of Silicon Valley, was chosen based on its robust semiconductor ecosystem, with a range of established businesses, startups, leading research and academic institutions, investors, and stakeholders across the value chain.[11]

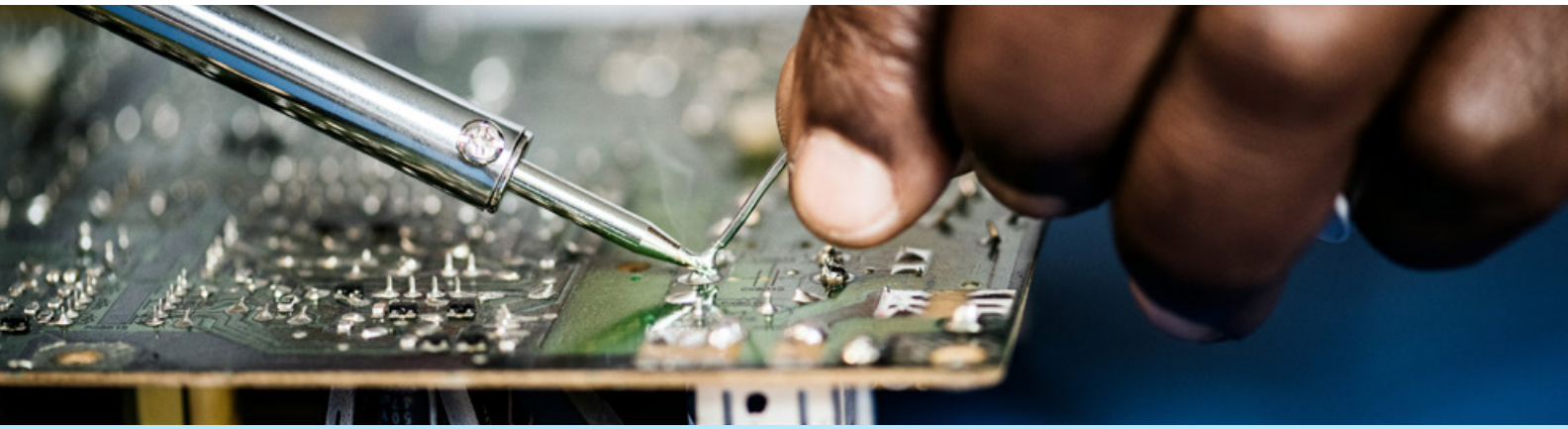
The DCF is anticipated to significantly boost growth in California's semiconductor and microelectronics sector, with potential to drive more than $1 billion in research funding and create more than 200 jobs over the next 10 years.[11] Specifically, DCF research will work to advance chip design, electronic design automation (EDA), chip and system architecture, and hardware security, and is expected to play a pivotal role ensuring the United States' technological competitiveness in the global semiconductor market.[10] Moreover, the proposed workforce investments via the NSTC Workforce Center of Excellence will help build the talent pipeline to support the workforce needs of the growing semiconductor industry,[11] making California even more attractive for other companies in the sector.

CHIPS and Science Act Funding

From October - December 2024, the U.S. Department of Commerce awarded four California companies, Akash Systems, Applied Materials, Bosch, and Infinera, with non-binding terms for funding under the national CHIPS and Science Act (CHIPS) aimed at driving a new era of semiconductor manufacturing in the U.S. These four awards mark significant California funding wins under CHIPS, helping secure our position as a current and future leader in the U.S.'s semiconductor market. The details of the awards are outlined below:

- **Akash Systems:** $18.2 million in proposed direct funding was awarded to Akash Systems, a manufacturer specialized in producing cooling systems to improve the thermal performance of semiconductors. This funding will be used to support the construction of a new manufacturing facility in West Oakland. The facility is anticipated to create 400 direct construction and manufacturing jobs in California's semiconductor & microelectronics subsector.[12] This deal builds on investments made through our CalCompetes program, which provided a tax credit to Akash Systems in 2023 to expand its Oakland facility and create 339 new jobs, laying the groundwork for this new funding.[13]
- **Applied Materials:** Up to $100 million expected to be awarded to Applied Materials in Santa Clara to develop and scale a disruptive silicon-core substrate technology for next-generation advanced packaging and 3D heterogeneous integration for semiconductors.[14]
- **Bosch:** $225 million in proposed direct funding was awarded to Bosch to support the company's planned $1.9 billion transformation of its Roseville facility to produce silicon carbide (SiC) power semiconductors.[15] The funding layers on CalCompetes tax credits awarded in 2023,[16] collectively helping Bosch expand their largest SiC device factory globally and significantly increase their production capacity. This project is expected to create up to 1,000 construction jobs and 700 manufacturing, engineering, and R&D jobs in California.[15]
- **Infinera:** $93 million in proposed direct funding was awarded to Infinera, an optical compound semiconductor manufacturer, to support two new projects, including the construction of a new fab in San Jose, California. These projects are anticipated to increase Infinera's manufacturing capacity by a factor of 10, and to create 500 new manufacturing jobs and 1,200 new construction jobs. Given this demand, Infinera is expected to build out the semiconductor talent pipeline in the region through programs such as the Semiconductor and Nanotechnology Apprenticeship Pioneers (SNAP) program, one of the first Registered Apprenticeships in California.[17] Infinera has also previously been awarded a CalCompetes grant to expand and modernize its facilities in 2023, creating 235 new jobs.[18]

These investments build a strong foundation for California to secure future CHIPS funding and to continue to propel the semiconductor & microelectronics subsector in the state.A



Infrastructure Investment and Jobs Act (IIJA) Projects

In November 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Deal. IIJA allocated an estimated $1.2 trillion in total funding over ten years towards transportation and core infrastructure like broadband and water.[19] To date, California projects have received significant funding from IIJA-funded programs, with select examples highlighted below:

- **Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES):** California was awarded up to $1.2 billion from the U.S. Department of Energy as one of seven Regional Clean Hydrogen Hubs aimed at supporting the production and use of clean hydrogen. ARCHES is a statewide public-private partnership between GO-Biz, the University of California, Lawrence Berkeley National Laboratory, state agencies, elected leaders, organized labor, and non-profit organizations and is expected to create over 220,000 new green jobs and result in nearly $3 billion in economic value annually beginning in 2030.[20]
- **Carbon Capture Demonstrations Projects:** The Sutter Decarbonization Project will receive up to $270 million in funding to demonstrate and deploy a commercial-scale carbon capture system at the Sutter Energy Center in Yuba City. The project will be the first in the world to deploy an air-cooling system at a carbon capture facility, which will eliminate the use of cooling water and significantly minimize freshwater usage.[21]
- **Charging and Fueling Infrastructure Awards:** California projects were awarded $318 million to invest in publicly accessible electric vehicle charging and alternative fueling infrastructure to support the adoption and use of ZEVs in the state.[22]
- **Energy Improvements in Rural or Remote Areas:** West Biofuels received an award for up to $30 million to deploy three community-scale forest biomass-to-energy power plants in Burney, Mammoth Lakes, and Mariposa that will provide a reliable, renewable energy source while also producing 15 good paying jobs at each facility.[23]
- **Grid Resilience and Innovation Partnerships (GRIP):** The California Harnessing Advanced Reliable Grid Enhancing Technologies for Transmission (CHARGE-2T) project led by a public-private partnership between California Energy Commission (CEC), California Independent System Operator (CAISO), Pacific Gas and Electric Company (PG&E), and Southern California Edison (SCE) was awarded more than $600 million to increase California's system capacity for integrating more renewable energy onto the grid.[24]
- **Industrial Demonstrations Program:**
  - **Cement and Concrete:** The Lebec Net Zero Project led by the National Cement Company of California received up to $500 million to support their goal of producing carbon-neutral cement through three strategies: using locally-sourced biomass for energy production; producing limestone calcined clay cement using a less carbon intensive alternative; and capturing and sequestering the plant's remaining carbon dioxide emissions. The plant upgrades are expected to generate 20-25 permanent jobs.[25]

- **Heat:** The Hybrid Electric Glass Furnace Project led by Gallo Glass Company plans to install a demonstration hybrid electric furnace to reduce natural gas use by up to 70%, increase recycled content in its glass bottle production process, and demonstrate cradle-to-gate reductions in carbon intensity while generating new union jobs. Gallo Glass will also work to expand and align its existing training programs to skills needed for these new technologies in partnership with local educational and workforce organizations.[26]

- **Nationally Significant Multimodal Freight & Highway Projects:** The Port of Humboldt received a $426.7 million grant to support the construction and operation of offshore wind turbines that will contribute to California's goal of at least 25 gigawatts of power generated by offshore wind by 2024.[27]

These federal dollars will play an important role in building out our "Anchor" infrastructure in communities across the state while seeding projects in emerging sectors such as hydrogen and the bioeconomy.

Inflation Reduction Act (IRA) Climate-Related Investments

In August 2022, the United States passed the Inflation Reduction Act (IRA), directing nearly $400 billion towards climate-related efforts with the goal of substantially lowering the nation's carbon emissions.

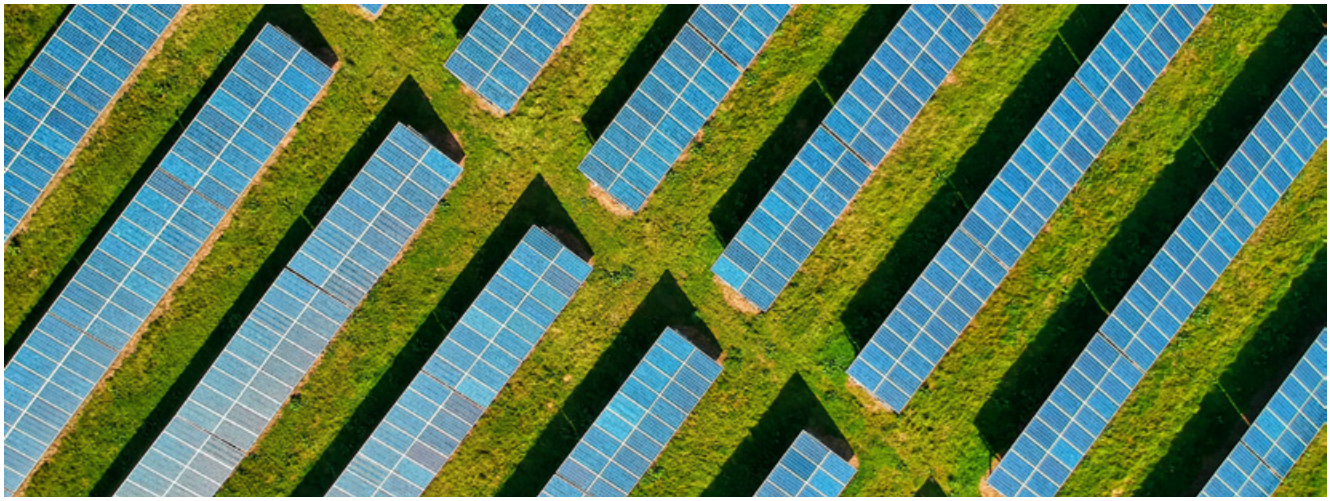
This funding has been used to invest in clean energy and clean transportation, as well as strengthening the country's manufacturing base.[28] A range of California projects have been supported by IRA-funded programs, such as:

- **Clean Ports Program:** Seven California ports received over $1 billion in funding through the U.S. Environmental Protection Agency (EPA) Clean Ports Program to deploy zero-emission port infrastructure and climate and air quality planning projects,[29] the most of any state.[30]

- **Climate Pollution Reduction Grants:** The South Coast Air Quality Management District received nearly $500 million to decarbonize transportation and goods movement in Southern California by providing incentives for ZEV infrastructure, increasing zero-emission freight vehicles, and replacing or converting cargo handling equipment and diesel freight switcher locomotives.[31]

- **Fueling Aviation's Sustainable Transition:** California projects aimed at accelerating the production and use of sustainable aviation fuels (SAF) and the development of low-emission aviation technologies received more than $120 million in grants, 40% of the program's total funding.[32]

- **National Clean Infrastructure Fund:** The California Economic and Infrastructure Development Bank (IBank) and the State Treasurer's Office together will serve as the California Green Bank, seeded with $450 million from the National Clean Infrastructure Fund as a subrecipient in the Coalition for Green Capital's $5 billion award. The California Green Bank will prioritize investments into zero-emission transportation, net-zero energy buildings, and distributed generation & storage.[33]



- **Qualifying Advanced Energy Project Credit:** Two California companies have received tax credits through the program. EnergySource Minerals received $260.7 million to support a new manufacturing facility in Imperial County that will produce battery quality lithium hydroxide monohydrate from geothermal brines. Twelve Benefit Corporation has received another $28.5 million to develop a manufacturing facility for its Opus CO2 electrolyzers used to produce power-to-liquid sustainable aviation fuel and other value-added chemicals.[34]
- **Tribal Energy Financing Program:** The Viejas Microgrid Project received a commitment for an up to $72.8 million partial loan guarantee to finance the development of a solar-plus long-duration energy storage microgrid on the Tribal lands of the Viejas Band of the Kumeyaay Indians near Alpine, California and support Tribal energy sovereignty. The project was previously provided with a $31 million grant by the California Energy Commission in 2022.[35]

IRA funding will play a critical role in helping California meet its goal of carbon neutrality by 2045 while simultaneously advancing the clean economy sector and helping green other carbon-intensive sectors, such as transport and logistics.

Projects Supported by Executive Order 14017 on America's Supply Chains

President Biden signed Executive Order 14017 in February 2021 aimed at strengthening the resilience of America's supply chains to ensure national economic prosperity and security.[36] The operationalization of this executive order has included investments into California companies that will help catalyze the critical minerals sector:

- **5E Advanced Materials:** The Export-Import Bank of the United States' Make More in America Initiative has granted up to $285 million in debt financing to 5E Advanced Materials, a boron and lithium company in southern California. Funds will be used to support commercial scale development and construction of the company's Boron Americas Complex, which has been designated as Critical Infrastructure by the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency.[37]
- **MP Materials:** The Department of Defense has awarded a $35 million contract to MP Materials to design and build a facility to process heavy rare earth elements at its Mountain Pass production site, establishing the first processing and separation facility of its kind to support both defense and commercial applications.[38]

National Science Foundation Engine Awards

In May 2023, the National Science Foundation (NSF) announced the inaugural Regional Innovation Engines Development Awards to fund regional projects in developing their innovation ecosystems. The program awarded 44 teams with up to $1 million for two years, with the potential to secure up to $160 million in future funding.[39] These Development Awards are a part of the broader NSF Engines program—the largest investment into place-based research and development in the nation's history—aimed at creating new jobs and spurring innovation in breakthrough technologies.[40] California received two of these development awards, outlined below:

- **University of California, Merced – Circular Bioeconomy Innovation Collaborative (CBIO Collaborative):** The CBIO Collaborative—led by UC Merced, BEAM Circular, and Lawrence Berkeley National Laboratory—aims at advancing the circular bioeconomy in North San Joaquin Valley (NSJV). The collaborative aims at drawing on the strengths of NSJV's food and agriculture sectors, manufacturing capabilities, and its proximity to biotechnology hubs to develop a bioeconomy innovation ecosystem. By building regional specialization in the bioeconomy sector, the CBIO Collaborative can strengthen the regional economy of a historically underserved area, improve the sustainability of agricultural supply chains, and create accessible, good-paying jobs. The development award funds will be used to address key areas, including R&D into knowledge gaps in biomanufacturing processes, supporting the translation of discoveries into scalable, market ready solutions, and developing workforce programs to build pathways to accessible, high-quality jobs in the field.[41]
- **Southern California Tribal Chairman's Association (SCTCA):** SCTCA's Tribal Energy Innovation Accelerator (TEIA) aims at developing a dynamic innovation ecosystem for clean energy technologies and solutions in tribal communities in Southern California. The TEIA covers 25 SCTCA member tribes and is well positioned for transformative investments in clean energy. The development award funds will be used for a range of services, including TEIA development and partnerships, resources for clean energy R&D, pilot projects and manufacturing facilities, and workforce development and job training services.[42]

These development awards can play an instrumental role in advancing regional innovation across California and pave the way for future funding and development.

Looking Forward

"California Jobs First is committed to providing all of Californians, including our veterans, with increased access to economic opportunities. We are working to ensure California's veteran community stays the most connected, protected, and respected in the nation."

- **Secretary Lindsey Sin**
  California Department of Veterans Affairs (CalVet)

Looking Forward

California Jobs First represents a transformative approach to economic development that is deeply rooted in community engagement and regional specificity.

By empowering local communities to define their economic futures and providing them with resources and support to implement these visions, we are setting a new standard for inclusive and sustainable growth. The next phase of this journey will involve implementing the strategies outlined in the Blueprint.

Over the next two years, we will bring a coordinated approach to developing our pilot sectors that successfully creates, attracts, and increases access to good-paying jobs, proving out a model that can be replicated for the rest of California's strategic sectors through 2035.

Doing so will require sustained commitment and engagement from state agencies, Jobs First Collaboratives, private and social sector partners, and our California communities themselves.

As we move forward, we are confident that the strategies and partnerships each of California's 13 regions have built with us will enable the state to navigate the challenges ahead and seize the opportunities in front of us, once again ensuring that the future happens in California first.

Endnotes

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Redwood Region RISE

CALIFORNIA JOBS FIRST

Regional Plan Part 1

Latest revision: May 2025

California's Redwood Region
Tribal Lands, Del Norte, Humboldt, Lake, and Mendocino Counties

NORTH EDGE Business Financing & Community Development

CCRP California Center for Rural Policy

Cal Poly Humboldt.

A Product of Redwood Region RISE
The California Center for Rural Policy at Cal Poly Humboldt

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As of April 2025, the U.S. Economic Development administration has formally accepted Redwood Region RISE's Regional Plan Part 2, alongside the other 12 Jobs First regional plans, as Comprehensive Economic Development Strategies, allowing communities across California to accelerate local economic investment.

CCRP. (2025). Redwood Region Regional Plan Part 1
California Center for Rural Policy at Cal Poly Humboldt

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The California Center for Rural Policy at Cal Poly Humboldt is a research and policy center committed to informing policy, building community, and promoting the health and well-being of rural people and environments.

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Executive Summary

Originally released in June 2024 and revised in May 2025, this report provides a baseline snapshot of the current state of the Redwood Region's economy, key industries, labor force characteristics, climate resilience, and public health issues that impact community well-being. Key metrics throughout the report enable tracking of the region's progress toward building an inclusive, climate-forward economy. This foundational report, known as Regional Plan Part 1, set the stage for a community-driven Regional Roadmap to guide equitable and sustainable economic growth and resilience. Building on this foundation, Regional Plan Part 2 (released in September 2024 and revised in May 2025) outlines development strategies for key sectors and enabling industries, and recommends investments to advance strategic goals—growing sustainable industries and aligning inclusive workforce strategies with thriving wage opportunities. Together, Parts 1 and 2 comprise the Redwood Region's Regional Roadmap.

California Jobs First and Redwood Region RISE (RRRISE)

In September 2021, California Governor Gavin Newsom enacted Senate Bill 162, establishing a $600 million California Jobs First Regional Investment Initiative. While some aspects of the initiative's funding and structure have evolved, its core ambition remains unchanged: to create high-quality, accessible employment opportunities and strengthen regional resilience to climate change and other global disruptions impacting California's diverse economies.

California Jobs First facilitated the formation of Jobs First "Collaboratives" across 13 regions in California, including the Redwood Region Resilient Inclusive Sustainable Economy (RRRISE) Collaborative, which encompasses Tribal Lands, Del Norte, Humboldt, Lake, and Mendocino Counties. The Collaborative includes a broad spectrum of partners, including labor, business, local government, education, environmental justice, and community organizations.

Anchoring Redwood Region RISE Collaborative's efforts is its Convening Team, made up of Fiscal Agent North Edge Financing (formerly Arcata Economic Development Corporation [AEDC]) and the California Center for Rural Policy (CCRP) at Cal Poly Humboldt. During the Planning Phase, the Convening Team collaborated closely with outreach partners North Coast Opportunities (NCO) and True North Organizing Network (TNON).

As of May 2025, the Collaborative has signed partnership letters with over 150 member organizations and actively engages well over 1,000 residents. The Collaborative works to create a region characterized by stable employment, accessible healthcare, and a thriving natural environment. Building on this report, RRRISE since developed Regional Plan Part 2, which is now being operationalized and implemented to guide investment in sectors and industries that prioritize equity, sustainability, access to quality jobs, and economic resilience and competitiveness.

RRRISE's Approach

Throughout the process of convening the Collaborative and developing Regional Plan Part 1 and 2, RRRISE embraced a commitment to "meeting communities where they are," engaging hundreds of residents through listening sessions, surveys, and community events to surface local priorities and shape a shared vision for equitable regional development.

The Collaborative is guided by three core principles: 1) honoring the wisdom of those historically excluded from economic planning; 2) centering lived experience in investment decisions; and 3) embracing nontraditional approaches to economic development.

Regional Plan Part 1 Findings

Economic and Social Challenges

The remote and rural Redwood Region covers 6% of California's landmass, extending 320 miles from Lake County to Del Norte's northern border. Renowned for its natural resources and diverse landscapes, the region has a population of 323,952 residents, including a significant Hispanic/Latino population and 33 Tribal Nations.

The Redwood Region faces significant economic challenges, including the decline of such traditional industries as timber and fishing, and the collapse of the cannabis market. Rising living costs, scarce affordable housing, and limited training opportunities exacerbate these challenges, particularly for remote rural areas and communities of color. Due to a lack of diversification, the region is also grappling with an aging population, youth exodus, labor shortages, and economic vulnerabilities.

Historic rural disinvestment patterns have had a significant impact on the region, and capacity and infrastructure challenges emerged as themes throughout conversations with residents and community leaders. The lack of organizations and professionals to carry forward the work and the sizable burden of updating critical infrastructure in a region with few incorporated municipalities, diffuse rural and remote populations, and historic disinvestment constitutes a major challenge that inhibits progress on economic development initiatives. Concerns over grid capacity, utility rates, and service coverage are growing more dire and urgent.

Aligned Goals and Strategies

Existing comprehensive economic development strategies (CEDS) speak to growing business opportunities, jobs, and development projects in the Blue Economy, Green Economy, Tourism, and Renewable Energy sectors. Whereas all plans emphasize support for small businesses and entrepreneurs, the focus of those recently completed in Del Norte and Mendocino Counties was also on building capacity and resilience of rural and Tribal communities, in particular through investments in broadband and transportation. The region is therefore currently investing in digital equity, offshore wind initiatives, and youth career pathways to foster future economic growth, among other shared visions for prosperity.

Health Disparities

The Redwood Region exhibits significant health disparities, with elevated mortality rates resulting from high smoking rates, substance abuse, and mental health issues. These disparities are driven by socioeconomic determinants such as poverty, limited education, and environmental hazards. Addressing these issues requires a multifaceted approach targeting at-risk populations, including people of color, LGBTQIA2S+ individuals, those with disabilities, and isolated older adults.

Priority Sectors for Economic Growth

There is a high degree of alignment and agreement across the region on key sectors and opportunities for growth, documented through review of existing CEDS, previous industry cluster analysis, and of surveys and listening sessions conducted with members of a wide range of relevant organizations. Based on these research activities, RRRISE identified four priority sectors for economic growth:

- Arts, Culture, and Tourism
- Health and Caregiving
- Renewable and Resilient Energy
- Working Lands and Blue Economy

These sectors draw on historic strengths (particularly with respect to natural resources and tourism), comparative advantage, and clear market signals indicating directions for sustainable and inclusive growth. Cross cutting industries like construction trades are highlighted as high potential areas for investment.

Labor Market Analysis

The labor market analysis for the Redwood Region revealed shifts from traditional industries to healthcare, government, and services, highlighting the need for specialized training in high-demand fields. The region faces challenges in career awareness, training alignment, support services, and K-12 preparation. Addressing these challenges requires expanding earn-and-learn models, employability skills training, flexible training programs, and digital literacy upskilling.

Input From Priority Communities

Direct feedback from priority communities calls attention to their need for stable jobs with livable wages, relevant skill-development opportunities, sufficient community resources to meet basic housing, transportation, child/family care and healthcare needs, and meaningful work structured in ways that fulfill the reasons they choose to live and work in the region—despite sometimes facing and enduring significant challenges. People in priority communities spoke about the impacts of trauma, violence, discrimination and exclusion, and the importance of connection, social safety, the experience of being valued, and the desire to simply meet basic needs while being able to choose a career path structured so as to honor the many reasons they call the region home.

Strengths, Weaknesses, Opportunities, and Threats

The Collaborative's SWOT analysis provides detailed context and understanding of the drivers behind the data, which were derived from hundreds of listening sessions and participatory research exercises. Highlighted are the region's strengths—traditional knowledge and indigenous cultures, entrepreneurial spirit, and connection to land and natural resources. Challenges include low capacity, geographically isolated communities, and infrastructure constraints. Opportunities lie in diversifying into renewable energy, investing in infrastructure, and developing robust career pathways through university-industry partnerships.

Looking to the Future

The Redwood Region must transition to regenerative natural resource management, make considerable investments in infrastructure, and address social determinants of health in order to enhance resilience. Empowering Tribal Nations, building local capacity, bridging social capital, and piloting community wealth-building strategies will be transformative. Leveraging new sources of capital will catalyze this Regional Roadmap, unlocking the Redwood Region's potential for an inclusive and sustainable future.

Summary of the Region's Strengths, Weaknesses, Opportunities, and Threats

Strengths

- The remaining stands of globally significant, old-growth redwood forest are predominantly located in their namesake region—sequestering millions of tons of carbon while drawing over a million visitors to the region each year.
- The original inhabitants of the region still live on their ancestral lands, preserving thousands of years of traditional knowledge and best ecological practice with respect to land and forest management.
- Land ethic: The region's unique social history continues to foster a culture of deep connection to and reverence for its lands and waters. The region excels at eco-innovation and has a strong sustainability ethos.
- The region possesses two- and four-year universities that are proactively engaged in creating pathways for young residents to realize career aspirations and in providing re-training initiatives.

Weaknesses

- An economy composed largely of non-tradable sectors, not (yet) driven by major, globally competitive industries. Historic reliance on sale of primary commodities.
- Small private sector (esp. Del Norte).
- Low diversification makes the region vulnerable to boom-and-bust cycles.
- Prevalence of historic and childhood trauma, high incidence of mental health issues and related disabilities, insufficient care facilities and behavioral health workforce. Social isolation and alienation; remote and disconnected communities. Poor mental health outcomes disproportionately impacting disinvested communities.
- High attrition rate from the workforce at prime age; high disability rate at prime age, likely related to the above.
- The region experiences high levels of poverty, driven in part by low labor force participation and low wages. Exacerbating poverty is the region's high cost of living and scarcity of critical, enabling services (e.g., healthcare and housing). High rates of poverty disproportionately impact disinvested communities, including people of color, people with disabilities, and LGBTQIA2S+ individuals.
- Institutions exhibit chronic low capacity, lack of key institutional partners to advance economic development initiatives, and nascent or absent collaboration on key issues facing the region due to lack of capacity.
- Aging, obsolete infrastructure creates vulnerabilities in water delivery, transportation, energy, communications, and other crucial systems. Degraded waste sites jeopardize drinking water and fisheries.
- The housing crisis is severe on the North Coast. Outdated stock is associated with high incidences of lead poisoning in children.

Opportunities

- Restoring forest health is a major job-creation opportunity for the region, climate-adaptation opportunity for the state, and carbon-sequestration opportunity for the world. Natural resource and ecosystem restoration careers are thus a major opportunity.
- A recent feasibility study found three call areas along the Redwood Region to be viable for offshore wind development, which is already underway in Humboldt Bay.
- Regionally, a unified focus on four key areas for economic development and diversification: Arts, Culture, and Tourism; Health and Caregiving; Renewable and Resilient Energy; and Working Lands and Blue Economy. Construction needs in these sectors coupled with urgent needs for infrastructure updates and housing development drive the promise of building- and trades-based industries in the priority clusters.
- The region's need for medical professionals presents an economic development opportunity with the promise to deliver thriving wage careers for Redwood Region residents.

Threats

- Catastrophic wildfires have enormous economic, health, and social impacts with impacted inland jurisdictions perpetually in "recovery mode." Wildfires play a major role in and are potentially the leading regional source of greenhouse gas emissions.
- Sea level rise puts key coastal assets at risk. Extreme heat events are predicted to become more frequent and severe in inland areas. The area's fog belt may decline.
- Natural disasters: Communities in the region are also frequently recovering from earthquakes and tsunamis. Flooding is an issue.
- The rising cost of essentials and rising incomes in urban areas push young people and skilled workers out of the region.
- A shifting regulatory environment and burdensome regulations hinder infrastructure development. Public funding opportunities are delivered inaccessibly, perpetuating cycles of disinvestment.
- Artificial intelligence and automation put lower wage workers in various fields at risk of displacement.

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Acronyms

Acronym	Definition
AB	Assembly Bill
ACE	Adverse Childhood Experiences
ACS	American Community Survey
ADU	Accessory Dwelling Unit
AEDC	Arcata Economic Development Corporation
AI	Artificial Intelligence
AIAN	American Indian and Alaska Native
BARHII	Bay Area Regional Health Inequities Initiative
BIPOC	Black, Indigenous, and People of Color
BLL	Blood Lead Levels
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CBO	Community-based Organization
CCC	California Community College
CCRP	California Center for Rural Policy
CDC	Centers for Disease Control and Prevention
CDFI	Community Development Finance Institutions
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEDS	Comprehensive Economic Development Strategy
CERF	Community Economic Resilience Fund

Acronyms

Acronym	Definition
CHIS	California Health Information Survey
CHRR	County Health Rankings & Roadmaps
CoC	Continuum of Care
CORE	Climate & Community Resilience
CPH	Cal Poly Humboldt
CR	College of the Redwoods
CSU	California State University
CTE	Career Technical Education
DUI	Driving Under the Influence
EDA	Economic Development Agency
EDC	Economic Development Corporation
EDD	Economic Development District
EDD	Employment Development Department
EDDI	Evaporation Demand Drought Index
EDF	Economic Development Finance
EDFC	Economic Development & Financing Corporation
EIE	Environmental Insights Explorer
EV	Electric Vehicle
FAA AIP	Federal Aviation Administration's Airport Improvement Program
FAIR	Fair Access to Insurance Requirement
GHG	Greenhouse Gases

Acronyms

Acronym	Definition
HAF+WRCF	Humboldt Area Foundation and Wild Rivers Community Foundation
HCWDB	Humboldt County Workforce Development Board
HHS	Health and Human Services
HML	Humboldt, Mendocino, and Lake Counties
HPSA	Health Provider Shortage Area
HUD	Department of Housing and Urban Development
ICLEI	Local Governments for Sustainability
IRR	Index of Relative Rurality
LQ	Location Quotient
LUST	Leaking Underground Storage Tank
LVN	Licensed Vocational Nurse
MBF	Mile Board Feet
MHI	Median Household Income
MMIWG2	Missing and Murdered Indigenous Women, Girls, and Two-Spirit People
NAICS	North American Industry Classification System
NCIRWMP	North Coast Integrated Regional Water Management Plan
NCRP	North Coast Resource Partnership
NorCal	Northern California
NoRTEC	Northern Rural Training and Employment Consortium
PIT	Point-In Time

Acronyms

Acronym	Definition
PUMA	Public Use Microdata Area
PUMS	Public Use Microdata Sample
QCEW	Quarterly Census of Employment and Wages
RII	Regional Investment Initiative
RISE	Resilient, Inclusive, and Sustainable Economy
RN	Registered Nurse
RRE	Renewable and Resilient Energy
RREDC	Redwood Region Economic Development Commission
RRRISE	Redwood Region Resilient, Inclusive, and Sustainable Economy
SBA	Small Business Administration
SBDC	Small Business Development Center
SMEDD	Sonoma Mendocino Economic Development District
SWOT	Strengths, Weaknesses, Opportunities, and Threats
SWRCB	State Water Resources Control Board
TIMS	Traffic Incident Management System
USDA	United State Department of Agriculture
USGS	United States Geological Survey
WANB	Workforce Alliance of the North Bay
WCC	Woodland Community College
WIOA	Workforce Innovation and Opportunity Act

Introduction

In September 2021, California Governor Gavin Newsom signed Senate Bill 162 into law, establishing the $600 million California Jobs First's *Regional Investment Initiative* (then known as Community Economic Resilience Fund [CERF]) program. While some aspects of the initiative's funding and structure have evolved, its core ambition remains unchanged: to create high-quality, accessible employment opportunities and strengthen regional resilience to climate change and other global disruptions impacting California's diverse economies.

The RII investment established Jobs First Collaboratives in 13 regions across California. Redwood Region RISE (RRRISE) serves Tribal Lands and the counties of Del Norte, Humboldt, Lake, and Mendocino, with broad representation from labor, business, local government, and education, environmental justice, community organizations, and more. The Collaboratives were tasked with developing Regional Roadmaps, including sector strategies and recommended investments for their respective regions.[1]

This report, Regional Plan Part 1, provides a baseline snapshot of the current state of the region's economy, including key industries, labor force characteristics, climate resilience, and public health issues that impact communities' well-being. Throughout the report, key metrics are highlighted to provide focal areas to enable the region to track its progress towards creating an inclusive, climate-forward economy.

The report is structured as follows:

Introduction	Description of Redwood Region's California Jobs First Collaborative: Redwood Region RISE.
Overview of the Region	Review of the region's economic history and diverse communities: This chapter includes information on historic disinvestment in the region and descriptions of the key assets and strengths that may be leveraged for inclusive growth.
Partner Mapping	A snapshot of the region's "people power": Institutions and organizations positioned to influence the creation of an inclusive economy. This chapter was co-authored with Bischoff Consulting.
Economic Analysis	Key indicators of macroeconomic health including basic information on growth, productivity, and inequality, and importantly, socioeconomic conditions in the region. Chico State Enterprises contributed to this chapter.

[1] See Press Release, 3/8/2024 "California Jobs First: State Launches First of its Kind Council to Create Thousands of More Jobs Across all Regions" [Office of Governor Gavin Newsom, ref].

Climate Analysis	Climate projections and their implications for communities across the region. Sources of greenhouse gas emissions and environmental contaminants. This chapter highlights areas of vulnerability as well as opportunities for adaptation and building resilience. This chapter was co-authored by the Sierra Business Council.
Public Health Analysis	Overview of health disparities, proximate risk factors, and their economic and environmental drivers.
Industry Cluster Analysis	Information on the industries currently driving the economy and their prospects for delivering job growth, living wages, and productivity into the future. Chico State Enterprises and Professor Robert Eyler of Sonoma State University provided data and guidance for this chapter.
Labor Market Analysis	An in-depth look at the region's current labor force, with consideration for living and family-sustaining wage jobs, opportunities for priority populations, and training needs.
Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis	This chapter details the region's strengths, weaknesses, opportunities, and threats. The analysis, along with the baseline metrics included throughout, prepares the Collaborative to create sector and community development strategies in Part 2 of the Regional Roadmap (forthcoming, August 2024).

A Note on Data and Methodology

The California Center for Rural Policy (CCRP), Convener for Redwood Region RISE, is a community-based participatory research center at Cal Poly Humboldt. Committed to research and policy that can be used to improve the lives of rural people in California, the Center specializes in participatory and mixed methods approaches. Its methods are tailored to the study of rural populations, environments, and their interactions. CCRP utilized a mixed methods approach to create this report. Both quantitative and qualitative data sources were utilized.

CCRP used a variety of public data sources to prepare this report. Figure I.1 offers an overview of primary data sources. Detailed information on specific data sources and methodological notes can be found accompanying each data visualization and in Figure I.1. The research team worked with the Collaborative's Planning Phase outreach and engagement partners to conduct 144 listening sessions with professionals from organizations in California Jobs First key partner groups—labor, economic development agencies, community-based organizations, workforce entities and more—as well as with residents from priority communities who have experienced economic marginalization and barriers to employment (355 individuals, interviewed by 22 partner organizations including outreach leads).

Planning Phase Outreach and engagement partners North Coast Opportunities (NCO) and True North Organizing Network's (TNON) assisted with research efforts, conducting listening sessions with communities of Color, federally and non-federally recognized Tribal Nations, immigrants, individuals with disabilities, LGBTQIA2S+ communities, and other underrepresented groups across the region.

Qualitative data from these efforts appear throughout the report, but especially in the Partner Mapping and SWOT chapters. Data from listening sessions were analyzed using qualitative data processing software ATLAS.ti.

Figure I.1. Key Data Sources

Economic and Labor Market Data	Public Health Data	Environmental Data
♦ U.S. Census Bureau American Community Survey (ACS) ♦ IMPLAN ♦ The California Employment Development Department (EDD) Industry and Occupation Projections ♦ Bureau of Labor Statistics (BLS)	♦ The California Health Information Survey (CHIS) ♦ County Health Rankings & Roadmaps (CHRR) Analytic and Trends Data ♦ The California Department of Public Health (CDPH) County Health Status Profiles ♦ Kidsdata.org	♦ CalEnviroScreen 4.0 ♦ California Air Resources Board (CARB)

Potential Data Limitations in Rural Areas

Small sample sizes and high statistical uncertainty: Small sample sizes in rural areas often produce higher levels of statistical uncertainty—a challenge that is exacerbated with subsets of populations such as disinvested communities.[2] Importantly, the inability to detect disparities between two groups in rural data sources with high uncertainty does not confirm the absence of such disparities.

Response bias: Differences may occur between populations that respond to surveys and those that do not, leading to nonresponse bias.[3] Furthermore, factors like limited broadband access could similarly affect survey responses across various instruments. Therefore, publicly available data sources might have gaps or inaccuracies that do not fully capture or fairly represent reality.

[2] In many of the data visualizations presented throughout the body of this report and its appendices, this statistical uncertainty is represented by horizontal bars (i.e., confidence intervals) that represent the level of confidence associated with a statistical estimate. Larger confidence intervals indicate greater uncertainty about an estimate. Estimates that describe populations that represent a smaller share of the overall population generally have lower confidence levels.

[3] "Response bias" occurs when survey (or interview) respondents provide inaccurate or false answers. "Nonresponse bias" occurs when respondents and nonrespondents of a survey or interview differ in an area relevant to the research at hand, leading to biased results. Nonresponse can happen because people are either not willing or not able to participate in the data-gathering exercise. Although methodological approaches can correct for this type of potential bias (the Census Bureau applies such methods), these methods are imperfect and, in extreme cases, can lead to unreliable estimates. For instance, during the pandemic in 2020, factors such as socioeconomic status were found to significantly influence the probability of nonresponse in the American Community Survey, leading the Census Bureau to withhold one-year 2020 data.

Redwood Region RISE

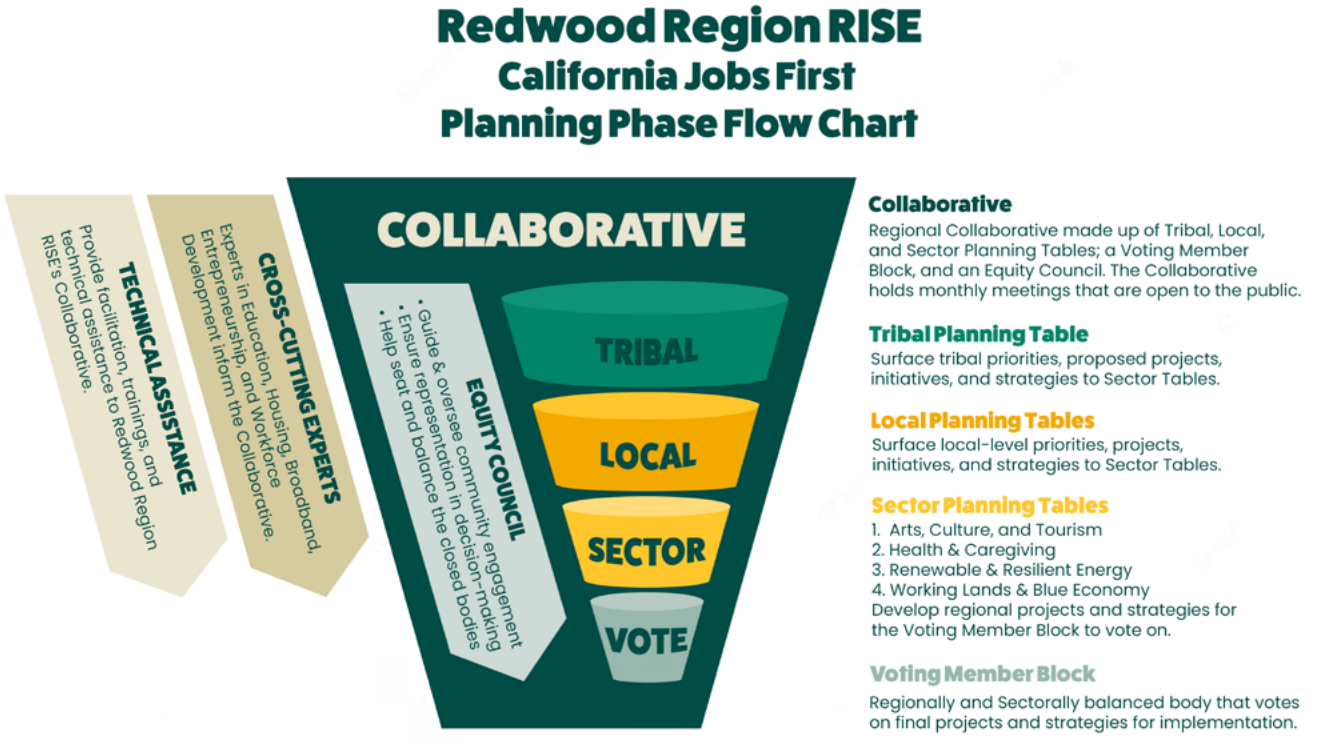
Redwood Region Resilient Inclusive Sustainable Economy (RRRISE) is the name of the Redwood Region's California Jobs First Regional Investment Initiative. Throughout the report, the designations "RRRISE" and "the Collaborative" are used interchangeably to refer to this region's initiative.

Redwood Region RISE launched in February 2023, committing to lead an inclusive, diverse, transparent, and accountable regional planning process and to include and honor community voices that do not always participate in or benefit from economic development planning processes. The following principles guide the Collaborative's work: 1) honor the wisdom of individuals who have in the past been marginalized in economic development planning; 2) create and allow space for individuals with lived experience to drive the prioritization of investments; and 3) encourage and accept nontraditional approaches within the economic development planning sphere.

Collaborative Governance

With guidance from a governance task force formed by the Collaborative for this purpose, RISE created a governance structure with five primary bodies focused both on decision-making and planning in Phase 1.

Figure I.2 Redwood Region RISE Planning Phase Flow Chart



The **Tribal Planning Table** is open to all Tribal residents in the Redwood Region and was created in April 2023 following consultation with Tribal Councils across the region. Thirteen Tribal Nations attend intermittent meetings whose focus is surfacing the diverse range of Tribal priorities, economic development strategies, and proposed projects and investments, in addition to liaising with other Tribal partners in the region and preparing for the Tribal Funding Opportunity. Tribal Planning Table priorities are brought up to the Sector Planning Tables and reported back to the broader Collaborative.

Local Planning Tables were created to give the individual counties in RRRISE space to discuss sub-regional priorities, provide local support to communities as they develop projects and plans, and align regional efforts with local CEDS processes.

Sector Tables represent the region's key industries: 1) Arts, Culture, and Tourism; 2) Health and Caregiving; 3) Renewable and Resilient Energy; and 4) Working Lands and Blue Economy. Each Sector Table is led by one or more Sector Coordinators working with 20-50 members. The Sector Tables develop strategies that are informed by data research, reflective of community priorities, and aligned with California Jobs First goals.

Serving as the **Executive Body** is a regionally balanced, community-endorsed Voting Block with up to 44 representatives from 11 required partner groups. All federally and non-federally recognized Tribes in the region may become members. The **Voting Block** is the primary decision-making body of the Collaborative and is responsible for organizational development and guidance in decision-making.

Voting Block Community Endorsement Process

After four months of outreach, engagement, and partner mapping, RRRISE launched a process for seating its Voting Member Block. Dedicated seats were apportioned; one for each partner category in each county, and then every Tribe was invited to sign on as a voting member. The outreach and engagement team did additional presentations at Tribal Councils across the region to make those nations aware of the opportunity to participate as decision makers.

The Collaborative assisted in identifying organizations that had not yet been mapped or contacted to be added as prospective candidates in each category. Once the crowdsourced inventory of organizations in each category was as complete as possible, the convening team created endorsement forms for each subregion and circulated these to the subregion's interest holders. Partners were permitted to forward the form's link to their constituents, who could endorse for their respective communities, and forms were available on the Redwood RISE site as well. Over 600 individuals were directly invited to endorse an organization in each category to represent their subregion.

Once organizations were identified, the Convening team onboarded members to the Voting Block. Several seats were not able to be identified due to the small numbers of organizations in the region and capacity constraints. The roster was sent to the Equity Council for review and recommendation in December 2023.

Up to 24 nominated **Equity Council** members representing priority communities act as an advisory group to the Collaborative. Led by a chair and co-chair, the Council has been meeting independently and reporting to the Collaborative every month since November 2023. Often referred to as Redwood Region RISE's "moral compass," the Equity Council guides and oversees the community-engagement process, ensures representation in decision-making, helps seat and balance the Collaborative's formal bodies, and provides general guidance on embedding equity best practices across the Collaborative's work.

The RRRISE Planning Phases:

1. Setting the table for broad-based, community-driven planning and socializing regional data. Identifying key regional priorities.
2. Formally seating the Collaborative's governing bodies.
3. Organizational development, including development of bylaws, charters, work plans, and strategy.
4. Consensus building and approval of the Regional Roadmap.

Phase 1

Since its launch in February 2023, the Collaborative has met monthly to share updates, discuss progress, and provide opportunities to learn from each other. A staple at these meetings are "Data Walks" intended to guide the Collaborative's understanding of the region, allow the community to ground-truth quantitative findings, encourage community dialogue, and inform strategic regional thinking within and beyond California Jobs First.

Phase 2

In May 2023, the Collaborative convened a Task Force to explore governance models and create a structure for itself. This Task Force established five primary bodies: a Voting Member Block (executive leadership council of the Collaborative); an Equity Council; a Tribal Planning Table; Local Planning Tables; and four Sector Planning tables.[4] The Task Force also identified a cadre of experts to focus on cross-cutting issues like housing, entrepreneurship, and broadband.

Phase 3

Between April-June 2024, the Collaborative established processes and procedures to ensure effective decision-making, accountability, and strategic alignment. This phase involved the development of bylaws and work plans; helping define roles, responsibilities, and operational procedures for Collaborative participants.

Phase 4

In Summer 2024, the Collaborative will be engaged in strategy-formation exercises to further articulate a 10-year vision for inclusive economic growth and diversification in the region. This work is documented in Regional Plan Part 2. Together, Regional Plan Part 1 and Regional Plan Part 2 form the Regional Roadmap for RRRISE.

The Collaborative will continue to facilitate inclusive discussions, workshops, and feedback sessions to gather input, address concerns, and build a shared vision for the future. By actively involving affected parties in the decision-making process, the Collaborative aims to create a ground-truthed Regional Roadmap with broad-based support that can serve as a unifying framework for action and investment in the region in the years ahead.

[4] Chapter 2 Partner Mapping describes how these were identified.

Chapter 1

Redwood Region Overview

This chapter offers a brief history of the Redwood Region's economic development, including discussion of the impact of resource extraction, boom-and-bust cycles, and the legacy of disinvestment in certain communities.

Key Takeaways

- The Redwood Coast Region's economic history is characterized by commodity boom-and-bust cycles and a lack of economic diversification. While there is a need to move beyond resource extraction and exportation of primary commodities, the region's comparative advantage remains its natural resources and productive landscapes.
- One of the most rural and remote regions of the state, the region is also culturally diverse and home to the state's largest Indigenous communities, which continue to reside on their ancestral lands. Younger generations are becoming more diverse, and there is a growing Latinx community. The region is aging; the median age is seven years older than California's median. While the population of the region is declining, most town centers have gained residents in recent years, straining housing availability.
- Over 95% of the region qualifies as "disinvested" by California Jobs First criteria.
- The region possesses many assets that position it to be a leader in sustainable development, including suitability for offshore wind development, sustainable forestry, indigenous-led ecosystem initiatives, and historic strength in local food production and regenerative agriculture.

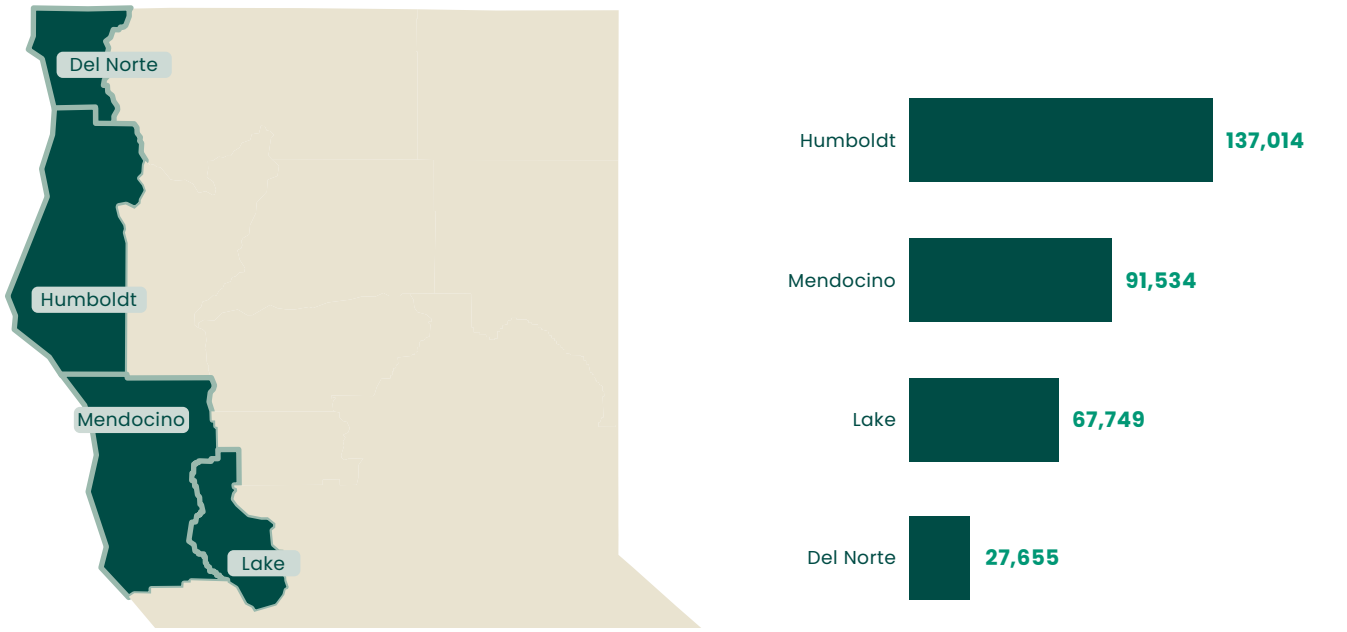
Key Metrics

- Demographics - age, race, and ethnicity of the region's residents: Tracking the region's demographic composition with respect to median age and racial and ethnic distributions, including changes over time enables population trends, such as aging and shifts in diversity, to inform inclusive economic development strategies and ensure equitable representation in the Collaborative's efforts.
- Percentage of census tracts determined to be disinvested under California Jobs First criteria: Assessment of the proportion of the region classified as disinvested is based on the program's definition, which includes such factors as median household income, poverty rates, and unemployment levels. This metric is used to prioritize areas for targeted investment and support and to measure progress in reducing economic disparities across the region.

Brief Economic and Social History of the Redwood Coast

The Redwood Coast contains some of the most rural and remote areas in California. Beginning 100 miles north of San Francisco and extending to the Oregon border, the region includes Tribal Lands and four counties (Mendocino, Lake, Humboldt, and Del Norte), covering approximately 6% of the state's total landmass (U.S. Census Bureau, n.d.). The four-county region—including Tribal Lands—has 323,952 residents, accounting for less than 1% of the state's total population (U.S. Census Bureau, 2024).

Figure 1.1 Redwood Coast Region and Population (2017-2021)

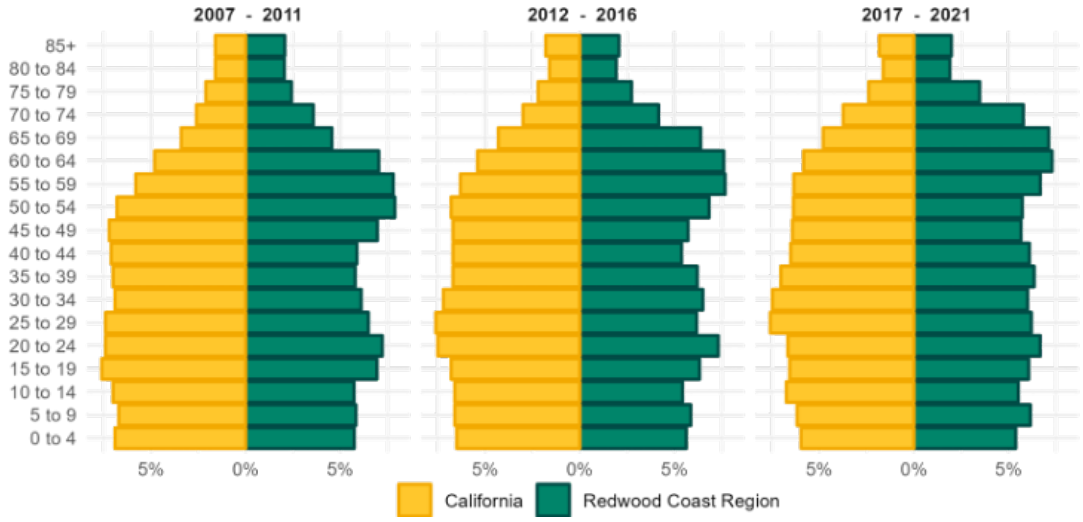


Note. Data sourced from the ACS.

The Redwood Region is the ancestral land of several Indigenous cultures, including (but not limited to) those of the Hoopa, Karuk, Miwok, Pomo, Tolowa, Wappo, Wiyot, and Yurok. Presently, 33 federally and non-federally recognized Tribes reside in the region. The region's population is largely white and non-Hispanic (67.7%). Hispanic or Latino individuals make up 19% of the region's population, while the American Indian and Alaska Native (AIAN) population represents approximately 2.4% of the region's total population, higher than the statewide percentage of AIAN residents. On the whole, the region's population is aging—the median age is 41 years, compared to the state median of 37 years (see Figure 1.2).

European settlers arriving for the California Gold Rush in the mid-19th century forced displacement, acculturation, genocide, and other atrocities on Indigenous peoples, the legacy of which is still felt in the region today. Colonizers established the extractive industries that to this day comprise a mainstay of the region's economy. During the initial wave of settlers, the timber and logging industries grew to prominence, particularly in Mendocino, Humboldt, and Del Norte counties, thanks to the abundance of redwoods, or "red gold," in the area (Del Norte County Historical Society, 2021; Humboldt County Historical Society, n.d.). Commercial fishing and canneries were established in coastal areas and rivers in Humboldt, Del Norte, and Mendocino counties (Del Norte County Historical Society, 2021b; Humboldt County Historical Society, n.d.). Agricultural industries were established soon after.

Figure 1.2 Age Distribution (2007-2021)



Note. Data sourced from the American Community Survey.

By the 1960s, wine making had become a successful industry in Lake County (Lake County, California, 2020), while the dairy and livestock industries performed well in Humboldt County (Humboldt County Historical Society, n.d.). Home to California's largest freshwater lake, Clear Lake, Lake County's economy has historically been based on tourism and recreation ("Lake County Cannabis Equity Assessment," 2020). Tourism also became a prominent industry in the other counties as early as the late 19th century (Humboldt County Historical Society, n.d.; Lake County, California, 2020; Lake County, California, 2022).

Towards the mid-20th century, timber and fishing industries had diminished considerably due to resource depletion and unsustainable management (Pomeroy et al., 2010; Del Norte County Historical Society, 2021b). The logging and timber industries began their long decline due in part to the post-war housing boom, export of timber products, and subsequent destruction of over 90% of the region's redwood forests (ibid.). The rise of countercultural movements in the 1960s brought newcomers from urban California and other parts of the nation to the region. Known as "Back to the Landers," these new migrants introduced a novel agricultural product into the region—cannabis. Illicit cannabis cultivation became a lucrative business and a new major industry across much of the region, though not without concerted (albeit largely ineffective) efforts to thwart growing operations dedicated to it by state and federal authorities (University of Oxford, 2019). Cannabis cultivation and sale for medicinal use was legalized in 1996, with recreational and business use legalized statewide in 2016.[5] Once thought to be a six-billion-dollar market, firms flooding the market caused a collapse in the commodity's price, and the industry is now in substantial financial decline across the region (Department of Cannabis Control - State of California, n.d.; Jaeger, 2024).

[5] Click here to learn more.

Disinvestment in the Region

> *"California's inland and more rural regions have less exposure to the knowledge and technology industries that have powered California's economy over the past decades. Their economies are less diversified than those of coastal regions and many currently lack the economic drivers to create quality jobs at scale for residents. Inland and rural regions are at once most impacted by climate change and environmental pollution and most vulnerable to potential job losses from measures designed to address climate change and improve environmental quality."*
>
> **-Little Hoover Commission Report, 2022**

California Jobs First's Regional Investment Initiative emphasizes inclusive planning to ensure equitable outcomes for "disinvested communities," which face many challenges resulting from inequitable land-use and zoning policies, exclusionary economic development processes, underinvestment, and a lack of meaningful engagement in planning and policy decisions (among other reasons). The program promotes the active engagement of residents and community leaders of disinvested communities in its economic development planning efforts. The program is also structured to help ensure that these communities enjoy ongoing benefits from future investments. California Jobs First defines "disinvested communities" as any of the following:

- Census tracts identified as "disadvantaged" by the California Environmental Protection Agency.
- Census tracts with median household incomes at or below 80% of the statewide median income or at or below the threshold designated as low-income by the Department of Housing and Community Development's list of state income limits pursuant to Section 50093 of the California Health and Safety Code.
- "High poverty area" and "High unemployment area" as designated by the California Governor's Office of Business and Economic Development California Competes Tax Credit Program.
- California Native American Tribes as defined by the Native American Heritage Commission (NAHC) Tribal Consultation Policy.

Figure 1.3 below shows low-income and disadvantaged communities within the region as defined by the California Jobs First Program.

Figure 1.3 Low-Income or Disadvantaged Communities as Designated by California Jobs First[6]

According to California Jobs First's definition, over 95% of the Redwood Coast Region constitutes a "disinvested" community.

Given the generalized nature of spatial disinvestment, the Collaborative elevated specific economic barriers in creating its own definition- conceptualizing "disinvested communities" in the region as those who face a confluence of relatively severe and often interconnected hardships including, but not limited to, poverty, disability, lack of access to household or community resources, and/or lack of economic or educational opportunities. RRRISE recognizes the experiences of BIPOC communities; Indian Country, including non-federally recognized Tribes; New American communities (new arrivals and/or non-native English speakers); and youth and the elderly and seeks to better understand and respond to the profound and difficult impacts of the widespread trauma and disability experienced by members of these groups.

[6] *Data sourced from the California Energy Commission via the California Open Data Portal. Data are defined as follows: "This layer shows census tracts that meet the following definitions: Census tracts with median household incomes at or below 80 percent of the statewide median income or at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted under Health and Safety Code section 50093 and/or census tracts receiving the highest 25% of overall scores in CalEnviroScreen 4.0 or census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative population burden scores or Census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0 or Lands under the control of federally recognized Tribes."*

Based on a combination of CEDS data from each of the four counties, information from the California Climate Investments Priority Populations (2023), and the outreach and engagement team's knowledge from working with underserved communities, the team generated a preliminary list of priority communities. This list was further defined by the RRRISE Equity Council to ensure voices from marginalized, underserved, and underheard groups were not overlooked.

Where possible, Redwood Region RISE uses quantitative data to define and describe the priorities mentioned above. However, the region's small and distinctly rural population leads to correspondingly small sample sizes in public datasets that can obscure the impacts of disinvestment on priority communities. Thus, relying solely on quantitative data to identify these effects is not feasible. In response, RRRISE has adopted an approach distinct from other, less-rural regions of the state, by integrating qualitative data with quantitative measures to ensure the accurate representation and inclusion of these communities.

Within the region, deeply rural communities are thus designated as priority communities and so named as areas of persistent disinvestment. Many of these communities are unincorporated and rely on cooperative relationships with county governments for service delivery. In listening sessions, members of those communities frequently described this dynamic as a source of powerlessness. Other barriers to economic empowerment cited by priority communities include a lack of adequate workforce-development initiatives, insufficient wraparound services, a lack of technical support for entrepreneurs (particularly for Native Americans, New Americans, and entrepreneurs of color).

> "[Workforce initiatives need to understand] barriers like transportation, childcare, housing…understand the holistic approach that is needed. It takes working with regional partners, and looking at larger problems."

The Redwood Region Today

The agricultural and timber industries continue to be major drivers of the region's economy. Lake and Mendocino Counties are significant producers of wine and horticultural products, whereas Mendocino, Del Norte, and Humboldt Counties retain primacy in timber production. Tourism, hospitality, and recreation industries are abundantly represented across the region as well (California EDD, Labor Market Information Division [n.d.]; California Employment Development Department [EDD], n.d.; Stenger, 2018; Del Norte County Historical Society, 2021b; Submitted, 2022).

Given the region's reliance on agriculture and timber-based commodities and their associated boom-and-bust cycles, Collaborative members support planning efforts to diversify local economies and increase economic activity and economic resilience. While past economic development efforts were focused more broadly on business attraction, their more recent emphasis has been the targeted leveraging of existing and emerging assets and industry sectors.[7]

[7] e.g., Humboldt County's "Targets of Opportunity" cluster-focused model of economic development (https://www.gohumco.com/173/Comprehensive-Economic-Development-Strat)

Since the economic downturn of 1998-2000, more focus has been paid to forming partnerships and enacting policies better suited to the region's comparative advantages. The aim of these initiatives has been to diversify services and firm types within industries having existing strong oundations. However, challenges persist and include a lack of regional coordination on economic strategies, rising costs, missed opportunities to grow firms capable of accessing lucrative markets in nearby urban areas, and failure of key sectors to adapt to changing regulations and market conditions.

With an aging population and a relative decline in natural resource-based industries, healthcare and public sector jobs are gaining in prominence. Healthcare and government employment combined currently constitute nearly one-third of the region's workforce and represent the bulk of the higher wage opportunities available to residents of the region. Concurrent with this shift, populations have decreased in its more rural areas while municipalities have experienced growth, exerting additional pressure on a strained housing market ("California Jobs First: Equity Indicators for the Redwood Coast Region," 2024). The Economic Analysis and Labor Market Analysis chapters of this report discuss the dynamics of these in depth.

Overview of Regional Assets and Opportunities

Asset-based community development is an evidence-based approach involving identification and leveraging of the assets needed for resilient and equitable economic growth. Assets specific to the growth of key sectors are discussed in depth in the Industry Cluster Analysis and Regional Plan Part 2. At a high level, the community assets listed below are recognized[8] as key to the region's employment opportunities, ability to innovate, and provision of services to its communities and thus contribute significantly and/or uniquely to its residents' overall well-being.

Natural Resources

- Globally significant redwood forests, including Redwood National and State Parks,[9] which draw almost 5 million visitors annually in addition to providing other benefits (habitat, agroforestry, carbon sequestration, the historic presence of large- and medium-scale timber operations such as Green Diamond and the Mendocino Redwood Company[10]).

[8] This non-exhaustive list of community assets was derived from the findings of the listening campaign, which included 144 leaders and community members.

[9] The Redwood Region is home to Redwood National and State Parks, which protect nearly 39,000 acres of old-growth redwood forests (National Park Service, 2021).

[10] Mendocino Redwood Co. has over 228,000 acres of forest holdings and one mill located in Ukiah. Green Diamond Co.'s local holdings, called the California Timberlands, constitute 397,000 acres, a mill at Korbel, and a chip company at Humboldt Bay.

- The longest stretch of coastline of any California Jobs First Region, at 379 contiguous miles in total. Three of the region's areas—Noyo Harbor (Mendocino),[11] Humboldt Bay, and Crescent City (Del Norte)—host the region's fishing industry, which remains driven by small and family-run businesses. Preliminary studies deemed all three ports to be feasible locations for offshore wind development, and Humboldt Bay is the first area in the state to execute a lease for development.[12] Additionally, the region is a state leader in aquaculture; for example, Humboldt Bay is the largest producer of oysters in California.[13] The Port of Humboldt Bay is the only deep-water port between San Francisco and Coos Bay, Oregon.[14]

- Lake County is home to one of the largest geothermal areas in the world. Sustained through an innovative use of wastewater injection, the Geysers (Calpine) produce sufficient clean power for all of San Francisco.[15]

- Part of the region's blue economy, Clear Lake (Lake County) is the largest natural lake in California and thus provides a valuable regional tourism and recreation destination. The USGS is currently conducting hydrologic (primarily nutrient loading) research on the lake to improve water quality and fish habitat (the Clear Lake Hitch fish species).[16]

"I don't think I would want to live anywhere else."

Physical Assets

- Local businesses: In addition to myriad small- and medium-sized enterprises across all sectors, the region boasts many farms, wineries, micro-breweries, and artisanal food producers. Mendocino (which has over 550 vineyards)[17] and Lake counties' wine industries, for example, provide a significant source of employment and tourism dollars.

- Former mill sites: Consolidation and decline in milling activities has freed former mill sites for redevelopment opportunities. Several sites have undergone remediation and are currently being readied for redevelopment, including the Georgia Mill site in Fort Bragg (Mendocino County) and the Samoa Pulp Mill site on the Samoa Peninsula (Humboldt County).

[11] The Noyo Ocean Collective, a California Jobs First pilot project grantee, capitalizes on marine science, sustainability initiatives, and traditional fishing activities to ensure a thriving harbor.

[12] The federal government recently awarded $426 million to the Humboldt Bay Harbor, Recreation, and Conservation District for the design, permitting, and construction of the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal on the Samoa Peninsula at site of a former pulp mill site. This grant was announced shortly after the District committed to a "Green Terminal" strategy, i.e., the development of a heavy lift terminal powered primarily by electricity to protect air quality and public health while reducing greenhouse gas emissions, noise, and the threat of fuel spills. The District's commitment to design a green terminal enables provision of offshore wind energy unaccompanied by a potentially fossil fuel-leaking port in Humboldt Bay.

[13] [Ref].

[14] Humboldt Bay Harbor, Recreation & Conservation District. (2021) https://humboldtbay.org/port.

[15] [Ref].

[16] [Ref].

[17] See Mendocino County Wine Region.

"I fell in love with the place. I fell in love with the community, just the natural beauty, the slow pace."

Key Institutions

- The region hosts three community college networks: College of the Redwoods (Humboldt and Del Norte Counties), Mendocino College (Mendocino and Lake County), and a Woodland Community College Campus in Lake County. Humboldt State University announced its transition to Cal Poly Humboldt and became the state's third polytechnic university in 2023, a development anticipated to increase the region's entrepreneurial and innovation capacity.

- A network of hospitals and clinics, some in rural and remote parts of the region, are working to address persistent issues of access and ongoing health disparities.

- Several Community Development Finance Institutions (CDFIs) and three major NorCAL SBA affiliates[18] serve the needs of entrepreneurs, small businesses, special districts, and rural jurisdictions that could otherwise struggle to access financing.

Cultural Strengths

- The region's original peoples lead key ecological and economic justice initiatives. The region is one of the first to have federal park land returned to indigenous stewardship and hosts the first Indigenous Marine Protected Area in the nation. Tribes are the key initiators of economic and housing development projects in disinvested areas (both Tribally and non-Tribally held) and several Tribes are top employers in the region.

- Increasingly, resources are being mobilized to strengthen identity-based and human dignity organizations serving the interests of the region's priority, diverse populations.[19] Organizations aligned with the Collaborative are involved in fiscally sponsoring and funding such groups as they emerge.

- The region's historic and cultural landmarks, which include Tribal cultural centers and historic districts such as those of Eureka, Ukiah, and Fort Bragg, showcase the region's unique heritage, and efforts to revitalize small town main streets are growing the region's existing strength in tourism.

Asset-mapping specific to the region's priority sectors is currently underway in the Collaborative's Sector Tables.

[18] West Business Center, Lake County EDC, and NorCal SBDC all serve on the RRRISE Voting Block.

[19] Organizations identified include Centro Del Pueblo, Latinonet, Black Humboldt, Queer Humboldt, Ukiah Veccinos en Accion, Latinos United of Lake County, and Humboldt Asians and Pacific Islanders in Solidarity.

Chapter 2

Partner Mapping

This chapter assesses the Redwood Region's readiness for the California Jobs First initiative by examining the landscape of existing organizations, partnerships, and strategic plans aimed at fostering inclusive and sustainable growth in the region. Highlighted are opportunities for strategic partnerships and capacity-building to unlock the region's potential equitably and sustainably. The chapter also provides an overview of the initiative's first-year outreach efforts to engage key partners and communities in the Collaborative and describes how ongoing partner-mapping informs outreach and engagement activities. Finally, it outlines the next steps needed to strengthen the Collaborative's capacity to pursue its vision of shared prosperity in the region.

Key Takeaways

- **Capacity Constraints:** Economic development in the region is diffuse and characterized by low capacity, with few orthodox development organizations. That leaders often wear many hats due to funding and person-hour constraints hinders the region from pursuing opportunities and expending program funds. The region has few community organizing, identity-based human dignity groups, or environmental justice-specific organizations. Capacity constraints are the primary factor limiting coordination with disinvested communities and creation of an effective California Jobs First Collaborative.
- **Tribal Involvement and Priorities:** The region's 33 federally and non-federally recognized Tribes are leaders in creating opportunities for disinvested communities, sustainable natural resource management, green industries, renewable energy, housing, and in the arts, culture, and tourism sectors. However, Tribal rights holders are often not consulted sufficiently early in key planning decisions, hampering collaboration.
- **Strong Alignment of Strategies and Focal Areas:** Across counties and Tribes, plans emphasize traditional industries like agriculture, forestry, fishing, and manufacturing as well as emerging areas such as tourism, renewable energy, and specialty foods. Plans also highlight critical (physical) infrastructure gaps like those in broadband, water, and transportation that require investment to support further economic growth. Developing a skilled workforce is a common priority across economic development plans.
- **Need for Funding and Technical Support:** Organizations and leaders in the region would benefit greatly from structured, accessible mechanisms for identifying funding opportunities, as well as technical and grant writing support. Partners also recommend creation of a regional economic development entity.

Key Metrics

- **Number of Cross-Sectoral and Regional Partnerships:** Tracking the formation of new working groups, partnerships, and initiatives that bring together diverse partners from across the region and monitoring the retention of partners over time and the development of long-term collaborations or agreements that demonstrate the resilience of partnerships.
- **Number of New Organizations, Advocacy Groups, and Regional Initiatives:** Assess the creation of new entities that seek to address gaps in representation and support inclusive, sustainable economic development in the region.
- **Formation of EDA Economic Development Districts:** Monitor the establishment of new Economic Development Districts (EDDs) in the region, thereby enhancing access to funding opportunities and supporting regional planning efforts.
- **Self-Reported Assessment of Barriers to Collaboration:** Regularly obtain feedback from partners describing the challenges they face in engaging with the Collaborative, such as capacity constraints, resource limitations, and competing priorities.

Community Readiness for California Jobs First

Consistent with the experiences of rural areas nationwide, systematic economic-development efforts in the region are diffuse and characterized by low capacity and few orthodox development organizations. No regional economic-development organizations and few initiatives cover the California Jobs First-designated region Tribal Lands and the counties of Del Norte, Humboldt, Lake, and Mendocino. Leaders often wear many hats, and funding and person-hour constraints have created capacity traps that hinder the region from pursuing opportunities and expending program funds even when they have been successfully secured.[20]

To adequately assess community readiness to participate in a regional effort, engage with potential partners, and assemble the Collaborative, partner mapping was the essential first step in building RRRISE. Alongside the listening campaign, researchers conducted an initial survey to understand: 1) the current work of public-sector and community-based organizations in the region; 2) communities' desire and capacity to engage in a regional and inclusive economic development planning endeavor; 3) members' perceptions of opportunities and challenges in their areas of focus; and 4) existing partnerships. Through this and the work of the North Coast Opportunities (NCO) and the True North Organizing Network (TNON) Outreach and Engagement teams to identify organizations at the local level, the convening team assembled a comprehensive Partner Directory of interest holders within the partner categories named as essential by the California Jobs First program:

1. California Native American Tribes
2. Community organizers and community members
3. Disinvested communities
4. Economic development agencies

[20] This was a persistent theme voiced by participants in the RRRISE listening campaign.

5. Education and training providers
6. Employers, businesses, and business associations
7. Environmental justice organizations
8. Government agencies
9. Grassroots and community-based organizations
10. Labor organizations
11. Philanthropic organizations
12. Worker centers and workforce development entities
13. Other regional interest holders capable of contributing to the success of the project.

Members can opt into a public Partner Directory which is updated and shared monthly through RRRISE's various newsletters and is publicly available on RRRISE's website.

Attributes of Collaborative Partners

Following its official launch in February 2023, the RRRISE Convening Team administered the first of two surveys (open until August 2023). The 93 respondents who participated in the first survey represents the initiative's core support in Year One. Sixty-eight percent (68%) of respondents in that initial survey indicated that their work was directly related to economic development. Forty-five percent (45%) of all respondents identified as a community member as opposed to a representative of an organization.

When asked why they were interested in participating in RRRISE, most respondents (71%) cited "concern about economic development, business opportunities, and the future of the region." Sixty-eight percent (68%) indicated that their work was directly related to economic development. A majority (60%) described themselves as "concerned about equity," and 52% reported that they were "concerned about the environment." About half of all respondents expressed interest in playing an active role in the Collaborative, and Figure 2.1 lists the specific types of roles. Another 30% offered to provide input if asked or other types of support during the Collaborative's launch.

Figure 2.1 Desired Role in Collaborative (First Partner Survey Results)

Type of Participation	Percentage
Help the group fairly identify projects/initiatives for funding	57%
Help make sure the process is aligned with existing plans/initiatives	47%
Help reach out to communities and groups often overlooked in planning	47%
Help make sure plans/projects are beneficial to the environment	36%
Help make sure plans/projects are beneficial to workers	35%
Help the Collaborative function as a group	30%
Help with data collection and analysis	23%

N = 88 for all percentages

The initiative's membership is representative considering the populations of each sub region. Continuous emphasis on outreach is necessary, however, particularly in the two smaller counties of Lake and Del Norte, to ensure them an equal voice within the Collaborative (see Figures 2.2 and 2.3). Nonetheless, Humboldt County contains far more organizations in each of the partner categories than do Lake and Del Norte, and harnessing the much-needed people power of these organizations while ensuring equity for smaller counties and Tribal communities constitutes an ongoing challenge.

Figure 2.2 Regional balance of RRRISE Partners (11/2023)

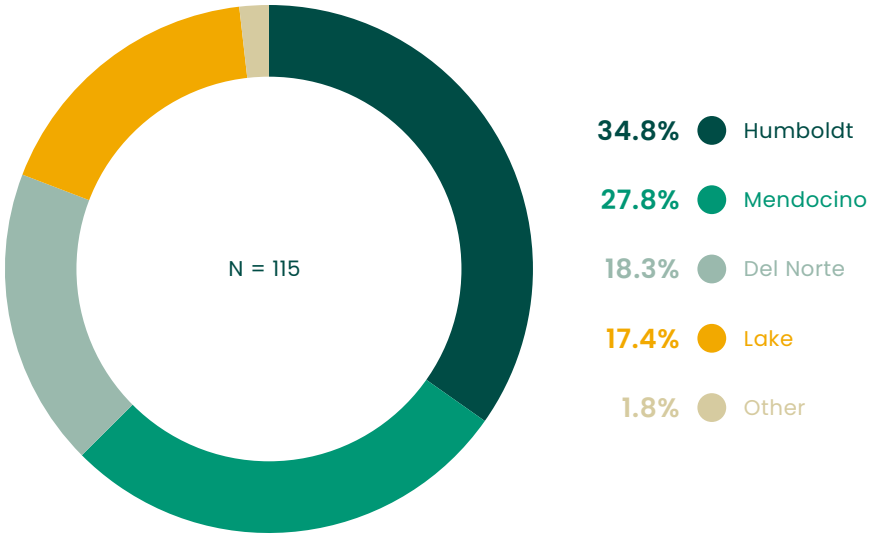
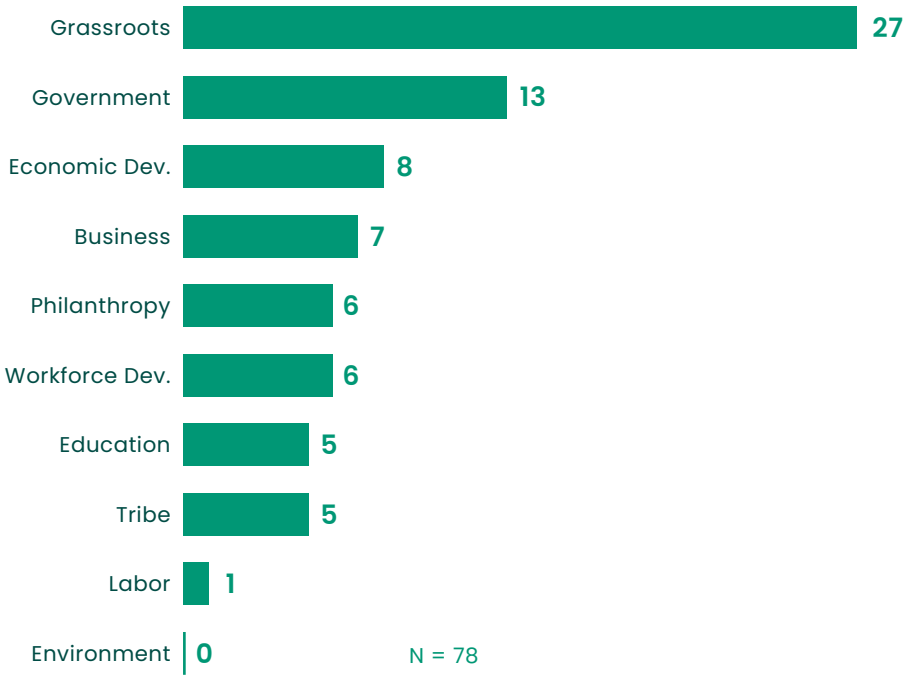
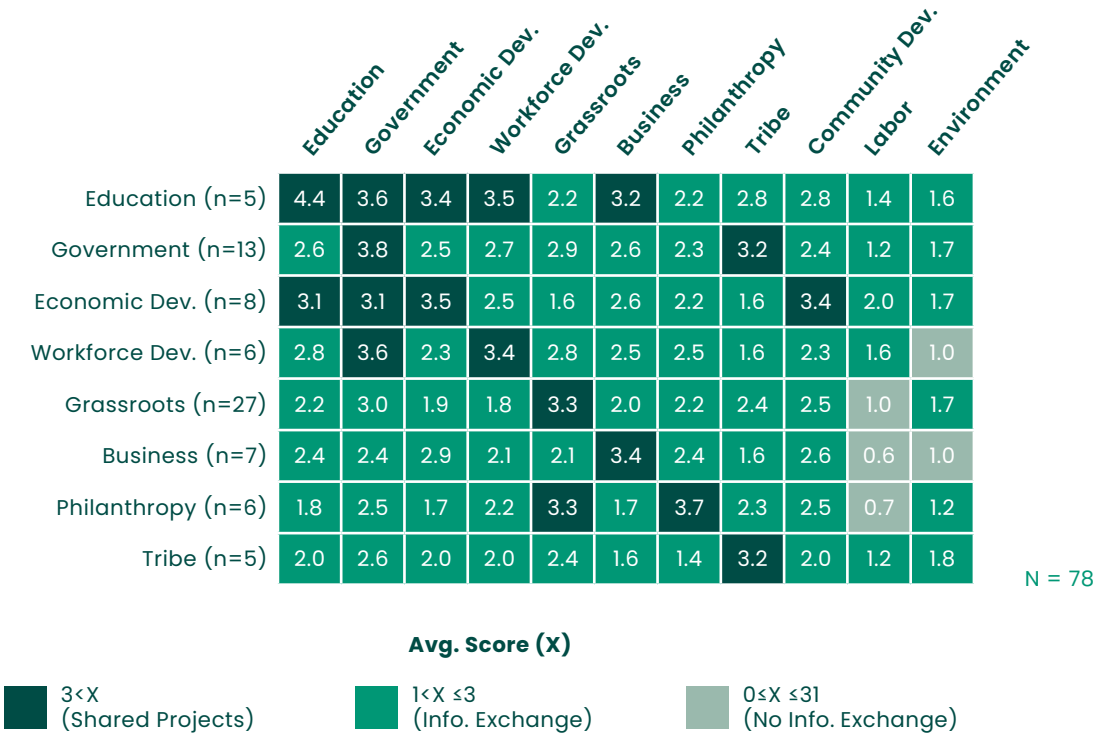


Figure 2.3 Sectoral Balance of RISE Partners (11/2023)



Launched in September of 2023 and garnering 124 responses, a second survey focused specifically on the existing partnerships in the region and the capacity of partners to engage in RRRISE and regional economic development efforts. Figure 2.4 shows the level of cross-sector activity and connectedness amongst the region's organization types. Those in government, workforce development, education, and economic development had high reported levels of partnering activity.

Figure 2.4 Strength of Connections Among Organizational Types



As Figures 2.5 and 2.6 show, many survey respondents in the second survey represented small organizations. While one-quarter of these respondents stated that they did not know their organization's annual operating budget, nearly a third (31.6 %) reported their organization's annual budget as less than $500,000. More than half (57%) of respondents worked in organizations with 10 or fewer staff, and nearly three-quarters (73%) in organizations with 25 or fewer staff.

Figure 2.5 Annual Budget of Organizations

	Percentage (%)	Frequency (n)
$0 - $100,000	14	10
$100,000 - $500,000	18	14
$500,000 - $2 million	18	14
$2 million - $5 million	9	7
$5 million - $10 million	4	3
Over $10 million	12	9
Respondent unsure	25	19

N = 76

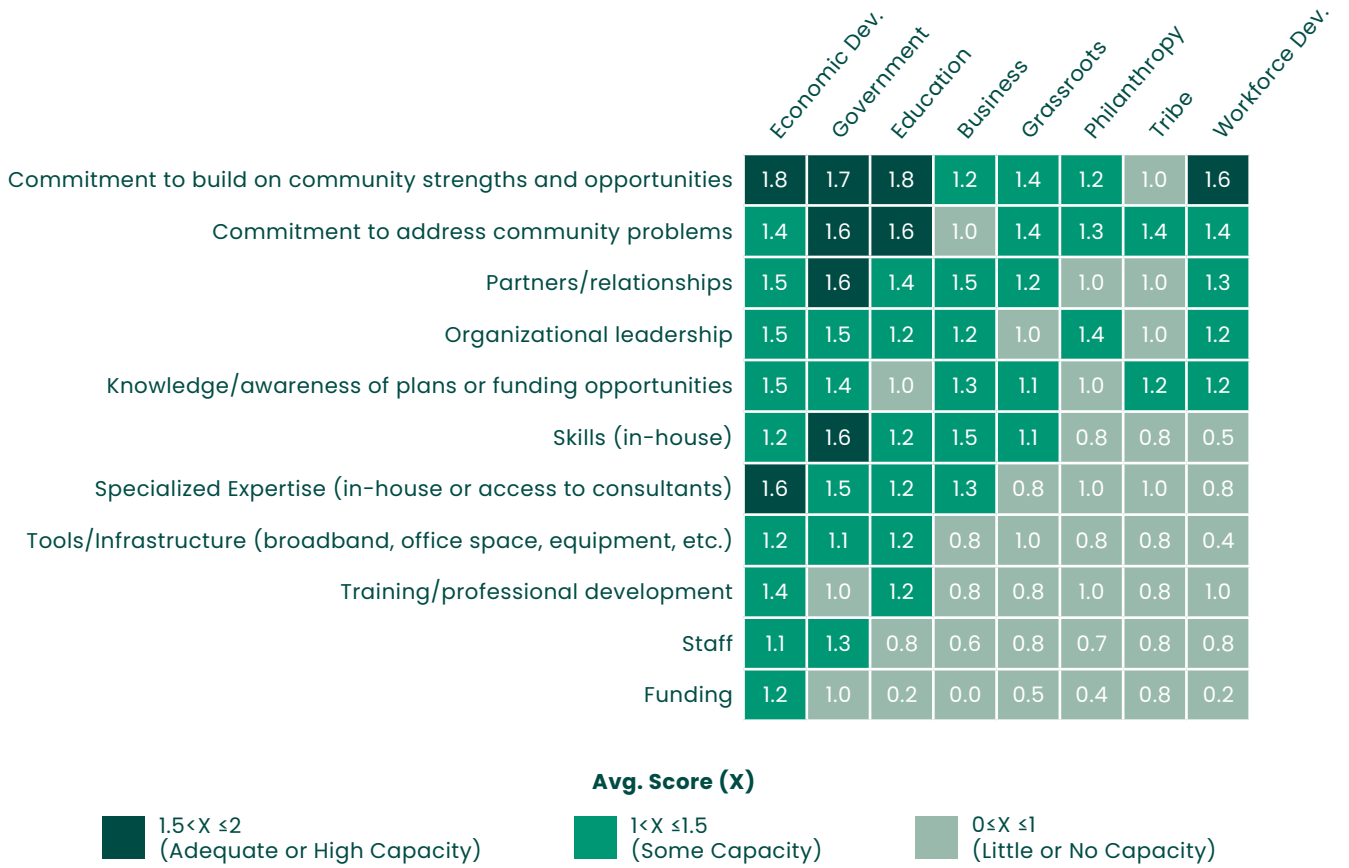
Figure 2.6 Employed Full Time Staff

	Percentage (%)	Frequency (n)
0 - 5 staff members	42	32
6 - 10 staff members	16	12
11 - 25 staff members	16	12
26 - 100 staff members	13	10
More than 100 staff members	13	11

N = 77

Consistent with findings from the listening campaign, organizations involved with RRRISE report struggling with capacity to participate in economic planning initiatives, among other challenges. Training, staffing, and funding are the primary obstacles to full involvement in such initiatives.

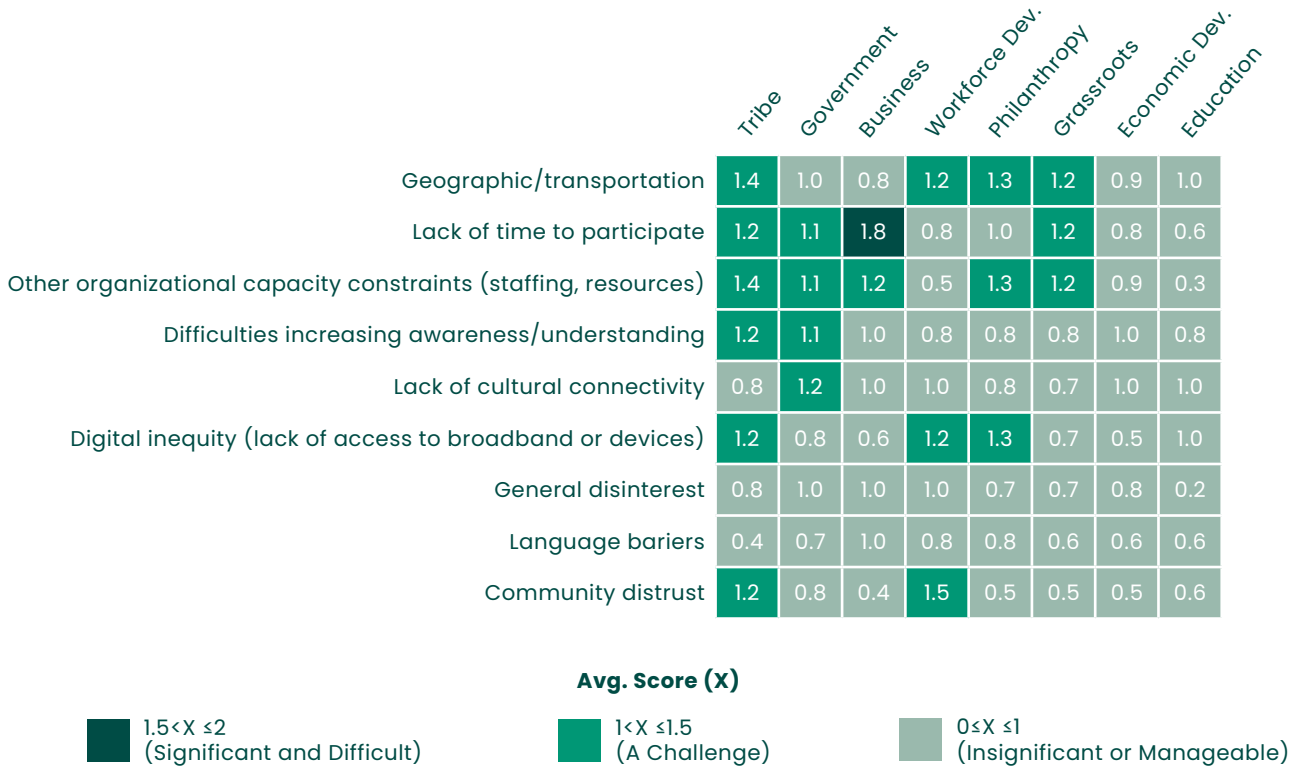
Figure 2.7 Capacity of Partner Organizations



N = 78. Scoring is based on the average score based on the following point system: Little or No Capacity = 0 points; Some Capacity = 1 point; and Adequate or High Capacity = 2 points.

Unsurprisingly, respondents cited lack of time and capacity as the largest barriers for organizations to take part in such efforts as RISE and local economic planning, tribes and Government organizations both reported experiencing the highest numbers of barriers (see Figure 2.8).

Figure 2.8 Barriers Experienced by Partner Organizations



N = 78. Scoring based on the average score based on the following point system: Insignificant or Manageable = 0 points; A Challenge (but manageable) = 1 point; Significant and Difficult = 2 points.

In summary, the results of the surveys and also the listening sessions indicate that partners see high value in regional cooperation and efforts to break down silos but view low capacity and other resource constraints as limiting their participation in these.

Overview of Outreach and Engagement Efforts

RISE's Outreach and Engagement Team, comprised of North Coast Opportunities (a community action agency based in Mendocino) and True North Organizing Network (a community organizing group based in Del Norte and Humboldt) used a variety of methods to identify and build relationships with interest holders in the required partner categories, priority populations, and the public at large (see Figure 2.9).

Figure 2.9 Outreach and Engagement Strategies

In addition to the two surveys, RRRISE's listening campaign was its primary method of identifying partners, hearing their concerns, connecting them to roles in the Collaborative, and identifying the barriers, workforce and other, and the opportunities facing disinvested communities. These are shown in Figure 2.10 below.

Figure 2.10 Redwood Region RISE Planning Phase: Breakdown of Outreach and Engagement Activities

Outreach/Engagement Activity	Interest Holder Representatives	Level of Engagement to Date *(please note that some groups are represented in multiple categories)*
Listening Sessions	Business/Workforce Agencies, CBOs, Economic Development Agencies, Environmental Justice Organizations, Government Agencies, Labor, Workforce partners, Tribal Nations.	144
	Priority Communities	355
	Total Listening Sessions:	499

Outreach/Engagement Activity	Interest Holder Representatives	Level of Engagement to Date *(please note that some groups are represented in multiple categories)*
Surveys	1 - Initiative Launch Survey	93
	2 - Partner Mapping Survey	124
Data Walks (virtual)	Collaborative, public at large	11 virtual Data Walks 1,102 total attendance
Pop-Up Data Walks (in-person)	Priority Communities in Tribal Lands and Humboldt, Lake, and Mendocino Counties; public at large	12 pop-up Data Walks 250 total attendance
Collaborative Meetings	All Collaborative Meetings	14 meetings (including 2 in-person gatherings) 1,448 total attendance
	Equity Council Meetings	11 meetings 139 total attendance
	Tribal Planning Table Meetings in Tribal Lands and Del Norte, Humboldt, Lake, and Mendocino Counties	5 meetings, 1 webinar 62 total attendance
	Local Table Meetings/Webinars in Tribal Lands and Del Norte, Humboldt, Lake, and Mendocino Counties; public at large	25 meetings/webinars 296 total attendance
	Sector Planning Tables	21 meetings 343 total attendance
	Voting Member Block	All Collaborative meetings + 2 working sessions Total attendance in working sessions: 67
	Economic Development Finance Working Group	7 meetings/webinars 146 total attendance
Community Events	Priority Communities, Community-based Organizations, Grassroots Organizations in Tribal Lands and Del Norte, Humboldt, Lake, and Mendocino Counties; public at large	30 events 600 total attendance

**Total attendance= duplicated counts of participants.*

In order to better reach priority communities, amplify their voices, and secure their participation in the Collaborative, the outreach and engagement team recruited CBOs to administer listening sessions. Tribes received grants to support their participation in RISE (see Figure 2.11)

Figure 2.11 Tribal Recipients of Grants for RISE Participation

Themes from these sessions with priority communities emphasized the need for stable employment, challenges with transportation and childcare and general cost of living in the region. A summary of these findings is published in a separate report, the RRRISE Community Insights Report.

Environmental Scan: Organizations and Assets Serving Economic and Community Development Interests

This section provides a brief characterization of each partner group's presence in the region and its current level of engagement with the project based on RRRISE's database of organizations and businesses and listening-session findings. Figure 2.12 below shows the number of existing entities within each of the key partner categories, their engagement via digital communication, and their level of involvement in Redwood Region RISE's Collaborative.

Figure 2.12 Redwood Region RISE: Existing Entities and Engagement to Date

Partner Category	Number of existing entities	Collaborative Participation
California Native American Tribes	33 Federally and non-federally recognized Tribal Nations have been identified.	Eight Tribes serve as voting members at the time of writing. Thirteen Tribal Nations engage with and serve on our Tribal Planning Table, and two are actively engaged on our Equity Council.
Community Leaders and Members	323,952 residents	Approx. 600 community members and leaders have engaged with Redwood Region RISE's efforts through 30 community events. A cumulative number of 1,448 residents participated in at least one Collaborative meeting, 296 attended local (county-level) meetings, and 250 community members and leaders participated in pop-up Data Walks.
Disinvested ("Priority") Communities	The Collaborative has identified these priority communities.[21]	27 members of the Equity Council represent priority communities and four seats on the Voting Member Block.
Economic Development Districts (EDDs) and Economic Development Agencies (EDAs)	One EDD (SMEDD, in Mendocino). One EDA in each county, one Tribal EDA identified. Two additional CDFIs play significant roles.	One CDFI (AEDC) serves as RISE's Fiscal Agent. The other organizations—RREDC, EDFC, Lake EDC, Del Norte Economic Development Corp.—are all voting members.
Education and Training Providers	Three Community Colleges(Mendocino, College of the Redwoods) and one four-year college (Cal Poly Humboldt).	Mendocino Community College (MCC), College of the Redwoods (CR), and Cal Poly Humboldt (CPH) have seats on the Voting Block.
Employers, Businesses, and Business Associations	19 Chambers of Commerce active in the region, two SBDCs, numerous trade associations.	Five Small Business Association-funded partners are seated on the RRRISE Voting Member Block. Three other business organizations have signed partnership agreement letters and are actively engaged as advisors and outreach partners.
Environmental Justice Organizations	No organizations identify as explicitly environmental justice oriented. However, two—EPIC and Northcoast Environmental Center—frequently serve in that capacity.	The Grassroots Institute and Tribal EcoRestoration Alliance (TERA) both serve on the Voting Block. Both EPIC and Northcoast Environmental Center have signed partnership letters. Climate Action Mendocino serves on the Renewable and Resilient Energy table.
Government Agencies	Two councils of governments, two county economic development leads involved, representatives from 14 incorporated municipalities and other county level staff also participate.	Four government agencies serve as voting members, and several sit on (or lead) Sector Planning Tables.
Grassroots and Community-based Organizations	Unknown	Sixteen community-based organizations received mini grants to conduct proposed outreach activities to further engage priority communities especially difficult to reach in the region. Four designated seats for CBOs are filled on the Voting Block, and others also represent priority communities there.

[21] [REF]

Partner Category	Number of existing entities	Collaborative Participation
Labor Organizations	The three key labor organizations in the economic development space in the region are: LiUNA, Machine Operators 3, and the North Bay Labor Council.	All three federated labor organizations have signed partnership agreements with Redwood Region RISE, LiUNA is a voting member.
Philanthropic Organizations	Two: Humboldt Area Foundation/ Wild Rivers Community Foundation; Community Foundation of Mendocino	Both HAF+WRCF and the Community Foundation of Mendocino (CFM) are voting members.
Worker Centers and Workforce Development Entities	The Region has three workforce development boards: NoRTEC, HCWDB, and WANB.	All three entities are voting members. Three corresponding worker centers (SMART, the Job Market, and CareerPoint) have participated in Collaborative discussions.

1 California Native American Tribes

The Redwood Region's 33 Federally and non-federally recognized Tribes are leaders on economic development, investment, and innovation within the region, particularly with respect to creating opportunities for disinvested communities in natural-resource management, green industries, renewable energy, and housing and in the arts, culture, and tourism sectors. All are invited to become voting members of the Collaborative. At the time of writing, eight nations are voting members of RRRISE,[22] and thirteen are involved with the Collaborative's Tribal Planning Table and Sector Tables. Additionally, NCO released a Tribal Engagement Grant Opportunity that offered up to $28,000 to the region's Tribal governments to enable their participation in the California Jobs First Planning Phase. Five Tribal Governments received a total of $140,000 in these grants.

Economic development capacity and the strategies available to Tribes are highly dependent on their specific histories of land struggles and long-fought battles for sovereignty and recognition. For instance, the inability to collateralize Tribally held land is a frequent barrier to accessing conventional financing, one of the many barriers Tribes contend with. Landless Tribes have also had to work creatively to create economic development initiatives, one example being the energy sovereignty program currently under development by the Scotts Valley Band of Pomo Indians. Cultural resurgence movements have helped federally unrecognized Tribes like the Wailaki establish themselves as key interest holders in, for example, expanding the use of beneficial cultural burning practices for forest management in southern Humboldt and Northern Mendocino Counties.

Tribal planning stresses the intersection of traditional knowledge and cultural values with meeting the needs of Tribal residents/relatives and landscapes and with adapting and responding to the climate crisis. Tribal plans therefore incorporate threats to traditional foods, livelihoods, and important cultural practices and the need to protect fish, game, wild and cultivated crops, and the landscapes that nurture them (see, for example, Hoopa Valley Tribe CEDS). Commonly held goals therefore include updating critical infrastructure (particularly for water); expanding clean energy programs; stabilizing and

[22] Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, Elk Valley Rancheria, Hoopa Valley Tribe, Middletown Rancheria of the Pomo Indians, Round Valley Tribes, and Yurok Tribe.

expanding key services, including assistance to families and housing; and protecting the Tribe's financial position. Plans also highlight workforce development and Tribes' priority sectors. For example, tourism development is a strong area of investment for the Yurok Tribe.

2 Community Members, The Public at Large

RRRISE has, from its inception, prioritized broad-based participation, including community members and investing in informing the general public as its efforts evolved. From February 2023-May 2024, over 1,000 community members signed up to receive RRRISE newsletters, which have an average open rate and click rates of 57% and 15%, respectively. The Spanish language newsletters have an open rate of 90% and a click rate of 6.5%. In February 2023-May 2024, over 2,350 unique visitors visited the RRRISE homepage to obtain information and identify resources. Between its launch in March 2024 and May 2024, RRRISE's Spanish language homepage was visited 104 times, with an average engagement time of 5 minutes and 36 seconds.

3 Disinvested ("Priority") Communities

In January 2024, RISE announced the Community-based Organization (CBO) Outreach Mini Grant Opportunity, which offers up to $10,000 to CBOs in the Redwood Region to support outreach activities. The Equity Council selected 16 CBOs to engage members of priority communities including those of communities of color, Tribal citizens, individuals with disabilities, monolingual Spanish and Hmong speakers, unhoused individuals, and youth. The True North Organizing Network focused its outreach efforts on Hmong, Latinx and monolingual Spanish-speaking, youth, and LGBTQIA2S+ community leaders. In the time period January 2024-May 2024, the focus of outreach and engagement activities throughout the region was identification of communities' local priorities, which were then used to inform SWOT analyses.

4 Economic Development Districts (EDDs) and Economic Development Agencies

Community Development Finance Institutions (CDFIs) active in the region are the Redwood Region Economic Development Commission (RREDC), which serves Del Norte and Humboldt; the Arcata Economic Development Corporation (AEDC), which is RRRISE's fiscal agent; Lake EDC; and the Mendocino-based EDFC.

Mendocino and Sonoma Counties formed the Sonoma Mendocino Economic Development District (SMEDD), the only EDD district in the region, which prepares a CEDS document for the two-county district. Interest holders from SMEDD sit on the Equity Council and also assist in administering the Economic Development Finance Working Group.[23]

[23] The Economic Development Finance (EDF) Working Group is embarking on an education- and capacity-building process aimed at empowering its participants by: 1) enhancing their existing expertise in EDF and 2) equipping them with the tools to more effectively pursue state and federal funds, philanthropy, and other sources of revenue so as to increase project viability. The EDF Working Group's main deliverables include: 1) assessment of existing levels of use of EDF tools within the region; 2) development of a partner engagement and training plan; 3) creation of a regional EDF database and funding matrix; and 4) development of a cross-sector capital analysis plan to further enhance the integration and utilization of EDF tools within the region. The EDF Working Group has two phases, with Phase 1 running from January to June 2024 and Phase 2 from July to December 2024.

5 Education and Training Providers

The Redwood Region has three community colleges and one campus of the California State University system: Mendocino Community College (MCC, serving Mendocino and Lake Counties), College of the Redwoods (CR, serving Humboldt and Del Norte counties), and Cal Poly Humboldt. A voting member, MCC is actively involved in RRRISE. CR and Cal Poly Humboldt are actively engaged with each other and with RRRISE. The Regional Convener, the California Center for Rural Policy (CCRP), is a part of the Cal Poly Humboldt campus.

6 Employers, Businesses, and Business Associations

Small Business Association-funded partners represented on RRRISE's Voting Member Block (representing the needs of small businesses and entrepreneurs within the region) include: North Coast SBDC (serving Del Norte and Humboldt), West Business Development Center, and Lake County Economic Development Corporation. A total of 19 chambers of commerce are active in the region, two of which, those of Del Norte and Lake County, serve on the Voting Member Block. In addition, advocates from the Small Business Majority, the Eureka Chamber Foundation, and Rotary District 5130 have signed partnership agreement letters and are actively engaged as advisors and in reaching out to businesses.

Major employers engaged with RRRISE include, among others, representatives from clinics and hospitals in the Health and Caregiving sector, and Tribal Nations, who participate in multiple target sectors. Private firms involved in offshore wind development and energy generation have been engaged via the Renewable and Resilient Energy table. The sector most represented amongst businesses engaged is the Working Lands and Blue Economy Table, to which 38 businesses actively contribute and which represents dairy and livestock farms, major timber producers, family fishing operations, and others.

Outreach and engagement efforts with local chambers of commerce and Rotary Clubs have helped expand the reach of the initiative in the local business community. In total, 10 businesses are receiving communications or are involved in some way with the Collaborative. The convening team distributed succinct outreach materials tailored to businesses and employers that included a QR code to a short online survey aimed at better understanding their needs as employers and identifying how RRRISE could prioritize those needs in its planning processes. As noted in Chapter 3, the vast majority of business activity in the region is driven by small and micro businesses and self-employment. However, since active engagement in long-term visioning and planning processes is typically not compatible with the schedules of busy entrepreneurs, the initiative relies on partnerships with business advocates and outreach events to engage them.

Other notable characteristics of the region's business environment include limited foreign direct investment when compared to that of the state overall (GO-Biz 2023), particularly for greenfield investments. Exceptions include activities in the Port of Humboldt Bay, which will host the forthcoming Nordic Aquafarms project (still in the permitting stage, which is expected to be completed in 2024) and which has courted foreign and multinational companies interested in developing a land base for offshore wind industry activities. Also located in the Arcata Bottom near Humboldt Bay, Sun Valley Floral Farms is one of the region's major employers. At the time of writing, this anchor institution is at risk of closure.

7 Environmental Justice Organizations

"What is Environmental Justice?" Collaborative members frequently ask. According to the EPA:

Environmental justice means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:

are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and

have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.

Whereas this term appears to have more resonance in urban areas, communities on the North Coast tend to focus on environmental issues at large, about which the region has a long and storied history (see Climate Analysis chapter). That said, several environmental organizations are involved in environmental justice work, including the Environmental Protection Information Center (EPIC) and the Northcoast Environmental Resource Center (NERC), both based in Humboldt. Both organizations have furnished partnership agreement letters to the Collaborative, and NERC serves in its Voting Block. Grassroots Institute in Mendocino and Climate Action Mendocino serve on the Voting Block and Renewable and Resilient Energy Sector Table, respectively. From Lake County, the Tribal EcoRestoration Alliance also serves as a Collaborative voting member.

8 Government Agencies

Many of the region's jurisdictions struggle to consistently fund and retain capacity for economic development planning; the primary focus of planning departments is often such daily tasks as permitting. For instance, not until 2023 did Mendocino County create its first dedicated position for an economic development manager, and many economic development activities in Del Norte County are led by the city manager's office of Crescent City. Figure 3.12 describes the major players in economic development planning in the region, their capacities and roles, and their current engagement in the RRRISE process. Among the 14 incorporated municipalities in the region, 11 have some economic development capacity.

As seen in Figure 2.12, RRRISE engages Tribal, county, municipal, and special jurisdictions and works closely with county entities and municipal staff on economic development issues within and beyond their municipal borders. For example, staff from Crescent City and the City of Fort Bragg hold leadership roles as RRRISE voting members and Sector Table Coordinators.

9 Grassroots and community-based organizations

Community-based organizations are represented in RRRISE's Voting Member Block, Sector Tables, and Equity Council and are involved locally or more peripherally through monthly check-in meetings and receipt of updates from the Collaborative. Currently, two CBO seats on the voting block belonging to organizations that declined to participate are vacant, and two seats are filled by representatives of True North Organizing Network (representing Del Norte County) and North Coast Indian Development Corporation, a regional, Tribal-serving organization, occupy two other seats.

10 Labor Organizations

The regional narratives on unionization that emerged from the listening campaign are complex. As government services are a primary sector of the economy, public sector unions are more prevalent in the region. Some of the largest public sector unions subscribing to RRRISE are the California Teachers Association (CTA); California Nurses Association (CNA); SEIU Local 1021; AFSCME Council 57 (Local 1684); the Building and Construction Trades Council along with fourteen union affiliates; and various local police, sheriff, and firefighter unions.

Organization of private sector unions is often characterized as having declined along with the decline of the logging industry. Within the region, the most prominent participants in discussions concerning large-scale projects eligible for Project Labor Agreements are federated union representatives. The three most prominent in the region's economic development are LiUNA, Machine Operators 3, and the North Bay Labor Council, and all have signed partnership agreements with Redwood Region RISE. The Collaborative is committed to strengthening labor representation in the area in the future.

11 Philanthropic Organizations

Community foundations active in the Redwood Region include (but are not limited to) HAF+WRCF, the result of the merger of the Wild Rivers Community Foundation and the Humboldt Area Foundation, and the Community Foundation of Mendocino. HAF+WRCF, which serves Del Norte, Humboldt, Siskiyou, Trinity, and parts of Curry County (Oregon), plays a key role in building capacity across the region through such initiatives as the 10-year Building Healthy Communities initiative. Funded by the California Endowment, the initiative was convened by HAF+WRCF and helped incubate a key RRRISE partner, the True North Organizing Network. The foundation's current project portfolio includes the Climate and Community Resilience (CORE) Hub (convening parties around offshore wind development and the creation of community benefits agreements), the Native Cultures Fund, and other regranting programs. In total, the merged foundation manages $106 million in assets.

The Community Foundation of Mendocino funds an array of activities related to economic development, disaster preparedness and relief, poverty alleviation, and youth development, among other areas, and manages $46 million in assets. Both HAF+WRCF and the Community Foundation of Mendocino are voting members of the Collaborative.

12 Worker Centers and Workforce Development Entities

Workforce development planning entities in the Redwood Region include: 1) the Northern Rural Training and Employment Consortium (NoRTEC), which serves Del Norte County (along with Butte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama, and Trinity Counties). NoRTEC is a special district organized under a joint powers agreement to provide workforce development services across an 11-county region; 2) the Humboldt County Workforce Development Board (HCWDB), an independent board appointed by the Humboldt County Board of Supervisors responsible for strategic planning, policy development, and oversight of the county's workforce innovation system; and 3) the Workforce Alliance of the North Bay (WANB); which serves Lake, Marin, Mendocino, and Napa Counties. WANB is a joint powers agency formed by the four counties to coordinate regional workforce development activities and administer Workforce Innovation and Opportunity Act (WIOA) funds. Regional Job Centers include: NORTEC's SMART workforce center, HCWDB's Job Market, and WANB's CareerPoint. All of these organizations have been involved in the Collaborative, particularly in conversations about regional job quality and job access.

13 Regional Initiatives

In May 2022, the California Regional K-16 Education Collaboratives Grant Program provided an $18 million grant (out of $108 million provided statewide) for the Redwood Coast K-16 Education Collaborative, convened by Cal Poly Humboldt. This program is part of a statewide strategy to enhance regional economies by strengthening education-to-career pathways and ensuring that education, vocational, and workforce programs work in partnership to provide broader access for all to educational and employment opportunities in their own communities. The Redwood Coast program seeks to develop a robust college-going culture in the region by building career pathways for education and health care, increasing participation in and completion of A-G courses, and improving retention rates in higher education, especially for Native American and socioeconomically disadvantaged students.[24]

Another regional initiative, the North Coast Resource Partnership (NCRP), covers the Redwood Coast Region and parts of key watersheds extending into surrounding counties. NCRP is a "coalition of Tribes and counties working together on integrated regional planning and project implementation to enhance working and natural lands, build infrastructure, local economies, and community health in the north coast of California." Growing from the North Coast Integrated Regional Water Management Plan (NCIRWMP) and beginning in 2004, NCRP's focus is clean drinking water, watershed health, energy independence, climate adaptation, and economic vitality, with a special emphasis on disinvested communities.[25]

[24] https://now.humboldt.edu/news/18-million-cradle-career-collaborative-north-coast; 2) https://www.gov.ca.gov/2022/05/26/california-distributes-108-6-million-to-create-regional-education-to-career-pipelines/

[25] https://northcoastresourcepartnership.org/about/

Although the California Jobs First initiative cites the High Road Training (HRT) Partnerships initiative as a priority, only a few active partnerships were recognized by Collaborative members, all in Humboldt County. During listening sessions, except for those from workforce development organizations, few understood the concept "high road". The initiative's key activities, such as industry-led workforce efforts, are present in the region but not consolidated within the framework provided by HRT Partnerships as prescribed.[26] Given that many of the region's key employment sectors are public or are thinly traded, industry-led workforce development initiatives located there may receive less emphasis compared to those in other regions of the state that host globally competitive industries. These other regions therefore often attract high levels of investment, both foreign and domestic, and have large workforce needs. As a result, industry-driven workforce development efforts may be less prevalent in the Redwood Region than in these other regions.

Overview of Current Economic Development Plans and Strategies

To further inform the analysis of existing plans, the RRRISE Convening Team invited economic development planners to participate in listening sessions, which identified challenges the planners experienced in completing, updating, and implementing CEDS and other plans. Many precipitated and/or exacerbated by the pandemic continue to negatively impact progress. These challenges include:

- A historical lack of planning with respect to infrastructure and/or the consequent impact on resources (staff, time, financial resources) characteristic of rural, remote areas.
- Reallocation of personnel and funds during and following natural disasters and the pandemic, which contributed to a lack of continuity and an inability to carry out long-term planning, which is therefore always in recovery mode.
- Staff and committee/board member turnover, leaving key positions vacant and thereby stalling progress and limiting outreach and community engagement.
- Lack of funding.
- Lack of data.
- The need to prioritize mandates to complete plans covering different topics and jurisdictional boundaries to maintain funding.
- Community resistance to planned strategies and projects, which result in project challenges, delays, and cancellations.
- Rapid shifts in the economic development landscape due to policy changes, climate impacts, and emerging new opportunities (e.g., legalization of cannabis, wildfires, storm and flooding devastation, and offshore wind).

[26] See https://cwdb.ca.gov/initiatives/high-road-training-partnerships/

More recent plans (2018 and onwards) show a sharper focus on blue-economy, green-economy, and creative-economy opportunities compared to older plans (see Figure 2.13). Emerging opportunities like offshore wind energy development and cannabis legalization are shaping new economic priorities. Climate impacts like wildfires and storms have caused climate adaptation and resilience strategies to figure more prominently in recent Tribal and regional plans. More recent plans highlight strategies for building capacity and resilience of rural and Tribal communities through direct investment in regional partners. Positively, collaborations seem to be increasing over time; e.g., counties are working together on trial projects and other regional initiatives.

Figure 2.13 Redwood Region Strategic Economic Development Plans (2014-2023)

Document Type	Plan Title	Approximate Date Produced
Comprehensive Economic Development Strategies (CEDS)	County of Del Norte	2019
	Crescent City Economic Development Strategic Action Plan	2021
	Humboldt County CEDS	2018-2023
	Lake County CEDS	2016
	Mendocino and Sonoma Counties CEDS	2022
	MOVE2030: Community plan	March 2021
	MOVE2030: Economic Resiliency plan	March 2021
Tribal CEDS	Blue Lake Rancheria CEDS	2019
	Hoopa Valley Tribe	2016-2020
	Karuk Tribe Comprehensive Economic Development Strategy	2021
	Wiyot Tribe Strategic Plan 2020-2024	2019
	Yurok CEDS	2017
Transportation Plans	Caltrans District 1	2021
	Del Norte Regional Transportation Plan	2020
	GHD-County of Humboldt, Planning Department	2021
	Humboldt County Transit Development Plan (2023-2028)	2023
	Lake County Regional Transportation plan/Active Transportation Plan	2022
	Lake County Transit Development Plan - 2023 Update	2023
	Mendocino County Transit Development Plan	2022

Document Type	Plan Title	Approximate Date Produced
Climate Strategy Documents	Blue Lake Rancheria Climate Adaptation Plan	2023
	Hoopa Valley Tribe Strategic Energy Plan	2016
	Humboldt Regional Climate Action Plan	2021 (draft)
	Karuk Climate Adaptation Plan	2019
	Yurok Tribe Climate Change Adaptation Plan	2014
Workforce Development Reports	Del Norte County Labor Market Profile and Industry Sector Analysis	2019
	Lake County Labor Market Analysis & Strategy	2023
	Mendocino County Labor Market Analysis & Strategy	2023

County CEDS documents reviewed for this study offer a snapshot of current economic development priorities. As Figure 2.14 shows, RRRISE counties share a focus on industries with deep, historical roots across the region, including arts and culture, tourism, agriculture, forestry, fishing, and manufacturing. Recent updates to plans sharpen their focus on these traditional areas of industry under the banners of Blue, Green, and Creative economies. Counties also share a focus on education, research and development, and small business innovation and entrepreneurship. Climate adaptation plans were identified for four Tribes in the northern part of the region, and 10 Tribes from the southern half of the region participated in a listening session with the CalEPA Office of Environmental Hazard Assessment on climate impacts and priorities for their cultures which were also reviewed.

Figure 2.14 Redwood Region Industries in County Plans (2018-2025)

Industries in County Plans			
Del Norte CEDS 2019-2024	Humboldt CEDS 2018-2023	Lake EDS 2019-2025	Mendocino CEDS 2022-2025
♦ Transportation, Technology, Tourism ♦ Agriculture, including Forestry and Fishing ♦ Manufacturing, Medicine ♦ Education, Environment ♦ Small Business and Sovereign Nation (DNATL) Success	♦ Tourism/Arts, Culture ♦ Alternative Agriculture / Forest Products ♦ Specialty Food, Flowers & Beverages ♦ Niche Manufacturing ♦ Diversified Health Care ♦ Construction ♦ Investment Support Services ♦ Management & Innovation Services	♦ Tourism ♦ Agricultural Supply Chain ♦ University & Research Institution Science ♦ Advanced Entrepreneurs: Engineering, Aerospace, Graphic Design/ Arts	♦ Tourism, Arts ♦ Creatives (tech) ♦ Green Economy: specialty food and beverage, biomass, water storage ♦ Blue Economy: ocean-related fisheries and food production

In summary, there is a high degree of alignment across plans and strategies in the region. Tribes and counties' goals speak to expanding and growing business opportunities, jobs, and development projects in the blue economy, green economy, tourism, and renewable energy sectors. All plans emphasize support for small businesses and entrepreneurs. Plans recently completed in Del Norte and Mendocino Counties also focus on building the capacity and resilience of rural and Tribal communities, through investments in broadband and transportation in particular. While core industries continue to be important, economic priorities are also evolving to adapt to emerging opportunities and challenges, and recurring themes of these priorities are overcoming capacity constraints through collaboration and strategic investment.

Projects

Some projects in the CEDS and other plans are no longer current or are not described in sufficient detail to support meaningful comparisons/analysis. During the proposal development phase (July 2022) and through the first partner survey (March-April 2023), the RRRISE Convening Team invited partners to share important and promising projects. Listening sessions and local planning table meetings have also involved discussion of projects.

Recognizing that an analysis of existing plans would be unlikely to generate actionable information and responding to RRRISE partners' eagerness to learn about projects across the region, CCRP launched an online form to create an inventory of projects ranging in maturity from early-stage ideas to those close to or ready for implementation. The intent was to capture and share information that could help seed partnerships and to begin categorization of projects for regional consideration. During the November 28, 2023, meeting, CCRP gathered input from the RRRISE Collaborative to improve the online form, and the project inventory began sharing information in January 2024. RRRISE Sector Tables are in place to catalyze partnerships, develop regional strategies, and propose regional projects.

A comparison of counties' CEDS shows strong alignment across goals and strategies. Plans embrace new and emerging industry areas. Some counties are collaborating on trails and recreation projects, and all four are currently participating in the recently awarded K-16 Education Collaborative focused on education and health career pathways. Plans cite critical infrastructure and talent needs as areas for economic development. Proposed projects are scaled and tailored to local areas, and budgets and significant policy and funding challenges hamper implementation of plans and projects.

Chapter 3

Economic Analysis

This chapter delves into the region's economic well-being, cost of living, and industry composition. It prioritizes findings related to equity, sustainability, job quality and access, and economic competitiveness and resilience, and its focus is on macroeconomic conditions, broad trends, and the impacts of these trends on communities. Additional, in-depth information on key industries and the workforce can be found in the Industry Cluster and Labor Analysis chapters, respectively.

Key Takeaways

- The Redwood Region has suffered from California's differential development, and opportunities for high road development have stalled there as Bay Area economies have taken off. Over the past decade, GDP growth has been comparatively low. Median income across the region is low, and poverty rates are significantly higher than in the state at large.
- Working families in the region suffer a "coastal cost of living with rural America wages." Cost of living as a proportion of wages is significantly higher than in the rest of the state.
- In particular, this uneven development burdens the region's residents of color, who are disproportionately represented amongst the working poor and who experience poverty rates up to double those of their peer residents of color in the rest of California.

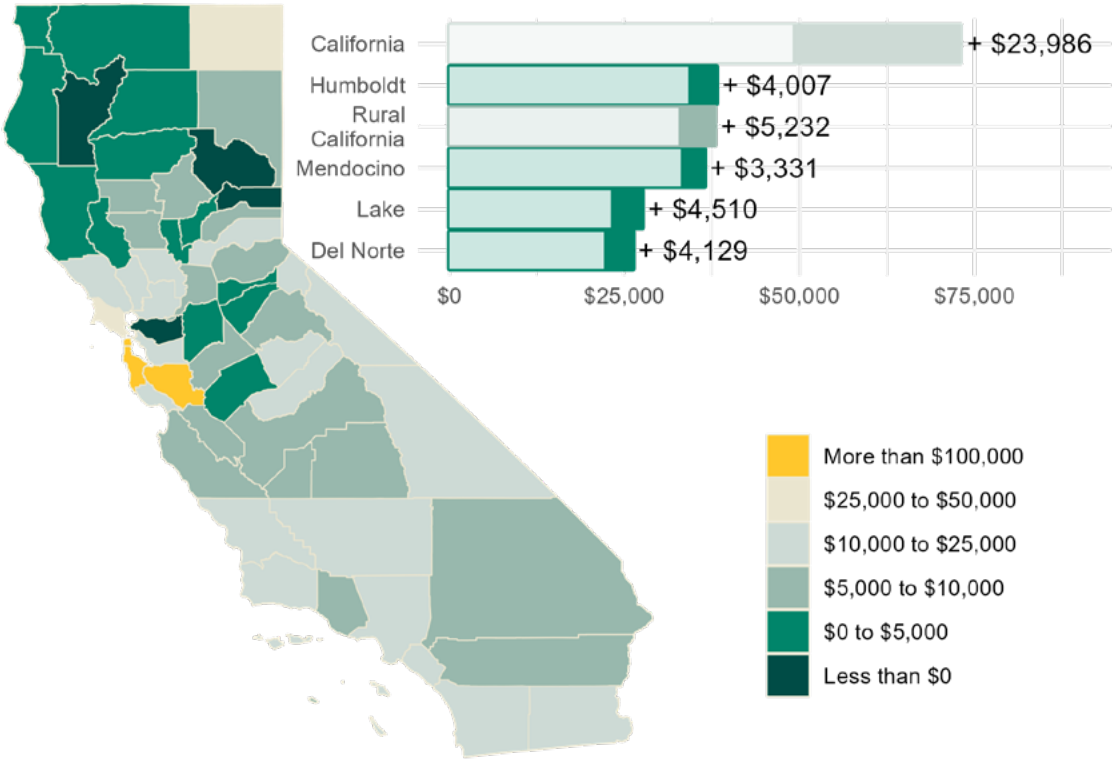
Key Metrics

- **Median income, poverty rates, and GDP per capita as indicators of overall well-being:** Tracking these metrics allows assessment of the region's economic health and identification of disparities among different communities. Monitoring these changes over time can enable progress towards inclusive growth.
- **Percentage of total employment by industry as an indicator of diversification:** Analysis of employment distribution across sectors can help gauge the region's economic diversity and resilience.
- **Ratio of income to expenses for a family with two median earners and two children (i.e., the "Medians"):** Examining the proportion of income spent on essential expenses allows assessment of the financial strain experienced by typical working families in the region.
- **Housing affordability and availability:** Monitoring housing costs, vacancy rates, and the supply of affordable housing allows identification of barriers to economic stability and growth.

Economic Well-Being and Cost of Living

Much of California's rural and northernmost counties have had an economic trajectory wholly distinct from that of the rest of the state. Since 2001, statewide economic output per capita[27] has increased by an average of $23,986 in inflation-adjusted terms (see Figure 3.1). Much of this growth is concentrated in three Bay Area counties—San Francisco, San Mateo, and Santa Clara—each of which has experienced a doubling of economic output in the past two decades, far exceeding the growth experienced by any other California county. Statewide, output in counties other than these three increased by $19,307 on average, indicating that strong economic growth was also widespread across the state during the 2001-2021 period. California's most rural counties,[28] on the other hand, have experienced much slower growth on average, increasing by just $5,232 since 2001. Among these, the Redwood Region experienced growth on par with other rural California counties, ranging from an increase of $4,510 in Lake to $3,331 in Mendocino. On average, per capita output in the Redwood Region was 62% of the statewide average in 2001 and is now 47% of the statewide average, indicating that the region has fallen even further behind.

Figure 3.1 Change in Economic Output Measured by Real Gross Domestic Product (GDP) per Capita (2001-2021)

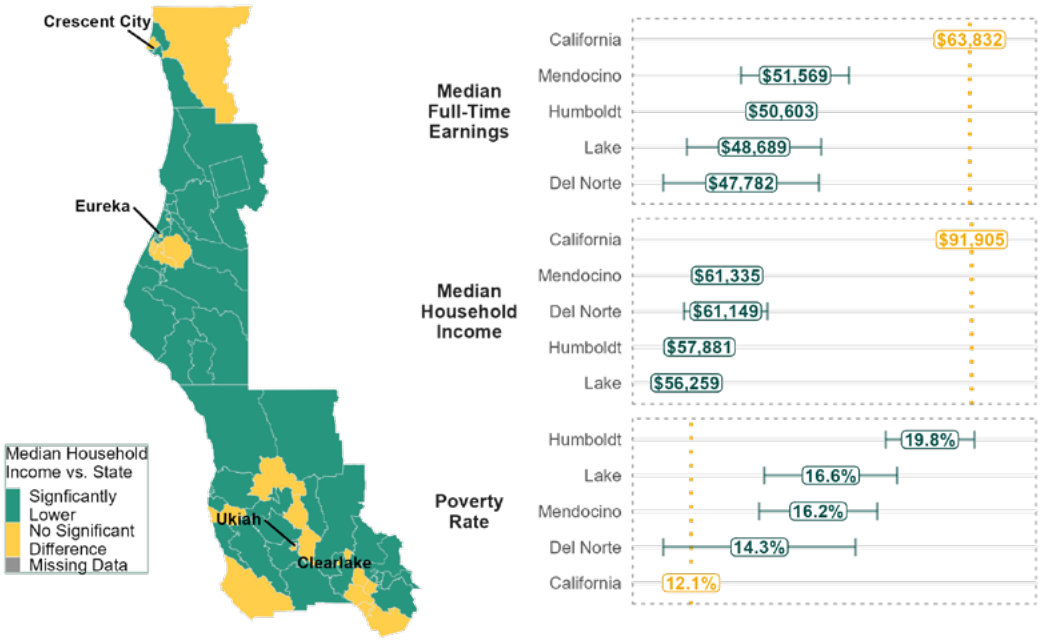


Note. GDP data sourced from the Bureau of Economic Analysis. Population estimates for 2001 and 2021 were sourced from the California Department of Finance, Table E-2.

[27] Economic output is the total market value of all goods and services produced in a region during a period of time.

[28] These counties are defined with an Index of Relative Rurality (IRR) greater than 0.5. This includes the four Redwood Region counties and 14 other counties.

Figure 3.2 Indicators of Economic Well-being (2018-2022)



Note. Data sourced from the American Community Survey.

Economic Well-Being

As shown in Figures 3.2 & 3.3, the Redwood Region's median full-time earnings and household income are lower than in the rest of the state, and its poverty rate higher. The region's overall relatively poorer economic well-being can be attributed to several factors. The region's economy is more reliant on such industries as tourism, agriculture, and forestry, which typically offer lower-wage jobs compared to sectors like technology, healthcare, or professional services that are more prevalent in other parts of the state (see the Industry Cluster Analysis). In addition, the Redwood Region has relatively few large employers or corporations that typically offer higher salaries and more comprehensive benefits packages (see Figure 3.12).

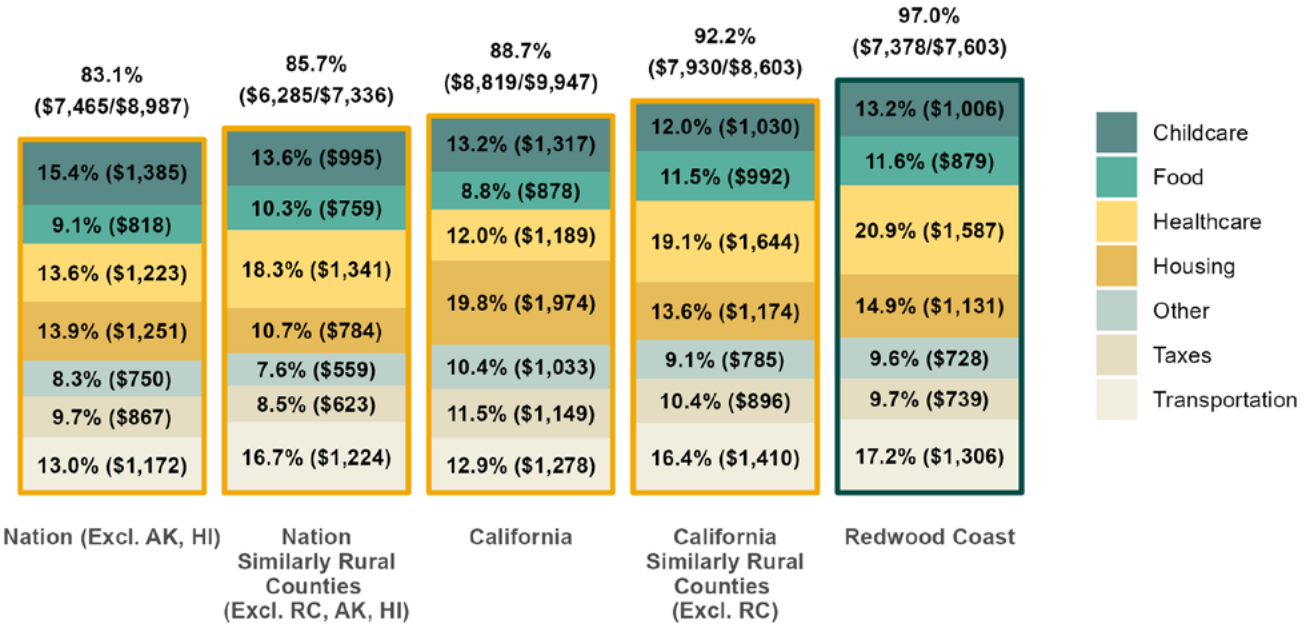
Cost of Living

Compared to the other counties throughout California, those that make up the Redwood Region are, on average, more expensive places to live.[29] Thus, whereas the region's household earnings are typical of those in similar rural areas throughout the United States, the cost of living is substantially higher. The figure below shows the ratio of estimated household expenditures to income for a hypothetical family of two full-time working adults[30] and two children. In the Redwood Region, this hypothetical family—the "Medians"—has a monthly income of $7,603 and total estimated expenses of $7,378, 97.0% of their income. This leaves the Medians with very little income for wealth accumulation or unexpected expenses. Compared to similar families in other rural areas of the country, the Medians spend a much more substantial proportion of their income on food, healthcare, housing, taxes, and transportation. If the Medians were to move to a typical United States county with a level of rurality similar to that of the Redwood Region (see "Nation Similarly Rural Counties" in the figure), their income would fall slightly from $7,603 to $7,336, but their estimated cost of living would decline substantially, from $7,378 to $6,285.

[29] The Redwood Coast has a cost-of-living index (COLI) of 129. This is calculated by measuring the consumer expenditure amounts for six major categories: grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services. This measure provides a baseline for understanding to what extent regional costs are related to those of other regions and of the nation as a whole. A cost-of-living index above 100 indicates that living in that region is relatively more expensive than elsewhere, whereas a COLA at or below the baseline of 100 indicates a lower cost of living there.

[30] Total household income assumes two median full-time incomes and no other cash or in-kind income.

Figure 3.3 Monthly Cost of Living for a Family of Two Full-Time Working Adults and Two Children as a Ratio of Labor Income (2017-2021)



Note. Data sourced from the Economic Policy Institute's Family Budget Calculator, the American Community Survey, and the Index of Relative Rurality (IRR). See footnote for the methodology used.[31]

"People that I grew up with are trying to find a cheaper place to live ."

Housing Availability and Affordability

Housing costs in the Redwood Region are lower than the statewide averages but substantially higher than for similar rural areas nationwide. Moreover, because of the region's lower wages and income, affordability is substantially worse compared to that of similar rural regions. Moreover, a related indicator below suggests that some segments of the population may be more severely impacted by affordability than others. Statewide, 44.8% of renters spend more than 35% of their household income on housing expenses, while regional figures (i.e., in Humboldt) reach 54.0%.[32]

In addition, both the quantity and quality of the available housing are problematic. As shown in Figure 3.4 on the next page, rental vacancy rates are lower than the statewide average, indicating far more competition for renters. Much of the region's housing supply is older and in need of repair.

[31] The Index of Relative Rurality (IRR) ranks all counties in the United States from 0 (most least rural) to 1 (most rural). Rural comparison regions "Nation Similarly Rural Counties" and "California Similarly Rural Counties" include counties in the nation or state that have an IRR that is at least as high as the lowest IRR and no higher than the maximum IRR in the Redwood Region. Regional averages were calculated as a population-weighted average of the county-level data using American Community Survey's (ACS) five year estimates (2017 - 2021). Median full-time earnings sourced from ACS five year estimates. Rurality measured by the Index of Relative Rurality (IRR). "California 0.5 ≤ IRR ≤ 0.53" includes Amador, Calaveras, Glenn, San Benito, Tehama, and Tuolumne counties. Five counties were not included in the national estimates due to missing data. "Other" is short for "Other Necessities."

[32] Humboldt's figure is likely distorted by the presence of Cal Poly Humboldt's student population.

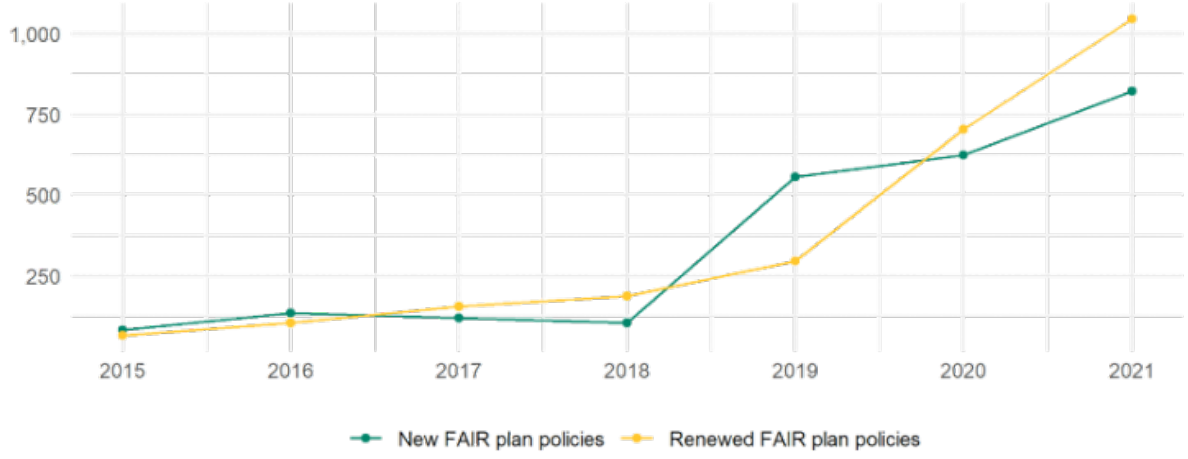
Figure 3.4 Regional Housing Data

County name	Median House Value	Housing Units	Occupied Housing Units	% Occupied Housing Units	Home Owner Vacancy Rate	Vacant Housing Units	% Vacant Housing Units	Median Monthly Rent	Rental Vacancy Rate
Del Norte	S237,700	11,093	9,531	85.9%	1.5%	1,562	14.I%	$999	1.1%
Humboldt	$344,800	62,137	53,729	86.5%	1.0%	8,408	13.5%	SI,079	2.9%
Lake	S260,600	34,309	26,307	76.7%	1.7%	8,002	23.3%	$1,116	2.8%
Mendocino	$417,100	41 ,276	34,183	82.8%	1.4%	7,093	17.2%	SI,176	2.3%
Region-Wide	$315,050	148,815	123,750	82.9%	1.4%	25,065	17%	$1,093	2.3%
California	$573,200	14.34 M	13.22M	92.2%	1.0%	1.11M	7.8%	$1,698	3.9%

Source: Lightcast™ (2022)

Exacerbating the housing crisis, wildfires have destroyed thousands of structures throughout the region, particularly in Lake (which lost 60% of its housing stock in the 2015/16 fire season) and Mendocino Counties and in Tribal Lands. Additional, widespread effects of these wildfires are increases in home insurance costs and availability, increasing the total housing costs of both homeowners and of renters, who will ultimately shoulder much or all of this additional cost through higher rents. Since 2018, there has been a sharp increase in the number of residents in Lake and Mendocino counties forced into higher cost, last-resort FAIR plans (see Figure 3.5).[33]

Figure 3.5 Number of New and Renewed Fair Access to Insurance Requirement (FAIR) Plan Policies in Lake County by Year



Note. Data sourced from the California Department of Insurance.

Also lacking are sufficient numbers of skilled trades workers to construct the number of housing units needed to satisfy demand or replace those lost to wildfires. However, this lack of skilled trades workers also presents an opportunity to develop high-wage jobs that meet a genuine economic need for the region. In particular, Employment Development Department (EDD) projections show carpentry to be one of the most in-demand occupations in the region through 2030.

[33] Fair Access to Insurance Requirement (FAIR) plans are state-mandated property insurance plans for individuals and businesses unable to secure insurance in the standard, voluntary market(Fair Access to Insurance Requirements [FAIR] Plans, n.d.).

There are limited sites available in the region suitable for housing development, a statewide challenge. In 2019, Governor Newsom took several actions to make state and local public lands available for affordable housing development, including the following:

- Making Executive Order N-06-19 making excess state land available for affordable housing .
- Connecting affordable-housing developers to local surplus land and strengthening enforcement of the Surplus Lands Act (AB 1486, Ting, 2019).
- Requiring cities and counties to inventory and report surplus and excess local public lands for inclusion in a statewide inventory (AB 1255, Robert Rivas, 2019).[34]

Only two counties in the region have sites identified in the inventory—Humboldt County (14 sites) and Lake County (27 sites). The current status of housing development on these sites is unknown.

Digital Access and Broadband Development

Compared to the rest of California, significantly more households in the Redwood Region lack internet access in the home (see Figure 3.6). In some communities, particularly those in the most remote areas of the region, about one-third of households lack access to home internet. Across the U.S., only 65% of Tribal populations have broadband access compared to 98 percent (both Tribal and non-Tribal populations) in urban areas (UCLA, 2022). Broadband services can be critical to the health, well-being, and economic development of communities, and so a lack of equitable access presents a serious human rights issue. Of particular importance for all communities in the Redwood Region is access to telehealth services, a much more time- and cost-effective way for people living in remote areas to consult a healthcare professional, especially in non-emergent circumstances.

Broadband is a necessary infrastructure component for the region's regions to utilize telehealth and capitalize on other emerging opportunities to build health and wealth. Figure 3.6 below displays the region's broadband access compared to that of the rest of the state. Efforts to improve the region's broadband infrastructure are already underway, however. Phase 1 of the state's Broadband Middle-Mile Network will add 581 miles to the network that are within the Redwood Region, and Phase 2 will add an additional 110 miles to the region.

Case Study

Tribal Broadband Efforts Case Study
Hoopa Valley, CA: Connecting a Community Through Resilience and Innovation

In the heart of California's Redwood Region, the Hoopa Valley Tribe has been working tirelessly to bridge the digital divide and empower its community through improved internet access. Despite the challenges posed by the rugged terrain and limited infrastructure, the Tribe has shown remarkable resilience and innovation in their pursuit of connectivity.

The launch of Acorn Wireless in 2021, a Tribally-owned and operated internet service, marked a significant milestone in the Tribe's journey towards digital equity. Under the leadership of Linnea

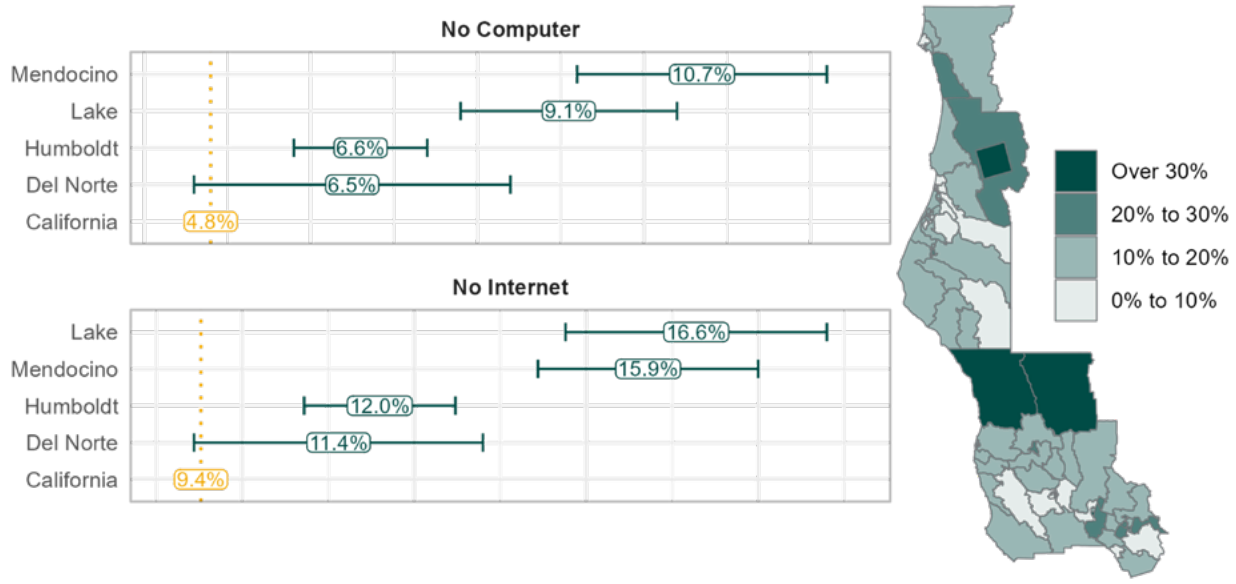
[34] For more information on State policies with respect to housing site development see https://www.hcd.ca.gov/planning-and-community-development/public-lands-affordable-housing-development

Jackson, general manager of the Hoopa Valley Public Utilities District, the service has already made a tangible impact on the lives of many residents. From tribal elders like Marcellene Norton, who can now attend online council meetings and share important information with the community via Facebook, to youth leaders like Danielle Frank, who rely on internet access to coordinate climate action and salmon-restoration efforts, Acorn Wireless has opened up new opportunities for civic engagement and community development.

However, the Hoopa Valley Tribe's aspirations extend far beyond the current reach of Acorn Wireless. With the recent influx of $65 million in federal funding, the tribe is set to embark on a transformative expansion of their internet infrastructure. The introduction of fiber optic cables directly to homes, coupled with the expansion of the wireless network, will bring reliable, high-speed internet to 1,000 households, 64 businesses, and 19 community institutions. Moreover, the Tribe's commitment to digital literacy and education, exemplified by their participation in the Digital Navigator Corps program, ensures that all members of the community will be equipped with the skills and knowledge to fully harness the power of connectivity. As the Hoopa Valley Tribe continues to navigate the challenges and opportunities of the digital age, their story serves as an inspiring example of how communities can come together to build a more connected, resilient, and empowered future.[35]

[35] REF

Figure 3.6 Householders Without Internet Access (2017-2021)



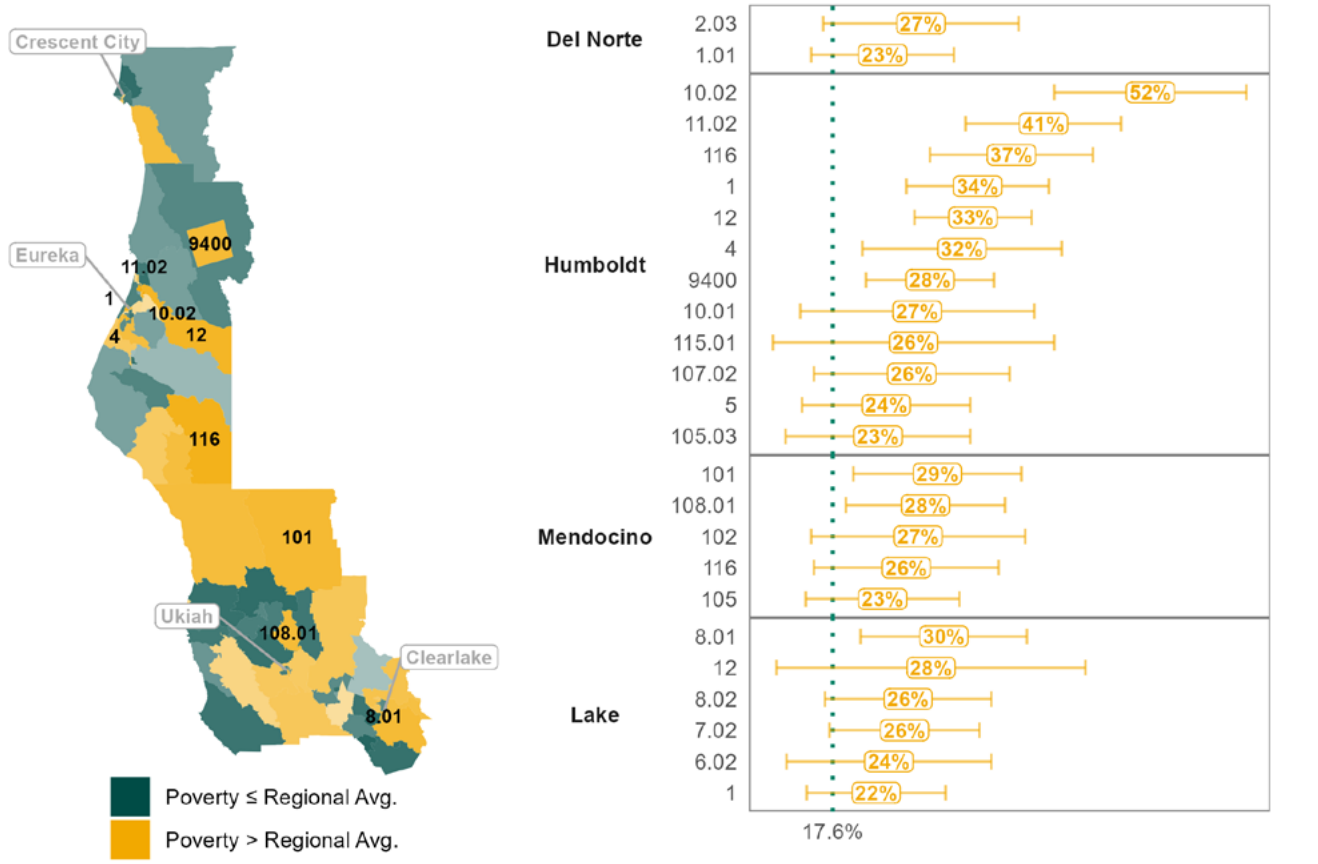
Note. Data sourced from the American Community Survey (ACS). Map indicates percentage of households lacking any form of internet subscription.

Unequal Development in the Region

While California Jobs First criteria characterize the entire region as disinvested , patterns of inequity and uneven development are observable across the region, driven by a multitude of factors including disenfranchisement and marginalization of communities of color; deep rurality and barriers to accessing services; decline in unionized industries; lack of traded sectors; flight of skilled labor to higher wage, more urban areas south of the region; a legacy of natural disasters (e.g., the low-income coastal areas); and ever-increasing climatic risks (i.e., the disinvested inland areas); and departure of land-based industries and a subsequent lack of remediation of brownfield sites created by those former industries. There are, however, positive departures from the experiences of the rest of rural and inland California. The unemployment rate in the Redwood Region more closely mirrors that of the nation at large, as does educational attainment. Despite this, the proportion of families struggling under the burden of a high cost of living and comparably low wages is higher than in the rest of coastal California (Little Hoover Commission, 2022).

Figures 3.7 and 3.8 present key indicators of economic well-being, allowing comparison to state and regional averages: household income, poverty rates, and earnings by census tract. Consistent across these analyses is the role rurality has played in historic disinvestment. The areas of the region most affected are a swath of northern Humboldt County extending from the Humboldt Bay inland, the parts of Del Norte County south of Crescent City, Southern Humboldt, and Northern Mendocino County through eastern Lake County, and these comprise potential areas of new investment for RRRISE.

Figure 3.7 Intraregional Variation in Poverty Rates (2018-2022)



Note. Data sourced from the American Community Survey. Tracts labeled on the left panel have a poverty rate significantly[36] higher than the regional average (17.6%). The right panel displays the top 25 highest poverty rate tracts in the region. Horizontal bars represent the 95% confidence intervals, and the dotted vertical line represents the regional average.[37]

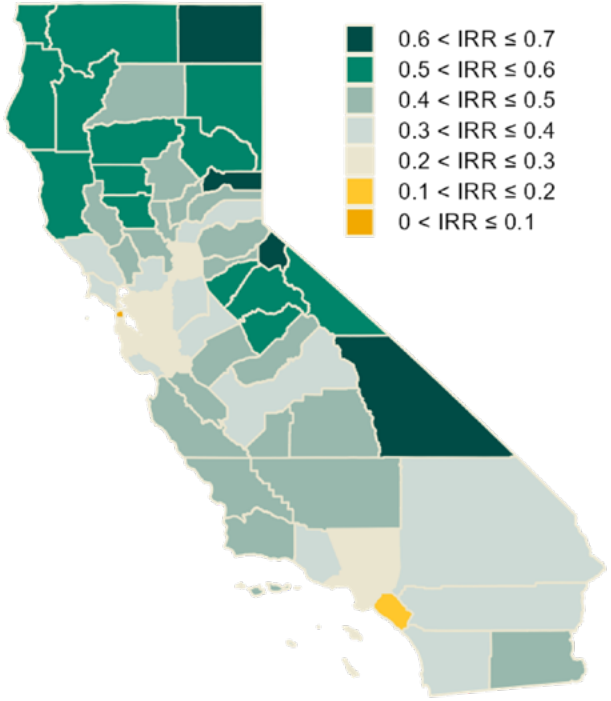
While deep rurality and isolation is a root cause of many economic challenges, it is also a source of regional strength due to its role in the land-based sectors of forestry, agriculture, and tourism and recreation. Figure 3.8 displays the exceptionally rural areas of the region. The region has only 14 incorporated municipalities, a paucity that has implications for economic development (see the SWOT analysis in Chapter 8). While the presence of renowned conservation areas are a boon to the region's tourism and recreation sector, counties like Del Norte must also contend with a smaller tax base as a result of having more land under conservation status.

[36] This only accounts for the margin of error on tract level data. A confidence interval for the aggregated regional average cannot be generated.

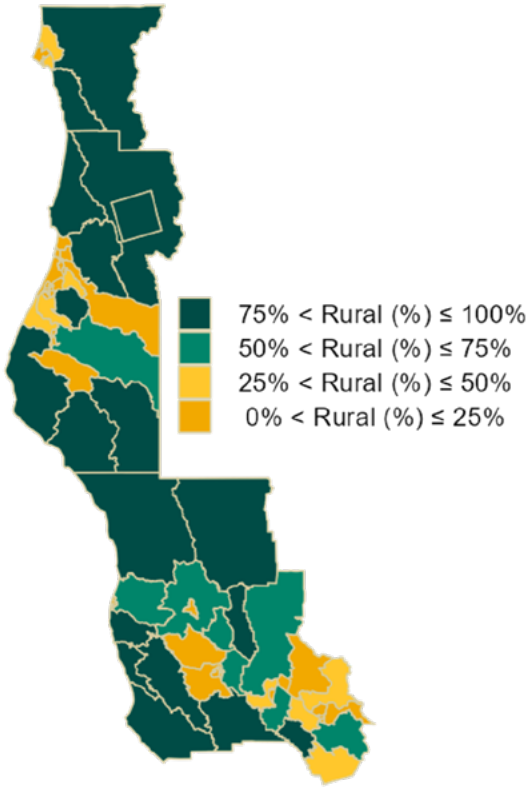
[37] The regional average was calculated by taking the population-weighted average of the four counties comprising the Redwood Region.

Figure 3.8 Measures of Rurality (2010)

Index of Relative Rurality (IRR)



Census Population Designated "Rural"



Note. Left Panel: IRR scale ranges from 1 (most rural) to 0 (least rural). Data sourced from Kim and Waldorf's 2018 data set titled "The Index of Relative Rurality (IRR): US County Data for 2000 and 2010." Right Panel: Data sourced from 2010 Decennial Census variables P002001 - P002006.

Diverse Communities and Economic Opportunity

Inequality in the Redwood Region may appear less pronounced than in the rest of California, as evidenced by a lower Gini coefficient (see Figure. 3.9).[38] However, this seemingly positive indicator is not a consequence of a thriving middle class but rather a reflection of the failure of higher wage industries to establish a strong presence in the area. The resulting lack of high-paying jobs has had a particularly detrimental impact on communities of color, including Black, Latinx, and Indigenous residents, who face significant disparities in income, employment, and overall economic well-being.

According to the Equity Atlas (2024), which analyzed Redwood Region data from the American Community Survey (ACS) and the Integrated Public Use Microdata Series (IPUMS), people of color are more likely to reside in high-poverty census tracts compared to their white counterparts. They are also more likely to earn less than a living wage, defined as $15 per hour, and are overrepresented in low-wage occupations and sectors. Analysis of the data revealed that people of color in the region earn less than their white peers at every education level ("California Jobs First: Equity Indicators for the Redwood Coast Region," 2024), indicating that factors beyond educational attainment contribute to these income disparities.

[38] Ranging from 0 to 1, the Gini coefficient is a measure of income or wealth inequality within a population. Values close to 0 indicate less income inequality or less dispersion in the distribution of wealth within an area, whereas values closer to 1 indicate greater inequality in wealth.

The factors driving these disparities stem from a multitude of causes, including disenfranchisement and marginalization of communities of color, deep rurality and barriers to accessing services, the decline in unionized industries, lack of traded sectors, flight of skilled labor to higher wage urban areas, and the legacy of natural disasters and increasing climate-associated risks. These have contributed to uneven development across the region, with areas like northern Humboldt, Del Norte south of Crescent City, Southern Humboldt, Northern Mendocino County, and eastern Lake County experiencing particularly high levels of disinvestment.

Moreover, high poverty rates, unemployment, and negative health outcomes are prevalent in many tribal communities in the Redwood Region. For instance, poverty rates on the reservations of the Yurok, Hoopa Valley, and Round Valley Tribes reach 40%, while unemployment rates can go as high as 80% during the winter months (Abinanti et al., 2020). These social problems can be traced to the early days of colonization, which disrupted and destroyed tribal economies while stealing Tribal lands. Poverty and related social issues are a fundamental backdrop of the Missing and Murdered Indigenous Women, Girls, and Two-Spirit People (MMIWG2) crisis, a pattern observed in other regions as well. Tribal communities in the Redwood Region also face continued threats to their safety and well-being in the context of the crisis involving MMIWG2—with California having the fifth highest incidence in the United States (Abinanti et al., 2020).

Figure 3.9 Disaggregated Poverty Rates (2018-2022)

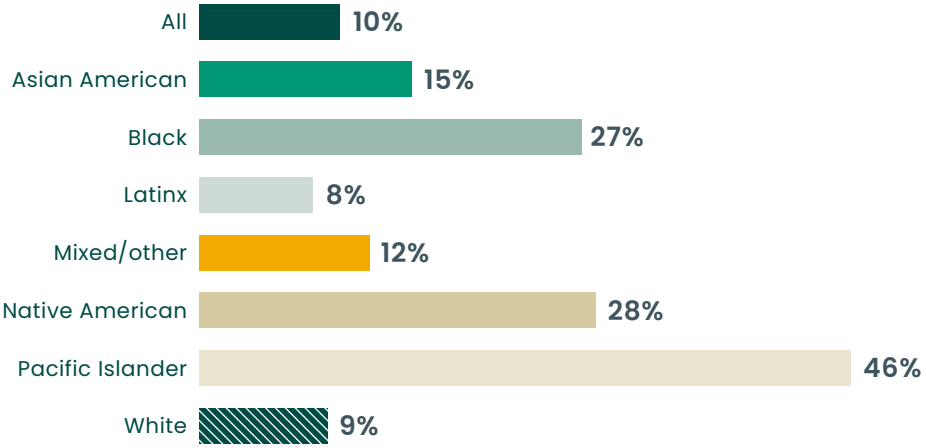
	CA	Humboldt	Mendocino	Lake	Del Norte	
Black	19%	41%	33%	32%	50%	Race/Ethnicity
AIAN	16%	29%	24%	43%	17%	
Hispanic or Latino	15%	24%	22%	17%	20%	
Two or more races	12%	22%	21%	19%	19%	
Asian	10%	34%	15%	9%	~14%	
White, not Hispanic or Latino	9%	18%	13%	15%	12%	
Female	13%	21%	17%	18%	16%	Sex
Male	11%	19%	16%	15%	13%	
Under 5 years	16%	20%	28%	20%	16%	Age Range
Under 18 years	16%	20%	21%	21%	17%	
18 to 34 years	13%	30%	19%	18%	16%	
5 to 17 years	16%	21%	18%	21%	18%	
35 to 64 years	10%	17%	14%	18%	15%	
65 years and over	11%	12%	13%	10%	9%	
Less than high school	20%	34%	25%	26%	17%	Educational Attainment (25+)
High school or equivalent	13%	20%	18%	20%	16%	
Some college	10%	17%	13%	14%	11%	
BA or higher	5%	9%	8%	5%	8%	
Unemployed	24%	34%	33%	30%	11%	Work (16+)
Did not work	21%	29%	25%	24%	24%	
Worked part-time	13%	25%	14%	16%	11%	
Worked full-time	2%	4%	3%	2%	2%	

> 3X CA Avg. > 2X CA Avg. > CA Avg. ≤ CA Avg.

Note. Data sourced from the American Community Survey (ACS). (~) denotes statistically unstable estimates.15

Poverty rates for individuals of color within the region are two or sometimes even three times the California average (see Figure 3.10). Labor force participation is also a key factor that seems to impact individual well-being in the region to a greater degree than in the rest of the state. Under local economic conditions, workers working part-time are especially vulnerable.

Figure 3.10 Ethnic Composition of High Poverty Areas, from PolicyLink's Equity Atlas



Source: National Equity Atlas analysis of 2020 American Community Survey 5-year Summary File. Universe includes all people.

Note: Data represent the percentage of the population living in high-priority neighborhoods, defined as census tracts with a poverty rate of 30 percent or higher. Data represent a 2016 through 2020 average.

As can be seen in Figure 3.10, many of the areas of concentrated poverty are distant from employment and educational opportunities. These are Crescent City, the Humboldt Bay area, Ukiah, and town centers in Lake County and along the Mendocino Coast. Analysis of high-poverty census tracts in the region revealed the extent of the disparity, with 91% of residents identifying as an ethnicity other than white and so contrasting with the overall population, which is closer to 70% Caucasian.

Industry Composition and Trends

The two largest industries by employment numbers are administrative government and health care and social assistance. These two sectors employ nearly one-third of the Redwood Region's workers, and both represent a much larger proportion of regional employment than of the state averages. Both industries pay higher than average wages and employ much larger proportions of the region's workforce compared to state-level trends. Except for construction trades, no other sectors have these qualities, highlighting the importance of government employment in supporting the region's wages.

Moreover, other high-wage industries are sharply underrepresented (in terms of employment) in the Redwood Region. Almost all occupations across industries have substantial wage gaps in comparison to state averages, with the starkest gaps among high-skilled workers and occupations. Depressed wages are a problem in most of the region's industries and occupations. Industry and workforce dynamics are discussed in greater depth in Chapters 6 and 7.

Major Employers and Economic Drivers

The vast majority (72%) of businesses in the region are small, with fewer than employees (See Figure 3.11). Notably, the region's top employers tend to be government administrative services or ones in related areas and to be focused primarily on education and health. The Region's Tribal nations and their enterprises are major economic forces within the region. The remainder of its its top employers are in the key sectors of construction trades, agriculture, and tourism and recreation, which are discussed more fully later in this report. Figure 3.11 and 3.12 provide information on the major employers in the Region, by sales and number of employees:

Figure 3.11 Number of Businesses by Size Category, Redwood Region Counties (Third Quarter, 2022)

Counties	Number and Percent of Businesses Categorized by Size (Number of Employees)											
	Total	%	0-4	%	5-9	%	10-19	%	20-49	%	50-99	%
Del Norte	784	5%	505	5%	94	6%	86	7%	59	7%	29	12%
Humboldt	6,217	43%	4,280	41%	808	48%	597	49%	380	48%	101	43%
Lake	3,156	22%	2,596	25%	245	15%	158	13%	105	13%	33	14%
Mendocino	4,268	30%	3,004	29%	542	32%	369	30%	244	31%	74	31%
Totals	14,425		10,385		1,689		1,210		788		237	
% of Region			72.0%		11.7%		8.4%		5.5%		1.6%	

Source: https://labormarketinfo.edd.ca.gov/LMID/Size_of_Business_Data.html/. Firms with more than 100 employees not included.

Figure 3.12 Major Employers in the Redwood Region

Top 10 Employers, by Number of Employees	Employees (Single Site)	NAICS 2022 Code	NAICS 2022 Description
Sun Valley Floral Group, LLC	750	339999	All other Miscellaneous Manufacturing
Blue Lake Casino	370	321150	American Indian and Alaska Native Tribal Governments
Humboldt County Office of Education	370	611110	Elementary and Secondary Schools
Shannon Ranches, Inc.	250	541611	Administrative Management and General Management Consulting Services
Harwood Products	230	321918	Other Millwork (including Flooring)
Robinson Rancheria Citizens Council	200	921140	Executive and Legislative Offices, Combined
Little River Inn, Inc.	176	721191	Bed-and-Breakfast Inns
Running Creek Casino	170	721120	Casino Hotels
The Eureka Hotel Company	150	721110	Hotels (except Casino Hotels) and Motels
Kokatat, Inc.	150	315250	Cut and Sew Apparel Manufacturing (except Contractors)

Source: Dunn & Bradstreet, 2023

Top 10 Employers, by Sales	Sales (USD)	NAICS 2022 Code	NAICS 2022 Description
Adventist Health Clearlake Hospital	$143,237,060	622110	General Medical and Surgical Hospitals
Family Tree Service, Inc.	$73,566,132	561730	Landscaping Services
Dunco Builders	$64,838,943	236116	New Multifamily Housing Construction
Adventist Health Mendocino Coast	$56,567,120	622110	General Medical ans Surgical Hospitals
Humboldt County Office of Education	$53,835,949	611110	Elementary and Secondary Schools
Sun Valley Floral Group, LLC	$46,942,200	339999	All Other Miscellaneous Manufacturing
Lake County Tribal Health Consortium, Inc.	$39,633,663	621210	Offices of Dentists
Humboldt State University Sponsored Programs Foundation	$36,742,966	611710	Educational Support Services
Northwood Auto Plaza, Inc.	$33,200,943	441110	New Car Dealers
Harwood Products	$24,414,322	321918	Other Millwork (including Flooring)

Source: Dunn & Bradstreet, 2023

Economic Shocks and Shifts—Sources of Disparity and of Resilience

The region has experienced major shocks and shifts over the past decades from natural disasters (droughts, landslides, flooding, earthquakes, catastrophic wildfires, and the 2011 Fukushima-related tsunami), economic disruptions (the 2008 recession), policy changes (e.g., Proposition 64, cannabis legalization), and events like the COVID-19 pandemic. These are discussed below.

Natural Disasters

Among the natural disasters affecting the region, wildfires tend to have the largest impact. The 2018 Mendocino Complex Fire burned 459,123 acres, destroyed 280 structures, and caused over $267 million in damages (CAL FIRE, n.d.), and the 2020 August Complex Fire, which affected Mendocino, Humboldt, and Lake counties, burned over 1 million acres and destroyed 935 structures (CAL FIRE, n.d.-b).

The 2008 Recession

This was accompanied by 1) a significant decline in home prices and a slowdown in new housing construction; 2) job losses in construction-related industries such as lumber and building materials; 3) a sharp rise in unemployment rates, which remained high for several years after the recession ended; and 4) a decline in tax revenues leading to budget shortfalls and cuts in public services.

Policy Changes

Cannabis legalization significantly affected the economies of Humboldt and Mendocino Counties as a result of Proposition 64.[39] This decline is indicative of the challenges faced by the local cannabis

[39] Humboldt County, once the epicenter of cannabis cultivation in California's renowned Emerald Triangle, has seen a sizable decrease in cannabis business applications since 2018. In April 2024, the county had 1,068 legal marijuana farms, with an additional 400 applications in the pipeline and 657 that have since been denied. The number of new applications submitted in the past two years, however, plummeted to five, contrasting sharply with the approximately 2,000 applications received in 2016.

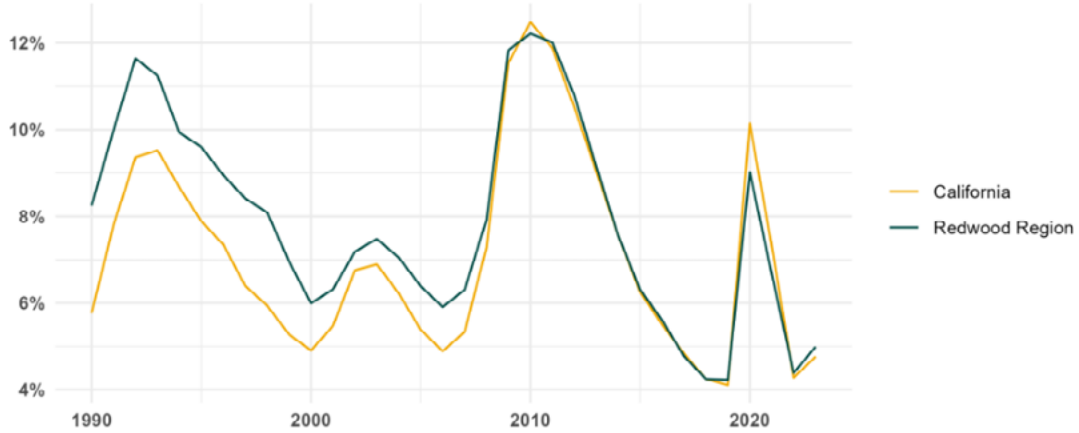
industry, with hundreds of farmers grappling with falling wholesale prices and overproduction, leading many to abandon the (legal) cultivation and marketing altogether (Schroyer, 2024). See the Industry Cluster analysis in Chapter 6.

COVID-19

The pandemic has also had a significant impact on the region, as the closure of businesses and the decline in the tourism and service sectors (among others) also led to job losses and economic hardship. In the four counties making up the Redwood Region, total employment went from 132,970 in February 2020 to 113,120 in April 2020 (Labor Market Information, EDD), a 14.9 percent drop.[40]

Except for influxes of capital, economic disruptions negatively affect employment in most regions of the U.S., and the Redwood Region is no exception. For example, Figures 3.13 and 3.14 below clearly show the impact of the COVID-19 pandemic on regional employment, which dropped almost 15% in just a few months.

Figure 3.13 Redwood Region Unemployment Rate (1990-2023)



Note. Data sourced from the Employment Development Department.

Figure 3.14 Change in Total Employment by County (February 2020-April 2020)

	Humboldt	Lake	Mendocino	Del Norte	Total
	(000)	(000)	(000)	(000)	(000)
February 2020	59.8	27.5	36.7	9.0	133.0
April 2020	50.4	23.7	31.0	8.0	113.1
Change	9.4	3.8	5.7	1.0	19.9
% Change	15.7%	13.7%	15.4%	11.5%	14.9%

[40] Nationally, the number of active business owners in the U.S. dropped by 3.3 million (22%) between February and April 2020, with losses across nearly all industries. The pandemic had a disproportionate impact on minority-owned businesses, with African-American businesses experiencing a 41% drop in activity, Latinx businesses falling by 32%, Asian businesses dropping by 26%, and immigrant-owned businesses declining by 36%. Female-owned businesses also saw a significant 25% drop in activity (Fairlie, R. W. (2020).

Effects of Disruptions

Disinvested communities in California's Redwood Region are particularly vulnerable to economic disruptions, in part due to significant health disparities and the behavioral risk factors prevalent among them (e.g., elevated rates of tobacco use, substance abuse, and mental health challenges). Such disparities can hinder a region's ability to adapt and recover from economic adversities, particularly when accompanied by inadequate healthcare systems, a shortage of mental health providers, and resulting treatment needs that go unmet, further exacerbating the Redwood Region's vulnerability to economic disruptions (see the Public Health analysis).

Case Study

The Role of Cultural Institutions in Response and Recovery: The Middletown Art Center

The Middletown Art Center (MAC) in Lake County, California, has emerged as a beacon of resilience and community support in the face of repeated wildfire disasters. The MAC has assumed a crucial role in helping the region recover from the devastating effects of the Valley Fire in 2015 and from subsequent wildfires. Despite personal losses suffered by many of the MAC's board members and artists, it has remained a strong presence in the county. After the Valley Fire, the MAC provided free art classes, workshops, and events aimed at helping residents process their emotions and find solace in creative expression. The MAC has also partnered with other organizations to offer yoga and meditation classes, PTSD workshops, and insurance assistance, becoming a hub for community restoration and development.

The MAC's impact extends throughout the entire region, and it has become a gathering place for various community groups and events, such as the Valley Fire Phoenix Rising initiative, whose focus is rebuilding through affordable housing, green design, and local micro-businesses. Supporting the Center's growth and initiatives have been such local organizations as the Lake Area Rotary Club Fire Relief Fund and the #LakeCountyRising Valley Fire Relief Fund. As the MAC continues to expand its reach and programming, it serves as a powerful example of how arts and culture can play a vital role in economic development and community resilience in the face of adversity.[41]

The pandemic, for example, has been found associated with increased risk factors for adverse childhood experiences (ACEs) and toxic stress, leading to loss of family members, social isolation, economic decline, family stressors, mental health issues, substance abuse, and work and school disruptions to work and school. These challenges have further compounded the economic and social difficulties faced by families already struggling with poverty, food insecurity, housing instability, and limited access to quality health care, education, and other resources (Humboldt County Community Health Improvement Plan 2022-2027, DHHS, 2023). The region's housing shortage and affordability crisis further compound the effects of these vulnerabilities, (California Department of Housing and Community Development, 2018). California's Housing Future: Challenges and Opportunities, Final Statewide Housing Assessment 2025), increasing the likelihood of outmigration to more affordable regions and enhancing the risk of displacement from eviction and/or foreclosure.

While beneficial for economic development and job creation, economic opportunities of sufficient scale (like offshore wind) have the potential to place additional burdens on already limited healthcare options and housing stock, critical infrastructure, and available workforce (e.g., construction) and could cause increased displacement and unintended, ripple effects (e.g., higher cost of living, workforce supply for key industries, etc.) throughout the region, disproportionately impacting disinvested communities. Humboldt and Del Norte County interest holders have expressed concerns about the potential worsening of the housing crisis due to the development of offshore wind projects in the region. Residents in these counties already face significant housing burdens, spending approximately 39% and 38% of their income on housing, respectively. While the job opportunities brought by offshore wind development could provide economic benefits to the region, the anticipated influx of workers is likely to put an additional strain on the already stressed housing market and community services across Humboldt, Del Norte, and neighboring counties. Furthermore, the increased activities associated with offshore wind could also place pressure on essential community resources, including healthcare services, transportation infrastructure, wastewater systems, and other aging public infrastructure (HCD, 2018; HCDHSS, 2022[42]; SERC, 2022[43]).

[41] Source: Karlamangla, 2024; Fire Adapted Communities Learning Network, 2021

[42] Department of Housing and Community Development. (February 2018). California's Housing Future: Challenges and Opportunities, Final Statewide Housing Assessment 2025; https://www.hcd.ca.gov/policy-research/plansreports/docs/sha_final_combined.pdf; Humboldt County Department of Health & Human Services, Public Health. (2018). 2018 Humboldt County Community Health Assessment; https://humboldtgov.org/DocumentCenter/View/71701/2018-Community-Health-Assessment-pdf.

[43] Jacobson, A., J. Zoellick, R. Anilkumar, Z. Alva, C. Chamberlin, A. Cooperman, G. Chapman, A. Daneshpooy, P. Duffy, W. Musial, A. Mustafa, A. Younes. (2022). Transmission Alternatives for California North Coast Offshore Wind, Volume 1: Executive Summary. Cal Poly Humboldt, Arcata, CA: Schatz Energy Research Center. schatzcenter.org/publications/

The region's existing electricity transmission and distribution, water treatment, broadband, and other critical infrastructure weaknesses and gaps exacerbate existing economic inequities, including lack of access to housing and healthcare and decreased openings for jobs having upward mobility potential and paying a "livable" wage. Potential disruptions to food supply chains and job losses lead to increased food insecurity, while limited access to technology and crucial information, services, and remote work opportunities (in both business-as-usual and disruptive times) also increases food and other forms of insecurity, widening the opportunity gap even further (North Coast Resource Partnership, 2018).

Economic Development Opportunities

In addition to the threats they pose, economic disruptions can present new economic development opportunities that help communities reimagine their priorities and discover public sector activities that they may have previously ignored, including: 1) the development of trust in and the creation of new partnerships and relationships with disinvested populations that have historically been excluded from policy and planning processes and 2) the development of new priorities and ideas to improve equitable access to public resources.

Case Study

Lessons in Resilience, Blue Lake Rancheria's Toma Resilience Campus

The Blue Lake Rancheria's (BLR) Toma Resilience Campus, a 15,000 square-foot facility designed to serve as a business incubator and workforce development hub (currently under construction as of Summer 2024), is designed to address the concerns of infrastructure shortages and promote regional resilience in the face of economic and environmental challenges. As a facility with a regional focus, BLR anticipates that the facility's programming will impact thousands of regional residents.

The Resilience Business Incubator (RBI), housed within the Toma, will support entrepreneurs from underrepresented groups and provide workforce development opportunities for underserved populations across the Redwood Region. By offering entrepreneurship courses, startup assistance, skills training and certifications, job placement assistance, and ongoing coordination with regional economic, education, workforce, and community-based organizations, the RBI will foster a regional economy with increased resilience and sustainability.

The facility features a wide range of amenities in addition to the business incubator, including office space, training facilities, a digital design and fabrication lab, and a commercial teaching kitchen. These facilities enable the campus to focus on developing entrepreneurial and adaptive workforce skills that address current and emerging hiring needs in sustainable agriculture, smart technology, clean energy, light manufacturing, disaster preparedness, and production of other resilience-related products and services. By fostering innovation and collaboration in these critical areas, the Toma is designed to strengthen the region's ability to adapt and thrive in the face of disruption and change.

Furthermore, the Toma Resilience Campus will serve as an integral component of a regional innovation ecosystem developed in partnership with Cal Poly Humboldt, College of the

Redwoods, and multiple partners from across the region, state, and nation. This collaborative approach will ensure that the campus can leverage the expertise and resources of its partners to create a comprehensive support system for regional residents, entrepreneurs and businesses, and communities (Tribal and non-Tribal), ultimately increasing the resilience and sustainability of the Redwood Region's economy.[44]

California Energy Commission

CEDS documents from across the region highlight specific opportunities that generally fall within three categories: industries, infrastructure, and skills, and the following summary provides a high-level overview of these strategies appearing in two or more of the plans.

Industry Strategies

The primary focus of industry strategies is to diversify local industries and foster the growth of industries that can provide living-wage jobs. These can be achieved through several key initiatives:

[44] Source: BLR Business Incubator Feasibility Study, 2018, Agnew Beck Consultants

- Developing niche brands of tourism, such as culinary, cultural, eco-, and experiential tourism, to attract a diverse range of visitors and create new job opportunities.
- Expanding the cultivation, processing, distribution, and sales of specialty foods to bolster the local economy and create additional employment options.
- Supporting sustainable agricultural, forestry, and fishery products, while developing new forest industry, biomass, and timber products.
- Expanding programs that apply traditional ecological knowledge and that preserve aquatic resources, traditional diets, and wildfire management.
- Investing in fire mitigation and safety practices to protect local communities and businesses.
- Growing technology-based firms across industries, increasing and supporting light manufacturing, fostering the growth of healthcare enterprises, and investing in the development of renewable energy.

Infrastructure Strategies

Ensuring that suppliers, residents, and visitors can easily access resources and opportunities throughout the region is the primary goal of infrastructure strategies. Key components of this objective include:

- Investing in harbor/port infrastructure to facilitate the efficient movement of goods and people.
- Developing and preserving water resources, including storage, management, and wastewater treatment, to support local industries and communities.
- Investing in airports and expanding and constructing emergency routes to improve connectivity and safety within the region.
- Expanding highways and roads to accommodate supply chain routes, commuters, and visitors.
- Developing regional multi-modal and active transit options, as well as enhancing public transportation options, to facilitate access to employment opportunities and services.
- Delivering broadband to rural communities to ensure that all residents have access to online resources and opportunities.
- Establishing community hubs that provide such community benefits as education, work, recreation, and disaster preparedness.
- Increasing the availability of ADUs, workforce housing, and affordable housing by addressing permitting and zoning issues.

Skills Strategies

Ensuring that businesses and residents are prepared and resourced to participate in the local economy is the primary focus of skills strategies. Key initiatives in this area include:

- Upskilling the workforce in the skills needed for the blue, green, and creative economies.
- Investing in ocean/marine science education and other high-demand career paths to ensure that the local workforce is well-prepared for emerging job opportunities.
- Training on cooperative development and ownership to empower local residents to take a more active role in the local economy.
- Supporting business entrepreneurship and fostering a thriving small business environment to contribute to economic growth and job creation.
- Developing research and lab space to grow emerging industries and attract new businesses.
- Increasing childcare affordability and availability to enable parents to participate in the workforce.
- Developing quality messaging, outreach, and marketing to promote local businesses and attract new investment to the region.

Introducing Key Sectors

The RRRISE Convening team worked closely with the Collaborative to identify key sectors to prioritize in the region's economic development and diversification strategies. The process used to do so was as follows:

1. Review previous Industry Cluster analyses, such as the EDD's "Targets of Opportunity" report (November 2021), exploring industry clusters in Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity counties. The RRRISE convening team consulted the authors of that report to understand the methodology and any challenges that arose during report preparation.
2. Receive qualitative input from the Collaborative during listening sessions during which participants identified opportunities and threats on the horizon from the perspective of key drivers in the region and industry strengths. The ATLAS.ti software program was used to identify themes and nodes of regional interest in different industry sectors.
3. Map and survey partners to identify key industries by the "people power" needed to develop them. Collaborative members (107 in total) responded to a survey querying them as to the key issues needed for economic development. What emerged were 10 priority areas that received strong agreement and corresponded with previous assessments.
4. Analyze publicly available quantitative data to obtain the findings reported in Chapter 6 .

The result was the ultimate articulation of key RRRISE focal areas, which are as follows:

Priority Sectors	
Cluster	Related Industries
Arts, Culture, and Tourism	Performing Arts; Museum, Historical Sites, etc; Scenic and Sightseeing Transportation; Food Services and Drinking Places; Accommodation; Transit and Transportation; Motion Picture and Sound Recording; Amusement, Gambling, and Recreation.
Health and Caregiving	Hospitals; Social Assistance; Ambulatory Health Care Services; Nursery and Residential Care Facilities; Health and Personal Care Stores.
Renewable and Resilient Energy	Construction; Repair and Maintenance; Utilities.
Working Lands and Blue Economy	Leather and Allied Products Manufacturing; Beverage Manufacturing, Fishing, Hunting Trapping; Animal Production and Aquaculture; Food Manufacturing; Textile Mills; Crop Production; Wood Products Manufacturing; Support Activities for Agriculture; Furniture and Related Products Manufacturing; Forestry and Logging; Building Materials and Garden Equipment.
Cross-Cutting Issues and Sector Enablers	
Housing Broadband Entrepreneurship Education and Training Health and Caregiving[45]	

Workforce development is so central to the California Jobs First initiative that it is mainstreamed throughout Collaborative consideration of these sectors and enablers. This report references the four priority sectors that drive the sector strategies developed and reported on in *Regional Plan Part 2*.

[45] In Regional Plan Part 2, development strategies for the health and caregiving sectors include both sector growth strategies and expanding access and addressing social determinants of health.

Chapter 4

Climate Analysis

This chapter provides an overview of key climate and environmental issues in the region and the related impacts on people and communities. Included are insights into anticipated climate impacts and potential sources of resilience. The analyses below: 1) review the sources of environmental pollutants and contaminants; 2) assess the burden of these pollutants and contaminants on communities throughout the region; and 3) describe how existing environmental inequities intersect with the projected impacts of climate change. Highlighted throughout this chapter are the drivers and impacts of the two major climate-related risks the area faces: sea level rise on the coast and wildfire in inland areas. Also addressed are environmental issues related to current and former industries including energy generation, forestry, and agricultural production. The chapter concludes with a discussion of environmental activism and leadership in the region.

Key Takeaways

- **Critical environmental risk factors** across the region include the potential for ground- or surface-water contamination, wildfires, and lead exposure to young children. While the region enjoys better air quality than the rest of the state, its largest industrial emitters are located in low-income areas.
- **Sea level rise** is a critical climate impact for the region, which has the longest coastline of any California Jobs First region. Humboldt Bay is one of the highest risk areas on the California coast and yet is slated for more redevelopment activities elsewhere in the region, at the time of writing.
- **Wildfire** is a major driver of economic losses and has been a public health disaster for inland communities. Moreover, communities with incomes well below the state median feel its worst impacts. In recent years, Lake County, in particular, has suffered the worst of these, but Del Norte and Humboldt have the highest risk projections in the region.Wildfire thus constitutes a critical risk to industries in the working lands sector.
- **Investment in infrastructure** for water delivery and waste disposal is a crucial environmental justice issue for the region.
- Jurisdictions in the region have **significant data gaps** concerning GHG emissions (e.g., only one outdated GHG inventory was available for the region). Jurisdictions should prioritize creating GHG emissions inventories to better direct clean energy projects and other emissions-reduction efforts.

Key Metrics[46]

- **Percent of waterways impaired and number of groundwater threats present in the region:** Track the extent of water pollution and groundwater contamination to prioritize areas for remediation and protection.
- **Dollars invested in water infrastructure improvements in disinvested communities and those hosting waste sites:** Monitor investments in water systems to ensure equitable access to safe, clean water and measure progress in addressing disparities.
- **Number and scale of climate adaptation initiatives along the coast, especially in Crescent City, Humboldt Bay, and the Mendocino Coast:** Assess the region's preparedness for sea-level rise and other coastal impacts by tracking the implementation of adaptation measures.
- **Greenhouse gas emissions by sector and per capita:** Measure the region's contribution to climate change and identify high-emitting sectors for targeted emissions-reduction strategies.

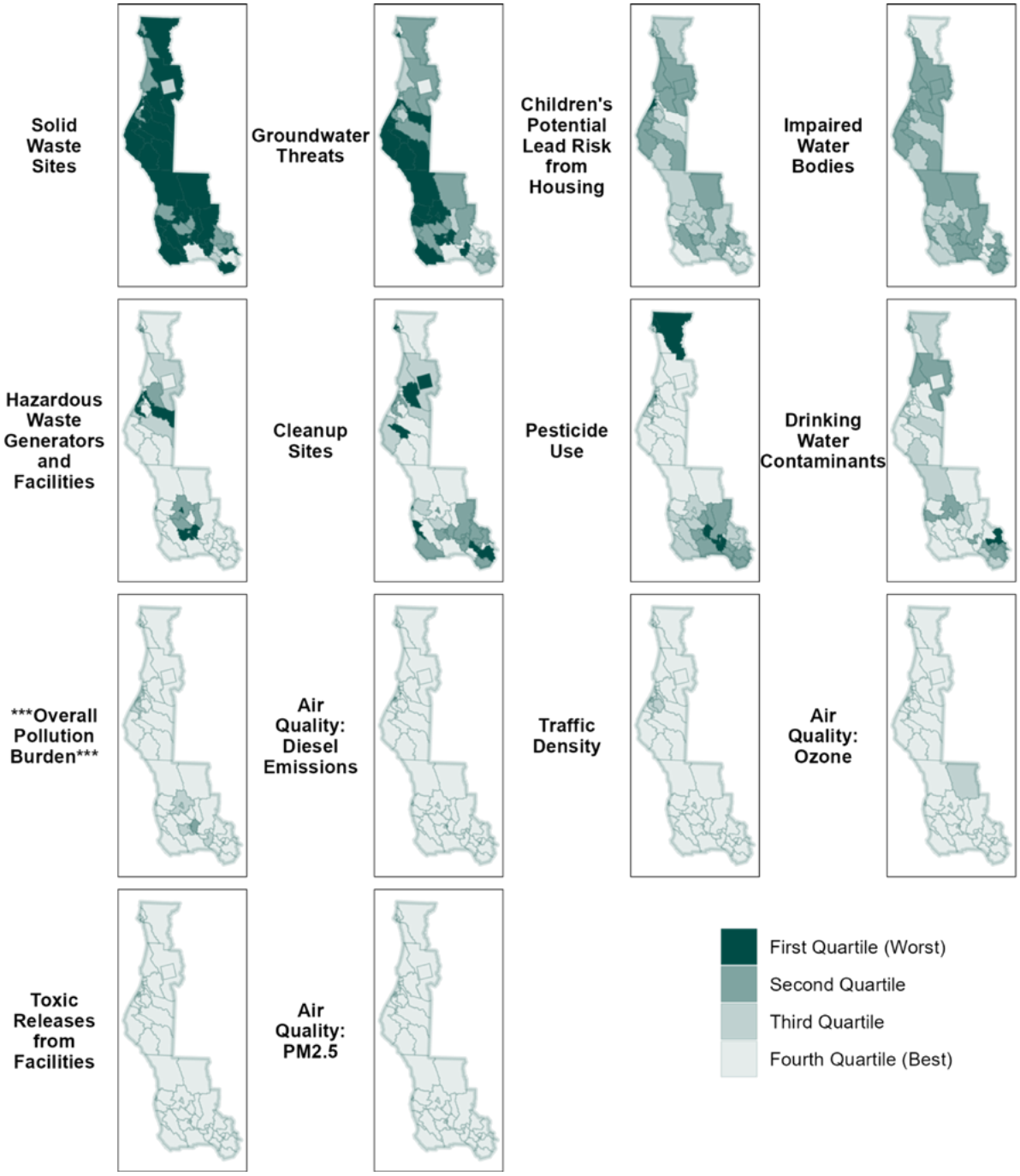
Environmental Risks for Communities

This section provides an overview of the burden of air and water pollution, toxic and hazardous waste, major sources of greenhouse gas (GHG) emissions, and the impacts of all these on diverse and/or disinvested communities.

The region's overall pollution burden is low compared to other regions in the state (see "Overall Pollution Burden" in Figure 4.1). Nevertheless, certain types of pollutants or environmental risks are elevated, and communities in the region face differential risks, including (among others): 1) water resource impacts from a variety of sources (e.g., drinking water and fish contamination), including solid waste sites, nonpoint-source groundwater pollution, hazardous waste generators, and cleanup sites and 2) lead poisoning of children. And, despite low levels of human-caused air pollution, wildfires continue to pose a critical risk to air quality, health, and prosperity within the region.

[46] Data sources for select metrics have yet to be identified by RRRISE.

Figure 4.1 CalEnviroScreen 4.0 Indicators (2023)



Note. Data sourced from CalEnviroScreen 4.0. Each census tract is ranked compared to all other census tracts in the state. Those in the first quartile (dark emerald) are among the worst 25% of census tracts within the state, whereas those in the fourth quartile are among the best 25%.

Water Quality and Hazardous Waste Sites

Although most of the region has levels of drinking water contamination ("Drinking Water Contaminants" in Figure 4.1) comparable to state trends, the region's water bodies ("Impaired Water Bodies" in Figure 4.1) are more likely to be polluted than those used to compute statewide trends, indicating the seriousness of the potential threat to drinking water quality within the region. In particular, runoff and surface materials picked up and carried by moving bodies constitute a critical

source of water pollution in the region, and so agricultural activities, erosion from timber harvesting, construction, and roadways can all contribute to surface pollution that ultimately accumulates in water bodies.

The region's substantial cannabis industry has also had an impact on the local environment. Water contamination, streamflow reductions due to water diversions, and poisoning of wildlife have been linked to the region's cannabis producers (Carah et al., 2015). Additionally, hundreds of sites in the region, including cleanup sites and underground storage tanks, are potentially putting groundwater sources and water quality at risk. Nonetheless, at present, most of the region has above-average groundwater threat levels compared to state trends.

Across the region, over 36,000 miles of rivers and streams are considered impaired due to pollutants (CalEnviroscreen 4.0). Fifty-eight river and stream locations have tested positively for at least one pollutant that is over the safe threshold mandated by the California Water Boards. Of the recorded locations, 67% have sedimentation listed as a pollutant, 66% have heightened water temperature, and 45% have aluminum. It is unclear what the source of the elevated rates of aluminum is. Other listed pollutants include indicator bacteria, mercury, copper, and dissolved oxygen. Sediment can create shallower waterways, increasing the risk of flooding, harming ecosystems and habitats, reducing water clarity, and increasing the cost of drinking water processing, among other serious impacts. Increasing water temperatures in streams and rivers impact wildlife and can lead to reduced biodiversity. Aluminum is a naturally occurring element in nature, but large amounts in high doses can lead to adverse health effects.[47]

Contaminated surface waters[48] pose a particular risk to public health as the region's drinking water comes primarily from these sources. High levels of pollutants such as mercury can lead to fishing advisories, potentially impacting recreational activities and fishing-related industries and constituting threats to priority sectors (discussed below). Among the many lakes, reservoirs, harbors, and estuaries in the region, eight bodies of water comprising over 63,000 acres are listed as polluted; three-quarters of these water bodies are contaminated by mercury, which increases mercury levels in fish. This contamination can lead to advisories for eating fish caught locally and so interrupt fishing-related recreation and economic activities, such as tourism. Further, many of the region's indigenous cultures depend on fishing and are thus disproportionately threatened by this type of contamination. Rivers and streams are primarily impacted by elevated levels of sediment and aluminum. Accumulated sediment can result in shallow water bodies, increasing the risk of flooding, and elevated levels can increase the cost of processing drinking water from these sources.

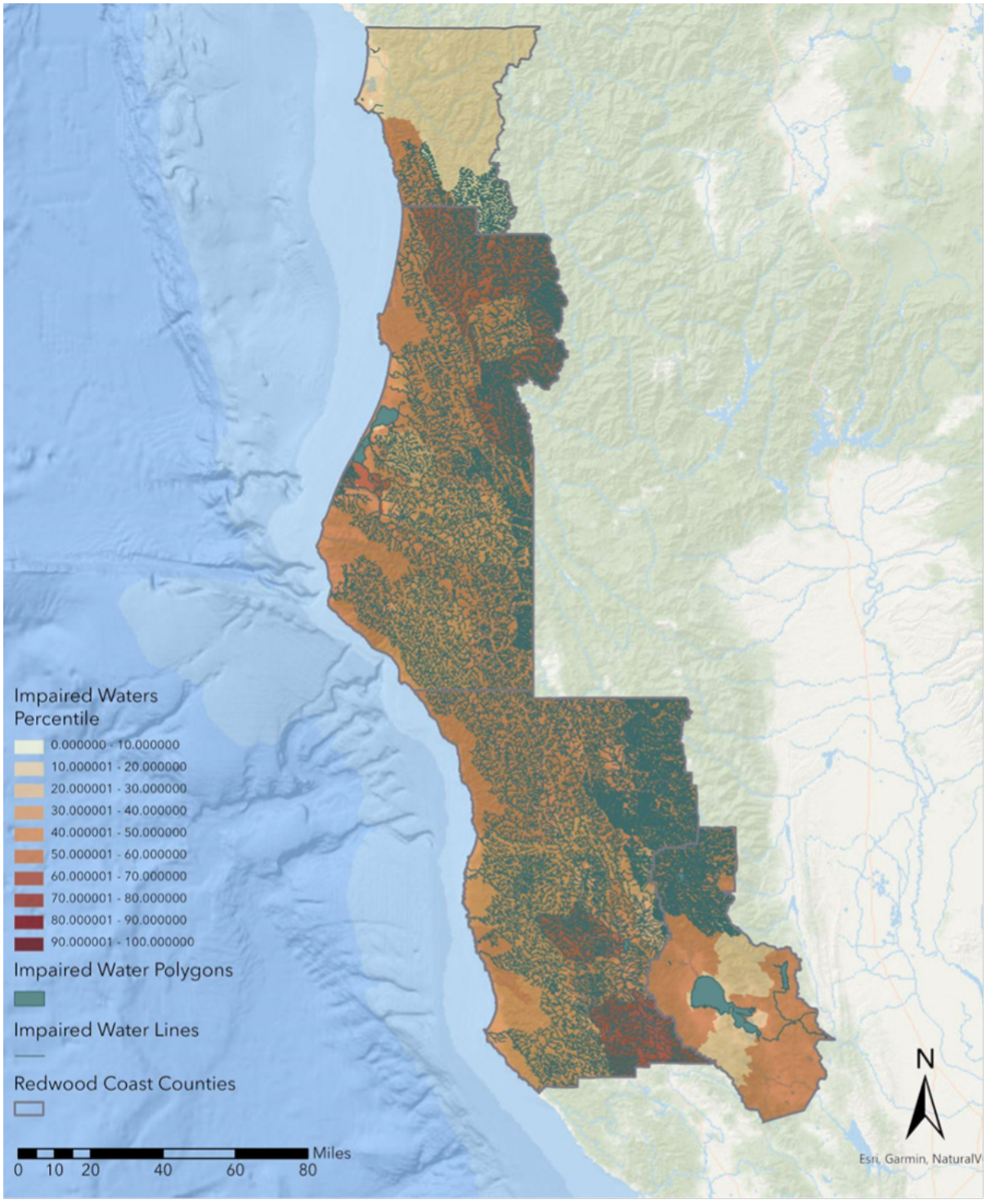
Over 11 miles of coastal and bay shoreline across 16 beaches in Humboldt and Mendocino Counties are considered to be impaired (see Figure 4.2). No coastline in Del Norte County is listed as impaired, as of this report. Each of these locations has been found to be polluted by indicator bacteria, which are surrogates used to measure the potential presence of fecal material and pathogens in waterways. As the source of most indicator bacteria is feces or other types of waste produced by humans and warm-blooded animals (e.g., birds and mammals), indicator bacteria contaminate food sources caught or collected from contaminated waters and can then lead to illness in humans and pets.[49]

[47] https://www.waterboards.ca.gov/northcoast/water_issues/programs/

[48] Impaired groundwater can affect drinking water and soil and lead to adverse health impacts. The State Water Resources Control Board (SWRCB) hosts a GeoTracker Database that oversees and tracks projects at cleanup sites that can affect purity of groundwater. It also hosts the California Integrated Water Quality System Project, which tracks information about environmental impacts, manages permits, tracks inspections, and manages enforcement activities.

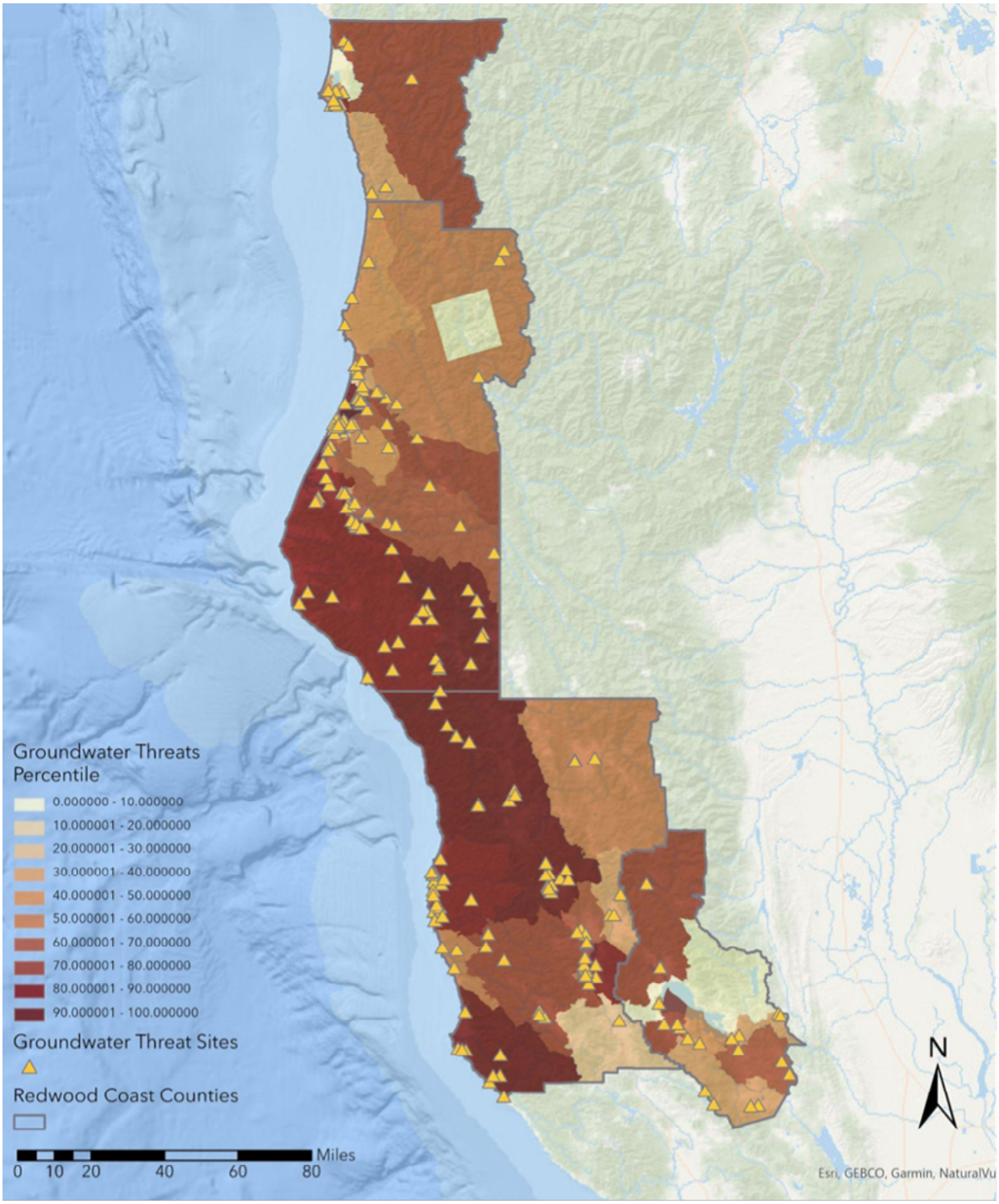
[49] [REF]

Figure 4.2 Impaired Waterways Map



Source: CalEnviroScreen Indicator Maps: Groundwater Threats, requested July 2023.

Figure 4.3 Groundwater Threats



Source: CalEnviroScreen Indicator Maps: Groundwater Threats, requested July 2023.

Hazardous Waste

Although the region's numbers of hazardous waste generators and facilities are fewer than statewide trends, populated areas surrounding Ukiah and near Humboldt Bay appear to have higher levels of these than other areas of the region. While most regional areas have fewer hazardous waste generators compared to similar areas in the state, the region's severe wildfires constitute a particular hazard, increasing risk of exposure to contaminants for first responders and members of the public. While overall Cleanup Sites are less common region-wide, the location of such sites is uneven, with most located in lower income areas. Those living near these sites are at greater risk of harm. Areas around Eureka and east on the 36 corridor, and neighborhoods near Ukiah are particularly vulnerable. See Figure 4.3 above.

Approximately 270 locations across the region have led to common soil and groundwater pollutant leaks and so have threatened the safety of drinking water or exposed people to contaminated soil and air. Of these sites, 30% are land disposal sites, 40% are Cleanup Program sites, and the remaining sites consist of leaking underground storage tanks (LUSTs) and military cleanup sites. Common groundwater pollutants are gasoline and diesel fuels near gas stations, as well as substances like pesticides and heavy metals that leak from landfills or burn sites. Land and groundwater that has been contaminated can take years or decades to clean up, leading to water shut-offs, mandatory bottled water deliveries to impacted communities, and public health concerns should exposure go undetected.

Air Pollution

The Redwood Coast region has five mandatory air pollution reporting facilities.[50] These are all located in census tracts with a median household income (MHI) far below the state's median household income of $84,097 and the national median of $69,000. Two of these facilities are within the Humboldt Bay region and may be at risk of sea level rise or flooding events, possibly leading to pollution of the Bay and ocean waters that could pose a risk to ecosystems and public health. Two of these facilities are located on tracts with MHI's below $40,000.

Among non-natural sources, waste disposal and farming operations are the largest emitters of organic gasses. Industry, namely mineral processes, is the largest stationary source of particulate matter. Dust blown from unpaved rural roads constitutes another major source of particulate matter; this is to be expected in rural areas and can be mitigated through paving. Residential use of wood fires for heating and managed burns are also major contributors to overall air pollution. The use of natural gas for heating and cooking is one of the largest area wide pollution sources in the region, suggesting that the region could therefore benefit from residential energy retrofits.

Within the region, wildfires are by far the single most significant contributor to overall air pollution. Of non-natural sources, the dust stirred up along the region's rural unpaved roads contribute substantially to particulate matter emissions. Residential fuel use, particularly wood fires, as well as managed burns are also major contributors to overall air pollution. While indicators of overall air pollution are low relative to state trends, wildfires are a more critical risk for the region compared to

[50] *Major source facilities* are facilities that emit, or have the potential to emit, 100 tons per year or more of any air pollutant, 10 tons per year of any single hazardous air pollutant (HAP), or 25 tons per year of any combination of HAPs. These are considered major sources of pollution and must therefore obtain a Title V permit to operate. Facilities with Title V permits must submit annual compliance certifications and semi-annual monitoring reports to the NCUAQMD detailing the facility's compliance with permit conditions, emission limits, and other applicable air quality regulations.

the state as a whole. Wildfire smoke has been shown to cause respiratory illnesses among sensitive populations and outdoor workers. Moreover, it limits the tourism and recreation industry that fuels many local economies in the summer months.

Lead Exposure in Children

Exposure to lead through lead-based paint in older housing is the most significant source of lead poisoning in children. Children's estimated risk of exposure to lead from housing is elevated in many areas of the region, particularly in the Humboldt Bay area and the more urbanized areas of Del Norte and Mendocino Counties. Moreover, children five and younger in Humboldt and Lake Counties have been found to have elevated blood lead levels compared to the state average (6.7% and 3.3%, respectively, compared to 1.9% statewide).

Greenhouse Gas (GHG) Emissions

Data Limitations

As a community-level GHG emissions inventory was available for Humboldt County only and was more than five years old, the data it contained was scaled using demographic changes and emission trends to obtain an estimate of 2020's emissions. Due to the limitations of this methodology, only findings related to emissions from the Residential, Nonresidential, and transportation sectors are discussed below. Local emissions from the Solid Waste and Water and Wastewater sectors can increase emission totals by varying proportions depending on the presence of treatment plants, landfills, and other sites that emit GHG within a jurisdiction's boundary. These sectors have been omitted from the following analysis due to restraints on normalizing these values.

GHG emission estimates for Del Norte, Lake, and Mendocino Counties were available through Google Environmental Insights Explorer (Google EIE). The methodology used by Google EIE differs from that used by the Sierra Business Council and from that of most consulting firms performing local and regional emissions inventories.[51] Given the lack of available GHG inventories in the Redwood Coast CERF region, utilizing Google EIE provided estimates of regional emission totals and allowed by-sector identification of estimated emission sources. However, due to extensive reliance on estimates in the analysis, the county and regional totals shown below are not exact. Further, the calculation methods and tools used do not align with GHG emission inventory best practices. Therefore, all GHG emissions shown in Figure 4.4 are provided for illustrative purposes only. It is highly recommended that jurisdictions complete comprehensive emissions inventories in order to properly engage in climate action planning. For jurisdictions interested in having a GHG inventory developed, resources are available from CARB, ICLEI, Redwood Coast Energy Authority, and the Schatz Energy Research Center.

[51] Google EIE methodology can be found here.

Figure 4.4 Emissions by Sector

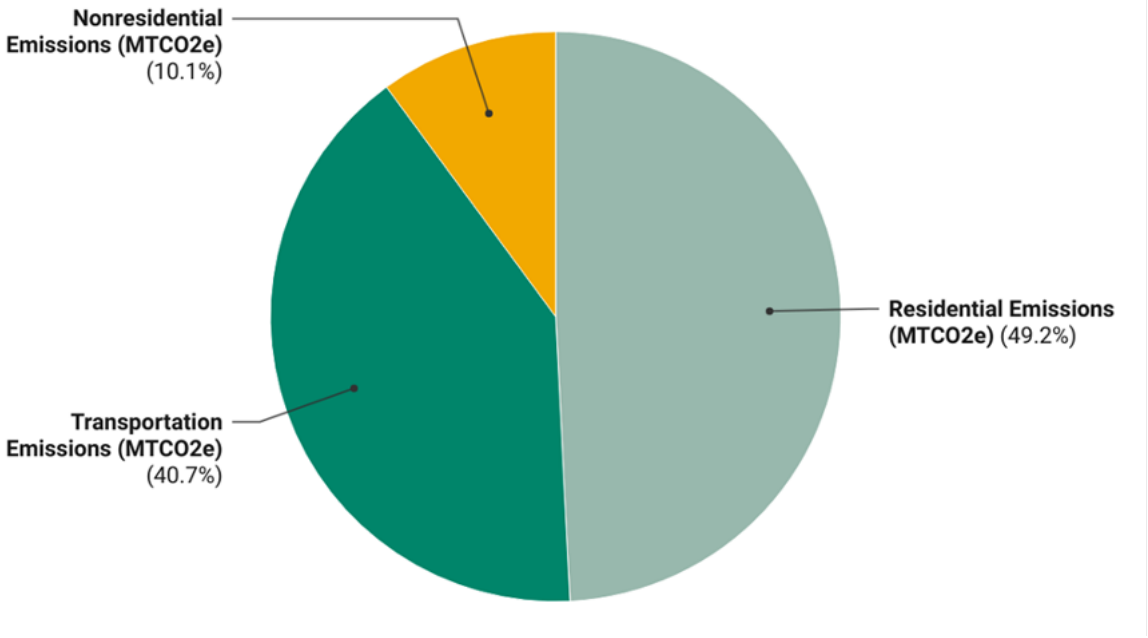


Chart: Sierra Business Council
Source: Local Greenhouse Gas Inventories where available (scaled to 2020 when necessary, Google Environment Insights. Created with Datawrapper)

In California, the Transportation sector is the largest contributor to GHG emissions, and many rural California regions mirror this trend. While the Redwood Coast regional analysis shows the residential sector as the largest contributor to GHG emissions, it should be noted that emissions data from Google EIE tend to show lower proportions of emissions from transportation than do standard-method GHG emission inventories.

Transportation is still heavily reliant on the burning of fossil fuels (e.g., gasoline and diesel), which release large amounts of greenhouse gasses to the atmosphere. In rural areas like the Redwood Region, it is unsurprising that the transportation sector is the source of the vast majority of emissions due to residents' needing to travel further distances to town centers for work and to reach such providers of typical services as schools, grocery stores, and healthcare providers. Rural areas with economies based on natural and working land industries may see even larger percentages of emissions associated with the transportation sector due to the increased use of off-road vehicles and equipment (e.g., farm machinery). Rural regions are also slower to adopt new technologies like electric vehicles (EVs); this may be due in part to local resistance, but is more likely attributable to the lack of EV infrastructure and funding to support a transition, as well as residents' individual cost barriers and cultural resistance to change.

Residential building is typically the second-largest GHG-emission sector in rural regions, owing to their reliance on natural gas and propane as primary fuel sources for home heating. As California begins to mandate cleaner energy sources and a transition to electrification, the region must have access to energy efficiency resources, clean energy workforce development, and funding

opportunities. Additionally, the region's larger energy providers must be able to provide a reliable transmission and distribution infrastructure to ensure that power outages will not disproportionately affect rural communities, where extreme weather conditions have led to the present-day reliance on natural gas and propane for heating and cooking.

Significant Stationary Sources of GHG Emissions

The California Air Resources Board (CARB) requires facilities emitting 10,000 or more metric tons of carbon dioxide equivalent (MTCO2e) to submit annual reports. Only Lake and Humboldt Counties have facilities that meet or exceed these mandatory reporting thresholds for 2020 (see Figure 4.5).[52]

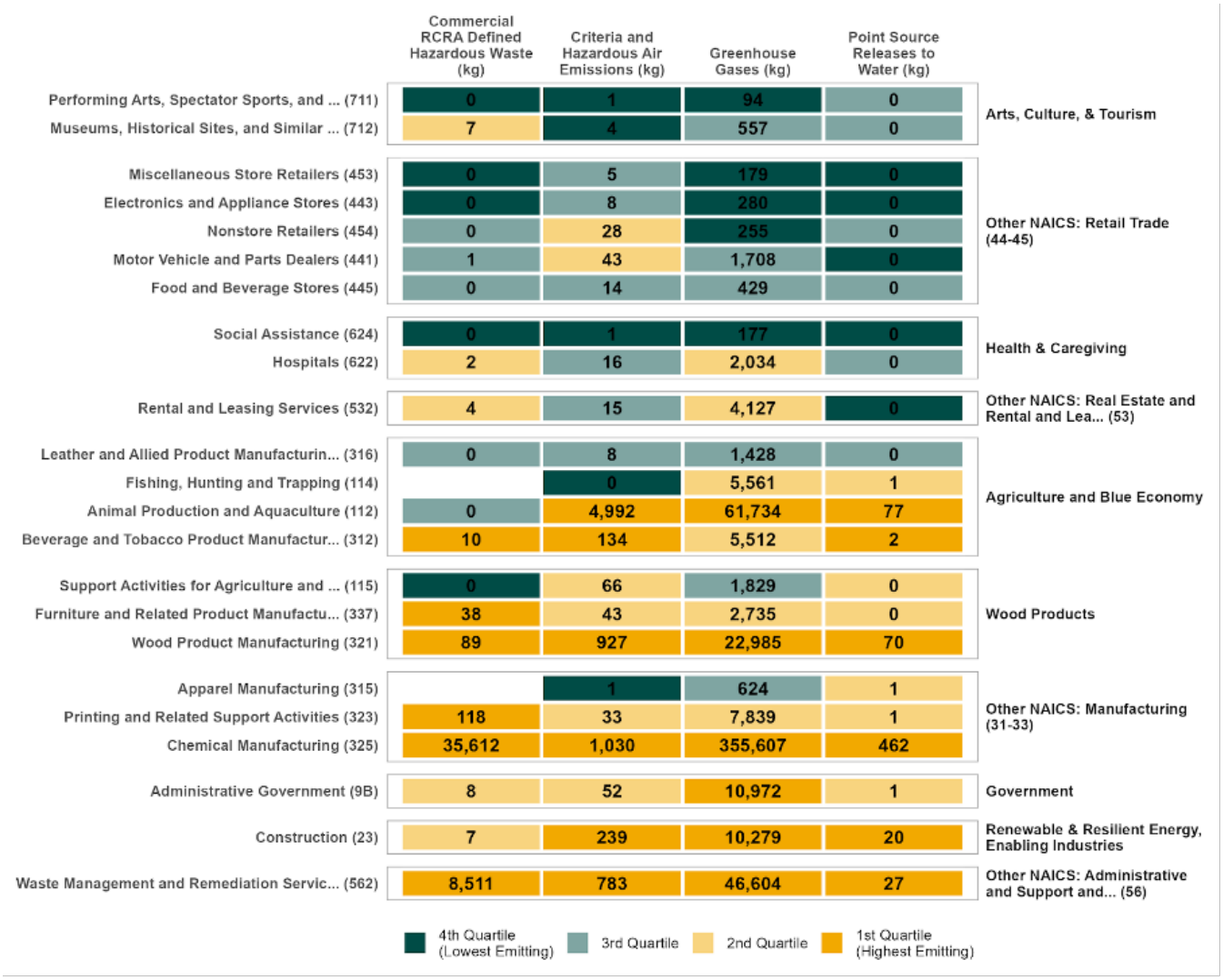
Figure 4.5 CARB Mandatory Reporting Facilities in the Redwood Region (2020)

County	City	Source Name	Emissions (MTC02e)	Year	NAICS	Sector
Lake	Middletown	Calpine - Geysers Power Company, LLC - Geothermal	210,004	2020	221116	Electricity Generation
Humboldt	Samoa	DG Fairhaven Power LLC	16,128	2020	221117	Electricity Generation
Humboldt	Scotia	Humboldt Sawmill Company	295,562	2020	221116	Cogeneration
Humboldt	Eureka	PG&E Humboldt Bay Generating Station	227,214	2020	221112	Electricity Generation
Humboldt	Arcata	The Sun Valley Group	11,532	2020	111,422	Other Combustion Source

Major gaps exist in data related to the region's greenhouse gas emission, highlighting the need for the region to conduct a comprehensive emissions inventory. Available data show that residential energy use, followed by transportation, are the two largest anthropogenic emitters of GHGs in the Redwood Region. However, the largest overall source of GHG in the region is likely to be wildfires. Among the target sectors, data from the Industry Cluster and Labor Market Analysis suggest that, relative to economic value added, the Working Lands and Blue Economy industries have the highest output of greenhouse gas emissions among the RRRISE target industry sectors.

[52] GHG emissions data for facilities emitting over 25,000 metric tons of CO2 equivalents are subject to independent third-party verification by a CARB-accredited verifier. The following facilities were identified using CARB's Pollution Mapping Tool

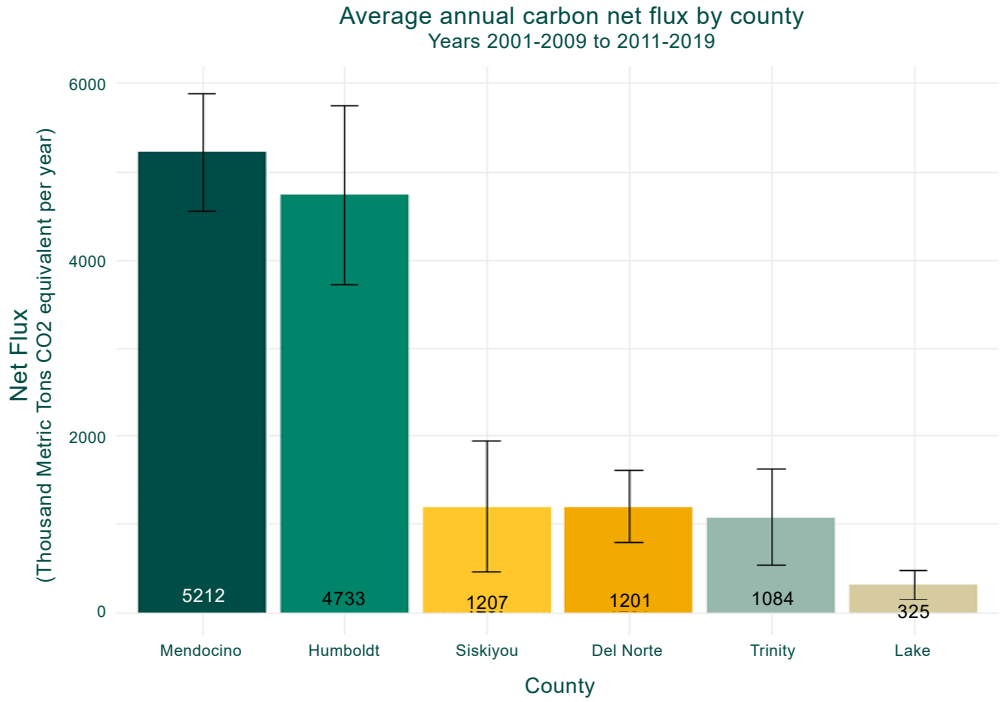
Figure 4.6 Major Sources of GHG Emissions, Air, Water, and Hazardous Waste from Potential Growth Clusters, Emissions (kg) per Job



Note. Data sourced from IMPLAN.

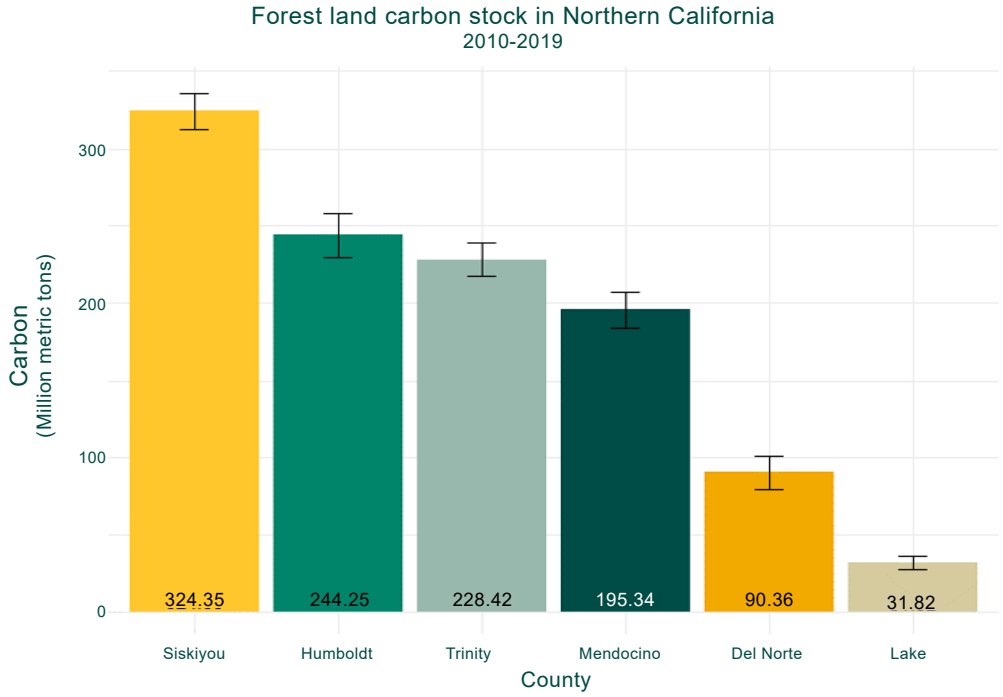
However, the IMPLAN data is sourced from the Environmental Protection Agency (EPA) for their USEEIO Version 2.0 model. This model uses the U.S EPA GHG and Sinks: 1990-2016 data; specifically the Land Use, Land-use Change, and Forestry data. This data does not account for storage of carbon in timber lands, or substitution emissions. The graphs below show more on carbon sequestration and rates in Northern California.

Figure 4.7 Average Annual Carbon Net Flux by County (Years 2001-2009 to 2011-2019)



Note. Data sourced from the California Board of Forestry and Fire Protection. Graph shows the net total carbon sequestration rates per county for all forest pools, including growth, harvest, and mortality. Lines represent the standard error.

Figure 4.8 Forest Land Carbon Stock in Northern California (2010-2019)



Note. Data sourced from the California Board of Forestry and Fire Protection. Graph shows the total rate of carbon in forest land. This combines the carbon in live trees, dead trees, and understory vegetation that are aboveground and belowground, as well as down wood, the forest floor, and soil. Lines represent standard error.

Current and Anticipated Impacts of Climate Change on the Redwood Coast

Analysis of the impacts of climate change on the Redwood Coast was based on evaluation of the following climate indicators to enable future projections:

1. **Annual Cooling Degree Days:** Annual Cooling Degree Days represents the sum of the number of degrees that each day's average temperature is above 65°F (18°C) over the course of a year. The measure is used to estimate the energy demand required for cooling buildings and is an indicator of the degree of cooling needed in a given location based on temperature.
2. **Extreme Heat Days** are an indicator used to measure the annual number of days when a county's daily maximum temperature surpasses a specific threshold, which is typically set at the 98th percentile temperature for that county based on historical data (meaning that the threshold temperature was exceeded on only 2% of days during a historical baseline period). Comparing the number of extreme heat days in a given year or period to that of the historical baseline allows the effect of climate change on the frequency and severity of extreme heat events in a region to be assessed.
3. **Warm Nights** refer to the annual number of nights when the minimum temperature remains above a predetermined threshold, usually the 98th percentile for the county based on historical data. Even in regions with cooler nights and even in summer, tracking changes in nighttime temperatures is crucial for understanding the potential impacts of climate change on the economy and on public health planning.
4. **Annual Average Precipitation:** Measured in inches, this indicator measures the average precipitation per year at the county level; precipitation is measured as liquid or solid water and is averaged over the county's area.
5. **Area Burned:** Measured in hectares, this indicator measures how many acres will burn due to wildfire. This indicator cannot predict where a fire is likely to occur but can enable an overall assessment of how wildfire will affect the local economy, public health, and the health of local ecosystems.

Heat

Recent high-impact wildfires and droughts have been linked to extremes in the Evaporation Demand Drought Index (EDDI).[53] The likelihood of extreme wildfire is based on two-week periods of elevated evaporative demand during the summer and autumn. When the two-week EDDI is above the 95th percentile, it can be used as a proxy for high fire danger days. For the Redwood Region, the historical baseline is approximately five days per season that have a two-week EDDI above the 95th percentile. All models for both the near future and the mid-century show an increase in extreme EDDI days, indicating more high fire danger days. The mid-century model shows a consistent increase of over 400% (nearly five times the historical baseline) across the entire region, with Del Norte and Humboldt having more extreme EDDI days than the more southern counties in the region.

[53] *Evaporative demand* can be thought of as how "thirsty" the atmosphere is and how much moisture evaporates over a period of time. Increasing air temperature is the leading cause of increased evaporative demand for inland regions, whereas humidity has more of an overall influence on coastal regions (Sierra Business Council).

Wildfires

These factors are expected to increase atmospheric evaporation, leading to drier conditions and increased wildfire risk. Across the region, summertime high fire-risk days and total wildfire area burned are expected to increase markedly by midcentury, exacerbating an already heightened risk to health, life, and property. Total wildfire burn area is expected to rise between 29% in Lake County and to increase as much as 213% in Del Norte County. Statewide, wildfires were the second largest contributor to GHG emissions in 2020, offsetting previous efforts to reduce GHG emissions (Jerrett et al., 2022).

Sea Level Rise

Coastal communities in Del Norte, Humboldt, and Mendocino counties are projected to experience varying impacts of sea level rise. Coastlines such as areas around Crescent City that have low slopes are particularly vulnerable, where even a small level of sea level rise can result in a substantial loss of shoreline. Crescent City will likely see a sea level rise of up to six inches by 2050. Even with extensive global GHG emissions reduction, most projections view the rise through 2050 as inevitable due to legacy emissions. Consequently, beaches with low gradients, like Crescent Beach, could see nearly 100 feet of shoreline lost to sea level rise by 2060.[54]

The land around Humboldt Bay is subsiding (sinking), possibly amplifying the relative rate of sea level rise in the area. The North Spit is expected to experience the most significant sea level rise in the Redwood Coast region and is considered one of the most high-risk tidal ranges along the West Coast. The coastal dune habitat along the North Spit could increase coastal resilience in the region if it is restored and maintained. On Mendocino's shores, Arena Cove can expect to see up to a foot of sea level rise by 2050, possibly leading to a loss of shoreline near the Point Arena Pier and causing erosion along the sea cliffs. Loss of shoreline in the Arena Cove area would lead to limited public and commercial access, and the Mendocino coastline with its gentle slopes could see over 100 feet of shoreline lost by 2060.

The Coastal Act, which was adopted by the California Coastal Commission (the Commission) in 1976, requires 61 cities and 15 counties in California to prepare Local Coastal Programs (LCPs) that are meant to govern land development, use, and resources in the coastal zone inland of the mean high tide (California Coastal Commission: Sea Level Rise Policy Guidance, 2024). Recently, a new bill was passed that requires local governments to have updated sea level rise adaptation plans in their LCPs by 2034. The purpose of having sea level rise adaptation plans in LCPs is to promote sustainable economic growth while also taking into account public safety and protecting coastal resources, such as recreation areas or coastal habitats. However, as of this report only three out of fourteen LCPs in the North Coast Region have been updated to discuss sea level rise and climate change. Those LCPs are from the City of Crescent City, the City of Eureka, and the Humboldt Bay Area Plan. Each document provides guidance on sea level rise hazards, based on current climate change analysis, and guidelines for how local infrastructure should consider future sea level rise when building near the coast (City of Eureka Coastal Land Use Plan, 2023; Crescent City Harbor: Coastal Land Use Plan, 2020; Humboldt Bay Area plan, 2022). The other eleven LCPs do not discuss sea level rise or climate change, and this could potentially lead to critical loss of infrastructure and coastal resources.

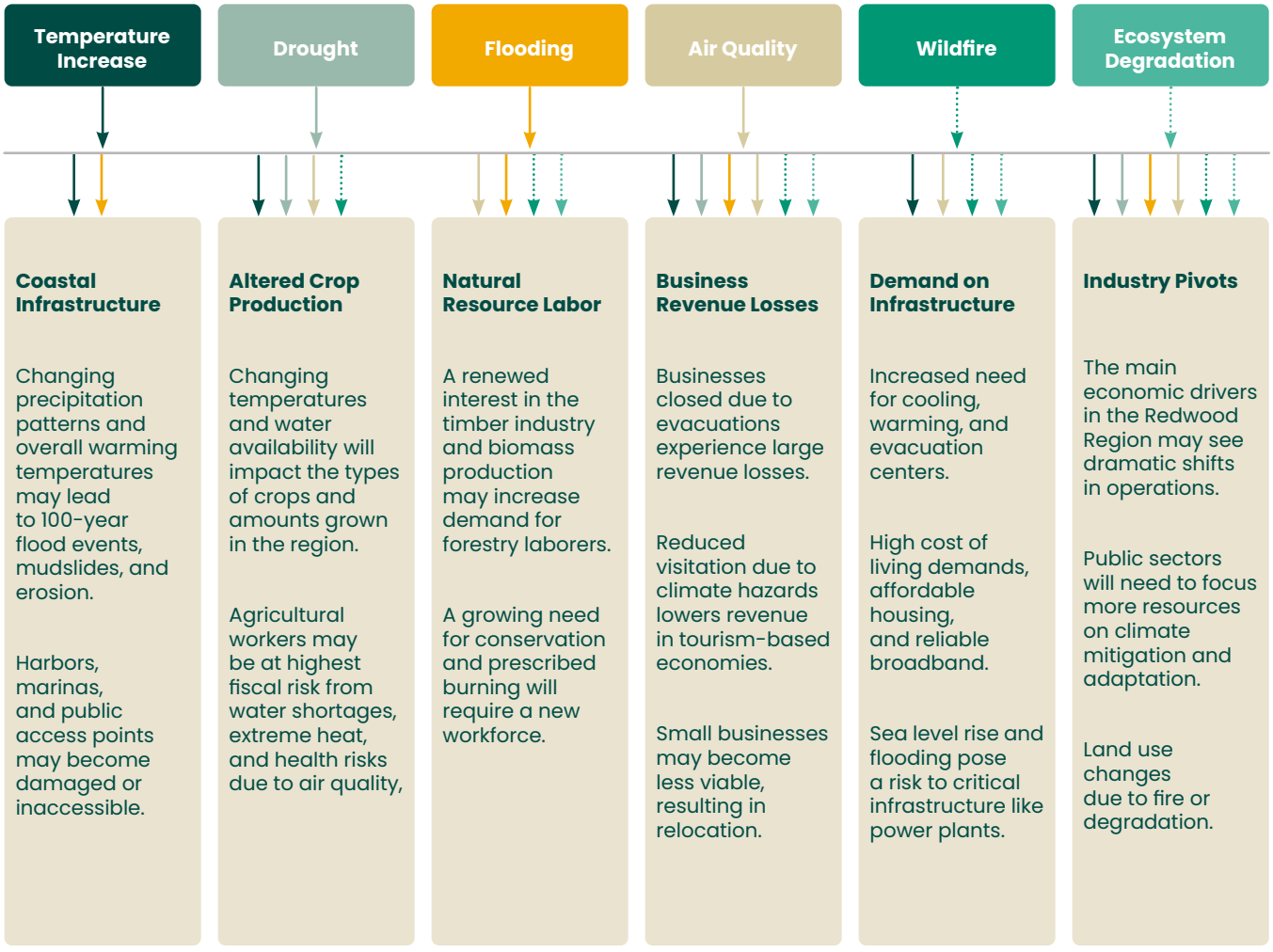
[54] It is typically assumed that one inch of sea level rise will cause about 100 inches of shoreline loss, depending on beach slope; https://science.nasa.gov/earth/climate-change/cant-see-sea-level-rise-youre-looking-in-the-wrong-place/

Landslides

An intensity of rainfall during wet seasons will increase the likelihood of flooding and landslides within the region. Landslides threaten residents and housing, as well as critical infrastructure, including but not limited to transportation networks, water and sanitation systems, and communication networks. Landslides can negatively affect the habitats of local wildlife. For example, elevated sediment deposits due to landslides may accumulate in streams or rivers. These deposits can degrade spawning habitats for fish and reduce the diversity of their food source (California Energy Commission et al., n.d.), a potential threat to the Working Lands and Blue Economy sector.

Figure 4.9 below provides a summary of the effects climate change can have on the region over the near to long term.

Figure 4.9 Economic Risks and Losses Related to Climate Change on the Redwood Coast



Additional impacts on the region's targeted industries include:

Arts, Culture, and Tourism

- Degradation of culturally important landmarks, sites, and infrastructure.
- Flooding, wildfires, and algae blooms may decrease tourism.

Health and Caregiving

- Increased need for healthcare during extreme events (e.g., wildfires, floods, heat).

Renewable and Resilient Energy

- Increased need for building cooling during heat waves.
- Need for reliable energy sources during heat waves, wildfires, and storms.
- Sea level rise-caused damage to infrastructure.

Working Lands and Blue Economy

- Changing weather patterns impact agricultural and natural resource productivity. Droughts impact crop production and wildfire poses risk to all land-based industries (including ash damage to vineyards).
- Sea level rise and algae blooms may disrupt maritime industries.

Impacts on Disinvested Communities

Redwood Region communities are especially vulnerable to climate change due to geography and environment, lack of resources and essential services, and underrepresentation of at-risk populations. These sparsely populated communities tend to be defined by low-tech, outdoor and service-based jobs, and traditional values, where people of color, people with disabilities, and families in poverty are present but often exist as hidden populations. These data constraints have led to less state and federal funding (disinvestment) and greater disparities in levels of climate change adaptation planning.

The populations shown in Figure 4.10 may see the most impacts from climate change hazards. Young children, seniors, and people with disabilities are at higher risk of physical impacts from climate change due to their reduced physical and (in some cases) mental capacities, owing to age, illness, or isolation; many may be reliant on caregivers and medical equipment. Power outages can cause great physical stress on communities reliant on air conditioning, refrigeration of medicines, electrically powered medical equipment, and other powered products. Additionally, these groups are less likely to be able to evacuate without assistance.[55]

People experiencing poverty and those unable to work are more likely to face economic barriers to climate adaptation from, for example, inadequate shelter or lack of mobility during extreme weather events. Growing populations of under-resourced groups in the Redwood Region can lead to lowered community resilience, an increased need for climate planning, and increased social services.

[55] https://www.epa.gov/climateimpacts/climate-change-and-human-health-whos-most-risk

Most of the impacts felt by climate hazards will be similar across vulnerable populations (see Figure 4.10).

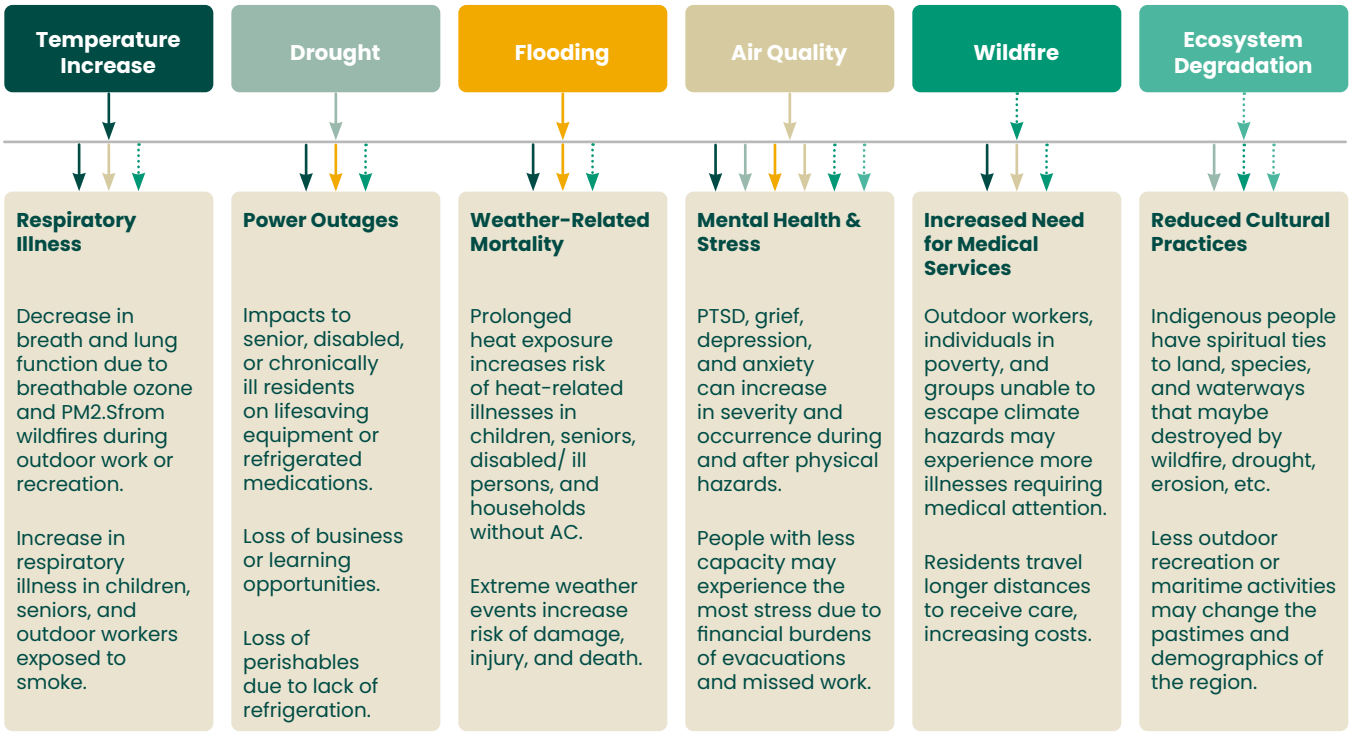
Figure 4.10 Populations at Risk of Adverse Impacts from Climate Change

Population	Number of People	Percent of Total Population	Critical Risks
Under 5	17,421	5.4%	Extreme heat, air quality
Over 65	65,563	32.9%	Extreme heat, air quality, reduced evacuation ability
People of color	79,956	64.6%	Extreme heat, air quality
People in poverty	56,819	17.8%	Extreme heat, air quality, reduced evacuation ability, water shortages (i.e., dry wells), extreme precipitation events
Nonworking people (aged 16-64)	58,611	29.4%	Extreme heat, air quality, reduced evacuation ability, water shortages (i.e., dry wells)
Households with no car	8,104	6.6%	Extreme heat, air quality, reduced evacuation ability, water shortages (i.e., dry wells), extreme precipitation events
People with disabilities	58,697	18.4%	Extreme heat, air quality, reduced evacuation ability, power outages
People without health insurance	25,042	7.9%	Extreme heat, air quality

Various Total Populations were used based on population type. For example, the percent of households with no car is based on the total number of households in the Redwood Coast Region and not the total population.

Table: Sierra Business Council. Source: US Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C. Created with Datawrapper.

Figure 4.11 Climate Impacts on Vulnerable Populations



Tribal populations within the region disproportionately face several climate-related threats, including food and water insecurity, limited access to traditional foods, and loss of culturally vital plant, fungi, and wildlife (Bull Bennett, et al.). Impacts on freshwater resources are a particular concern for Tribal communities that depend on them for drinking water, fisheries, and cultural activities. In addition, climate impacts to culturally significant species and habitats can detrimentally affect social and cultural components to Tribal communities (California Energy Commission et al., n.d.).

Environmental Leadership in the Region

The Redwood Region's original inhabitants have a long history over many millennia of living resiliently and sustainably in the lands and on the coastlines of the Redwood Region. As noted elsewhere in this report, many of the region's Tribes are now regional leaders in innovative environmental restoration and resilient living. In addition, both Tribal and non-Tribal leaders are working to re-integrate "traditional ecological knowledge" into environmental management practices that are often based solely in Western models of science and ecological understanding. The environmental leadership provided by the Redwood Region's Tribes has been transformative, showcasing the power of integrating indigenous knowledge and values into today's restoration and conservation efforts.

The Klamath River Restoration Agreement, a historic accord signed in 2010 by the Yurok, Karuk, and Klamath Tribes and federal and state agencies, has succeeded in removing four dams on the Klamath River. The project is working to restore salmon runs, improve water quality, and further showcase the Tribes' commitment to watershed and bioregional health. The Yurok Tribe has also been a leader in sustainable forestry practices, developing a forest management plan that prioritizes the long-term health of their ancestral lands while providing economic opportunities for the Tribe (*Environmental Department, Yurok Tribe*, n.d.). The Hoopa Valley Tribe has implemented a carbon sequestration project, utilizing their forestlands to absorb and store atmospheric carbon dioxide (*Hoopa Valley Land Management, Tribal EPA/Realty*, n.d.). Scotts Valley Tribe is currently developing an innovative biomass to energy project, among other renewable energy and sustainability initiatives.

Tribes have been instrumental in promoting environmental education and cultural preservation. The Round Valley Indian Tribes have established the Eel River restoration project, which engages Tribal youth in hands-on environmental restoration work while teaching them about their cultural heritage (*Education — ERRP*, n.d.). The Yurok have been at the forefront of efforts to reintroduce the critically endangered California condor to the Redwood Region, with the first birds released in 2022 as part of the Yurok Condor Restoration Program.[56]

The Blue Lake Rancheria (BLR), a federally recognized Tribe in Humboldt County, has emerged as a leader in renewable energy and community resilience through its development of the Blue Lake Rancheria community-scale microgrid. The microgrid, which was commissioned in 2017, is a state-of-the-art, low-carbon energy system that integrates solar photovoltaic (PV) panels, battery storage, and advanced control systems to provide reliable, sustainable power to the Tribe's critical infrastructure (*Blue Lake Rancheria Microgrid – Schatz Energy Research Center*, n.d.).

In addition to the region's indigenous populations, the region also has a post-settlement history of environmental leadership and activism—stemming in no small part from the region's natural beauty, which has inspired generations of individuals and organizations located there to champion

[56] REF

conservation efforts. From the early days of the Save the Redwoods League to the "back-to-the-landers" movement in the 1960s and 1970s, which saw an influx of environmentally conscious individuals seeking to live off the grid and in harmony with nature, to the present-day initiatives aimed at protecting the region's unique biodiversity, the Redwood Region has been at the forefront of progressive environmental stewardship.

Several notable organizations have played pivotal roles in shaping the environmental landscape of the Redwood Region. In Humboldt County, the Environmental Protection Information Center (*EPIC*), founded in 1977, has been a stalwart defender of the region's ancient forests, working tirelessly to protect old-growth redwoods and advocate for sustainable forestry practices (*EPIC: Environmental Protection Information Center,* n.d.). Similarly, the North Coast Environmental Center, established in 1971, has been instrumental in promoting environmental education, monitoring water quality, and engaging in conservation efforts throughout the region (*History | NEC*, n.d.). These organizations, along with numerous other grassroots groups and community-based organizations (CBOs), have been integral to the preservation of the Redwood Region's natural heritage.

Lake County has been a leader in sustainable agriculture, with a thriving organic farming community and innovative programs like Lake County Farmers' Finest, which promotes locally grown produce and supports small-scale farmers (*Lake County Farmers' Finest*, n.d.). Mendocino County has a long history of environmental activism, with organizations like the Mendocino Land Trust working to protect the county's unique coastal and inland ecosystems through land conservation, habitat restoration, and public access initiatives. Additionally, the county has been a leader in the development of sustainable forestry practices, with the Mendocino Redwood Company implementing selective harvesting and restoration forestry techniques that prioritize the long-term health of the forest ecosystem (*Our Story | Humboldt Sawmill*, n.d.).

The Redwood Region has benefited from the presence of educational institutions that prioritize environmental studies and sustainability. College of the Redwoods (CR), Mendocino College (MCC), and Cal Poly Humboldt (CPH) have all developed robust programs and initiatives focused on environmental education (science, engineering, planning and policy, etc.), research, and community engagement. From cutting-edge research in such areas as sustainable forestry and clean energy to innovative community outreach programs, these educational institutions continue to play a crucial role in shaping the future of environmental leadership in the Redwood Region (*Environmental Science & Management*, n.d.).

Chapter 5

Public Health Analysis

This chapter explores the social determinants of health and the disparities experienced by the region's communities, drawing connections to the economic and environmental factors that influence health outcomes.

Key Takeaways

- The Redwood Coast region experiences higher age-adjusted mortalities than the state as a whole across most causes of death, especially unintentional injuries, all forms of cancer, drug-induced deaths, chronic lower respiratory disease, lung cancer, chronic liver disease and cirrhosis, suicide, motor vehicle traffic crashes, coronary heart disease, prostate cancer, and firearm-related deaths. The proximate risk factors for these are smoking, substance use, and poor mental health. These issues particularly affect specific populations in the region—people of color, people over the age of 50, and lesbian, gay, and bisexual individuals.
- Complex and interrelated social and community factors are observed with respect to disability rates, high reported Adverse Childhood Experiences (ACEs), poverty and attrition from the workforce, lower educational attainment, loneliness and isolation, and other factors that are pervasive and disproportionately impacting priority communities.[57]

Key Metrics

- **Age-adjusted mortality rates:** Compare mortality rates for major causes of death in the region to state averages to identify areas of concern and track progress over time.
- **Prevalence of proximate risk factors:** Monitor rates of smoking, substance use, poor mental health, and other key risk factors that contribute to the region's high mortality rates.
- **Socioeconomic disparities:** Track poverty rates, educational attainment, and other social determinants of health by race, ethnicity, and geography to identify communities facing disproportionate barriers to health and well-being.
- **Healthcare access barriers:** Assess the prevalence of health professional shortages, delays in accessing care, and unmet health needs, particularly among low-income and mentally ill populations.

[57] The outreach and engagement team's Insights Report offers qualitative insights into the relationship between these phenomena. Participants highlighted socioeconomic factors but also a desire for greater community cohesiveness, better relationships, and social belonging.

Conceptual Framework

The conceptual framework discussed in this section was inspired by the Bay Area Regional Health Inequities Initiative (BARHII) framework, which posits a flow from upstream factors such as social, living environment, and institutional inequities to such downstream factors as health behaviors, diseases, and ultimately mortality rates (BARHII).

To maintain focus on the most salient health determinants, this chapter works backwards from these upstream disparities in health outcomes, looking first at regional disparities in mortality rates, diseases, and disabilities to identify where disparities exist between the region and state averages, such as those in lung cancer rates. This analysis yielded a set of health outcomes for which a significant adverse disparity exists between the region and the state. Identifying these enabled a focused approach to identifying immediate or "proximate" downstream factors contribute to these disparities, such as health behaviors like tobacco use.

The analysis then moves further upstream to identify deeper factors (i.e., institutional, economic, and/or social ones) that may contribute to disparities in proximate risk factors, the role of poverty in tobacco use, for instance. It considers the potential for direct relationships between health and these deeper factors, e.g., that between poverty and chronic stress. Because of the complexity of such factors, focus is maintained on those commonly raised in the region's community health assessments. Lastly, the report examines health consequences from environmental factors, such as wildfires.

Wherever possible, data sources that include all four counties were sought and used. The California Health Information Survey (CHIS) data include only Humboldt, Mendocino, and Lake counties (referred to in these visualizations as HML). Del Norte is aggregated with a broader seven-county California region, so inclusion of Del Norte would unfortunately substantially skew the data for the region.

Health Disparities on the Redwood Coast

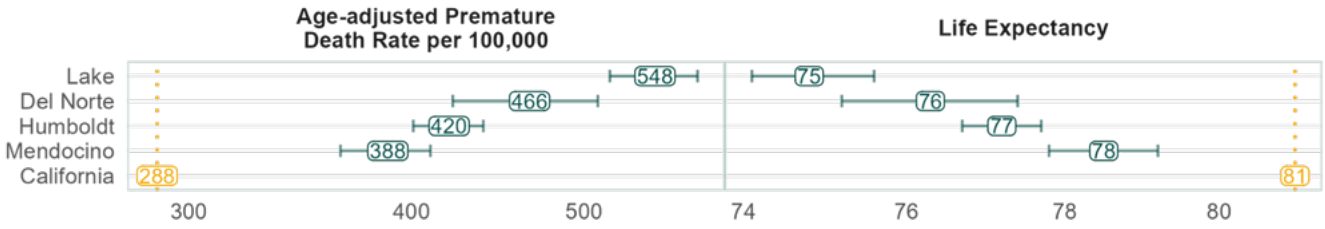
Life expectancy is a fundamental metric that reflects a broad spectrum of health factors, indicating the cumulative influence of wide-ranging health determinants. Disparities in life expectancy, therefore, serve as a good starting point for uncovering signals of disparities in health determinants between geographies and populations. Across the region, life expectancy at birth is significantly lower, and age-adjusted premature deaths per 100,000 significantly higher, than the statewide average. Figure 5.1 provides regional premature death and life expectancy rates by county, and Figure 5.2 displays a breakdown of these rates by race and ethnicity.[58]

Additional data indicate that premature death is elevated among AIAN communities in the Redwood Coast region compared to the overall state total (County Health Rankings and Roadmaps, 2023), signaling significantly higher age-adjusted premature death among white populations, given their size compared to the state average, as well as the overall state total. Additionally, Asian populations experience rates of premature death largely consistent with the overall state average, but significantly higher than the state averages for their respective population sizes. On the other hand, the region's Hispanic population experiences rates of premature death and life expectancy consistent with or

[58] Defined as the number of deaths occurring before age 75 per 100,000 population.

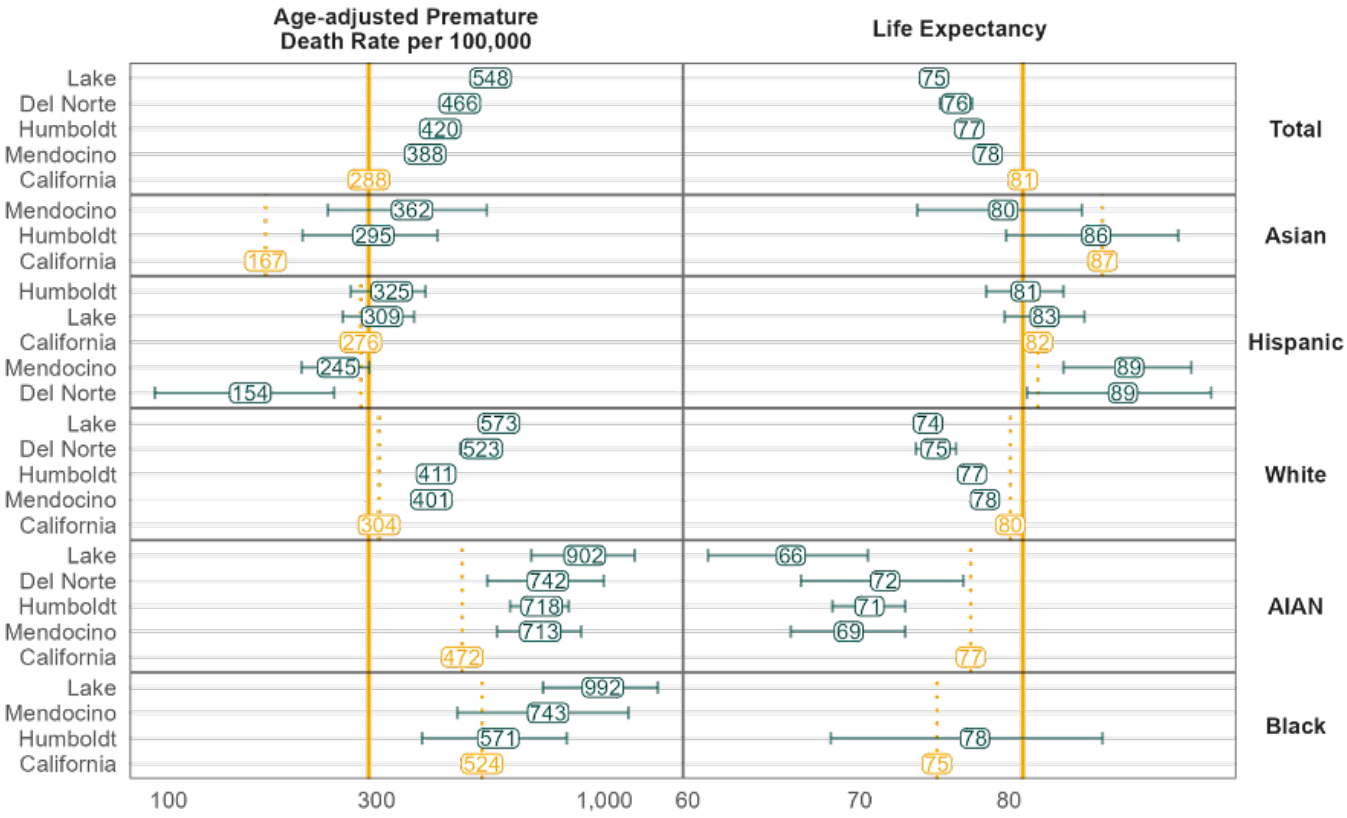
superior to both the state average for this population and the overall state population. Disaggregating mortality rates by cause of death allows for a targeted examination of the determinants of health that specifically contribute to the elevated rates of premature death and lower life expectancy within the region.

Figure 5.1 Premature Death and Life Expectancy (2018-2020)



Note. Data sourced from CHRR.

Figure 5.2 Premature Death and Life Expectancy by Race and Ethnicity (2018-2020)



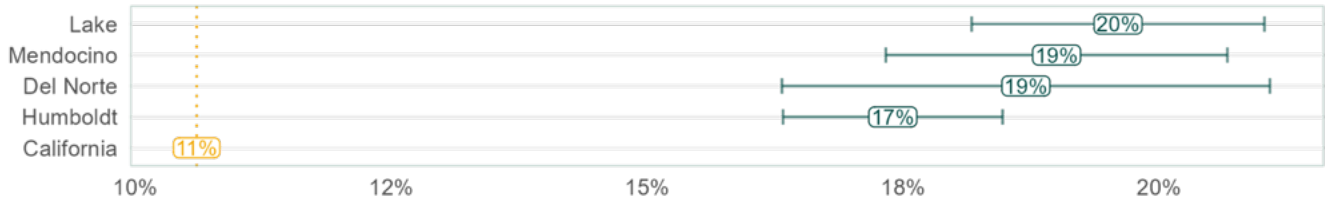
Note. Data sourced from the County Health Rankings & Roadmaps.

The data show a clear regional pattern of substantially higher death rates than those for the state as whole in several categories, including unintentional injuries, all cancer types, drug-induced deaths, chronic lower respiratory disease, lung cancer, chronic liver disease and cirrhosis, suicide, motor vehicle traffic crashes, coronary heart disease, prostate cancer,[59] and firearm-related deaths (California Department of Public Health (CDPH), 2022).

[59] Per 100,000 males.

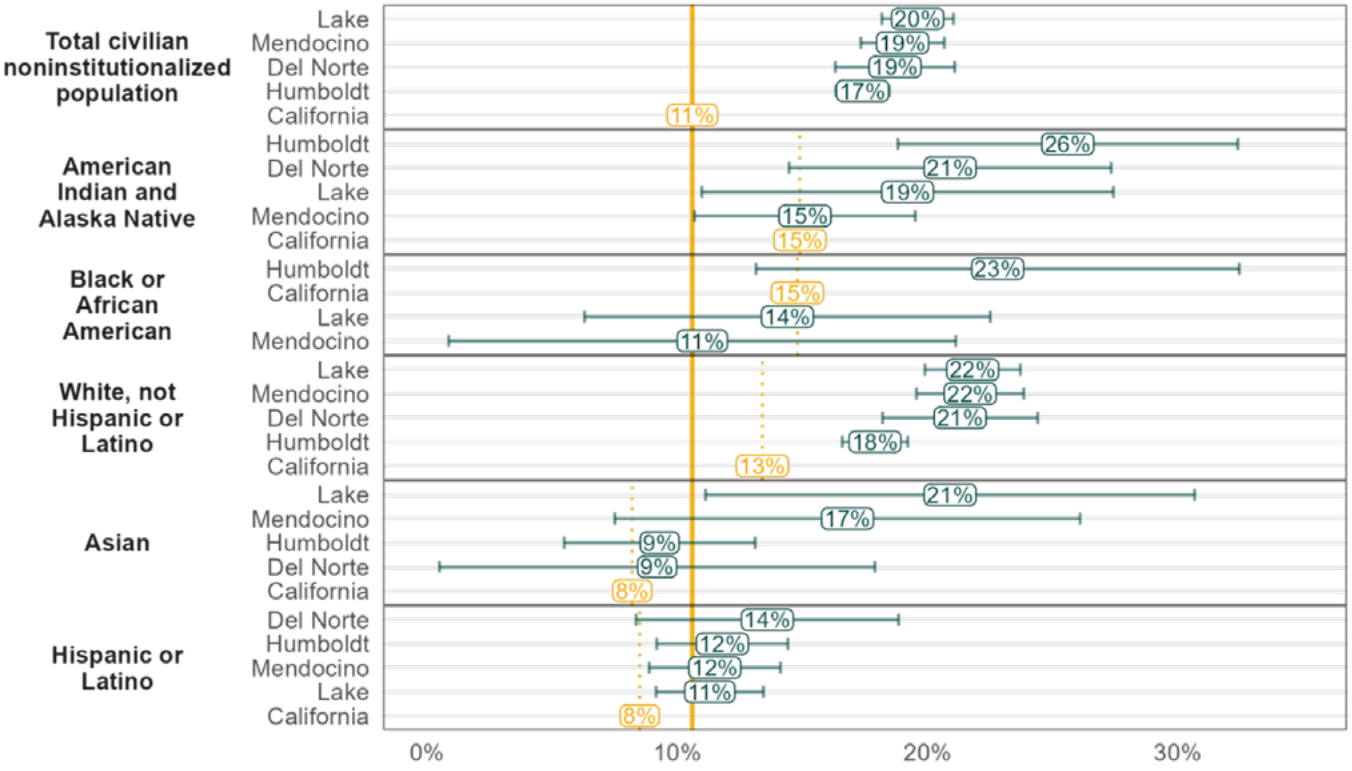
Disability and chronic illness: The data[60] reveal moderately elevated rates of asthma, heart disease, and obesity in the region, although these data do not include Del Norte (CHIS).[61] Conversely, rates of diabetes and high blood pressure are similar to or lower than the state averages. As shown in Figure 5.3, disability[62] rates for the region are higher than those for the state. While the aging population is a contributing factor, even individuals aged 18 to 34 are experiencing disability rates significantly higher than the state average, suggesting that factors beyond the aging population play a role in the region's elevated disability rates. The next section further explores potential factors contributing to this phenomenon.[63]

Figure 5.3 Disability Rates (2017-2021)



Note. Data sourced from the U.S. Census Bureau (2022).

Figure 5.4 Disability Rates by Race or Ethnicity (2017-2021)



Note. Data sourced from the ACS. Missing data or estimates with confidence intervals that include zero are excluded from the visualization.

[60] County-level morbidity data are relatively limited when compared to mortality data, highlighting data gaps in understanding health disparities in rural areas. To address these limitations, both CHIS and CDC PLACES datasets are employed to identify signals of health disparity.

[61] All CHIS data include only Humboldt, Mendocino, and Lake counties.

[62] Including both physical and mental health disabilities.

[63] Appendix C presents disability rates by race and ethnicity.

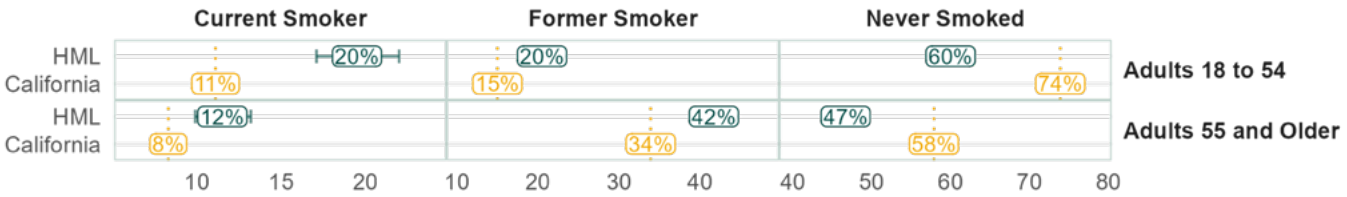
It is important to consider differences in disability rates and other health factors by race or ethnicity in the context of age, as differences in a population's age structure can strongly influence differences between the disability rates of populations. Consistent with national and state trends, Latino households are substantially younger compared to the general population. On the other hand, the non-Hispanic, white community is substantially older compared to the general population (CHIS). Therefore, a greater level of age-related disparities in health outcomes would be expected for the non-Hispanic white population whereas a lower level of such disparities would be expected for the Hispanic population.

Proximate Risk Factors

This section explores the potential factors contributing to the health disparities between the region's Redwood Coast region and the state, as identified in the previous sections. A more comprehensive analysis of the underlying factors (e.g., poverty) potentially related to these proximate risk factors are explored in the following section.

Smoking: As shown in the previous section, evidence demonstrates higher mortality rates among the region's residents from cancer, lung cancer, chronic lower respiratory disease, and heart disease than the state averages. One explanation could be the significantly and substantially higher smoking rates across the region shown in Figure 5.5. Notably, the proportion of current smokers among adults aged 18 to 54 in the Redwood Coast region (labeled as HML in the figure) is nearly double the state average (CHIS). This striking disparity indicates that smoking may play a crucial role in explaining and addressing the region's elevated rates of cancer, lung cancer, and respiratory illnesses.

Figure 5.5 Smoking Rates (2011-2022)



Note. Data sourced from the CHIS.

Heart Disease: The primary risk factors for heart disease include high blood pressure, high low-density lipoprotein (LDL) cholesterol, diabetes, unhealthy diet, physical inactivity, obesity, smoking, and exposure to secondhand smoke (CDC, 2022). The available evidence indicates that rates of high blood pressure, high cholesterol, and diabetes in the region are comparable or superior to state averages. Additionally, although limited in scope, that data suggest that diets in Humboldt, Mendocino, and Lake (HML) counties are on par with or, in some cases, healthier than the statewide average, and indicators of physical activity in these counties are similar or superior to statewide averages (CHIS).[64] While the data for Del Norte are more limited, they suggest that food access in Del Norte is more limited and rates of physical inactivity are somewhat higher there than in the rest of the region. However, while diet and exercise may be contributing factors for Del Norte County, the data suggest that obesity and smoking play a key role in the prevalence of heart disease regionwide.

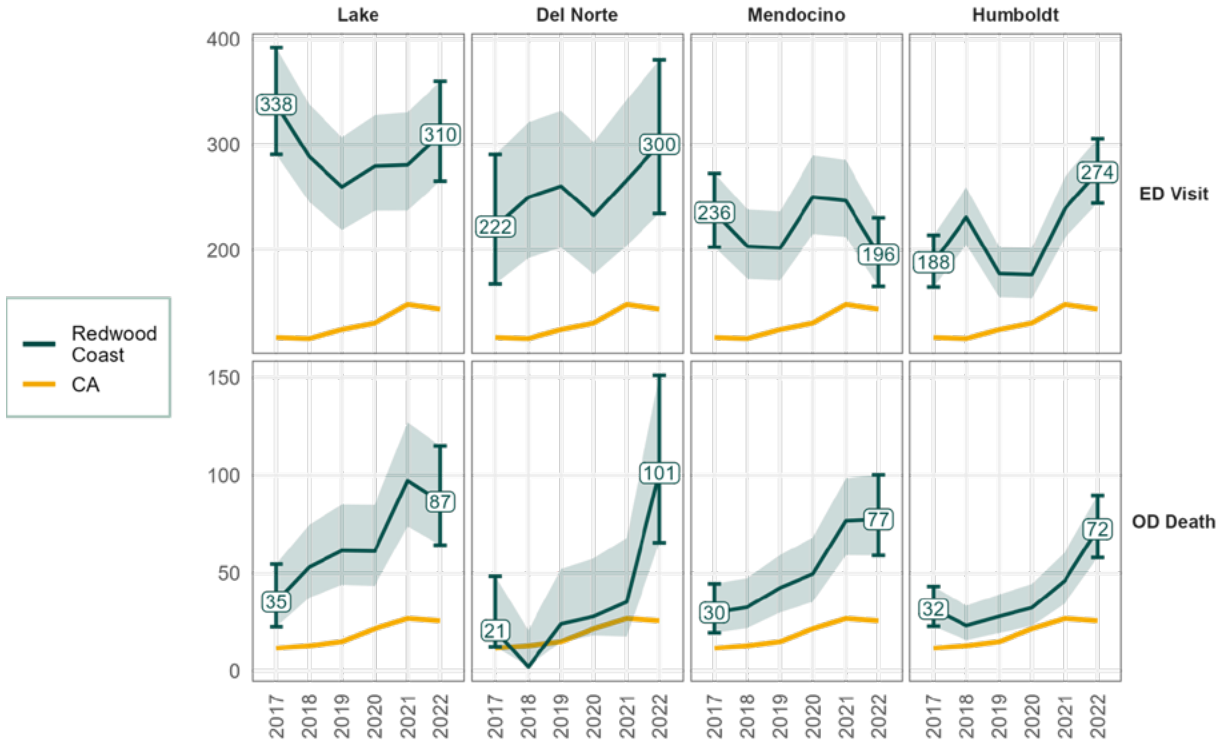
[64] Data for Del Norte are more limited, but the available data do not rule out diet and physical inactivity as contributing factors to the disparity in heart disease between Del Norte and the state.

Mental Health and Substance Use: As previously identified, the region exhibits elevated rates of accidental (i.e., unintentional) injuries, drug-induced deaths, motor vehicle accidents, liver disease, suicides, and firearm-related deaths. The analysis presented below suggests that these disparities in health outcomes align closely with the heightened prevalence of mental health challenges and substance use-related issues within the region, challenges that may also help to explain the elevated rates of disability also observed there.

The category of unintentional injuries includes unintentional poisoning and drug overdose, alcohol poisoning, motor vehicle accidents, and other unintentional injuries. Nationally, unintentional poisoning, including drug overdoses, has emerged as the leading cause of death within the unintentional injury category, a trend that began in the mid-1990s. However, since the mid-1990s and continuing to the present, unintentional poisoning deaths, particularly from drug overdoses, have risen sharply. As of 2021, nationwide data indicate that poisoning accounted for more than half of all unintentional injury deaths, followed by motor vehicle accidents (CDC).[65] Consequently, the region's elevated rates of drug-induced and motor vehicle deaths likely contribute substantially to the higher prevalence of unintentional injury deaths within the region.

As shown in Figure 5.6 below, drug-induced deaths began rising sharply in the Redwood Coast region starting around 2018, which the fentanyl epidemic has exacerbated in recent years. Statewide, fentanyl deaths began rising exponentially starting around 2017 and now account for over half of statewide overdose deaths. Similarly, fentanyl deaths have also increased exponentially in the Redwood Coast region and now account for roughly half of all drug overdose deaths.

Figure 5.6 Age-Adjusted Drug Overdose Rate per 100,000 (2017-2022)



Note. Data sourced from the CDPH's "California Overdose Surveillance Dashboard." Shaded regions and bars represent confidence intervals. Confidence intervals were provided by the data source. ED=Emergency Department. OD=Overdose

[65] A 2019 report for Humboldt County reported findings that indicate a similar trend, with the largest component being overdose, followed by motor vehicle crash injury deaths (County of Humboldt, Department of Health and Human Services, 2019). Also, according to this report, most of the disparity between the region's unintentional injury mortality rate and that of the state is attributable to these two causes of death.

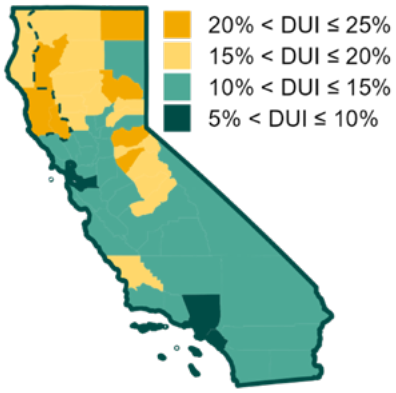
Rates of liver disease mortality have increased in recent years statewide; in the Redwood Coast region, this increase is occurring faster than in the state as a whole in all but Humboldt County, highlighting the urgency of addressing this worsening trend.[66] Multiple data sources collectively point to higher rates of excessive drinking in the region compared to the state (CHIS; CHRR). Although CHIS data related to binge drinking are somewhat limited, at least one heavy drinking variable in the CHIS data indicates high rates of binge drinking.[67]

Motor vehicle mortality rates are sharply elevated across the region. Traffic safety ranking data from the California Office of Traffic Safety point to several factors possibly contributing to the region's elevated rates of motor vehicle traffic fatalities. According to these data, Redwood Coast individuals have a higher risk of being involved in pedestrian, hit-and-run, nighttime, and alcohol-involved fatal and injury-causing traffic accidents than do those elsewhere in the region.

Two additional data sources highlight the role of substance use in traffic safety in the region (TIMS; CHRR). As shown in Figure 5.7, crashes within the region in which the driver was driving under the influence (DUI) account for a greater proportion of all vehicle crashes (including those without injury) compared to those in the majority of the state.

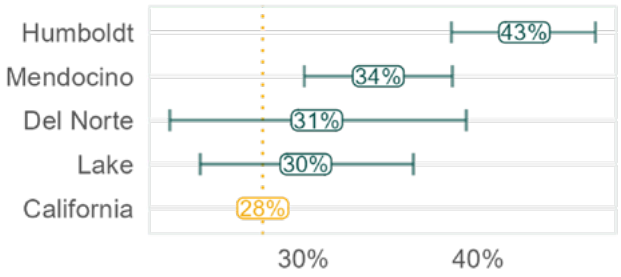
Figure 5.7 Car Crashes or Deaths Involving Alcohol Use

Drug and/or Alcohol DUI as a Percent of All Crashes (2012 - 2021)



Note. Data sourced from TIMS. Includes both alcohol and drug DUIs.

Percent of Driving Deaths Involving Alcohol (2016 - 2020)



Note. Data sourced from CHRR.

While other factors such as infrastructure and climate contribute to the region's elevated motor vehicle crash fatalities, substance use appears to play a critical role in the region's elevated motor vehicle deaths and—along with drug-induced deaths—and in its unintentional injury deaths.[68,69]

[66] The 2019-2021 CDPH data release compared to the 2017-2019.

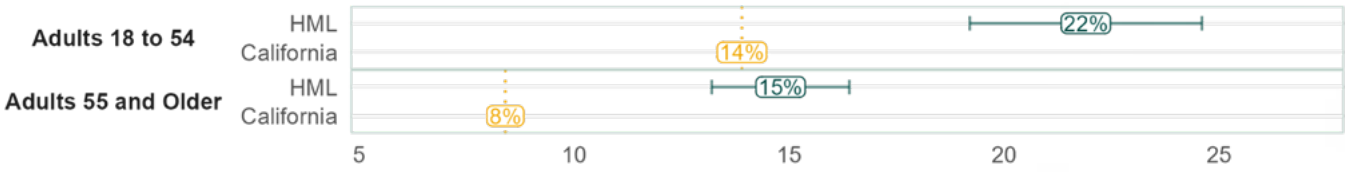
[67] Adult binge drinking data from CHIS is limited to only a few years. Data collected between 2021 and 2022 on recent binge drinking show rates consistent with state averages but with wide confidence intervals reflecting the limited duration of data collection. CHIS data collected between 2011 and 2015 show higher rates of binge drinking in the past year.

[68] Another factor not captured in the data reported above but particularly salient in the rural Redwood Coast context, is emergency medical service (EMS) response time which are significantly associated with motor vehicle mortality rates (Byrne et al., 2019). Research indicates a 1.46 times greater risk of mortality for an EMS response time of 12 or more minutes compared to seven or fewer. A national study found that the median EMS response time is six minutes in urban and suburban regions and 13 minutes in rural areas. This study also found that 10% of EMS response times were 26 minutes or longer in rural areas (Carr et al., 2017).

[69] Motor vehicle deaths are included in unintentional injury deaths.

Suicidal Ideation: Data from multiple sources strongly signal higher risk factors for suicide in the Redwood Coast (Figure 5.8). Both youth and adults located there are more likely to report having considered suicide than in the state as a whole, and youth in the region are more likely to have reported feelings of sadness.

Figure 5.8 Answers to the Question *"Have you ever seriously thought about committing suicide?"* (2011-2022)



Note. Data sourced from CHIS.

Amongst the leading causes of illness and death, poor mental health and substance use appear to play either a direct or an indirect role in contributing to many of the disparities in health outcomes observed in the region. Along with tobacco use as discussed previously, substance use and mental health factors appear to strongly influence those health outcomes displaying the greatest disparities between the Redwood Coast and the state.

Impacts of Disinvestment on Community Health

Homelessness: While the data presented below indicate an elevated level of homelessness in the Redwood Coast, important to acknowledge is that following and measuring homelessness is a complex task, leading to limitations and uncertainties in these figures. Nevertheless, these indicators suggest an elevated homelessness rate across the region compared to the rest of California (*HUD.gov / U.S. Department of Housing And Urban Development (HUD)*, n.d.); KidsData, 2023).

As shown in Figures 5.9 and 5.10 below, homeless point-in-time (PIT) data[70] from the Department of Housing and Urban Development (HUD) reveal that homelessness on a per capita basis in the region exceeds the state average.[71] These data do not include Del Norte; however, a 2023 report from the NorCal Continuum of Care (CoC) region found 694 homeless people in Del Norte, producing a rate of 2,525 per 100,000 population. Similarly, an alternative data source indicates a greater proportion of youth homelessness among public school students across the region (KidsData, 2023).

[70] PIT data is gathered by counting how many people are experiencing homelessness on a given day.

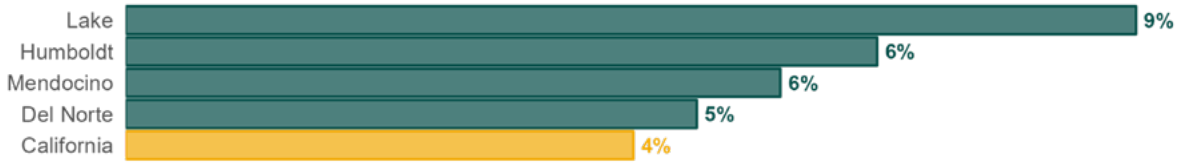
[71] HUD compiles reported homeless counts gathered by regional participants of the Continuum of Care (CoC) program throughout the U.S. During a 24-hour period in the first ten days of January each year, CoC participants conduct a Point-in-Time (PIT) count of homeless people in their respective regions. These counts include both sheltered homeless as well as people living in areas not meant for habitation.

See Appendix I for a comparison of all Continuums of Care in California. Humboldt and Mendocino CoCs have the highest rates in the state.

Figure 5.9 Total Counted Homeless per 100,000 Population by Continuum of Care (2016-2020)[72]

Note. Data sourced from the U.S. Department of Housing and Urban Development's datasets on Point-in-Time (PIT) estimates, a count of sheltered and unsheltered individuals experiencing homelessness. Data are five-year averages from 2016 to 2020. Rates calculated by the author are five-year estimates using population data from the U.S. Census Bureau (2022) for 2016-2020. Population estimates are summed for each CoC service area by county.

Figure 5.10 Homeless Public School Children (2011-2014 and 2016-2018)



Note. Data sourced from Kidsdata.org. Defined as the percentage of public school students recorded as being homeless at any point during the school year. Data for 2015 are not available.

Poverty: Economic conditions strongly influence health disparities. Poverty is linked to lower life expectancy and increases in health risks related to obesity, smoking, substance use, and chronic stress (Healthy People, 2030). People living in poverty are also more likely to burn wood for residential heating and live on or near unpaved roads, exposing them to dust from these sources, which are leading causes of air pollution (see Chapter 4) and can exacerbate health conditions.

Poverty rates for all ages are sharply higher in the Redwood Coast region compared to those for the state as a whole. People in the Black, Hispanic or Latino, and AIAN communities specifically are more likely to live in poverty than state averages (U.S. Census Bureau, 2022). Figure 5.11 below shows detailed, disaggregated data on poverty.

[72] The 2021 data, which show a dubious decline in measured homelessness, are deliberately excluded. These data are not comparable to prior-year estimates due the the effects of COVID restrictions. Many shelters, for example, reduced capacity in response to CDC COVID-19 guidelines, thereby also reducing the headcount of sheltered homeless (U.S. Department of Housing and Urban Development).

Figure 5.11 Disaggregated Poverty Rates (2017-2021)

	CA	Humboldt	Lake	Del Norte	Mendocino	
5 to 17 years	16%	22%	23%	28%	19%	Age Range
Under 18 years	16%	22%	22%	25%	19%	
18 to 34 years	13%	31%	18%	18%	21%	
Under 5 years	16%	20%	18%	16%	20%	
35 to 64 years	10%	17%	17%	17%	13%	
65 years and over	10%	11%	10%	9%	13%	
Less than high school	20%	32%	26%	21%	25%	Educational Attainment (25+)
High school or equivalent	13%	20%	20%	15%	17%	
Some college	9%	17%	14%	12%	13%	
BA or higher	5%	10%	5%	8%	7%	
Black	19%	43%	35%	39%	36%	Race/Ethnicity
AIAN	17%	37%	38%	26%	22%	
Asian	10%	32%	18%	47%	~12%	
Two or more races	12%	24%	21%	22%	20%	
Hispanic or Latino	16%	24%	16%	21%	22%	
White, not Hispanic or Latino	9%	17%	15%	13%	12%	
Female	13%	21%	18%	19%	17%	Sex
Male	11%	19%	15%	16%	15%	
Unemployed	24%	32%	33%	14%	34%	Work (16+)
Did not work	21%	30%	23%	26%	25%	
Worked part-time	13%	25%	17%	14%	14%	
Worked full-time	2%	4%	2%	2%	4%	

> 3X CA Avg. > 2X CA Avg. > CA Avg. ≤ CA Avg.

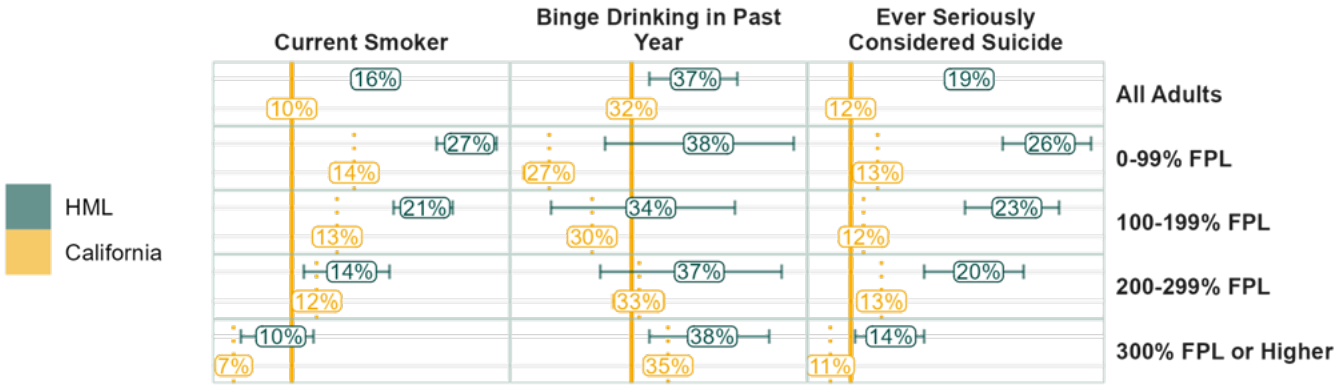
Note. Data sourced from the U.S. Census Bureau (2022). (~) denotes a statistically unstable estimate.[73]

Poverty in the Redwood Coast appears to be strongly connected with two proximate risk factors, smoking and suicide ideation (CHIS). Nearly 27% people living below the poverty line in the region are current smokers compared to just 15% statewide. Similarly, 26% of people living below the federal poverty level (FPL) have seriously considered suicide.

Statewide, recent binge drinking is *positively* associated with income (see Figure 5.12), a finding that is not uncommon of studies linking socioeconomic status to heavy drinking (Collins, 2016). Regionally, those with incomes above the poverty line have rates of binge drinking consistent with state rates. However, those below the poverty line have rates of binge drinking that are significantly higher compared to those in the same income bracket statewide. For smoking and suicidal ideation, those with low or moderate incomes are at much greater risk in the region.

[73] For these data, an estimate is determined to be statistically unstable if it is not significantly higher than 0 or significantly lower than 100%.

Figure 5.12 Proximate Risk Factors by Income Range (2011 - 2021, Binge Drinking 2011-2015)



Note. Data sourced from the CHIS. FPL refers to the federal poverty line.

Educational Access and Outcomes: Target objectives for improving educational access include improving high school graduation rates, increasing college enrollment, and improving math and reading proficiencies in K-12 students ("Education Access and Quality"). In the Redwood Coast, gaps in educational attainment begin early, with K-12 students lagging behind their statewide peers on reading and math proficiency. Regional high school graduation rates are on par with the state rate, but high school graduates in the region are much less prepared for college admission compared to the state average. Across the Redwood Coast region, high school graduates complete the course requirements for admission to the University of California (UC) or California State University (CSU) systems (i.e., "A–G courses") at roughly half the rate of their statewide counterparts (Kidsdata. 2023). Correspondingly, all Redwood Coast counties lag behind in four-year degree attainment. Therefore, while the region fares relatively well in terms of high school graduation rates, it appears that the educational system faces challenges in preparing high school graduates for college.[74]

With respect to the region's health challenges, educational attainment appears to be strongly associated with tobacco use.[75] Both in the region and across the state, smoking rates decrease significantly as educational attainment increases; however, this relationship is particularly strong in the Redwood Coast, where one in four individuals with less than a four-year college degree is a current smoker, compared to just 14% statewide (CHIS).

Social Isolation: A recent report by the U.S. Surgeon General brought national attention to the health impacts of social isolation and loneliness, raising the issue as urgent and requiring 'immediate awareness and action.' The report documents the health risks of social isolation and loneliness, including a wide range of physical and mental health outcomes encompassing cardiovascular disease, hypertension, diabetes, infectious disease, cognitive decline, depression, and anxiety (U.S. Surgeon General, 2023).[76, 77]

[74] Another contributing factor for the gap in higher educational attainment may be a comparative lack of four-year colleges and universities that are geographically accessible for much of the population in the region. Only Humboldt County is home to a public four-year university.

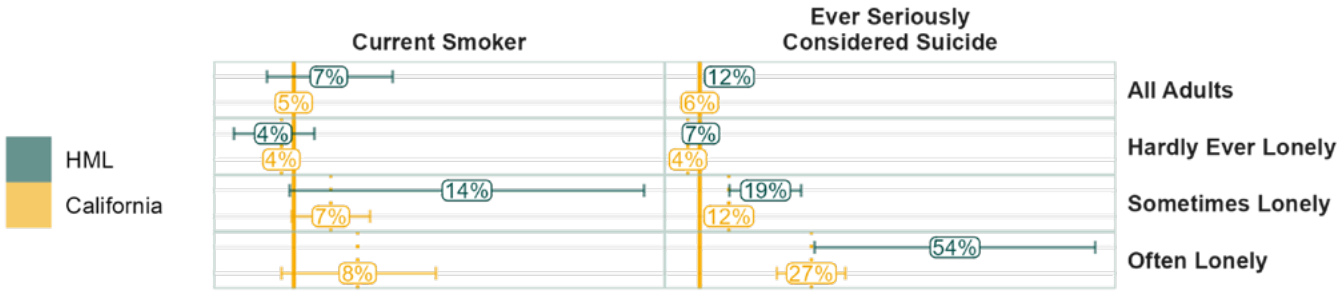
[75] Alcohol use and suicide ideation do not exhibit clear relationships with educational attainment. Rates of both appear to be *lower* among those with less than a high school education.

[76] The Surgeon General defines **social isolation** as "Objectively having few social relationships, social roles, group memberships, and infrequent social interaction. (2023)".

[77] The Surgeon General defines **loneliness** as "A subjective distressing experience that results from perceived isolation or inadequate meaningful connections, where inadequate refers to the discrepancy or unmet need between an individual's preferred and actual experience (2023)".

Data on loneliness at the local level is scarce. However, statewide data from CHIS indicate that significantly fewer adults over the age of 65 report themselves as hardly ever feeling lonely compared to the state average, suggesting that the experience of loneliness among the elderly population is more prevalent in the HML region. Older adults who experience loneliness are at higher risk of smoking and suicide ideation (CHIS) (see Figure 5.13). Over half of Redwood Coast seniors who report often feeling lonely also report having seriously considered suicide and at a significantly and substantially higher rate than those who report only sometimes or hardly ever feeling lonely. Therefore, older Redwood Coast residents who indicate that they often feel lonely appear to be at high risk for one of the region's most elevated causes of death.

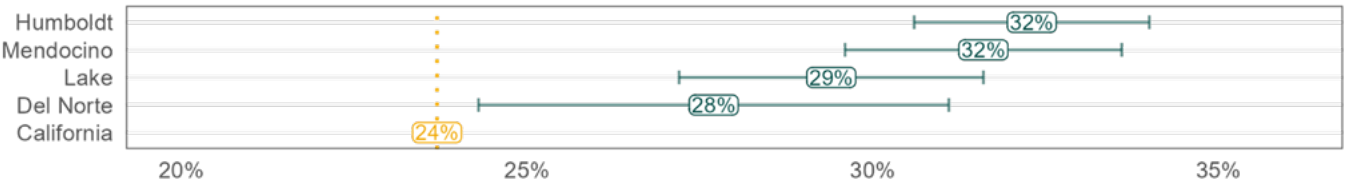
Figure 5.13 Proximate Risk Factors by Loneliness, Age 65+ (2019-2020)



Note. Data sourced from the CHIS. Smoking data not available for the "Often Lonely" category.

Significantly more householders live alone in the Redwood Coast, indicating greater levels of social isolation within the household context (Figure 5.14). Isolation is a critical risk factor for suicide, particularly among men who are almost four times more likely to commit suicide than women (CDC, 2023).

Figure 5.14 Householders Living Alone, Percent of Households (2017-2021)



Note. Data sourced from the U.S. Census Bureau (2022).

Adverse childhood experiences (ACEs) involve abuse and neglect, as well as dysfunction in the household including mental illness, problematic substance use, violence against mothers, or imprisonment of a household member (Felitti et al., 1998). People who have multiple ACEs are at far greater risk than people with one or no ACEs for poor health outcomes or behaviors, including all proximate risk factors identified in this report (i.e., tobacco use, substance abuse, and mental health challenges). For example, an individual with one ACE is approximately 1.3 times more likely to have ever injected drugs, whereas, for an individual with four or more ACEs, this likelihood rises to 10.3 times compared to someone with no ACEs (Felitti et al., 1998).

The proportion of adults with four or more ACEs is significantly and substantially higher in the Redwood Coast compared to the state average, while the proportion of adults with zero ACEs is significantly lower (CHIS). Recent data reveal that rates of domestic violence and child abuse are elevated across the region, indicating that the region's youth are at risk for ACEs (Kidsdata, 2020). However, no substantive, large-scale study has been done on the region to confirm these results.

Statewide, smoking, recent binge drinking, and suicide ideation are positively associated with ACEs. Regional estimates, while subject to more statistical variation, indicate a similar trend (CHIS). In particular, 45% of Redwood Coast adults with four or more ACEs have seriously contemplated suicide during their lives compared to just 11% of Redwood Coast adults with no ACEs and 6% of California adults with no ACEs. Therefore, Redwood Coast residents indicating multiple ACEs are at high risk for one of the region's most elevated causes of death.

Food and Nutrition: A healthy diet composed of limited portions of the necessary food groups is associated with lower all-cause mortality, cardiovascular disease, obesity, diabetes, and breast and colorectal cancer (*Healthy People 2030* initiative). Thus, barriers that prevent access to a healthy diet such as poverty, high prices, or transportation may have an adverse influence on these health outcomes.

> "Lack of fresh food impacts wellness in a place where accessible medical treatment is already a challenge."

Rates of heart disease are elevated across HML counties along with somewhat elevated rates of breast cancer and colorectal cancer[78] (CDPH, 2022). Conversely, however, rates of diabetes are consistent with or lower than state averages across Humboldt, Mendocino, and Lake Counties. Health planning documents for Humboldt, Del Norte, and Lake County report food-related health issues. In particular, a 2019 Del Norte Community Health Assessment found high rates of food insecurity in Del Norte, disproportionately impacting children (Freedman et al., 2019).

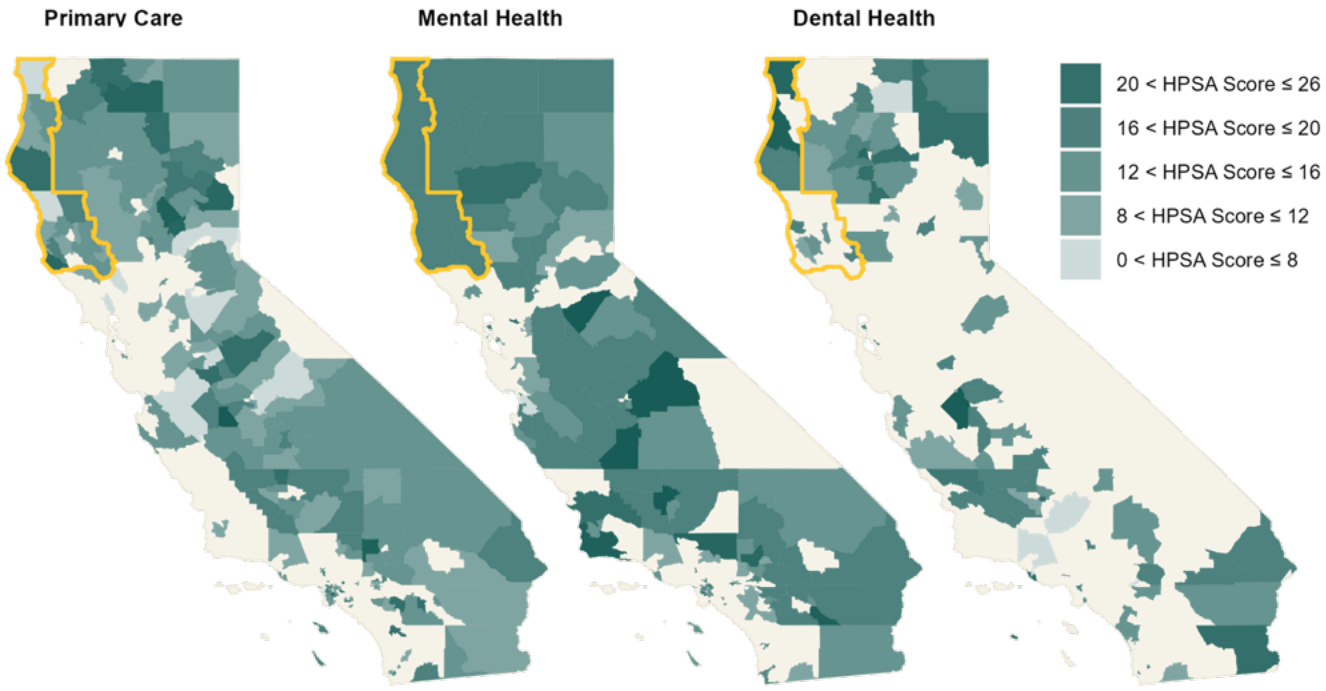
Unfortunately, available data strongly suggest that Del Norte is most impacted by food insecurity in the Redwood Coast, and yet CHIS data is not available for Del Norte County to further assess this county's most vulnerable populations. The data that are available for HML indicate that dietary factors in the region appear to be strongly influenced by household income (CHIS). Consistent with statewide trends, higher income households are more likely to have local access to fresh produce and are therefore less likely to have recently consumed soda and fast food.

For the HML counties, CHIS data suggest dietary outcomes are consistent with or superior to state averages across income strata, at least within the limited contexts of fast food, soda, and fresh produce. Therefore, the available data suggest that food insecurity and dietary risks are greatest in Del Norte County and among low-income households regionwide.

[78] The most recent CDPH data release shows a lower rate of age-adjusted heart disease mortality in Del Norte County, however, the 2017-2019 data release shows higher rates in Del Norte. Moreover, CDC PLACES data suggest higher rates of heart disease in Del Norte County.

Health Access and Barriers: The majority of the Redwood Coast is a designated Health Provider Shortage Area (HPSA), which are regions or populations identified by the U.S. Department of Health and Human Services (HHS) as having a shortage of primary care, mental health, or dental health providers.[79] Almost all of the region is a Primary Care HPSA, the entirety of the region is a Mental Health HPSA, and a substantial share is a Dental Health HPSA. See Figure 5.16 below for details.

Figure 5.15 Health Professional Shortage Areas and Scores (2023)[80]



Note. Beige areas are not HPSAs. Blue areas are HPSAs, with darker hues indicating higher HPSA scores (or greater need). The Redwood Coast region is outlined in gold. Data sourced from the Health Resources and Service Administration's data on shortage areas, measuring HPSA areas in primary care, dental health, and mental health.

In contrast to the state population, a significantly larger proportion of the Redwood Coast population has recently experienced delays in accessing primary healthcare. All income brackets experience higher rates of delayed care compared to corresponding income groups statewide (CHIS). However, those with lower incomes clearly experience increased delays, indicating a disproportionate effect. Moreover, those with incomes below the federal poverty line (FPL) are significantly more likely to have delayed a prescription compared to the same income category statewide, while those with higher income levels do not share this experience. Delayed care may also be a factor in the region's elevated age-adjusted mortalities due to prostate cancer, breast cancer, and colorectal cancers. For all three, delayed care is associated with higher mortality (Hanna et al., 2020; Chan et al., 2021).

[79] These HPSAs are assigned scores, which range from 0 to 25 for primary care and mental health and from 0 to 26 for dental health, with higher scores indicating greater need. Factors considered in determining the score include the provider-to-population ratio, poverty rate, travel time to the nearest point of care outside of the region, and other factors relevant to the health field (Health Resources & Services Administration). HPSA scores for primary care also take into account indicators of infant health. Dental health scores take into account water fluoridation status. Mental health scores take into account the percentages of the population over 65 and under 18, alcohol abuse prevalence, and substance abuse prevalence.

[80] See national level maps created by the data provider located here: https://data.hrsa.gov/maps/map-gallery.

Furthermore, CHIS data reveal a stark unmet need for care for those with mental health challenges. Among adults who have seriously considered suicide at some point in their lives, 42.5% (± 5.0%) have delayed care in the past 12 months compared to just 16.4% (± 2.4%) of HML adults, who have never considered suicide.

Equity Considerations and At-Risk Populations

Redwood Coast communities are vulnerable due to their geographic location and environment, lack of resources and healthcare services, and low representation of at-risk populations (see Chapter 4) both in data and decision-making spaces. At-risk populations, such as people with disabilities and people living in poverty, are often not represented and can exist as hidden populations. A lack of accurate diversity representation can lead to a lack of federal or state funding and increase the disparities seen in planning.

Figure 5.16 below offers a visual comparison of health outcomes and factors across demographics. Each column illustrates the differences between two populations. For example, the first column contrasts the health factors of people of color with those of the white population. Gold shades denote adverse disparities for the primary population relative to the reference group. A specific observation reveals that, in the HML region, 26% of people of color live below the poverty line in contrast to 16% of the white population.[81] These data display several notable trends that further highlight populations at risk in the HML region:

- People of color show higher rates of fair or poor health, higher poverty levels, lower educational attainment, higher ACEs, and more limited access to nutritious foods than their white peers. Based on other data, people of color in Del Norte County experience higher rates of poverty and higher rates of lack of health insurance than whites (U.S. Census Bureau, 2022).

- Lesbian, gay, and bisexual communities within the HML region face numerous disparities: increased smoking and heavy alcohol consumption, suicidal thoughts, higher poverty rates, elevated ACEs rates, domestic violence, deferred medical care, and adverse weather-related health impacts. Alarmingly, half of this community has seriously contemplated suicide.

- People with disabilities in the region experience higher rates of poor health, increased smoking, suicidal thoughts, poverty, decreased educational attainment, living alone, restricted access to healthy food, and deferred medical care.

- The 55+ demographic in the region tends to live solitarily. As expected, a higher percentage report fair or poor health, but this group generally exhibits fewer risk factors. The health trends of the veteran population resemble these patterns, possibly due to a significant age overlap in the two groups within the region.[82]

[81] Non-white Hispanics are included in the people-of-color category and white Hispanics are included in the white group.

[82] In the HML region 16.8% of adults 55 and older have served in the military compared to just 4.4% for adults 18 to 54 (2011 - 2022 CHIS data).

Figure 5.16 Comparative Analysis of Demographic Disparities in Health Factors (2011-2022)

Redwood Coast

	People of Color vs. White	Homosexual or Bisexual vs. Heterosexual	Disabled vs. Non-Disabled	Veteran vs. Non-Veteran	55+ vs. Younger
Fair or Poor Health Status	21/16%	18/19%	41/9%*	27/19%*	22/13%*
Current Smoker	16/16%	19/14%	27/15%*	17/16%	12/20%*
Binge Drinking	17/17%	22/16%	29/42%*	17/17%	10/22%*
Suicide Ideation	17/19%	49/18%*	21/11%*	20/19%	15/22%*
Below FPL	26/16%*	25/16%	24/15%*	11/18%*	12/21%*
Less than BA	79/65%*	57/66%	80/63%*	68/67%	64/69%
3+ ACEs	53/44%	60/43%*		40/46%	36/52%*
Violence by Intimate Partner	~2/2%	~6/1%			~1/2%
Lives Alone	14/19%*	20/18%	29/14%*	28/17%*	27/12%*
Lower Access to Fruits/Veggies	16/12%	~9/13%	17/10%*	11/13%	12/13%
Delayed Care in Past 12 Months	14/19%*	32/20%*	25/15%*	17/22%	16/19%
Health Impacted by Ext. Weather	~7/15%	21/13%		10/14%	12/16%

California

Fair or Poor Health Status	18/14%*	19/18%	41/12%*	18/19%	25/12%*
Current Smoker	10/10%	13/8%*	17/11%*	11/10%	8/11%*
Binge Drinking	16/20%*	28/18%*	25/35%*	16/19%*	10/24%*
Suicide Ideation	11/13%*	35/12%*	15/6%*	12/12%	8/14%*
Below FPL	21/14%*	16/15%	24/14%*	6/16%*	12/18%*
Less than BA	65/59%*	57/60%*	75/60%*	60/62%*	62/61%
3+ ACEs	32/34%*	52/31%*		36/33%	27/37%*
Violence by Intimate Partner	3/2%*	4/2%*		2/3%	1/3%*
Lives Alone	9/13%*	15/11%*	17/10%*	18/11%*	20/7%*
Lower Access to Fruits/Veggies	15/10%*	13/12%	16/10%*	10/12%	10/12%*
Delayed Care in Past 12 Months	11/14%*	25/15%*	21/11%*	11/16%*	12/13%*
Health Impacted by Ext. Weather	5/8%*	14/6%*		6/7%	6/7%*

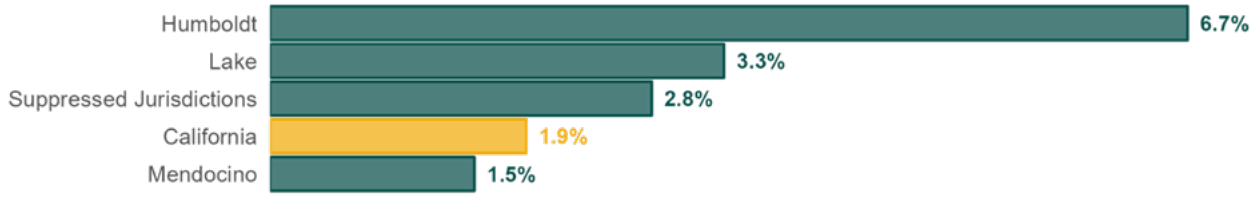
Note. Data sourced from the CHIS. (*) denote statistically significant differences and (~) denote unstable estimates. An estimate may be simultaneously unstable and significantly different. Missing values are not shown. Years are selected based on all available years from 2011 to the present. Binge drinking represents either "Binge Drinking in Past Month" or "Binge Drinking in Past Year" depending on data availability.

Climate and Environments Impacts on Community Health

Environmental pollutants can contribute to respiratory disease, heart disease, and some cancers (*Healthy People 2030* initiative, "Environmental Health"). CalEnviroScreen 4.0 data (see page 78 in the Climate Analysis) indicate that, overall, the region's pollution burden is lower than statewide estimates. However, certain environmental risks are elevated in some areas of the region, including children's lead risk as well as presence of drinking water contaminants.

Critical to note is that the CalEnviroScreen 4.0 variable "Children's Lead Risk from Housing" does not directly measure lead exposure and instead infers a level of risk based on the incidence of child poverty and age of housing structures.[83] An additional data source shown in Figure 5.17 indicates that blood lead levels (BLL) among children aged five and under are elevated in Humboldt and Lake counties. Moreover, Humboldt's BLL levels are the second highest in the state.[84] The CalEnviroScreen 4.0 data cited above suggest that the epicenter of lead risk in Humboldt County is in the Arcata-Eureka-Fortuna region.

Figure 5.17 Blood Lead Levels, Children 5 and Under



Note. Data sourced from CDPH. Suppressed jurisdictions include Alpine, Amador, Calaveras, Colusa, Del Norte, Glenn, Inyo, Lassen, Mariposa, Modoc, Mono, Plumas, Sierra, Siskiyou, Trinity, Tuolumne, and Yuba.

Water Quality: Impaired waterways are a major issue in the region (see Chapter 4). Fifty-eight river and stream locations have tested positive for at least one pollutant that is over the relevant safe threshold mandated by the California Water Boards. Each of these locations is polluted by indicator bacteria, surrogates used to measure the potential presence of fecal material and pathogens. Among the many of the region's lakes, reservoirs, harbors, and estuaries, eight bodies of water are listed as polluted, and three-quarters of these are contaminated with mercury, which therefore increases levels of mercury found in fish species in the region. These compromised aquatic species and contaminated groundwaters constitute a public health threat throughout the region.

Wildfires: In contrast to man-made pollutants, wildfires and corresponding health risks have, in recent years, been far more severe in the state's northern region than the rest of the state. Smoke from wildfires can impair lung function, contributing to bronchitis, asthma, and heart failure, and the region's substantial elderly population are particularly vulnerable to these effects (United States Environmental Agency, 2023). Wildfires are the region's largest single natural contributor to air pollution, even surpassing contributions made by cars and farm equipment (see Chapter 4). Consequently, these fires may exacerbate the region's disproportionately high levels of asthma and respiratory illness.

Recent high-impact wildfires and droughts have been linked to extremes in the Evaporation Demand Drought Index (EDDI), which is how much water the atmosphere needs and thus how much moisture evaporates over a period of time. Rising air temperatures are the leading cause of increased evaporative demand for inland regions, whereas humidity is more noticeable in n coastal areas, including the HML region. The EDDI's historical baseline is approximately five days per season with a two-week EDDI above the 95th percentile (see Chapter 4). Based on historical data, current models

[83] Exposure to lead-based paint in older homes is the most significant source of lead poisoning in children (*Experience*, n.d.).

[84] Second to Nevada County.

predict an increase in high fire danger-risk days likely leading to an increased risk of wildfires in the area, which, in turn, could increase rates of asthma and respiratory illness, as well as premature death.

Although not necessarily specific to wildfires, weather-related events do appear to have had an outsized impact on the health of the region compared to the state as a whole. Between 2019 and 2022, approximately 78% of Redwood Coast residents experienced extreme weather events compared to just 42% of California residents. Significantly and substantially more residents in the region experience adverse mental and physical health impacts due to recent extreme weather-related events compared to the state as a whole (CHIS).

RRRISE and Public Health

As evidenced by listening sessions across the region, there is widespread recognition of the relationship between public health and healthcare systems, and the overall wellbeing of Redwood Coast communities in the RRRISE Collaborative. Acknowledging some of these sobering trends on the health of the region's communities, and the role that professional shortages in healthcare fields can play in this (among other factors) contributed to Health and Caregiving being elevated as a priority sector for the initiative. Strategies that seek to address social determinants of health, for example, is detailed in Regional Plan Part 2.

Chapter 6

Industry Cluster Analysis

This chapter identifies key industry clusters with the potential for sustainable growth and family-sustaining careers, such as the Arts, Culture, and Tourism; Health and Caregiving; Renewable and Resilient Energy; and Working Lands and Blue Economy sectors.[85] These industry clusters will drive the regional strategy detailed in the forthcoming Part 2 of this report. Figure 6.1 below shows the specific industries within the clusters and their individual projected growth.

Key Takeaways

The Redwood Region's economic landscape is defined by four key industry clusters, each contributing uniquely to its growth, sustainability, and potential for development of family-sustaining careers:

- **Arts, Culture, and Tourism:** The region's natural wonders and cultural events attract visitors, making this cluster a vital driver of the local economy. Despite recent disruptions, the cluster shows resilience and potential for growth, especially in creating jobs compatible with meeting low-carbon goals. Projections indicate that the cluster will grow much faster than average. However, translating this growth into family-sustaining jobs remains a challenge.
- **Health and Caregiving:** This cluster addresses the region's critical health and social care needs and is expected to grow faster than average. It aligns with regional strategic goals such as minimizing greenhouse gas emissions and offering numerous family-sustaining jobs. The primary challenge lies in attracting, training, and retaining skilled professionals to meet growing demands for healthcare and caregiving.
- **Renewable and Resilient Energy:** The development of utility-scale wind energy, particularly offshore, offers substantial economic and employment potential, aligning with the region's environmental goals and supporting related industries. Abundant opportunities also exist for smaller scale programs focused on energy efficiency and distributed renewables (i.e., residential-, commercial-, and community-scale projects). These industries have the highest projected job growth in occupations paying the highest wages. The region's challenge is building out career pathways and smoothing labor shortages due to industry transfers (i.e., building construction trades).
- **Working Lands and Blue Economy:** The sector's strengths include that it is a traded cluster that is highly diversified. Its weaknesses are GHG emissions in certain of its industries and the need for higher wages and worker protections in certain of its value-chain segments. Dominated by wine grapes in Lake and Mendocino, diverse livestock in the north, and significant aquaculture in Humboldt Bay. Forestry and Wood Products remains the region's most concentrated sector with a high location quotient. Despite the volatile price fluctuations this sector frequently experiences, it is defined by stable timber production and increasing market values. The sector's priority is the innovation needed to increase incomes and opportunities while meeting the challenges of transitioning to sustainable forest management.

[85] In this report and other Collaborative documents, industries referring to a specific NAICS-defined industry code are capitalized, as are the region's identified industry clusters.

Key Metrics

- **Percentage of occupations that pay a family-sustaining wage:** Calculate the proportion of jobs in each industry cluster that provide wages sufficient to support a family of four. A higher percentage indicates better job quality and economic opportunity within the cluster.
- **Job-to-job multiplier:** Estimate the impact of job growth in each cluster on total employment across all industries. A higher multiplier suggests greater potential for the cluster to drive broad-based economic growth and job creation.
- **Location quotient and market share:** Assess the relative concentration and competitiveness of each cluster in the region compared to state and national benchmarks. Higher values indicate specialized strengths and potential for export-oriented growth.
- **Pollution emissions per job:** Measure the environmental impact of each cluster by calculating greenhouse gas emissions and other pollutants per job. Lower emissions per job indicate a more sustainable industry mix and so can guide efforts to promote cleaner, greener economic development.
- **Labor force demographics:** Measure indicators (age, race, educational status, etc.) that gauge opportunities for disinvested communities in these key industries .

Methodology

The industry clusters reported on here were identified using the following methodology:

1 Identification of Specialized and Resilient Industries

Industries labeled “Specialized and Resilient” in this report are ones that have shown competitive advantage through specialization and resilience against secular trends. For detailed criteria on identification of these industries, refer to the “Detailed Methodology” section of the Appendix.

2 Evaluation of Industry Performance

Evaluation of Industry Performance: Industries were selected based on their potential to support family-sustaining careers and their alignment with environmental policies. Such factors as employment stability, wage levels, and environmental impact were considered.

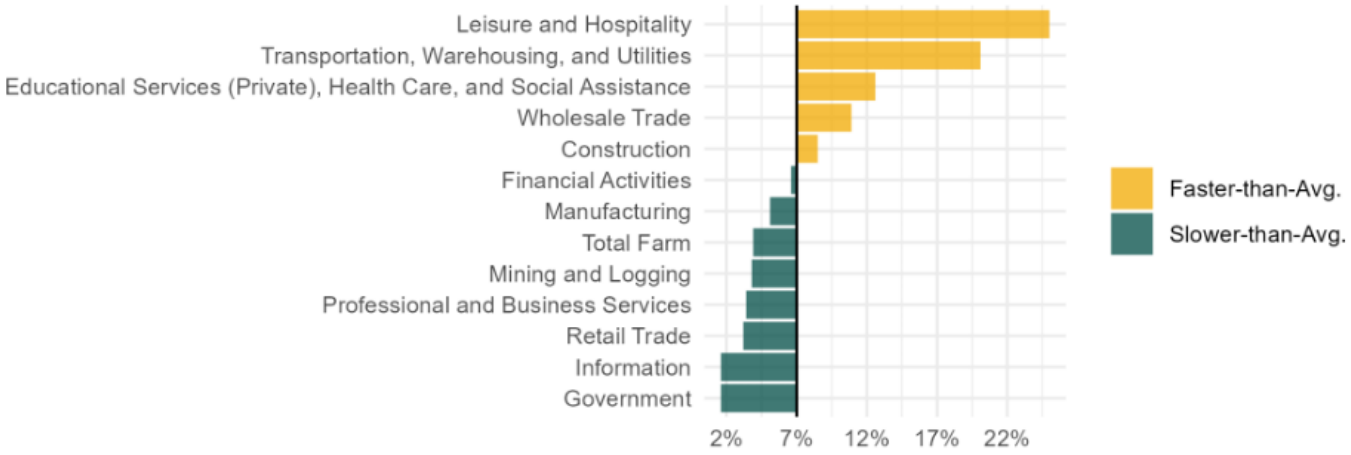
3 Analysis of Industry Cluster Outlook

This analysis of regional clusters assessed market trends, industry projections, industry-specific assets, resources, innovation, and policy trends. Its aim was also to evaluate the clusters’ ability to maintain or enhance market power through competitive advantages such as access to unique or scarce resources (e.g., redwoods, ocean resources, grasslands) and product differentiation (e.g., premium grass-fed livestock, wine, cannabis). Special focus was given to industries that can command premium prices through differentiated or unique products rather than competing solely on cost cutting and lower prices.

Overall Potential Job Growth for Major Industry Sectors, Redwood Region

Environmental pollutants can contribute to respiratory disease, heart disease, and some cancers (Healthy People 2030 initiative, "Environmental Health"). CalEnviroScreen 4.0 data (see page 78 in the Climate Analysis) indicate that, overall, the region's pollution burden is lower than statewide estimates. However, certain environmental risks are elevated in some areas of the region, including children's lead risk as well as presence of drinking water contaminants.

Figure 6.1 Potential Rate of Job Growth for Major Economic Sectors (2020-2030)



Note. Data sourced from California Employment Development Department (EDD). Overall employment growth is projected to be 7%.

Figure 6.2 below illustrates the results of the analysis for existing identified industry clusters.

While all industry clusters include multiple specialized and resilient industries (denoted below by *), **Agriculture and Blue Economy** emerges as a particularly strong cluster, except for Crop Production, all industries in this cluster-maintained employment or experienced employment growth over the past decade and most industries either maintained a high LQ or substantially increased in specialization. The **Renewable and Resilient Energy** Sector does not appear in this figure due to methodological issues but is addressed later in the chapter.

Figure 6.2 Employment Trends and Location Quotients, Identified Industry Clusters

Note. Data sourced from IMPLAN.

Agriculture and Blue Economy

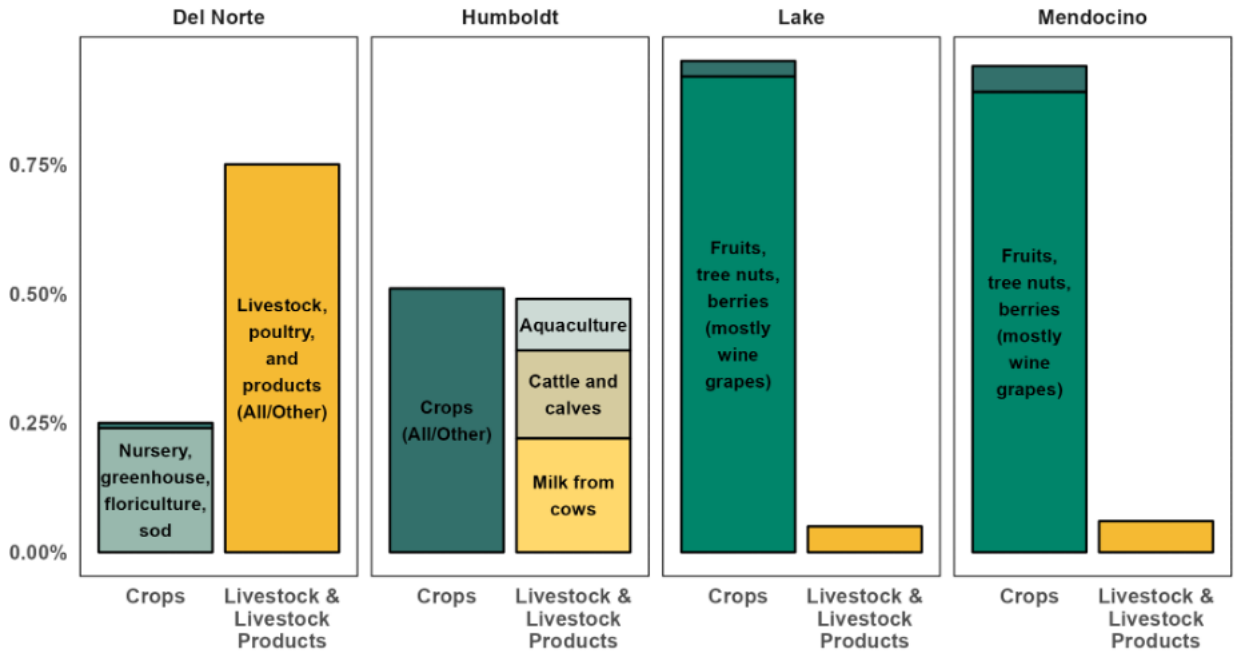
Major commodities traded within the Redwood Region's Agriculture and Blue Economy sectoral cluster[86] include livestock (e.g., beef and dairy), wine grapes and wine, cannabis, Dungeness crabs, and oysters. In Lake and Mendocino, wine grapes are the dominant agricultural commodity, whereasthe northern counties specialize somewhat in livestock production and are more diversified than the southern counties. For example, by market value, about one-quarter of Del Norte's agricultural output consists of nursery products (e.g., plants for landscaping, flowers, sod).

The region's aquaculture, which consists almost entirely of oyster farming, constitutes a substantial portion of Humboldt's agricultural output, amounting to $17.4 million in market value or 12% of statewide aquaculture production by market value. In the three coastal counties, commercial fishing—by market value, almost entirely Dungeness crabs —remains a key industry as well, with an annual market value of approximately $37.4 million[87] and accounts for nearly 80% of the state's Dungeness crab landings. See Figure 6.3 for a by-county agricultural and aquacultural breakdown for the region.

[86] *Blue Economy* refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystems and encompasses fisheries, aquaculture, coastal tourism, marine biotechnology, offshore renewable energy, seabed mining, and maritime transport.

[87] Year-to-year fish landings are highly volatile. This is the average of 2019 through 2023.

Figure 6.3 Intraregional Agriculture Specialization, Percent of Total Market Value Produced



Note. Data sourced from USDA Census of Agriculture County Profiles. Does not include commercial fishing. The 2022 data include hemp production.

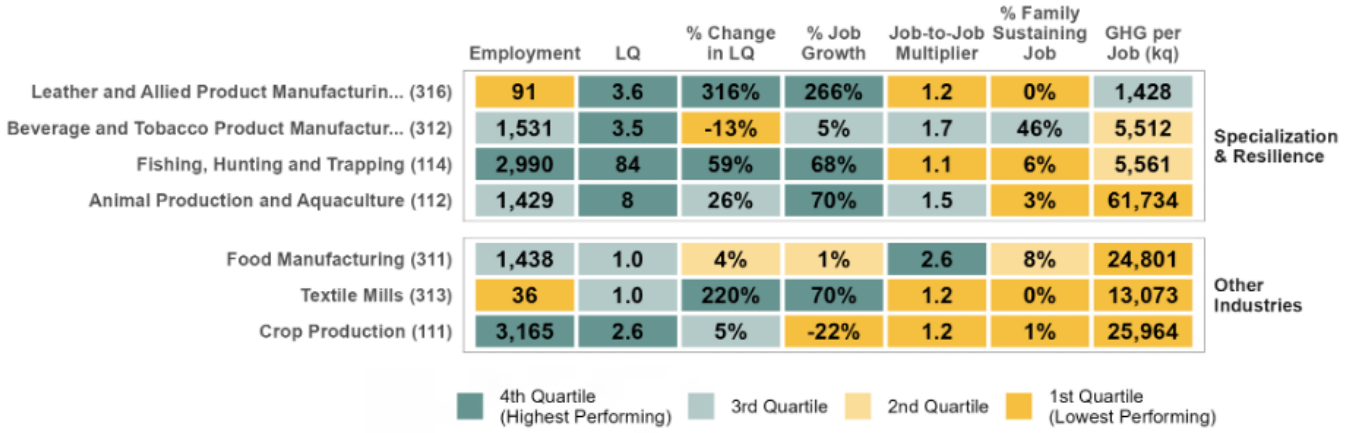
Cluster Performance and Alignment with RRRISE Goals

Agriculture and the Blue Economy represent key areas of regional employment specialization as shown by their sector LQs[88] and job growth (see Figure 6.4 below). Notably, the Fishing, Hunting, and trapping sectors (NAICS code 114) along with Animal Production and Aquaculture (NAICS code 112) have experienced significant increases in employment and specialization. Additionally, the region shows emerging potential in leather goods manufacturing (NAICS code 316), likely benefiting from its connections to the livestock industry. However, compared to other industries, these sectors face significant challenges, including lower wages and higher environmental impacts.[89]

[88] Location quotient (LQ)—defined at the beginning of this chapter—indicates the relative level of employment in an industry. An LQ > 1 for an area indicates that proportionately more workers there are employed in a given industry than in the state as a whole. An LQ > 1.25 is generally considered to indicate an industry with potential specialization.

[89] See "GHG Emissions, Air, Water, and Hazardous Waste" in the Appendix for a more comprehensive range of environmental impacts. Despite the environmental concerns identified, there are opportunities for more sustainable production practices. For example, aquaculture has a relatively lower greenhouse gas impact than other animal protein sources (Ritchie & Roser, 2024). The impact of organic versus industrial farming on greenhouse gas emissions remains ambiguous overall (Ritchie & Roser, 2024). However, in fruit production, organic methods tend to have a lower impact. In Lake and Mendocino counties, where fruit farming is prevalent, organic farming methods are employed at more than double the rate of the state average (Census of Agriculture - 2022 Census Publications - State and County Profiles - California, n.d.).

Figure 6.4 Agriculture and Blue Economy Cluster Performance



Note. Data source from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data which include only employees.

Overall Cluster Outlook

Data from the California Employment Development Department (EDD) project positive but slower than average employment growth in the agricultural sector.[90] The outlook for employment growth is not encouraging, as employment in Crop Production has declined substantially over the past decade (see Figure 6.4 above, NAICS 111). In Lake County, for example, only eight acres could be identified as dedicated to food production.[91]

Consistent with national trends, farmers in the region are aging. According to the latest Census of Agriculture, 46% percent of Redwood Region farmers are 65 years or older (*USDA - National Agricultural Statistics Service - Census of Agriculture*, n.d.). Groups in the region, for example the Del Norte Community Food Council and the Humboldt-based North Coast Growers Alliance, have programming to assist new farmers and farmers of color to acquire farmland and establish businesses.

Despite these issues, the Agriculture and Blue Economy cluster still includes opportunities for development, growth, and innovation within certain commodities.

Livestock and Related Products Outlook

Farm product prices, including those for livestock, have shown long-term deflationary trends. However, in recent years, the COVID-19 pandemic and the war in Ukraine, a major grain producer, have disrupted these trends,[92] leading to a significant rise in farm product prices, particularly in livestock. As a potential indication of this impact, Del Norte farms—heavily concentrated in livestock production—have experienced an increase in farm net cash flow relative to 2017 as the market value of the county's production slightly out-paced the rise in farm production expenses.

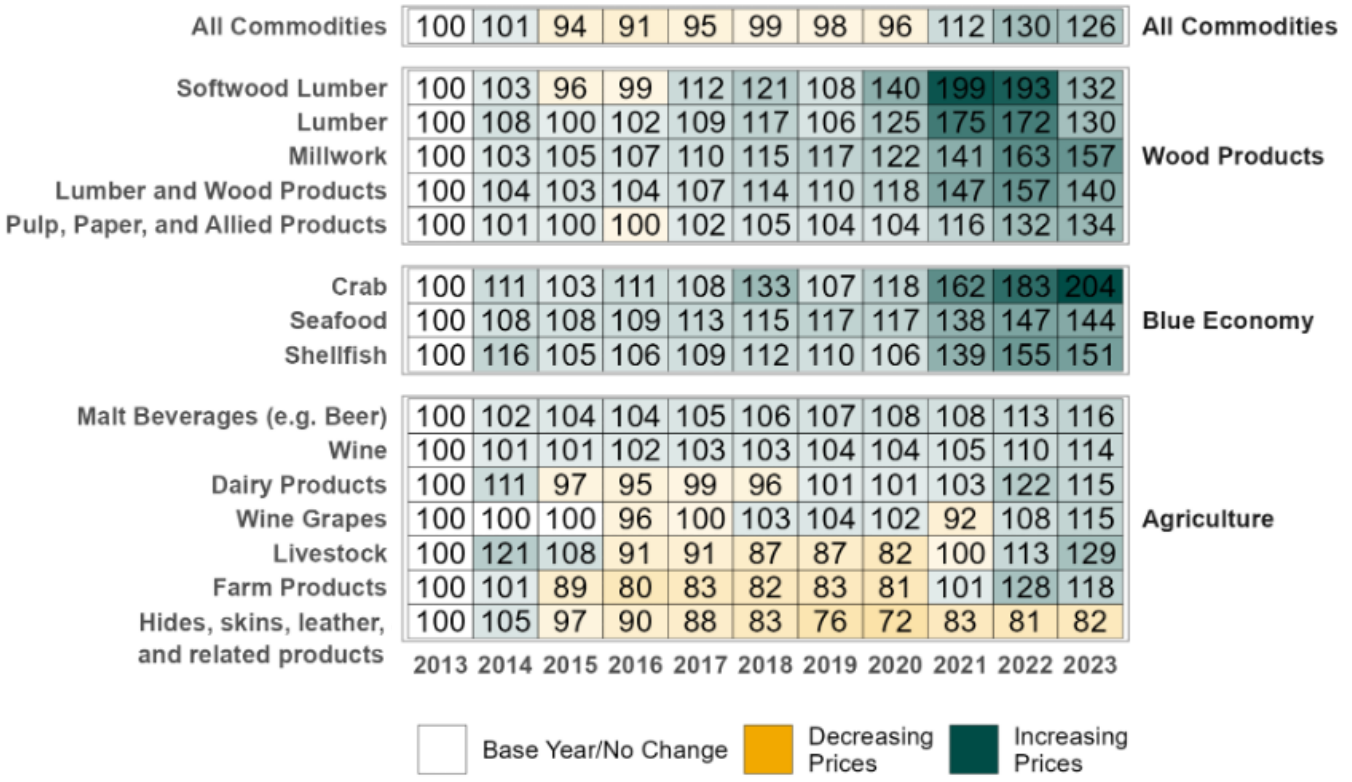
[90] See "Potential Job Growth for Major Industry Sectors, Redwood Region" in the Appendix.

[91] RRRISE Collaborative Meeting 4/30/24 which hosted an expert panel on food security and regional food systems.

[92] According to the USDA, Ukraine produces 4.3% of world wheat output, 3.5% of corn output, 6.8% of barley and nearly a third of world sunflower output (Foreign Agricultural Service & U.S. DEPARTMENT OF AGRICULTURE, 2022).

Like other commodity industries, the outlook for Livestock and Related Products depends largely on global and national commodity price trends (see Figure 6.5). The industry's growth potential will largely depend on whether agricultural commodity prices revert to their previous deflationary patterns.

Figure 6.5 U.S. Commodity Market Price Signals, Producer Price Index Adjusted to 2013 = 100



Note. Data sourced from FRED.

Vineyards and Wineries Outlook

Recent trends in global wine consumption have shifted from volume-driven growth to value-driven growth, a shift often referred to as "premiumisation." This trend particularly benefits producers of premium wines (*WEP:Wine Economics and Policy:12, 1, 2023*, 2023). In Napa County, for instance, crop report data indicate that red wine grape prices increased by 24.6% ($7,707 vs. $6,187 per ton) and white wine prices increased by 27.6% ($3,323 vs. $3,220 per ton) from 2017 to 2022. In comparison, Lake County red wine grape prices increased just 4.1% ($2,209 vs. $2,121 per ton) and white increased by 7.6% ($1,321 vs. $1,228) during the same period. Price growth is similarly muted in Mendocino, but the crop report data are not comparable to these other sources—available reports for Mendocino indicate that overall wine grape prices there increased by 5.8% ($1,794 vs. $1,696 per ton) from 2017 to 2021 (California Department of Food and Agriculture, n.d.).

These modest price increases indicate that the region's two wine-producing counties have experienced difficulty passing rising production costs on to consumers in recent years.[93] In the vineyard-dominated Mendocino and Lake Counties, average farm production expenses during this period increased 41% and 22% in Lake and Mendocino counties, respectively, while the market value of products sold in Lake

[93] See "All Commodities" in Commodity Market Trends in the Industry Cluster Appendix.

increased by 8% and decreased by 4% in Mendocino. Consequently, farm cash income fell sharply in both counties to just $6,819 per farm in Mendocino and was net-negative in Lake.[94]

The outlook for the wine industry in Mendocino and Lake Counties is challenging due to modest price increases that have not kept pace with rising production costs. Vineyards may need to adopt strategies such as raising prices, producing higher-value wines, and improving operational efficiencies to sustain and grow in the competitive market.

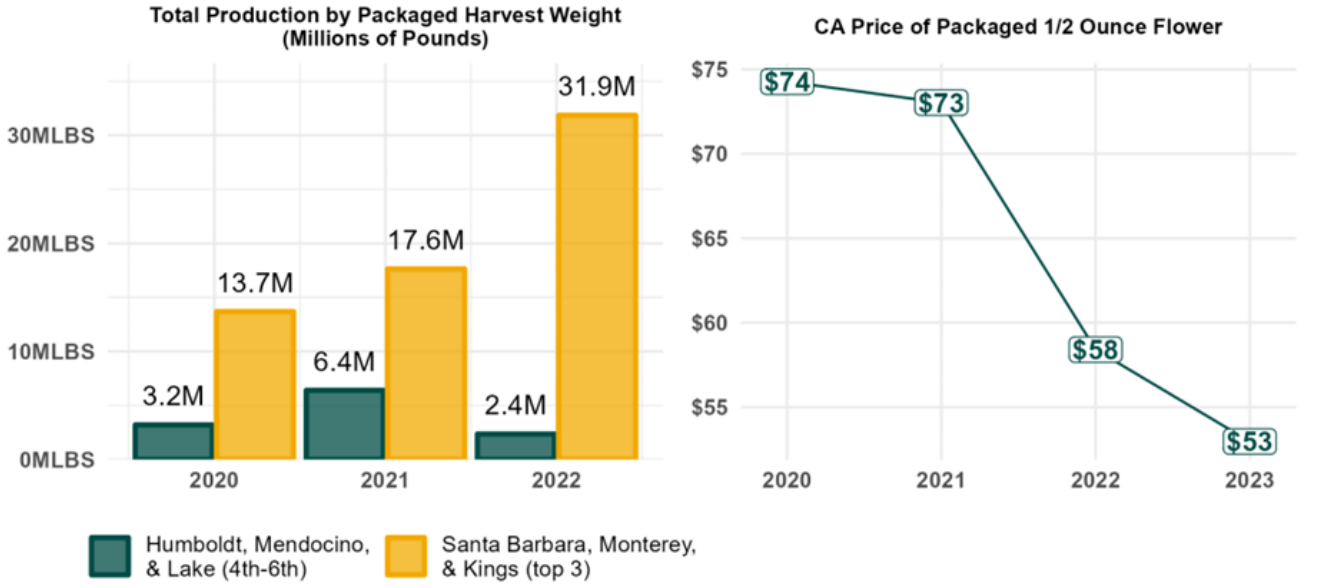
While low wages are generally a challenge for the Agriculture and Blue Economy cluster industries, the wine industry appears to be an important exception to this rule. As shown above, nearly half (46%) of Beverage and Tobacco Product Manufacturing (NAICS 312)[95] occupations are family-sustaining.

Cannabis Outlook

Following statewide legalization of cannabis in 2016, counties and cities not historically known as cannabis cultivators began to embrace the new legal industry. Santa Barbara, with its streamlined regulatory approach and proximity to markets (Mozingo, 2019), has now become the largest legal producer in the state followed by Monterey and Kings Counties (Department of Cannabis Control - State of California, n.d.-a). As shown in Figure 6.6 below, rising production, especially from these new producers, has eclipsed legal production in the legacy "Emerald Triangle" region, flooding the market and sharply lowering prices.

Historically, in the Emerald Triangle growers benefitted from the region's remoteness and challenging terrain, which limited law enforcement activities. However, with the change in the legal landscape, these geographical factors no longer offer a competitive edge, and legacy growers in the Emerald Triangle now must compete with large-scale, efficient producers from other regions. To remain viable, these traditional growers may need to focus on enhancing product quality and customer experience, capitalizing on the region's unique legacy and brand recognition.

Figure 6.6 Redwood Region Cannabis Production and Statewide Prices



Note. Data sourced from the California Department of Cannabis Control Harvest Report (https://cannabis.ca.gov/resources/data-dashboard/harvest-report/)

[95] The NAICS title of this industry is being adhered to, this industry reflects the wine and beer industry in the region not tobacco production. According to the USDA, there are no tobacco farms in the state. This is predominantly wine production.

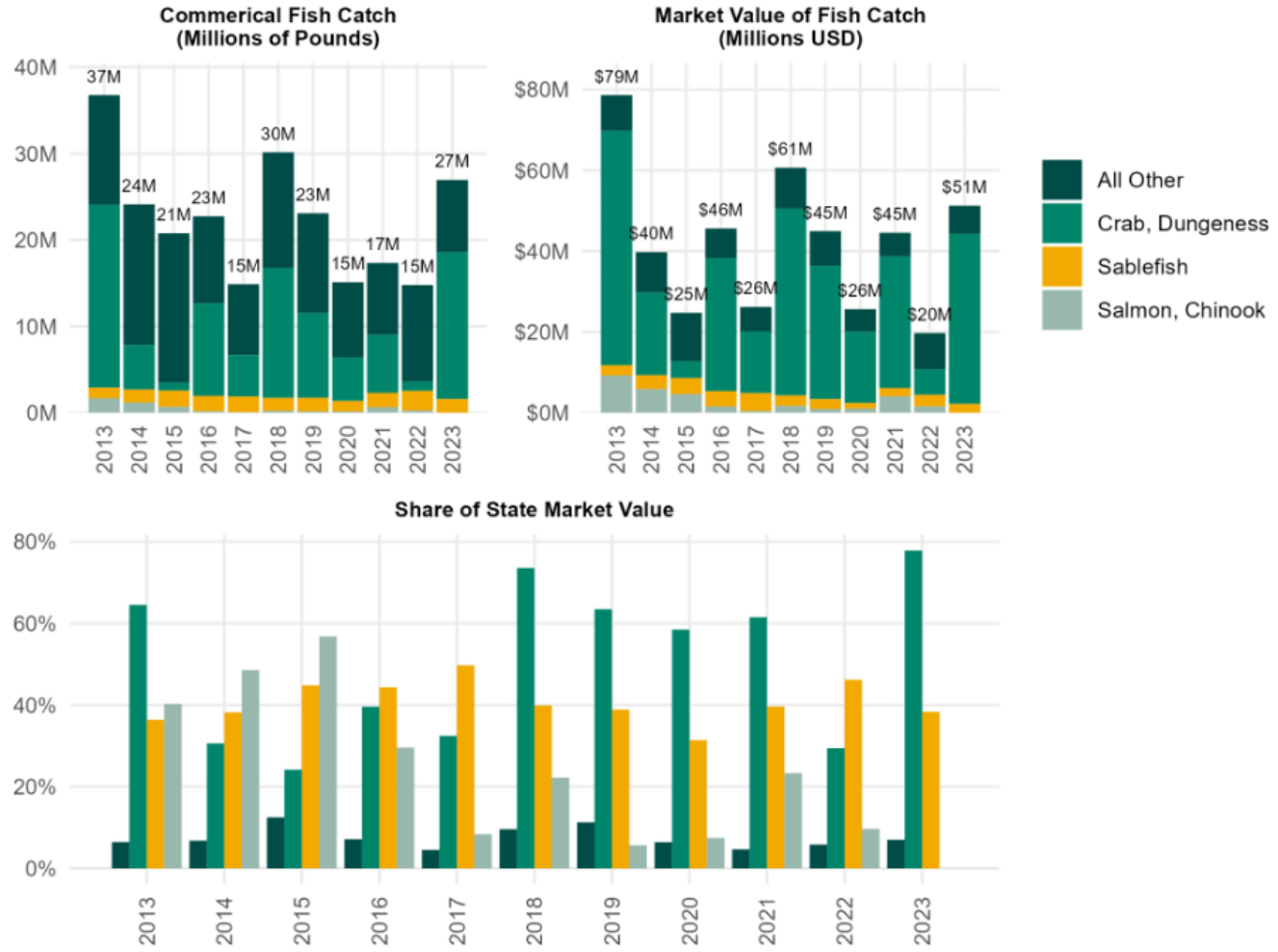
[94] See Farm Cash Flows and Income in the Industry Cluster Appendix.

Commercial Fishing Outlook

Nationwide, seafood product prices have been on an upward trend for a decade, defying the deflationary forces impacting other commodities. Specifically, crab prices have seen a substantial increase, doubling since 2013.[96] In California, the Redwood Region's commercial fisheries play a pivotal role, accounting for nearly 80% of the state's market value for Dungeness crab as of 2023 (see Figure 6.7).

Commercial fishing, like other industries based on natural resource extraction, faces significant ecological limits that restrict the volume of fish that can be harvested. Despite these constraints, the increasing prices of seafood and the dominant market position in the Dungeness crab sector suggest that commercial fishing will remain a crucial component of both the regional economy and employment landscape for the foreseeable future.

Figure 6.7 Redwood Region Commercial Fish Landings and Market Value



Note. Data sourced from California Department of Fish and Wildlife (CDFW). Data drawn from a custom query and figures may differ slightly from those presented on the CDFW Data Explorer page. See CDFW data disclaimer.[97] *https://wildlife.ca.gov/Conservation/Marine/Data-Management-Research/MFDE/Custom-Queries*

[96] See Commodity Market Trends in the Appendix.

[97] CDFW Data Disclaimer: "CDFW collects data from various sources for fisheries management purposes, and data may be modified at any time to improve accuracy and as new data are acquired. CDFW may provide data upon request under a formal agreement. Data are provided as-is and in good faith, but CDFW does not endorse any particular analytical methods, interpretations, or conclusions based upon the data it provides. Unless otherwise stated, use of CDFW's data does not constitute CDFW's professional advice or formal recommendation of any given analysis. CDFW recommends users consult with CDFW prior to data use regarding known limitations of certain data sets. The MFDE is not intended to be used for management purposes, and CDFW requests to be contacted if state or federal partners need data for management reasons" (*MFDE*: *Custom Queries*, n.d.).

However, the prospects for stable, several phenomena challenge quality employment in commercial fishing: year-to-year volatility in production and relatively low wages (as illustrated in Figure 6.7). Moreover, the crab season is restricted to the period from December 1 to July 15 (Fisheries, n.d.), and the season is typically prone to such disruptions as delayed openings and early closures, further impacting the industry's stability and predictability (*CDFW News | CDFW Closes Commercial Dungeness Crab Fishery and Restricts Recreational Crab Traps in the Central Management Area, Limits Commercial Fishing to Inside 30-Fathoms in Northern Management Area to Protect Whales From Entanglement*, n.d.; "California's Commercial Dungeness Crab Fishing Season Further Delayed," 2023). Consolidated purchasing and distribution (rendering local boats as price takers rather than price makers) and lack of necessary harbor infrastructure are two issues local fisherfolk elevated as disabling for their industry (see SWOT analysis).

Aquaculture Outlook

A substantial rise in seafood prices, particularly shellfish,[98] has also contributed to a more promising market outlook for fish farming in regions equipped with the necessary resources.

Humboldt Bay is one of just a handful of areas along the California coast permitted to cultivate shellfish for safe human consumption[99] (Department of Public Health, n.d.) and offers unique natural advantages that enhance its suitability for aquaculture. Similar to wine, oysters—even within the same species—acquire a unique flavor based on their harvesting environment, creating a natural product differentiation. These factors, combined with institutional regulations, establish Humboldt Bay as a competitive player in the oyster market due to its natural and regulatory barriers to entry. It is currently the number one producer of oysters in California (see page 31).

Industry data provide further support for a positive outlook. A 2016 survey conducted among aquaculture farms in Humboldt Bay revealed a generally optimistic view on future prospects, with expectations of a 47.5% increase in employment and a 34.2% increase in cultivation area by the end of 2022 (Richmond et al., 2018). Although historical data on the industry is incomplete, findings indicate that the market value of production stood at $9.8 million in 2016. More recent figures from the USDA in 2022 estimate the market value at approximately $17.4 million, indicating potential growth in line with earlier projections (*Census of Agriculture - 2022 Census Publications - State and County Profiles - California*, n.d.).

Wood Products

Timber continues to be a key commodity in Del Norte, Humboldt, and Mendocino Counties (see Figure 6.8). Although the importance of timber to the regional economy has declined over the past decades, recent years have seen a stabilization in production levels. Concurrently, there has been a significant increase in the market value of this production[100]—nearly doubling the region's share of the overall market value of lumber produced in California.

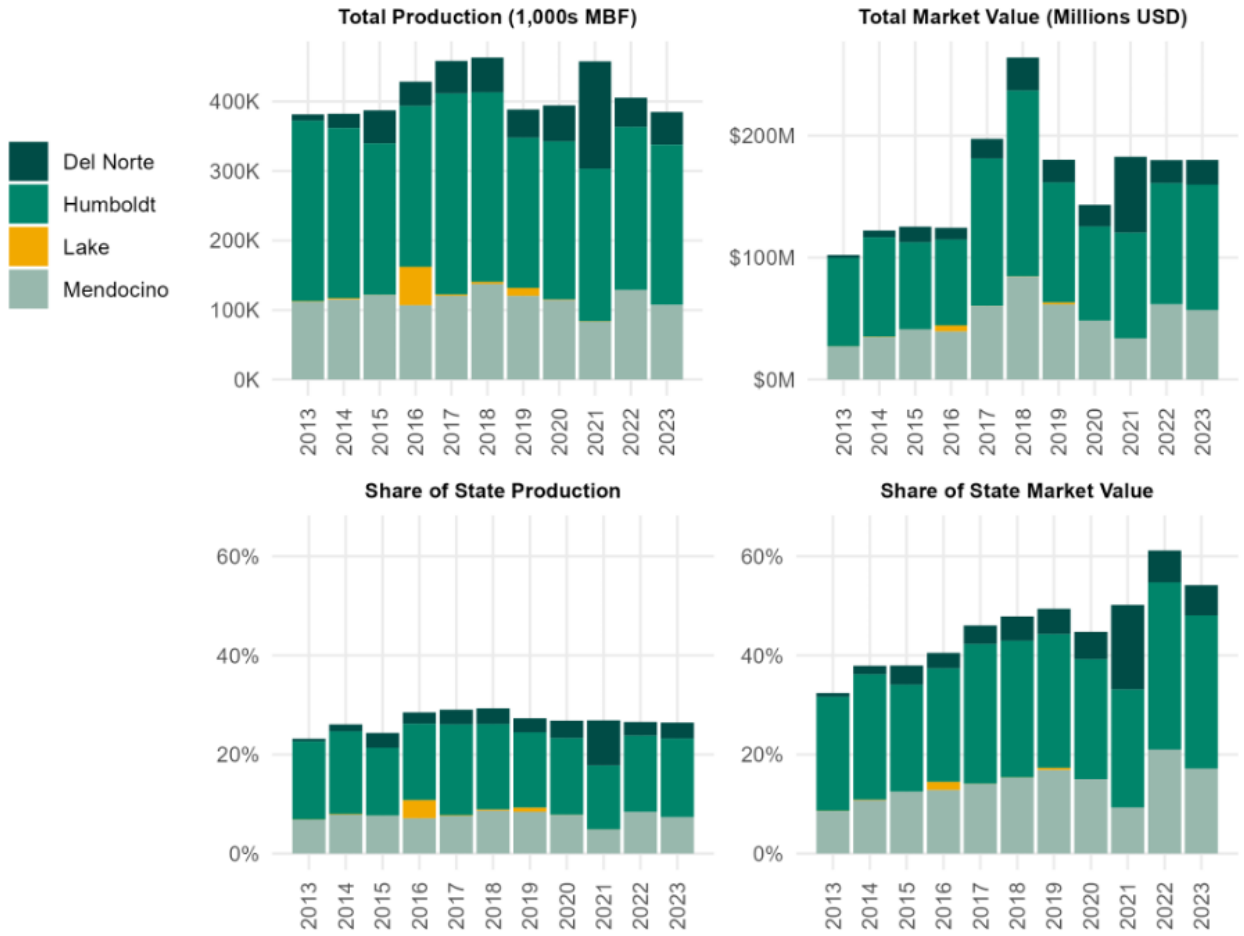
[98] See "Commodity Market Trends" in the Appendix.

[99] These areas include Humboldt Bay, Tomales Bay, Morro Bay, and the Santa Barbara Channel,which are "conditionally approved" and Agua Hedionda Lagoon near San Diego, which is "conditionally restricted" by the California Department of Public Health. In Humboldt Bay the following companies are approved by the CDPH: Aqua Rodeo Farms, Hog Island Oyster Company, Humboldt Bay Oyster Company, North Bay Shellfish LLC, and Pacific Shellfish Humboldt LLC.

[100] See lumber in "Commodity Market Trends" in the Industry Cluster Appendix.

Stable production levels and consistency in proportion of production by volume in relation to state figures, coupled with a marked increase in market value share, suggest that the value of the Redwood Region's definitive commodity has appreciated relative to other timber materials produced in the state. As shown below (see Figure 6.8, bottom right), in 2013, the Redwood Region produced about 32% of statewide lumber market value; by 2023, this had increased to 54%.

Figure 6.8 Redwood Region Lumber Production and Market Value



Note. Data sourced from the California Department of Tax and Fee Administration. MBF stands for one thousand board feet. A board foot is a 12 by 12 by 1 inch volume of lumber. These MBF figures are "net," referring to the usable volume of lumber produced after removal of waste and defects.[101]

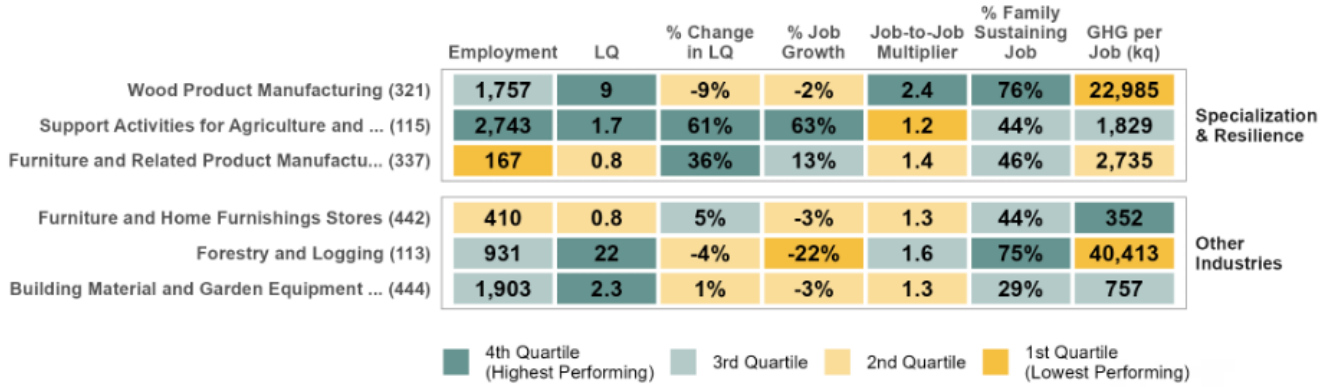
Cluster Performance and Alignment with RRRISE Goals

The Wood Products cluster maintains a high level of employment specialization, as illustrated in Figure 6.9 below. Despite a surge in market value, employment in core sectors like Forestry and Logging is experiencing long-term stagnation or decline. Conversely, industries higher up the value chain, such as Wood Products Manufacturing, show more resilience to these trends. The price of value-added lumber products has steadily increased over the past decade.[102] These products maintained their appreciated value in 2023, even as general lumber prices declined from their peak in 2021.

[101] REF

[102] REF

Figure 6.9 Wood Products Cluster Performance



Note. Data source from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

The cluster supports numerous family-sustaining jobs; however, aligning with environmental goals is a challenge. The Wood Products Manufacturing industry, for instance, is associated with high levels of greenhouse gas (GHG) emissions per job and increased air pollution.[103]

Cluster Outlook

The EDD forecasts below-average employment growth in the Mining and Logging sector.[104] Coupled with employment declines in most Wood Products industries, the overall growth outlook for the cluster appears uncertain. Despite these challenges, redwood stands out for its valuable properties, such as rot and insect resistance (*The Redwoods of Coast and Sierra*, n.d.), offering substantial market advantages. The region's growing dominance in the California lumber market and near monopoly on redwood—a valuable, differentiated, and appreciating resource—provide market power and competitive edge. These factors are promising for the industry's continued contribution to economic activity and family-sustaining employment in the region. The challenge for the industry is preserving these family-sustaining occupations while aligning with environmental rules and policies.

Notable Policies and Impacts

Prop 64 - Cannabis Legalization. Prop 64 formalized the industry but resulted in greater competition from regions with competitive advantage, subsequent market flooding, and exit from the industry of an estimated 80% of firms from the Emerald Triangle.[105] Cultivating appellations and niche marketing is a strategy the remaining North Coast growers are pursuing to stay competitive, a strategy supported by recent legislation (SB-185) that requires California county of origin to be accurately reported in cannabis labeling.

[103] See GHG Emissions, Air, Water, and Hazardous Waste from Potential Growth Clusters in the Industry Cluster Appendix.

[104] See Potential Job Growth for Major Industry Sectors, Redwood Region in the Industry Cluster Appendix.

[105] Interview with Humboldt Growers Alliance, June 15, 2023.

Clean Air Resources Board (CARB) (*Medium- and Heavy-Duty Diesel Regulations | California Air Resources Board*, n.d.) restrictions on heavy-duty diesel vehicles are impacting the logging industry. Companies report bottlenecks in trucking as companies exited the market or limited service.[106]

After over 150 years, regulations banning the indigenous forest management practice known as cultural burning have been overturned. Passed in 2021, SB-332 protects those who provide prescribed fire-burning services against liability for the cost of fire suppression or a prescribed burn, provided all conditions are met (Stone et al., 2021). Further enabling private landowners to partake in beneficial management practices, AB-1867[107] allows landowners to sell timber produced from their land due to fire prevention activities (Elizabeth, 2016).

Governance of shared waterways and marine resources naturally impacts the region's fisherfolk, including unpredictable season openings and closings for different species, as highlighted above. Port redevelopment and offshore wind will also impact those operators, and efforts are currently underway to consult with fisherfolk on project plans.

Arts, Culture, and Tourism

Cluster Overview

Tourism has been a significant industry for the region since the mid-19th century, whereas the contributions of Art and Culture have only more recently been recognized as providing synergistic growth and diversification opportunities. Historically, many industries within the sector deliver lower wages, may lack in typical employee safety nets and upward mobility, and are often defined by gig and seasonal work (Yang et al., 2021). With this important caveat in mind, the Arts, Culture, and Tourism industry cluster is a key economic sector in the region, drawing significant visitor numbers and revenue. Encompassing agritourism, the Redwoods and coastal attractions, seasonal festivals and heritage sites celebrating indigenous and other local cultures, the cluster has both well-established regional assets and capacity and potential for further development. Annually, the area's state and national parks attract approximately 5 million visitors.[108] Overall, visitors generate about $1.3 billion in spending (Dean Runyan Associates, 2023)—about $4,081 per Redwood Region resident, exceeding the statewide equivalent of $3,433.[109] See Figure 6.10 below.

Cluster Performance and Alignment with RRRISE Goals

Arts, Culture, and Tourism, shows signs of employment specialization and resilience in two industries, including **Museums, Historical Sites, and Similar Institutions** (NAICS 712)[110] and **Performing Arts, Spectator Sports, and Related Industries** (NAICS 711). These industries have a minimal carbon footprint, but support few family-sustaining occupations.

[106] REF

[107] REF

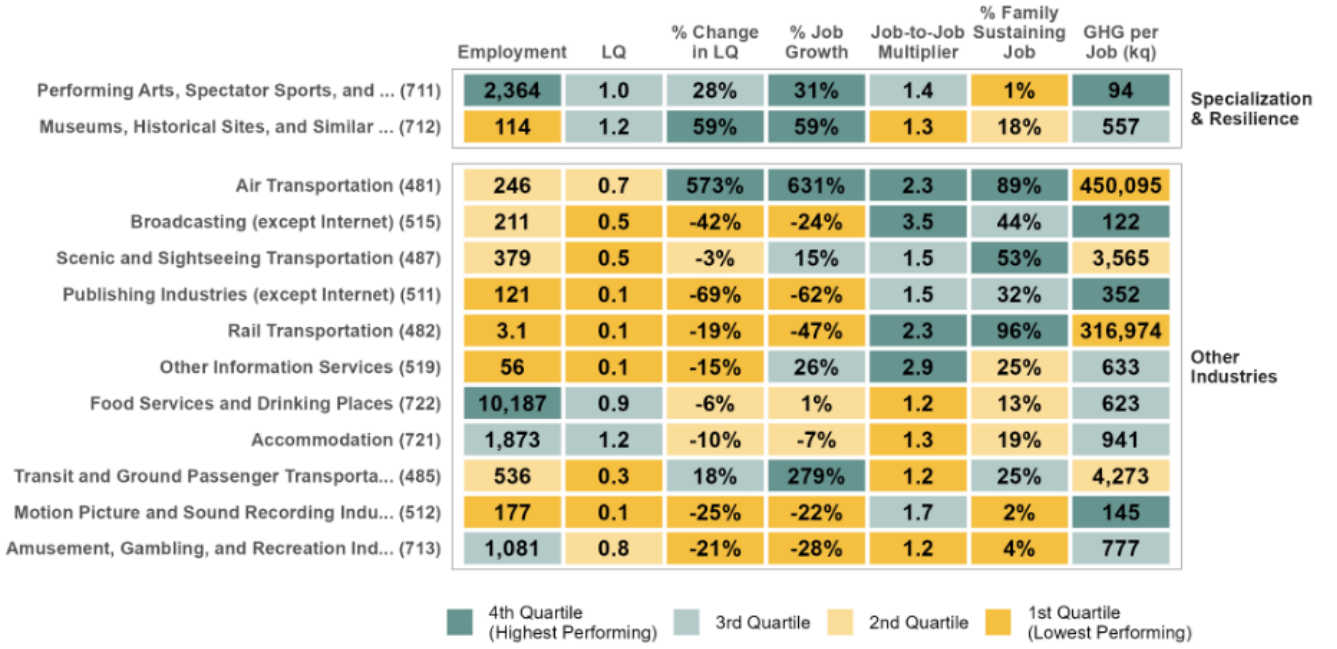
[108] In 2023 for instance 409,105 people visited Redwood National Park (Stats Report Viewer, n.d.) and 4,536,826 people visited the Redwood Region's state parks in fiscal year 2018/19 (the most recent year available) (Parks, n.d.).

[109] Based on Department of Finance 2022 Redwood Region population of 318,561, state population of 39,146,273 (California, n.d.), and state total spending of $134,391 million.

[110] NAICS codes are included in parentheses when industry name is abbreviated in visualizations.

Scenic and Sightseeing Transportation (NAICS 487) appears underdeveloped, given the region's numerous natural attractions, with a location quotient of just 0.5. This industry supports a high proportion of family-sustaining occupations, with a relatively moderate climate impact.

Figure 6.10 Arts, Culture, and Tourism Industries Performance



Note. Data source from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

Cluster Outlook

While the COVID-19 pandemic, inflation, and other shocks may have temporarily disrupted these industries (*COVID-19's Pandemic's Impact on the Arts: Research Update May 12, 2022*, 2022), the outlook for this cluster looks strong (*Economic Impact*, n.d.). From 2013 through 2022, traveler spending to the region has increased 27.1%, and industry earnings have increased 70.4%—outpacing the equivalent statewide figures of 20.3% and 53.6% (Dean Runyan Associates, 2023). Furthermore, the EDD projects that Redwood Region Leisure and Hospitality sector employment will grow faster than any other sector through 2030.[111] A challenge for the cluster is translating this growth into family-sustaining occupations.

> *"The creative sectors do not share a cohesive workforce infrastructure and employer-worker arrangements vary from one industry to another, which has created large obstacles for policy making. Many individuals do not practice their art or creative pursuits as their primary, wage-earning job. Yet many counts of the workforce focus only on those employed full-time by organizations"*
>
> **-(2023 Otis College Report on the Creative Economy, 2023).**

[111] See projection in the Appendix.

Industry-Specific Assets

Most current and proposed local and state investments in the sector are concentrated in eco-tourism. Currently under development, the Great Redwoods Trail,[112] for example, is an example of a highly anticipated asset. Cal Poly Humboldt and College of the Redwoods also bring in and produce young professionals in the arts, culture, and tourism sector.

Agri-tourism in the cannabis, winery, and brewery industries, as well additional agricultural industries such as dairy, attract and serve tourists and provide a boost to local and regional economies, creating cross-cutting opportunities with the Working Lands sector.[113] The region possesses nine destination marketing organizations.[114] Embedded in community, the arts and culture workforce is well-suited to exploring, developing, and implementing new strategies rooted in community-building and cross-sector collaboration to address some of the most profound social, economic, and environmental challenges in the region.[115]

Notable Policies and Impacts

State and philanthropic arts funding for rural arts and artists—especially BIPOC-centered organizations—lags significantly behind urban arts organizations and individuals on a per capita basis in the Redwood Region, significantly impacting equitable access to arts and culture (Carnwath, 2022). Also important to recognize is the relationship between rural and urban areas, with many of the "best and brightest" driven to leave their rural regions to pursue job opportunities elsewhere. However, the risks of gentrification and rising costs loom when a rural community is able to attract new tourists, residents, and businesses (Moskowitz, 2017).

Renewable and Resilient Energy, Enabling Industries

The region aspires to develop a **Renewable and Resilient Energy (RRE)** industry cluster primarily centered around energy efficiency and renewable energy. Industries supporting such an industry include Utilities,[116] Construction,[117] and Repair and Maintenance,[118] among others.

Cluster Performance and Alignment with RRRISE Goals

As shown in Figure 6.11, these industries support a high proportion of family-sustaining occupations. Therefore, additional economic activity in these industries is likely to continue to foster and promote family-sustaining occupations.

[112] The Great Redwood Trail will be a 307-mile multi-use rail-to-trail project connecting San Francisco to the Humboldt Bay via the Eel River Canyon. Preliminary impact studies project total annual benefits of over $102,000,000 from the trail.

[113] See, for example, Del Norte County's Agritourism strategy.

[114] According to Visit California, notable attractions include Clear Lake in Lake County and Glass Beach (MacKerricher State Park), Mendocino Coast Botanical Gardens, Redwood National Park, Point Arena Lighthouse, and the Skunk Train in Mendocino County.

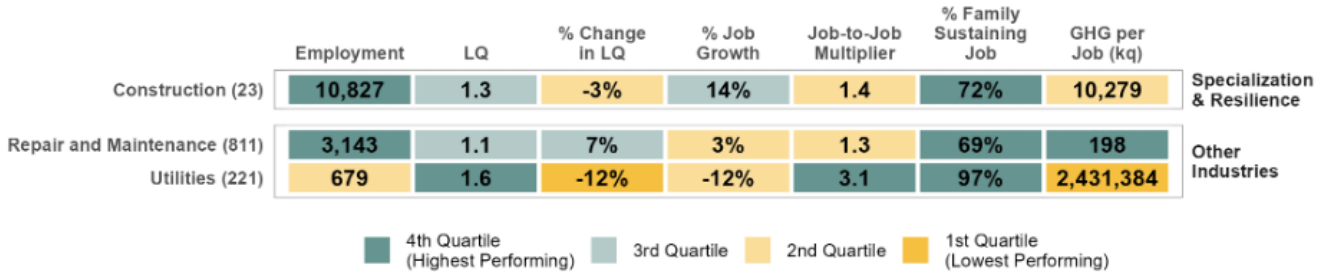
[115] REF

[116] Such as NAICS code 221115 Wind Electric Power Generation

[117] Such as NAICS code 237130 Power and Communication Line and Related Structures

[118] Such as NAICS code 811310 Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance

Figure 6.11 RRE Enabling Industries Performance



Note. Data sourced from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

RRE Potential

The Redwood Region has great potential for developing its RRE sector, as both energy efficiency and renewable energy investments in it offer significant potential for job creation and economic development. Energy efficiency investments are often labor intensive and so tend to create more jobs per dollar invested than do renewable energy projects. Moreover, energy efficiency jobs are often cross-sectoral and local (in industries like construction, manufacturing, and installation/maintenance).[119] Further, from an economic development standpoint, energy efficiency provides ongoing energy cost savings for households and businesses and frees up dollars that can be spent in local economies. Efficiency also has the benefit of added resilience: For example, reducing total energy demand can mitigate energy price volatility and supply disruptions.

Renewable energy investments also generate jobs in construction, manufacturing, and operations, although at a somewhat lower labor intensity than does energy efficiency.[120] However, renewable energy can provide significant boosts to local economies as an export industry, especially in rural areas such as the Redwood Region, with strong renewable resources that can be sold outside the region (see the discussion below). Both efficiency and renewables offer opportunities for building local supply chains and spurring innovation as these industries grow. As such, a transition strategy (as is being developed by the RRE Sector Table) that prioritizes both energy efficiency and renewable energy based on regional strengths can maximize overall job creation and economic development while accelerating the shift to a clean, resilient energy system.

[119] Garrett-Peltier, H. (2017). Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model. *Economic Modelling*, 61, , 439–447. http://dx.doi.org/10.1016/j.econmod.2016.11.012.

[120] Laitner, J. A. , Stephen O. A., Gabrielle B. D., & Kristen N. T. (2021). Investing in US energy efficiency and infrastructure creates more nationally-distributed jobs while saving money and protecting the climate. Washington DC and Paris, France: The Institute for Governance & Sustainable Development (IGSD); and Tucson, AZ: Economic and Human Dimensions Research Associates. https://theresourceimperative.com/wp-content/uploads/2021/03/Energy-Efficiency-Upgrades-Protecting-the-Climate-Creating-Jobs.pdf

The offshore wind industry has high potential to contribute to the Redwood Region's economic growth, GHG emissions reduction, and climate goals. Preliminary economic modeling shows significant (yet highly uncertain) potential impacts statewide (modeling of regional impacts is currently being conducted).[121] Estimates of Humboldt offshore wind job creation potential are difficult to pin down at present; the Schatz Energy Research Center at Cal Poly Humboldt is currently working on IMPLAN models to do so. Actual jobs and job creation estimates per GW (gigawatt) from studies across the nation use different job calculation procedures or models (IMPLAN, JEDI) based upon different assumptions, and on-site, construction stage, supply chain, and induced job numbers are often aggregated. Offshore wind also presents opportunities for innovation and industry-specific asset development, and policy trends support renewable energy growth and job creation. As the industry grows over the next 10-20 years, further innovations in design, materials, and construction techniques are expected to drive down costs and improve technologies and operational efficiency.

Notable Policies and Impacts

Recent California legislation has created a supportive policy environment[122] for both energy efficiency and renewable energy, particularly with respect to offshore wind and transmission infrastructure development. In October 2015, California adopted SB 350, the Clean Energy and Pollution Reduction Act of 2015,[123] which established a 2030 greenhouse gas reduction target, increased the state's renewable energy requirement to 50 percent, and mandated a doubling of energy efficiency. SB-1020, the Clean Energy, Jobs, and Affordability Act of 2022, sets ambitious targets for renewable energy with the goal of creating new jobs in the sector. SB-100, the California Renewables Portfolio Standard Program, mandates that, by 2045, 100% of the state's electricity come from renewable and zero-carbon sources. AB-525, the Offshore Energy Project, requires the state to develop a strategic plan for offshore wind development, while AB-2316 directs the Public Utilities Commission to consider development of offshore wind and the necessary transmission infrastructure.

Case Study

Offshore Wind in Humboldt County: Balancing High-Road Job Creation and Local Economic Resilience

The proposed offshore wind project[124] in Humboldt County, California, has the potential to create hundreds of high-quality, family-supporting jobs. The project's commitments to local hiring, workforce training, and labor standards could set a new bar for high-road economic development in the Redwood Region. As the industry grows, it could create a multiplier effect throughout local and regional economies, supporting job creation and small business growth in sectors like Construction, Transportation, Hospitality, and Services (among others). The proposed scale of the offshore wind project also presents challenges for Humboldt County's existing industries and employers, however. An influx of new, high-paying jobs in the wind

[121] For example, the construction phase for offshore wind is predicted to generate between $330 million and $2.5 billion in economic output in California and to create between 1,600 and 13,000 new jobs in California, depending on the scale of the projects and the transmission pathways chosen. Annual operations could contribute an additional $3.2 million to $117 million in economic output, creating 26 to 960 new jobs in California (Hackett et al., 2020; Schatz Energy Research Center et al., 2024).

[122] See here for overview.

[123] [REF]

[124] [REF]

industry could make it harder for other sectors to attract and retain workers, particularly those that have historically struggled to offer competitive wages and benefits. Small businesses and non-profit organizations may find it especially difficult to compete for talent in a tighter labor market.

One example of efforts to ensure that the benefits of the offshore wind project are shared broadly is the Redwood Region Climate and Community Resilience (CORE) Hub program.[125] A key aspect of the CORE Hub's work is facilitating community engagement and dialogue to inform decision-making and ensure tangible and beneficial outcomes from the wind project, including providing resources for historically underrepresented and marginalized communities to participate in the development process. The program also focuses on providing trusted expert input, data, and analysis to help local communities make informed decisions.

[125] [REF]

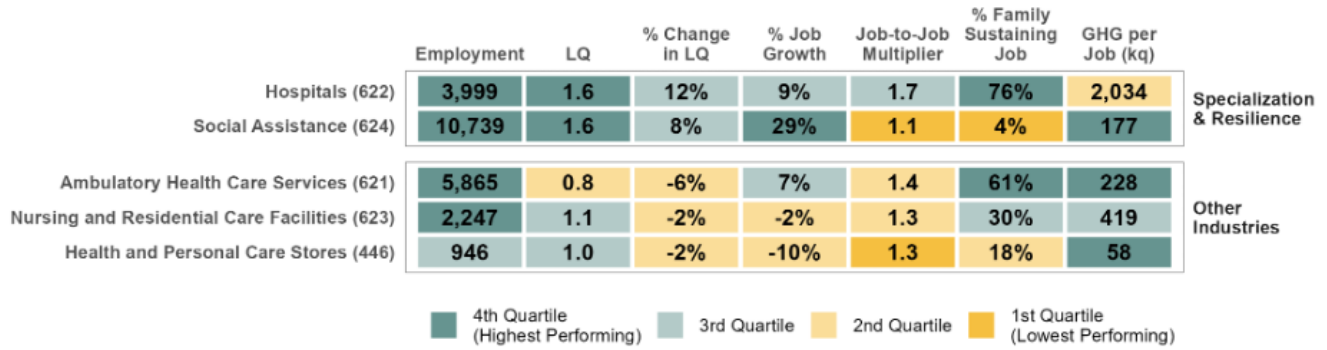
Health and Caregiving

Unlike traded sectors driven by market demand, the primary challenge for the Health and Caregiving cluster lies in attracting and retaining skilled workers to fulfill the region's health and social care needs. As discussed in the Public Health Analysis, the region faces health provider shortages and, as discussed in the Labor Market Analysis, the projected need for caregivers and health professionals is exceptional.

Cluster Performance and Alignment with RRRISE Goals

The cluster aligns well with High Road objectives, featuring minimal to moderate greenhouse gas (GHG) emissions and supporting industries that offer a significant number of family-sustaining jobs. However, the wages in the Social Assistance sector, which includes essential services like childcare, remain low. See Figure 6.12 below.

Figure 6.12 Health and Caregiving Industries Performance



Note. Data sourced from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

Outlook

The employment growth outlook for these industries is projected to be faster than average,[126] reflecting in large part the evolving needs of an aging population. The primary constraint on sector employment growth seems to be the region's capacity to attract and train skilled providers. These workforce development challenges are explored in-depth in the Labor Market Analysis.

Industry-Specific Assets

The Healthcare and Caregiving cluster includes a wide range of industries and services dedicated to promoting, maintaining, and restoring the health and well-being of community members. Within the RRRISE region, a variety of ways exist by which to characterize these sectors: 1) the breadth of their industry concentrations and capacities for employment, 2) the ways in which the industries do or do not meet the basic infrastructure needs that lead to economically prosperous communities, and

[126] As shown in Potential Job Growth for Major Industry Sectors, Redwood Region in the Appendix, employment in the Educational Services (Private), Health Care, and Social Assistance sector is projected to grow faster than average.

3) their impact on health outcomes and health inequities in the region.[127] The Health and Caregiving Sector encompasses several industries across the Redwood Region Rise region: ambulatory and acute medical care, behavioral health care, dental care, allied medical care, caregiving, and social care sectors. The region has durable organizations and collaboratives that actively seek solution-oriented approaches while trying to continually adjust to population needs and economic challenges.

Notable Policies and Impacts

At the state level, Health in All Policies (HiAP) provides a framework for change in healthcare systems. Specifically, it ensures that local, state, and federal governments make and implement decisions that have neutral or beneficial impacts on the determinants of health. Adoption of HiAP is anticipated to promote mainstreaming of SDOH approaches across the region's healthcare system. Additionally, the Department of Health Care Access and Information (HCAI) provides state-level recommendations to address workforce challenges in the healthcare space. Its focus is on behavioral health, nursing, allied health, and oral health. Many of these policy endorsements support scholarships and stipends for students with prioritization given to underserved and underrepresented communities and to an increase in pathway programs and new training sites.

The Workforce for Healthy California Initiative commits funding across programs to increase number of providers, provide additional training, and increase cultural competency. To identify investment avenues that will have the greatest and most lasting impact, HCAI uses a workforce model to understand the region's by-specialty and by-region care gap.

Summary of Cluster Alignment with RRRISE Goals and Outlook

In the context of high-road job creation, industry, government, labor, education, and community partners must collaborate on workforce and economic development strategies. Initiatives to upskill local residents for future jobs and efforts to boost job quality and career opportunities across all sectors are becoming increasingly important. Proactive planning, community-driven problem-solving, and a commitment to high-road principles will help the region better leverage economic drivers. Figure 6.13 on the next page provides a summary of the region's cluster analysis.

[127] In considering Schroeder's Social Determinants of Health (a framework that suggests that health disparities and outcomes are shaped not only by access to healthcare services but also by broader social, economic, and environmental factors) it makes sense to employ an aligned approach to these complementary industry sectors.

Figure 6.13 Industry Cluster Analysis Summary

	Wages	Climate & Environmental Impact	Outlook
Agriculture and Blue Economy	Low	High	Stable
Wood Products	High	High	Stable
Arts, Culture, & Tourism	Low	Low	Growth
Renewable & Resilient Energy	Potential for High Wages	Potential for Low Impact	Development Opportunity
Health & Caregiving	High	Low	Growth

Chapter 7

Labor Market Analysis

This chapter provides a snapshot of labor and workforce dynamics in the region. It discusses occupations, wages, the impacts of recent economic and technological developments and their effects on the labor market. Also discussed are projected labor trends in existing key industries and common barriers that limit access to high-quality jobs and relevant training programs and apprenticeships. Key industry standards for workers are touched on as relevant.

Key Takeaways

- The Redwood Region has experienced significant job losses in legacy industries (forestry, agriculture, manufacturing). Populations typically associated with these legacy industries—men and workers with lower educational attainment—exhibit low prime age labor force participation compared to state averages.
- Workers in the region struggle to gain career momentum. Wages for young workers and those with low levels of education match state averages. However, wages among more educated and experienced workers are suppressed, reflecting a trend common in rural areas across California.
- Current shortages and projected labor market needs clearly signal an ongoing demand for family-sustaining employment in healthcare, teaching, and skilled trades including electricians, plumbers, carpenters, and automotive service technicians. Demand for a number of occupations that are critical to all Redwood Region industry clusters is projected to be strong, including management, truck driving, and accounting.
- Most family-sustaining job growth is in occupations that do not require a bachelor's degree, and so relevant training programs are available locally. However, in many cases, completion rates from these programs do not keep pace with the demand for workers in those program's areas. Graduation rates from nursing, counseling and psychology, teacher credentialing, and skilled trades programs do not appear to be sufficient to meet the current or projected needs.
- High school graduates across the region are less prepared for secondary training compared to state averages, indicating a critical barrier to success in postsecondary training programs.

Key Metrics

- **Prime-age labor force participation rate by race and age:** Track the proportion of working-age adults (age 25-54) who are employed or actively seeking work, disaggregated by demographic characteristics. This indicator is less influenced by differences in the age distribution between regions or changes over time.
- **Percentage of jobs that pay a family-sustaining or living wage:** Assess the quality of employment opportunities by calculating the share of jobs that provide wages sufficient to support a family or individual. Based on the MIT Living Wage Calculator, the minimum wage sufficient to support a family of two working adults (full-time) and two children is at least $27.49.[128]
- **Living Wage:** Also based on the MIT Living Wage Calculator, a wage sufficient to support a single adult (working full-time) with no children equals at least $21.78.
- **Projected job openings and growth rates by occupation:** Analyze long-term labor market projections to identify high-demand occupations and guide workforce development priorities.
- **High school graduation rates and college readiness:** Monitor educational outcomes and preparedness for postsecondary training to ensure sufficient supply of skilled workers.

Major Trends in the Labor Market

Decline in Legacy Industries and the Rise of Healthcare and Social Assistance

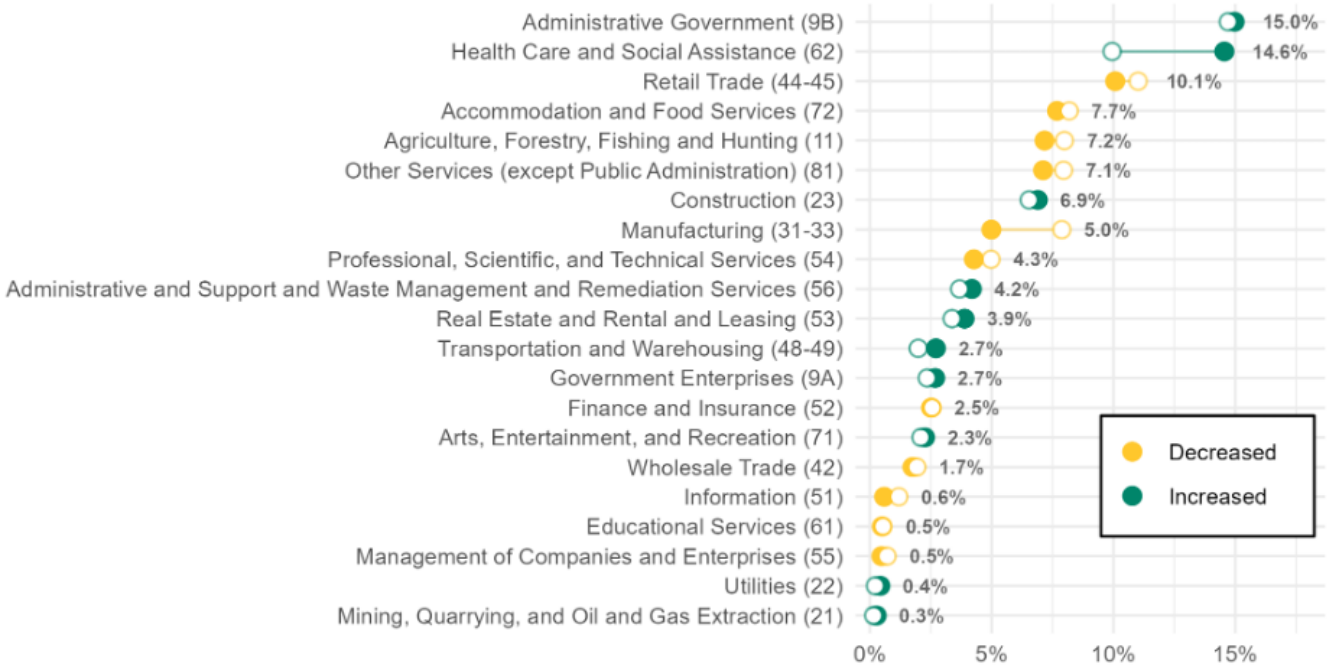
Like many rural areas in the United States, the Redwood Region's economy was historically concentrated in land-based sectors like agriculture, forestry, logging, and government services. Workers in these rural regions, who typically have lower levels of educational attainment, face greater challenges when displaced from their jobs due to the area's lack of diversity in employment opportunities compared to urban areas (Dumont, 2024).

Regional data reflect these trends in the Redwood Region, demonstrating a decline in employment in manufacturing and natural resource-based industries over the last few decades. Simultaneously, there has been a notable increase in employment concentration within the Health and Social Assistance sector. This sector employs the largest number of workers (21%) in the region. Nearly 60% of workers are concentrated in health care, retail, public administration, and educational services. Essential industries have faced significant pressure due to the COVID-19 pandemic (Policy Link, 2024).

See Figure 7.1 for shifts in areas of employment within the region over the two preceding decades.

[128] This is the population-weighted average of the four counties.

Figure 7.1 Employment Concentration and Change Since 2001 (2001, 2022)

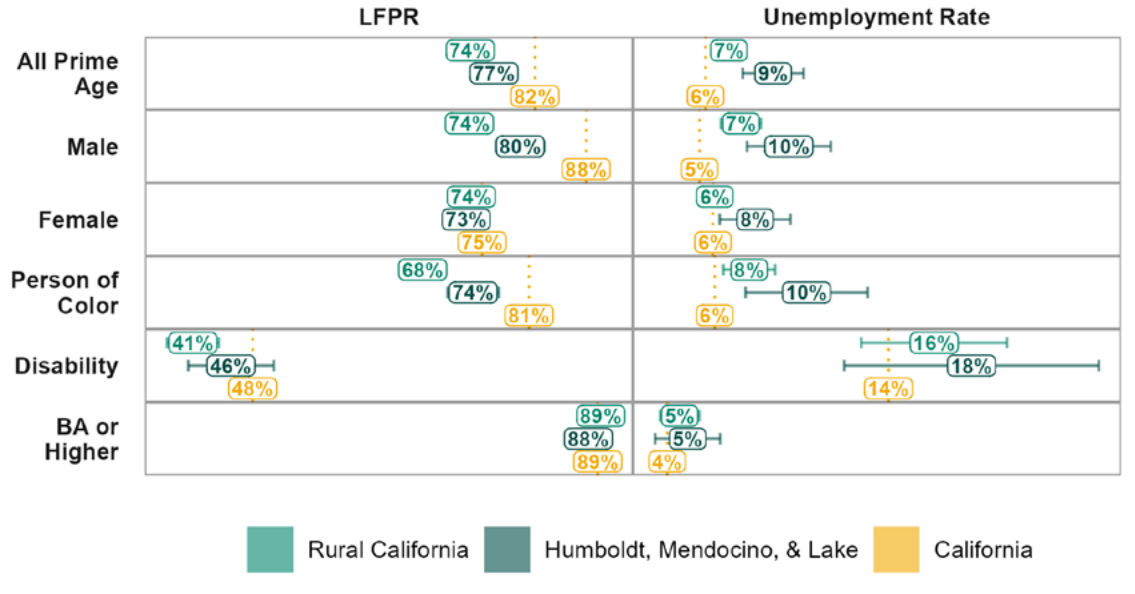


Note. Data sourced from IMPLAN.[129]

These employment shifts in the Redwood Region have had varying impacts on different groups of workers. Traditionally, the declining sectors such as Manufacturing and Resource Extraction have predominantly employed men without bachelor's degrees. In contrast, the growing Health and Social Assistance sectors tend to employ more women and more individuals holding bachelor's degrees. Consequently, the region's employment shifts have disproportionately displaced men and those with lower educational attainment. Data from the Redwood Region, and rural California as a whole, show that men experience significantly lower labor force participation rates, whereas individuals with a bachelor's degree or higher maintain employment rates that align with state averages. Despite this, women in the Region still have lower labor force participation than men.

[129] North American Industry Classification System (NAICS) code in parentheses. Solid points indicate current value.

Figure 7.2 Labor Force Participation Rate (LFPR) and Unemployment Rate, Prime Age Adults[130]



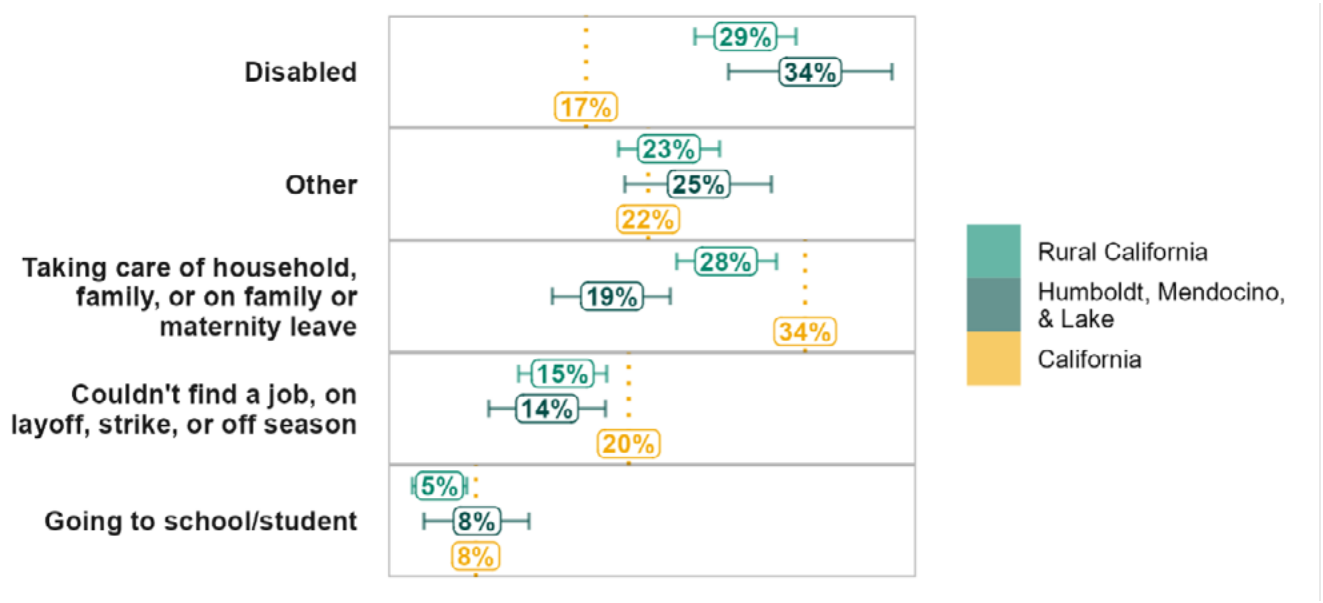
Note. Data sourced from Census PUMS. Five-year estimates 2017-2021. Rural California is defined as all California counties with an Index of Relative Rurality (IRR) of at least 0.50 (Waldorf & Kim, 2018).[131]

Health and disability factors significantly complicate these workforce challenges in the Redwood Region, where, as discussed in the Public Health Analysis, rates of disability are far higher than state averages, including among young adults. As shown in Figure 7.3, a substantial proportion of prime-age adults who are unemployed or out of the labor force cite disability as their main reason for not working. Furthermore, among younger adults, substance use and mental health issues are the predominant causes of these disabilities, suggesting that workforce challenges are intertwined with a growing public health crisis (*Symptoms Matter—Leading Causes of Disability*, n.d.).

[130] Prime age adults include adults aged 25 to 54.

[131] These include Alpine, Amador, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Plumas, San Benito, Sierra, Siskiyou, Tehama, Trinity, and Tuolumne Counties. Lake County has the lowest IRR in the region (i.e., is the least rural) and so represents the low threshold for the Rural California comparison group.

Figure 7.3 Main Reason Not Working, Prime Age Adults



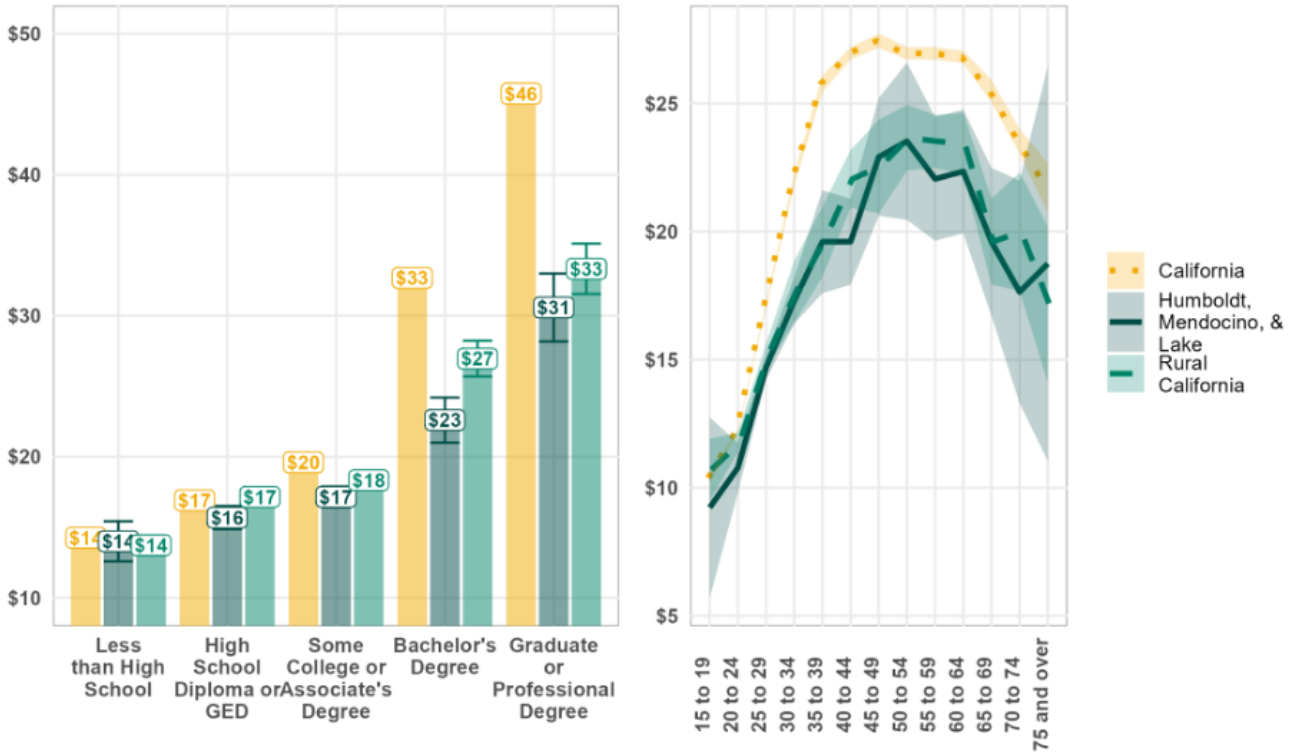
Note. Data sourced from California Health Information Survey. Data years include 2011-2022.[132]

Failure to Gain Career Momentum

Jobs are available in the Redwood Region, but career progression is elusive for many workers. Young workers and those with low levels of education earn wages comparable to state averages. However, workers with more experience or further education experience significant wage gaps, suggesting that the region's labor market does not adequately reward accrued experience or education. These trends are typical of other rural areas in California. See Figure 7.4 for hourly wage by education and age.

[132] To define a rural California comparison, Public Use Microdata Areas (PUMA) selected have at least one county with an Index of Relative Rurality (IRR) that is at least as high (≥ 0.5) as the IRR for the Redwood Region county with the lowest IRR (0.5 in Lake County). California counties covered by these PUMAs include Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne, Colusa, Glenn, Tehama, Trinity, Humboldt, Lake, Mendocino, Monterey (South & East only), Del Norte, Lassen, Modoc, Plumas, Siskiyou, San Benito, Nevada, and Sierra. Due to differences in geographic aggregation between the CHIS and Census PUMS data, Monterey County, which does not meet our threshold of rurality of 0.5, is excluded in the Rural California comparison in CHIS data.

Figure 7.4 Hourly Wage by Education and Age



Note. Data sourced from Census PUMS data 2017-21 5-year estimates. Bars on the left panel and shared region on the right panel represent 95% confidence intervals. See footnote for detailed methodology.[133]

Wage Disparities and Equity Considerations

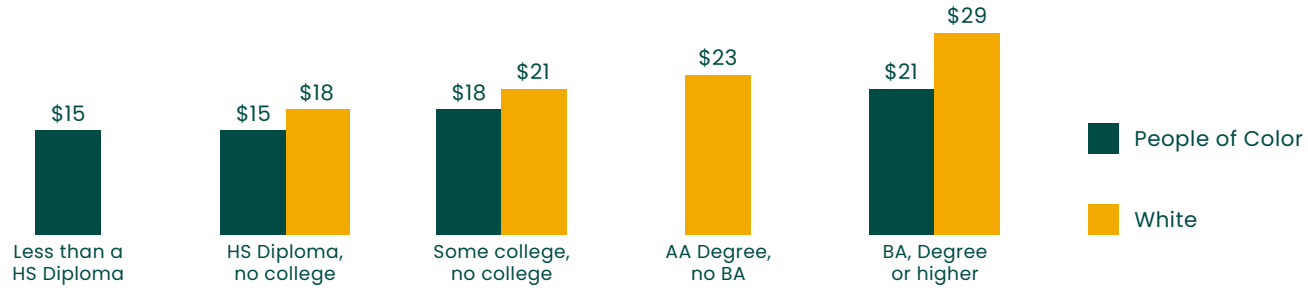
People of color are highly represented in lower-paying industries like agriculture (44%), retail trade (32%), and durable manufacturing (32%). They are underrepresented in higher-paying sectors like information (20%), professional services (15%), and finance, insurance, and real estate (21%).

Since 1980, the median wage in the region has dropped by 16 percent. Although data constraints limit historical comparisons for Latinx and Native American workers, wages for white workers have fallen by 12 percent. The wage disparity between Latinx and white workers is notable, with the median hourly wage for Latinx workers being just 73 percent of that for white workers. Over the last 40 years, earnings growth has predominantly benefited the top 10% of earners while declining sharply for the bottom half of workers.

The National Equity Index from PolicyLink provides targeted data analysis on wage disparities and inequities in the Redwood Coast's labor market and is the source of Figure 7.5.

[133] Hourly wages were calculated from the estimated number of weeks worked, average number of hours worked per week, and labor income. Outliers were then removed by excluding all nonpositive hourly rates and all hourly rates outside an acceptable interval. To determine this interval, the log of the hourly rates was taken to convert the distribution into an approximately normal distribution. The first and third quartiles (Q1 and Q3) were then determined to calculate the interquartile range (IQR = Q3 - Q1) of this distribution. All observations for which the log hourly rate was below Q1 - 1.5I * IQR or above Q3 + 1.5 * IQR were excluded.

Figure 7.5 Median Wage by Race/Ethnicity and Educational Attainment 2020



Source: National Equity Atlas analysis of 5-year American Community Survey microdata from IPUM USA. Universe includes civilian non institional full-time wage and salary ages 25 through 64 years. Note: Data for 2020 represent a 2016 through 2020 average. Values are in 2020 dollars.
Note: There is not enough data to display on median wages for Asian American workers with less than a high school diploma, nor Black, Native American, and Pacific Islander workers at any level of education.

Workers At Risk of Displacement

Worker displacement refers to an involuntary loss of employment due to an employer's downsizing or closure (OECD, 2016). By analyzing shifting trends in industry and job growth, this section identifies groups of workers within the region who may be at risk of displacement over the coming decade.

Nearly two-thirds of projected jobs[134] to be created over this period are predicted to come from two sectors: Education Services (Private), Health and Social Assistance, and Leisure and Hospitality[135] (see below). Both sectors employ predominantly women; aside from this, however, the sectors diverge across race, age, education, and income. The former workforce earns more income, skews toward white, is older, and has more education than the latter, who tend to earn a lower wage, are younger, have lower levels of educational attainment, and are more likely to be persons of color.

The remaining third of projected job openings are divided among 11 sectors. Although the proportion of total jobs created within these sectors is smaller than in the top two sectors, Transportation, Warehousing, and Utilities; Construction; Other Services[136]; and Wholesale Trade are projected to experience faster than average job growth rates. Therefore, workers in these fields appear to be at lower risk of displacement. The outlook for skilled trades and construction occupations is especially strong, and many of these occupations pay living wages and require only some postsecondary training.

The remaining sectors (see Manufacturing through Information in Figure 7.6) are expected to experience slower than average job growth rates and so account for a small proportion of overall jobs created. These slower growing fields include a mix of both industries having more highly educated workers and those with lower levels of educational attainment.

Workers in many Manufacturing; Total Farm, Mining, and Logging; and Retail Trade are already experiencing displacement (see the Crop Production and Forestry and Logging Industry Cluster Analysis), and these projections suggest an ongoing poor outlook for job growth in these industries. Such

[134] Including living wage and below living wage jobs. See next section for projected living wage occupations.

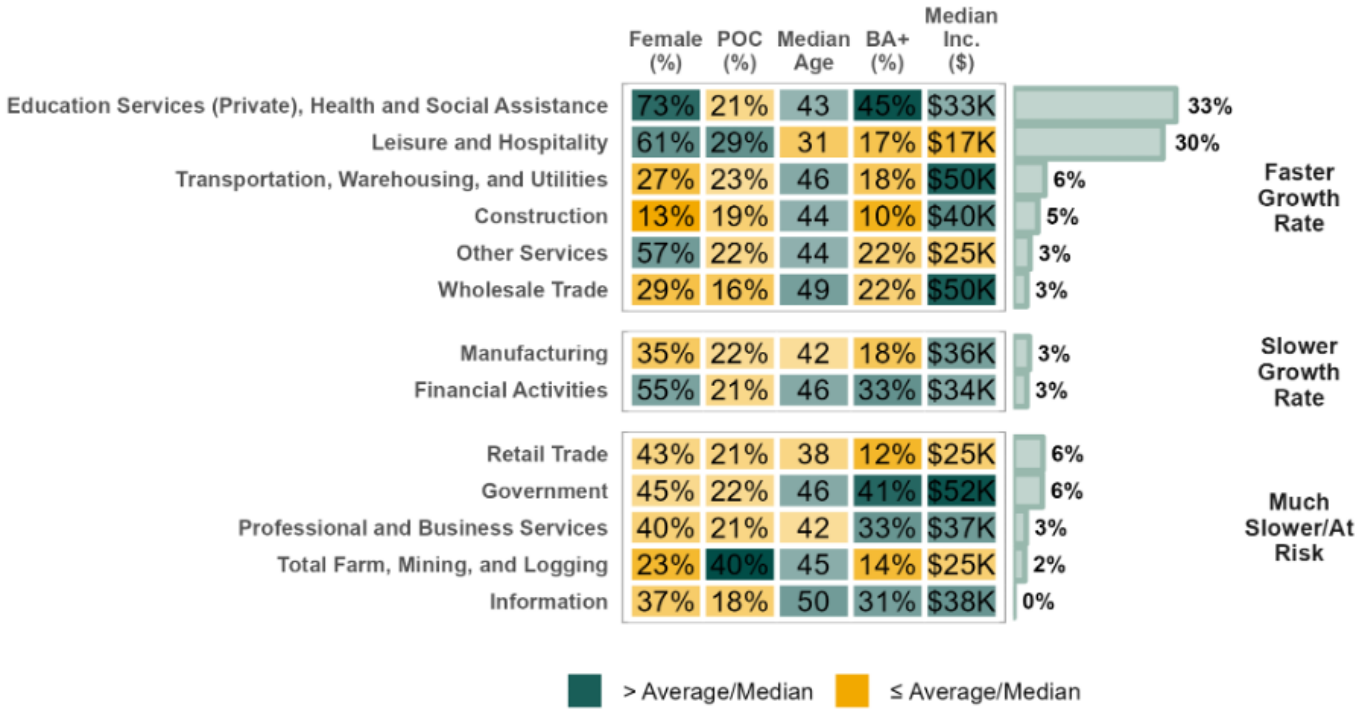
[135] As defined by the EDD. NAICS codes included in each.

[136] This includes NAICS code 81. This is defined as follows: "Establishments in this sector are primarily engaged in activities such as equipment and machinery repairing, promoting or administering religious activities, grantmaking, advocacy, and providing drycleaning and laundry services, personal care services, death care services, pet care (except veterinary) services, photofinishing services, temporary parking services, and dating services. Private households that engage in employing workers on or about the premises in activities primarily concerned with the operation of the household are included in this sector." (*North American Industry Classification System (NAICS) U.S. Census Bureau*, n.d.)

displacement is likely to disproportionately impact men, persons of color (within the Total Farm, Mining, and Logging sector), and individuals characterized by lower levels of educational attainment.

More highly educated workforces also appear to be at risk of displacement. Job growth in knowledge-based industries including Financial Activities, Government,[137] Professional and Business Services, and Information is projected to be minimal.[138] A compounding risk factor for these industries is the potential impact from current and future developments in generative artificial intelligence (AI). Roughly 16% of the United States workforce now regularly uses AI in the workplace (Brooks, 2023) and, as with many new technologies, the risk of displacement is a central topic of research and debate. A recent study found that many knowledge occupations are highly exposed to AI automation risk and displacement—particularly workers in legal and administrative[139] professions—whereas workers in trades, construction, outdoor and manual work, healthcare fields, and food services are expected to be relatively insulated from AI displacement (Hatzius et al., 2023). Workers in several of these at-risk fields skew older, compounding the potential workforce development challenge.

Figure 7.6 Workforce Demographics (Left) and Percent Breakdown of All Projected Jobs Created (Right) from 2020-2030



Note. Projection data sourced from EDD. Demographic data sourced from Census PUMS data 2017-21 5-year estimates. Demographic data do not include Del Norte.[140] Job growth does not sum to 100% due to rounding. Median income includes labor income only.[141] Bars illustrate the total percentage of all jobs created in each sector. Growth rates (see classification on the right) categorize sectors based on their percentage job growth rate.[142]

[137] As discussed in the next section, teachers and firefighters appear to be an important exception.

[138] See Potential Growth for Major Industry Sectors, Redwood Region, in the Industry Cluster Appendix.

[139] Legal and office and administrative support occupations are particularly exposed. Architecture and engineering occupations also have some exposure.

[140] Census PUMS data aggregate Del Norte with several other counties outside the Redwood Region.

[141] Includes both part-time and full-time workers. Does not include workers who report no labor income. These are approximate estimates only. Please see the wage data in the following section for more precise wage estimates.

[142] Larger sectors can account for a sizable portion of job openings even if the job growth rate is slow.

Barriers to Workforce Participation

Identifying workforce barriers was a key goal of the 355 listening sessions the RRRISE outreach and engagement team conducted with residents. The primary barriers identified were:

Transportation: Given the remoteness of the region's communities, residents stated that travel time between places is long, a particular difficulty for people with disabilities or people who rely on public transportation. The lack of public transportation limits the places residents can go. For residents who manage their own transportation, the cost of gas can be prohibitively expensive, and roads are frequently closed due to extreme weather events, such as wildfires.

Health: Many residents live more than 10 miles from a grocery store, limiting access to healthy foods. Access to healthcare providers, for both physical and mental health, is scarce in the Redwood Coast, as is healthcare education.

Childcare: Across the region, as many as seven in 10 children do not have access to a licensed childcare provider. Residents who cannot find licensed child care often leave children with family members or sometimes bring their children with them to work, limiting the parents' opportunities at work.

Cost of Living: Residents reported difficulties affording their bills and rent and having to rely on credit cards. As mentioned previously, affordability concerns impact transportation and nutrition for families as well.

Working Culture and Job Access: Residents stated that many jobs have less than favorable working conditions, citing favoritism and bullying by supervisors. Residents who are non-native English speakers or who do not speak English reported difficulties navigating the workplace. Few workforce-preparation or career-exploration programs are available for residents, and many feel that, without some means of seeing what jobs are available, they miss out on job opportunities.

Educational opportunities are also a workforce barrier. Many jobs in the area require a college degree that residents do not have, but the jobs are such that these residents could learn on the job and be successful. Residents are typically unable to commit to a college degree because they have to support their families or cannot afford to attend college, thus limiting their career opportunities. Online schooling is an option, but many people in the region do not have access to a computer or the internet.

Residents' experiences navigating the workforce in the region are summarized in a report from outreach partners that is available on the RISE website.

Projected Workforce Development Needs in High-Growth Living Wage and Family-Sustaining Occupations

By examining all sources of job growth, regardless of wage and training requirements, the previous section identified the region's workers who are at risk of displacement. This section's objective is identifying living-wage occupation workforce-development opportunities that both support the development of living wage and family-sustaining careers and serve the workforce-development needs of the region's key industry clusters.

In the examination of job growth projections by occupation based on the EDD data that follows, the focus is solely on occupations that offer at least a living wage and that necessitate some form of postsecondary education or graduation from an apprenticeship program; in other words, occupations aligned with High Road priorities that have workforce-development requirements.[143] Figure 7.7 below shows projections for openings in living wage jobs requiring postsecondary education or training.

Labor market projections from the EDD overwhelmingly speak to an ongoing need for skilled healthcare workers in the Redwood Region (see Health & Caregiving below). Key among these are family-sustaining, skilled health occupations that require only a few years of training, including registered nurses (RN)[144] and licensed vocational nurses (LVN). Living wage opportunities exist in Medical, Nursing, and Dental sector assisting roles. The outlook is also strong for health-management occupation professionals having higher levels of education.

There is also significant need and opportunity for occupations that span the region's key industry clusters (see Cross-Cutting Occupations below) particularly the management, truck driving, and accounting occupations, for which workforce development is critical to all Redwood Region industry clusters.

Another high-need area—although not tied specifically to any industry cluster—is for education professionals (see "Other in Figure 7.7 below). Among living wage occupations and across all grade levels, those in teaching are projected to have the highest number of openings. Compared to their statewide counterparts, the region's high school students are less prepared for college, and an education workforce sufficient in number and quality is critical to address that challenge.[145]

Finally, skilled trades occupations critical to the Wood Products cluster, Construction, and the future development of a Renewable and Resilient Industry cluster are expected to be particularly strong. Demand for carpenters, electricians, plumbers, and automotive service technicians is expected to be high. Moreover, potential future development within wind energy will require workforce development in some skilled-trades occupations not discussed below. According to the Bureau of Labor Statistics, over one-third of workers in the Wind Electric Power Generation (NAICS 221115) industry are Wind Turbine Service Technicians (SOC 49-9081), a family-sustaining[146] career that requires non-degree postsecondary training (*Occupational Employment and Wage Statistics*, n.d.).

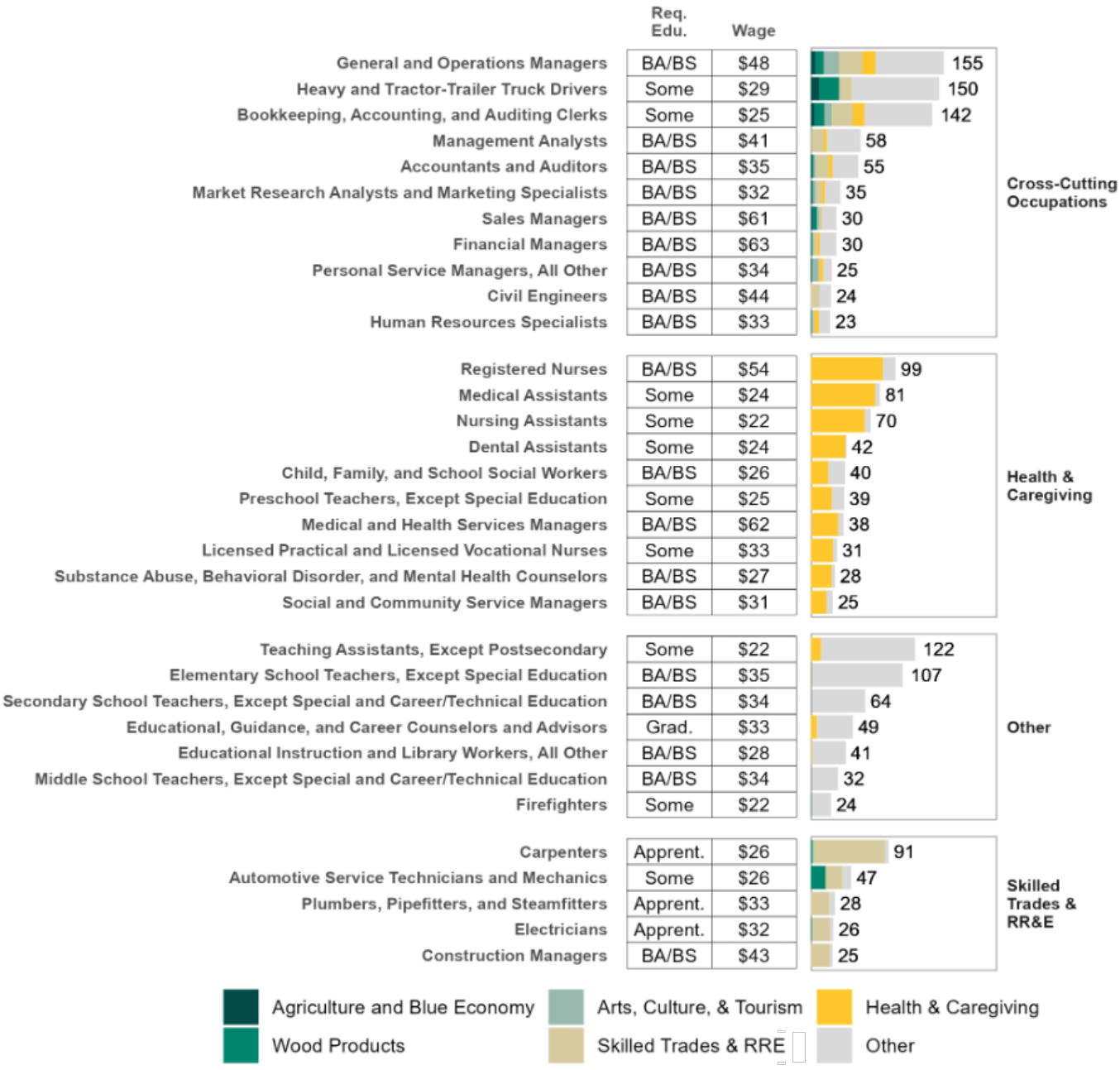
[143] If a job does not pay a living wage, then it is not a High Road priority. If a job requires on-the-job training only, then the workforce-development need for this job is minimal.

[144] The EDD dataset used in this analysis states that a bachelor's degree is an RN job requirement; however, this is not accurate.

[145] See Educational Outcomes and Barriers in the Industry Cluster Analysis Appendix.

[146] In California, the average hourly wage is $45.35.

Figure 7.7 Top Projected Living Wage Openings Requiring Postsecondary Education or Training, Projected Openings per Year[147]



Note. Labor market projections (total amounts) sourced from the California EDD. Component breakdowns based on IMPLAN data.[148] Wages sourced from IMPLAN. 2020 to 2030 projections. Only occupations paying living wages are shown.

[147] All occupations with 250 or more projected openings through 2020 to 2030 that require any amount of postsecondary education (e.g., certificate, Associate's degree, bachelor's degree) or apprenticeship.

[148] The percent of each occupation employed in a cluster was calculated. This percentage breakdown was then applied to the total projected openings for each occupation to obtain an estimate of the level of exposure each cluster has to the total level of projected openings. For instance, 11.5 % of the General and Operations Managers positions are employed in the Arts, Culture, & Tourism industries. Occupations not concentrated in a key industry cluster (the "Other" category) constitute less than 75% of employment in Other and so are defined as cross-cutting.

Potential Gaps in Local Education and Training

Skilled Health Occupations

For some skilled health occupations, local graduation rates appear nearly sufficient to supply the job openings projected over the near term. Over the past five academic years, the region has produced an average of 89 registered nurses (RNs) annually, slightly below the projected need of 99 RNs per year. Additionally, the region graduates an average of 31 licensed vocational nurses (LVNs) each year, precisely meeting the forecasted demand for this profession. However, data from the California Department of Healthcare Services indicate nurse shortage areas throughout the region (*Registered Nurse Shortage Areas in California - Registered Nurse Shortage Areas - California Health and Human Services Open Data Portal*, n.d.),[149] suggesting that other factors may be impacting the supply and demand for nurses.

For other occupations, there are gaps, the most obvious among these being the lack of regional training opportunities for medical doctors, psychiatrists, dentists, pharmacists, physician assistants, and nurse practitioners, which forces reliance on professionals relocating from outside the region.[150] As discussed in the Public Health Analysis section, the region has a shortage of primary, mental, and dental health.

Training gaps are also evident in other skilled health occupations, even those for which training programs are available. For example, community colleges (CR and MC) have been graduating an average of 21 dental assistants annually, which constitutes only half of the 42 openings projected per year.

The entire region is a mental health provider shortage area, underscoring the urgent need for more professionals in this field. According to a recent report, the region's behavioral health workforce currently comprises 1,900 professionals, approximately 950 individuals short of what is needed to adequately address the mental health and substance use demands of the region (Cal Poly Humboldt, 2023). From 2022 to 2027, the Redwood Region is projected to require an additional 485 mental and behavioral health professionals annually to replace retiring workers and to address unmet needs. In addition, the report identified an annual demand for 85 marriage and family therapists, 31 mental health and substance use social workers, and 15 psychologists.

However, based on current graduation rates from Cal Poly Humboldt (CPH), the supply of new professionals will not meet this demand. Over the past year, CPH graduated an average of 50 students in Social Work, 11 in Counseling Psychology, and eight in School Psychology at the master's level, clearly demonstrating that the region's educational output is insufficient to close the significant gap in the mental health workforce.

Cross-Cutting Occupations

The region's community colleges and Cal Poly Humboldt provide a comparatively high number of locally trained graduates in business and related disciplines, providing the educational opportunities required for the Bookkeeping/Accounting and General and Operations Managers occupations.

[149] These areas include the Crescent City/Bertsch-Oceanview (medium severity), Eureka/McKinleyville (low severity), Fort Bragg/Caspar (medium severity), and Clearlake/Hidden Valley Lake (high severity) areas.

[150] Nurse practitioners and physician assistants can perform some of the duties of a medical doctor such as diagnosis, referrals, and writing prescriptions (Medical Board of California, n.d.; Professional, n.d.). Therefore, a local training opportunity for either nurse practitioners or physician assistants may alleviate some of the shortage.

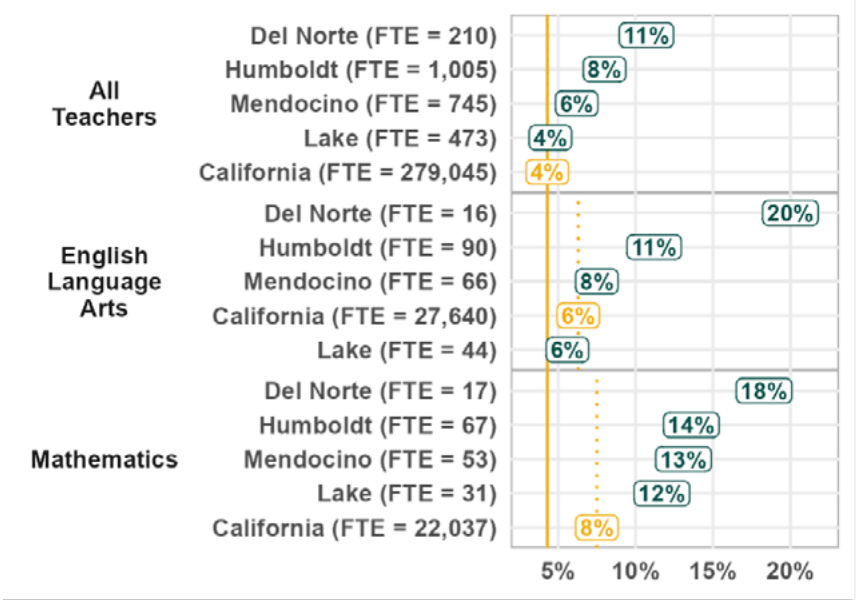
Education

The region shows significant gaps in teacher preparation, with projections indicating the need for 203 new teachers annually across the elementary, middle, and high school levels. However, Cal Poly Humboldt (CPH) graduates an average of 96 teaching credentialed students yearly (including both masters and BA programs).[152] Important to note is that CPH's teaching program includes online students, enabling it to serve candidates across the state and complicating direct regional impact assessments.

According to Teach California, there is a high demand for teachers in specialized fields such as Special Education, Mathematics, Science, Bilingual, and Career Technical Education (*High-Need Subject Areas*, n.d.). Despite this demand, credentialing output is low: In the past five years, the region has averaged 24.8 graduates per year in Special Education, but only 4 in Mathematics, 7.2 in Science, and a mere 0.2 in Career Technical Education (*Credentials Granted by Academic Year*, n.d.). These statistics underscore the pressing need for targeted improvements in teacher training programs to better align with both regional and state needs.

The deficiencies described above force local school districts to compromise, often hiring under-qualified teachers to fill gaps. As shown in Figure 7.8 below, teacher subject matter expertise falls below state averages across the region, particularly for mathematics. As discussed in the Labor Market Analysis Appendix, the region's K-12 achievement in mathematics and reading lag state averages, and the region's high school graduates are far less prepared for UC/CSU admission compared to state averages. The lack of teacher preparation may play a role in these outcomes.

Figure 7.8 Out-of-Field Teachers[151]



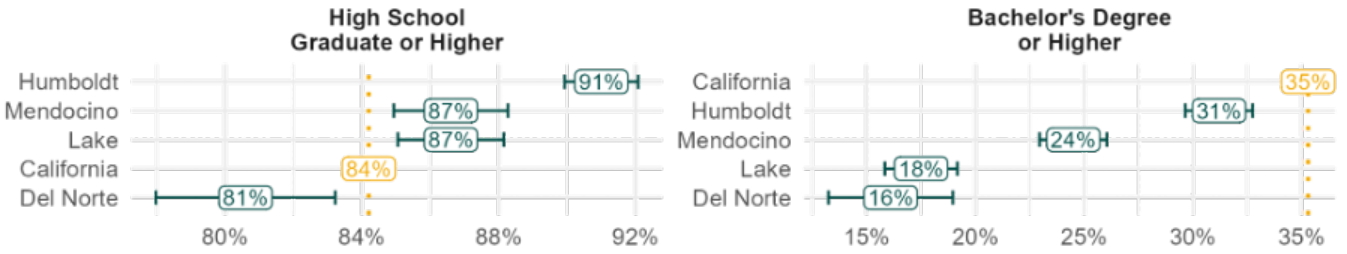
Note. Data sourced from the California Department of Education (California Department of Education, n.d.).

[151] Average 2018-19 through 2022/23 academic years.

[152] An out-of-field teacher is defined as: "someone who has a credential but has not yet demonstrated subject matter competence in the subject area(s) or for the student population associated with the assignment" (*Teaching AMO Definitions*, n.d.).

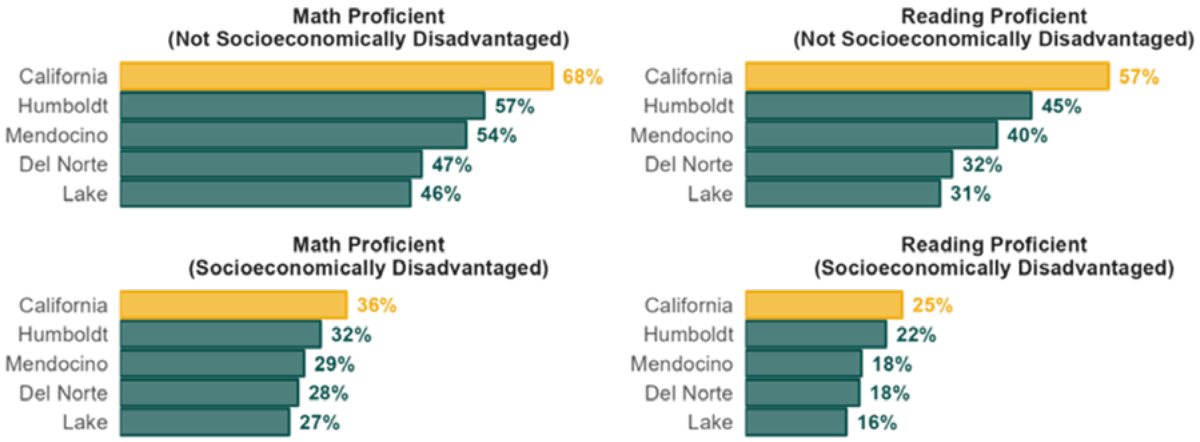
Correspondingly, except for Del Norte,[153] the adult population has achieved high school graduation rates that are on par with or even exceed the state average. However, all Redwood Region counties lag behind in four-year degree attainment (see Figure 7.9 below). Therefore, while the region has comparable rates of high school graduation, the educational system apparently faces challenges in adequately preparing high school graduates for college.[154]

Figure 7.9 Educational Attainment, Population 25 Years or Older (2017-2021)



Note. Data sourced from the ACS.
As shown below, in the Redwood Region, gaps in educational attainment start early, with K-12 students lagging behind their statewide peers on reading and math proficiency.

Figure 7.10 K-12 Math and Reading Proficiency by Socioeconomic Status (2017-2019)



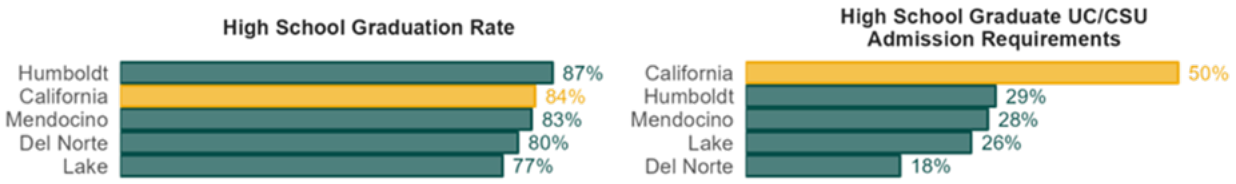
Note. Data sourced from Kidsdata.org. Includes grades 3, 4, 5, 6, 7, 8, and 11. Based on California Assessment of Student Performance and Progress's "Smarter Balanced Summative Assessment."

In the Redwood Region, high school graduation rates are on par with the state rate, but high school graduates in the region are much less prepared for college admission compared to the state average. Across the region, high school graduates complete the course requirements for admission to the University of California (UC) or California State University (CSU) systems (i.e., "A–G requirements") at roughly half the rate of their statewide counterparts.

[153] The Pelican Bay State Prison population likely skews Del Norte's figure substantially.

[154] Another contributing factor for the gap in higher educational attainment may be a comparative lack of four-year colleges and universities that are geographically accessible for much of the region's population. Only Humboldt County is home to a public four-year university.

Figure 7.11 High School Graduation Rates and College Preparedness (2017-2021)



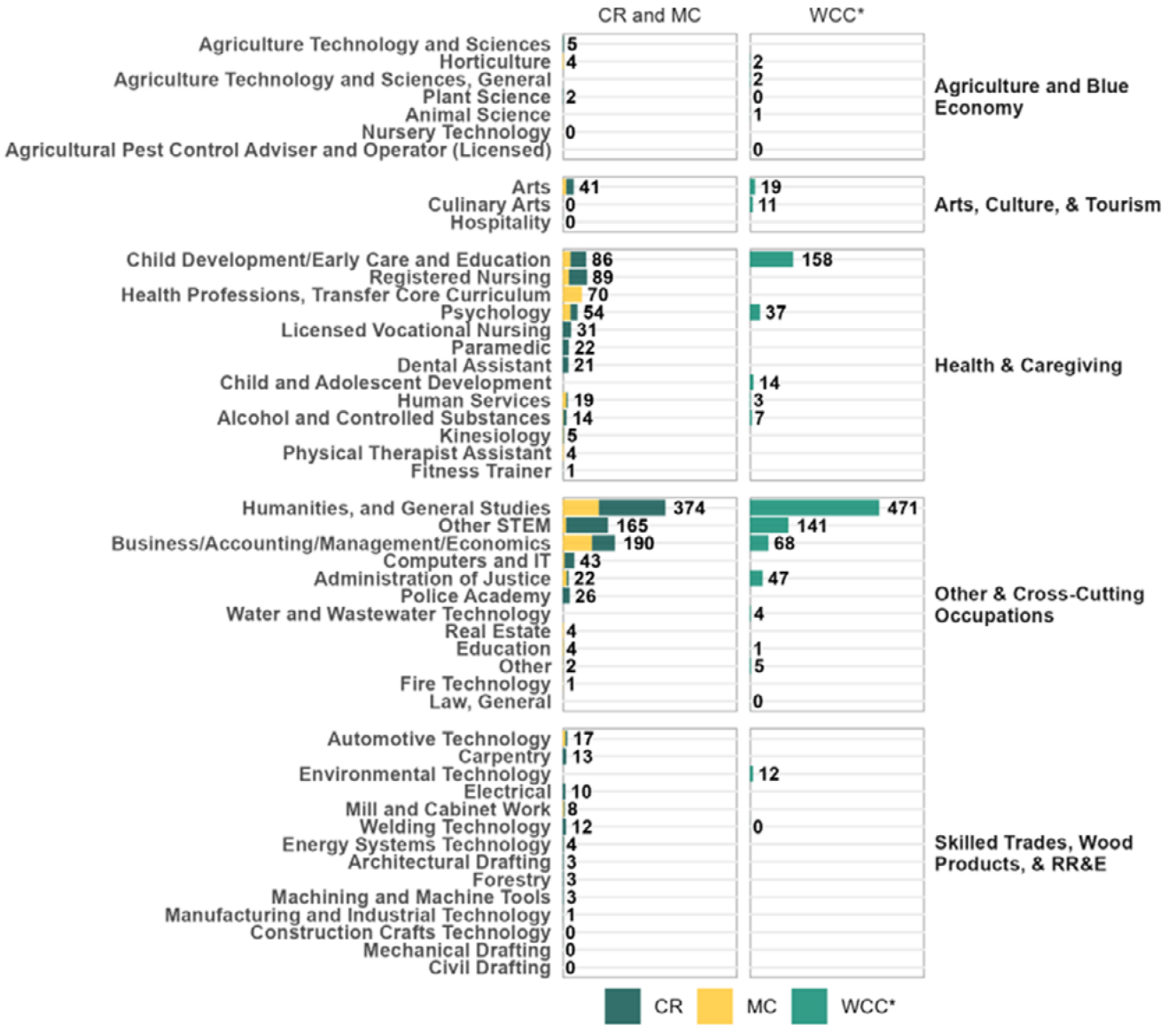
Note. Data sourced from Kidsdata.org.[155]

Skilled Trades

Training for skilled trades in the region's community colleges seems to be insufficient. The number of community college graduates who obtain certificates or degrees in skilled trades is notably low, and annual graduation rates do not meet the employment opportunities forecasted in these fields (see Figures 7.12 and 7.13 below). For example, the EDD projects an annual need for 91 carpenters, and yet, over the past five years, only an average of 13 students have graduated from the region's community colleges with carpentry qualifications. Similar shortages are observable in other trades such as those of automotive service technicians and electricians, suggesting a significant gap between available training capacity of community colleges and labor market demands for these skilled sectors.

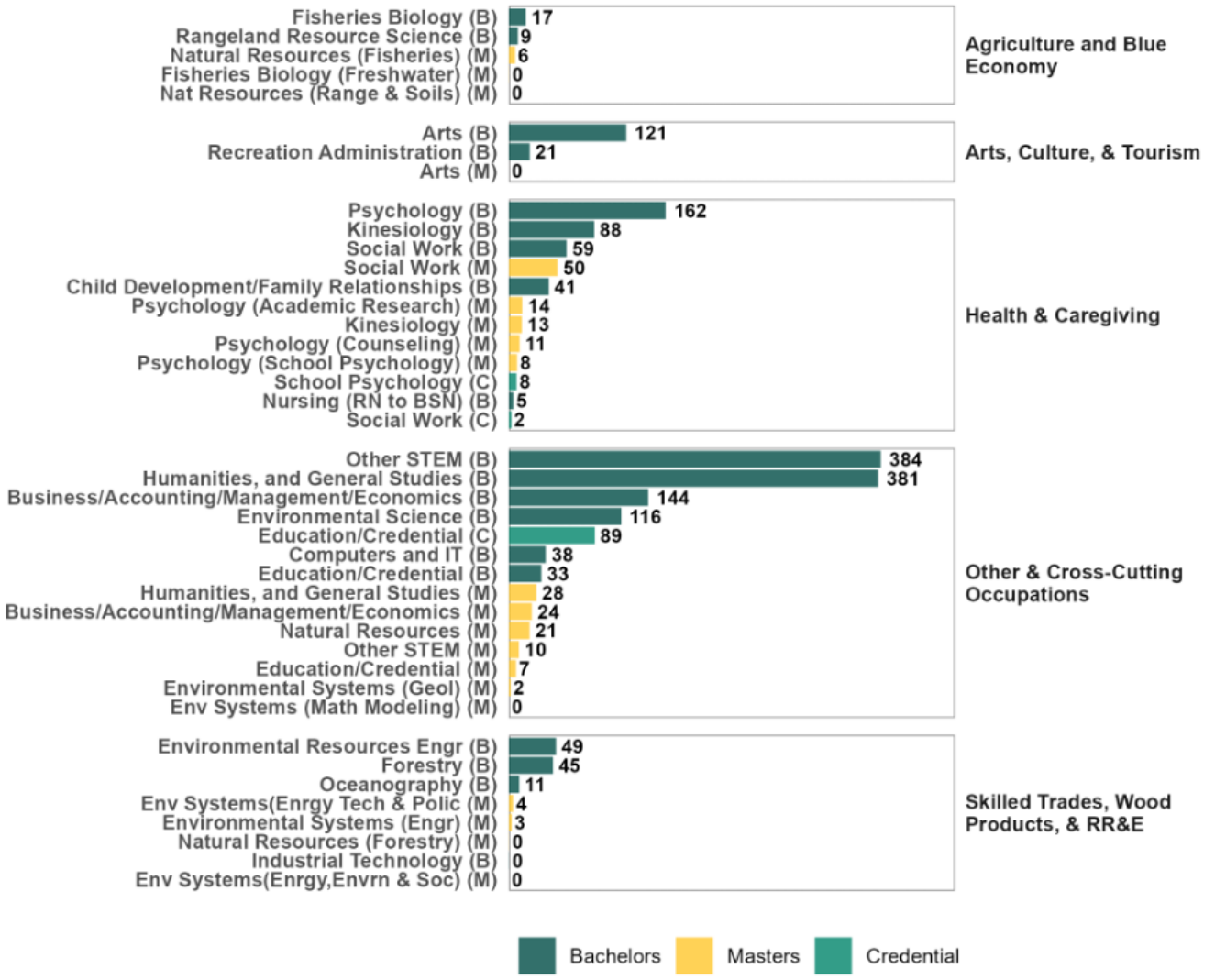
[155] Admission requirements data including only 2017-2019. Percentages are annual averages. High school graduation rate is defined as the percentage of public school students from the graduating class who receive a high school diploma. Admission requirements is defined as the percentage of high school graduates who complete all courses required for UC/CSU admission with a grade of "C" or better.

Figure 7.12 Mendocino College (MC), College of the Redwoods (CR), and Woodland Community College (WCC) Average Program Completion per Year from Academic Years 18/19 to 22/23



Note. Data sourced from California Community Colleges Chancellor's Office, Data Mart. Woodland Community College serves both Lake and Colusa campuses. WCC data therefore includes graduates from outside the Redwood Region.

Figure 7.13 Cal Poly Humboldt Average Program Completion per Year from Academic Years 18/19 to 22/23



Note. Data sourced Cal Poly Humboldt Institutional Research.

Barriers to Success

Region wide, students are less academically prepared for college compared to statewide averages. Less than a third of Redwood Region high school graduates complete the admission requirements for admission to the UC or CSU system, and regional students' test scores in reading and math proficiency lag behind state averages. Not only do these barriers impact the region's ability to grow its own workforce of skilled university graduates, but they also affect its production of skilled trades and health occupation workers for occupations that do not require a university degree. A 2016 study found that students admitted to California Community Colleges (CCC) that were placed in remedial courses had only about a 16% chance of earning a certificate or associate degree within six years (Cuellar Mejia et al., 2016), indicating that low reading and math proficiency among the region's high school students has critical implications for its ability to train skilled workers in the trades and health occupations. Addressing the teacher shortage is thus a key step in preparing the next generation of workers.

Industry-Specific Labor Standards that Meet High-Road Priorities

Due to an economy centered around natural resources and outdoor recreation, protection from extreme weather is a key labor standard across many of the region's industries. As the climate crisis progresses, policies concerning extreme heat days and climate events that impact infrastructure and health will be key to protecting these workers. The Climate Analysis section (Chapter 4) provides information about the climate change.

Arts, Culture, and Tourism

The California Travel Association (CalTravel) promotes responsible and sustainable tourism practices, including fair labor standards (CalTravel, n.d.). The Actors' Equity Association (AEA) represents actors and stage managers in the theater industry and advocates for fair wages and safe working conditions (Actors' Equity Association, n.d.). OSHA has specific safety standards for the entertainment industry, including guidelines for stage and set construction, electrical safety, and fall protection (OSHA, n.d.). The California Department of Industrial Relations has additional labor standards for the entertainment industry, including minimum wage requirements and overtime pay (California Department of Industrial Relations, n.d.).

Health and Caregiving

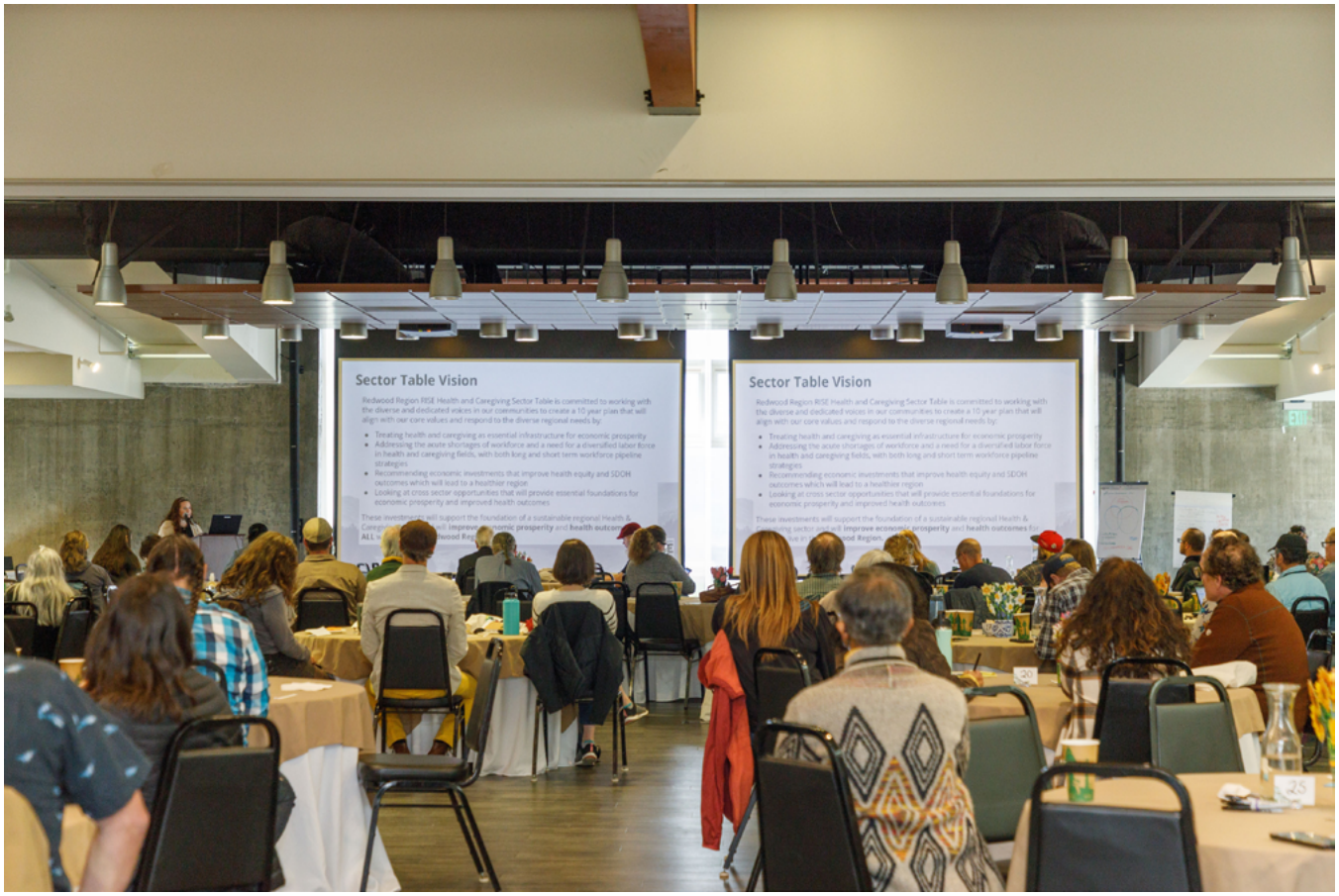
The California Hospital Association (CHA) promotes high-quality, safe, and equitable healthcare, including fair labor practices for healthcare workers (California Hospital Association, n.d.). The Service Employees International Union (SEIU) represents healthcare workers and advocates for fair wages, safe working conditions, and opportunities for advancement (SEIU, n.d.). OSHA has specific safety standards for the healthcare industry, including guidelines for bloodborne pathogens, personal protective equipment, and safe patient handling (OSHA, n.d.). The California Department of Public Health (CDPH) has additional regulations for healthcare facilities, including staffing requirements and infection control practices (California Department of Public Health, n.d.). SB-525 established a $25 minimum wage for healthcare workers (signed into law October 2023).

Renewable and Resilient Energy

The American Clean Power Association (ACP) promotes responsible development and operation of renewable energy projects, including worker safety and training standards (American Clean Power Association, n.d.). The International Brotherhood of Electrical Workers (IBEW) represents workers in the renewable energy sector and advocates for fair wages, safe working conditions, and training opportunities (IBEW, n.d.). OSHA and Cal/OSHA have specific safety standards for the renewable energy industry, including guidelines for wind energy, solar energy, and energy storage systems (OSHA, n.d.; Cal/OSHA, n.d.).

Working Lands and Blue Economy

Labor standards in the Working Lands and Blue Economy sector are influenced primarily by the California Farm Bureau Federation, which promotes safe and sustainable agricultural practices, and the United Farm Workers (UFW), which advocates for fair wages, safe working conditions, and access to healthcare for agricultural workers (California Farm Bureau Federation, n.d.; United Farm Workers, n.d.). Cal/OSHA has specific safety standards for agricultural operations, including heat illness prevention, pesticide safety, and equipment safety (Cal/OSHA, n.d.). The California Agricultural Labor Relations Act (ALRA) provides collective bargaining rights for agricultural workers (California Agricultural Labor Relations Board, n.d.). In the Forestry sector, the American Wood Council (AWC) promotes sustainable forestry practices and worker safety (American Wood Council, n.d.), while the International Association of Machinists and Aerospace Workers (IAM) represents workers and advocates for fair wages and safe working conditions (IAMAW, n.d.) in those areas. OSHA and Cal/OSHA have specific safety standards for the Wood Products industry (OSHA, n.d.; Cal/OSHA, n.d.).



Chapter 8

SWOT Analysis

This chapter synthesizes the findings from the previous chapters and community engagement efforts to identify the region's strengths, weaknesses, opportunities, and threats across various forms of capital (human, intellectual, social, physical, natural, and financial).

SWOT Methodology

The RRRISE research team utilized a mixed-methods approach to assess the region's strengths, weaknesses, opportunities, and threats (SWOT). Employing a "concurrent nested approach" in this analysis, Collaborative members sought to ground-truth quantitative data via feedback from community members obtained during data walks. In addition, they conducted semi-structured interviews ("listening sessions"), a participatory SWOT exercise, and the aforementioned two rounds of surveying.

In total, SWOT data sources used for this analysis are:

1. **Participatory SWOT exercise with Redwood Region RISE Collaborative members:** 50 members participated in person (Ukiah Conference Center, 9/16/23) and 71 other participants via Zoom.

2. **Listening Campaign:** 144 participants[156] engaged in semi-structured, multipurpose conversations focused on key priorities, challenges, opportunities, partnerships, and interest in engaging with California Jobs First. Participants were from a broad range of organizations and sectors. In semi-structured interviews ranging in length from 30 minutes to two hours, conversations gauged perspectives on strengths, weaknesses, opportunities, and threats, focusing on topics driven by respondents' interests and priorities.

3. **Surveys:** Two surveys were conducted in 2023, one during March-June 2023 (n=107) and the other during July 2023-May 2024 (n=161) that sampled from both Collaborative partners and the broader community, querying respondents on their priorities, challenges, and aspirations for the Collaborative. (Results from these surveys are reviewed in depth in the Partner Mapping report.)

4. Data found in other sections of Regional Plan Part 1 were synthesized and ground-truthed via community data walks (see Figure 8.1).

To better understand causal relationships and to ground-truth early quantitative findings, the RRRISE Collaborative held virtual monthly data walks and presentations, 11 in total, exploring the themes presented in Figure 8.1 below.

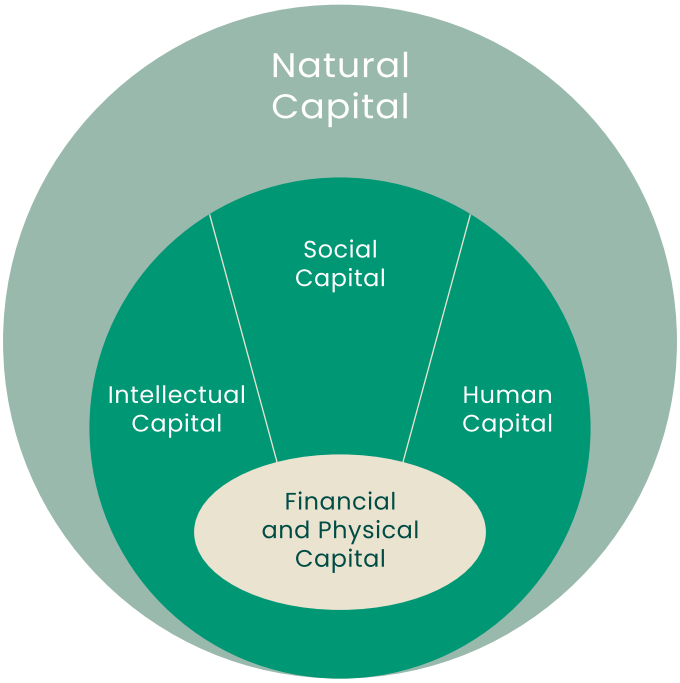
[156] An additional 355 listening sessions were completed with community residents; however this work was not completed in time for the SWOT analysis. See the Insights Report for more information.

Figure 8.1 Monthly Data Walks and Presentations

Data Walk/Presentation Theme	Collaborative Attendees
1. Demographic trends	73
2. Economic development inequities in the region	56
3. Public health	57
4. Employment and childcare data	112
5. Industry cluster and labor market analyses	87
6. Climate vulnerability and adaptation	107
7. Data review & Participatory SWOT	117 (50 in-person/ 67 over Zoom)
8. Workforce barriers and participation	107
9. Regional Summary and Barriers to Thriving	144 (in-person)
Other Presentations and Trainings	
Centering equity in economic development planning	117
Tribal ecorestoration	123
Cradle to career pathways	119

To provide structure to the analysis, RRRISE researchers used a composite framework loosely derived from different versions of the popular Five Capitals framework (Figure 8.2).[157]

Figure 8.2 Five Capitals Framework for Sustainability



[157] See, for example, Maack, M. and Davidsdottir, B. (2015). Five Capital impact assessment: Appraisal framework based on theory of sustainable well-being, *Renewable and Sustainable Energy Reviews*, Volume *50*, 2015, Pages 1338-1351, ISSN 1364-0321, https://doi.org/10.1016/j.rser.2015.04.132.

The Region's Strengths, Weaknesses, Opportunities, and Threats

Human and Intellectual Capital

Community members celebrate the independent spirit of the North Coast, noting the cultural richness, "scrappiness," and deep connection to the land and environment. However, an aging population, brain drain, lack of opportunity for youth, and skilled workforce shortages were pain points brought forward in listening sessions. Better channels to connect young and marginalized people to their aspirations are all desired. In particular, creating opportunities for fulfilling careers in environmental fields is seen as a way to celebrate the traditional ecological knowledge held in the region by tribal cultures, diversify away from natural resource extraction, and uplift eco-innovation, which is a strength of local educational institutions and entrepreneurs.

Figure 8.3 SWOT Analysis - Human and Intellectual Capital

Strengths

- Independent, resilient, "scrappy," self-reliant, innovative, "out-of-the-box" thinkers and doers.
- With a deep connection to the land, young people desire to work outdoors and live in a way that protects the environment.
- The original stewards of these lands are still here. There is great interest in applying traditional ecological knowledge to strategies to address climate and environmental threats. Many cultures call the region home, bringing their traditional ways of living and doing to bear on economic development strategies across sectors.
- Two community colleges and Cal Poly Humboldt, which create higher education opportunities for residents, are currently expanding their offerings across the region.

Weaknesses

- Labor shortages and skills gaps create bottlenecks and limit opportunity for the region as a whole. This is most apparent in the health and caregiving fields but is also seen in skilled trades and professional services across various industries.
- The region encompasses some of the most troubling mental health outcomes in the state. Generational, historic, and childhood trauma are startlingly prevalent. Correspondingly, mental health issues including substance use, depression, suicidal ideation, and anxiety abound.
- These mental health issues are associated with cognitive disabilities, workplace attrition, low income, social alienation, housing instability, and other, interrelated challenges.

Opportunities

- Recently established Cal Poly Humboldt has the potential to be a major force in driving innovation in key sectors within the region, particularly those related to sustainable, science- and technology-based industries.
- There is a historic and growing emphasis on "grow your own" workforce strategies and establishing CTE and other career pathways for young people. Major investments in cradle-to-career programs have been made since 2021.
- Expanding broadband access and grid connections could bolster opportunities for remote workers.

Threats

- Rising cost of living, housing scarcity, lack of training opportunities, and low incomes continue to squeeze working families and drive young people to seek opportunity elsewhere.
- Competition from urban regions exacerbates local struggles to maintain workforce in health-related fields especially (i.e., "Brain Drain").

"We need to address two things: the shortage of educated individuals and the scarcity of positions that don't require extensive education."

Workforce Shortages and Skills Gaps

Workforce shortages are prevalent in the region. Exacerbating these is a lack of access to training within the area. Higher education attainment lags behind the rest of the state, contributing to an unprepared workforce having few advanced skills (though high school graduation rates are higher than state averages). Those with the highest education and in the highest skilled occupations face the widest wage gap.

"I feel like in some ways there could have been a mentor or something like that, like to meet with you and see how you're doing and see if you need help or what you need help to further you in your career."

"All the [employment] support came from people I know and less from any kind of system."

"I'm in the under-employment tango."

With respect to prospective industries such as offshore wind and aquaculture development, preliminary data analysis indicates that labor shortages for occupations like electricians and construction workers number in the 1,000s. Listening session participants often emphasized "grow your own" workforce strategies that would enrich and expand training opportunities existing within the region rather than increasing access to external programs, which are viewed as a source of attrition of regional workers, particularly in the trades occupations.

"When they are doing their training they can make more money in places like Santa Rosa, so they don't come back."

Medical and Caregiving Occupations. Shortages of medical personnel in virtually every specialization and profession within the region are acute—primary care, specialists, behavioral health, dental, and more. While pathway approaches are being created and strengthened, the struggle to retain recruits is problematic. A recent report on the region's behavioral health workforce noted that 1,900 individuals are currently employed, 950 short of the number required to meet the region's mental health and substance use treatment needs.[158] Additionally, 990 behavioral health workers are anticipated to leave the field in the next five years via retirement, career change, or outmigration. The region produces an average of 89 registered nurses (RNs) annually, slightly below the projected 99 RNs needed per year. However, an average of 31 licensed vocational nurses (LVNs) do graduate each year, meeting the forecasted demand. Community colleges (CR and MC) graduate an average of 21 dental assistants annually, which is only half of the 42 openings projected per year, indicating a significant gap in training. From 2022 to 2027, the Redwood Region is projected to require an additional 485 mental and behavioral health professionals annually to replace retiring workers and address unmet needs. Current graduation rates from Cal Poly Humboldt are insufficient to meet

[158] 2023 North Coast Behavioral Health Workforce Needs Assessment.

this demand, with an average of 50 students in social work, 11 in counseling psychology, and eight in school psychology at the master's level (See Chapter 7, Labor Market Analysis).

> "I took a major pay cut because they were only hiring entry level… I decided it was worth it because I had no other option besides leaving here. So, I took a $20,000 pay cut…"

In the Redwood Coast, the scarcity of accessible childcare has become an acute concern for many families, posing significant challenges for parents balancing work and caregiving responsibilities. Approximately six out of 10 do not have access to certified childcare facilities due to the lack of available space. This situation is more pronounced in Lake and Mendocino Counties, with seven out of 10 children lacking access. Residents have spoken out about their difficulty finding a licensed provider and have reported that, if they cannot find childcare, they leave their children with a relative or bring them with them to work.

Career Technical Education and Career Pathways. Over and over, Collaborative members expressed anxiety that the region is not a place of opportunity for young people. Participants in listening sessions noted insufficiencies in skills building, career technical education, and workforce development in high schools that cause local educational institutions to not adequately prepare students for the workforce, especially industries of the future.

> "There needs to be more work readiness… A lot of high schools around here don't have those programs that really uplift kids to have trade skills that they want to go into."

Projections indicate a need for 203 new teachers annually across elementary, middle, and high school levels, but Cal Poly Humboldt graduates an average of only 96 teaching-credentialed students yearly. In Del Norte County, 100% of newly hired teachers are teaching at least one subject without the necessary certification, while in Mendocino County, the figure is 48%, significantly higher than the state average of 34% (from the Labor Market analysis).

The region's demand for teachers in specialized fields such as special education, mathematics, science, bilingual, and career technical education is high. However, credentialing output is low, with an average of 24.8 graduates per year in special education, 4 in mathematics, 7.2 in science, and only 0.2 in career technical education over the past five years.

Alongside critical labor shortages, these trends signal an opportunity for the region. Expanding career technical education (CTE) was a recurring theme offered by residents, and some momentum is growing to establish K-16 and other cradle-to-career programs in the region. Increasing trade and vocational training opportunities and apprenticeships are seen as a two-pronged strategy aimed at retaining young people in the area. Partners from building trades careers noted that, in the past, local high schools had hands-on learning opportunities in the local high schools, and many have the infrastructure necessary to revive that curriculum. However, respondents from both Del Norte and Humboldt Counties noted that finding instructors to teach CTE classes caused high schools to abandon these programs. Tribal members expressed support for creating training centers, especially for heavy equipment operators. (One such center is proposed for the Orick area with the Yurok Nation in the lead.)

"I would hope for a community center with classes so people could learn... including life skills."

The region's community colleges may need more training capacity for skilled trades. For example, the EDD projects an annual need for 91 carpenters, but, over the past five years, an average of only 13 students have graduated with carpentry qualifications from the region's community colleges (sourced from the Labor Market Analysis above).

Innovation and Technology

"If you have tech innovations developed and applied locally it helps support the local workforce, and if they can be exported then it helps the economy grow."

Figure 8.4 Innovation Index Ranking Among Similarly Rural U.S. Counties

	Del Norte	Lake	Mendocino	Humboldt	
Headline Innovation Index	670	323	192(T)	102	Headline Innovation Index
Business Dynamics	536(T)	132	394	170	Establishment Dynamics
	652(T)	170	312(T)	196(T)	Business Dynamics
	719(T)	265	229	278(T)	Establishment Formation
Business Profile	183	288(T)	6(T)	219	Proprietorship
	434(T)	507	22(T)	65(T)	Business Profile
	463	463	83	83	Venture Capital Dollar Measures
	463	463	116	122(T)	Venture Capital Count Measures
	526	526	230	228(T)	Foreign Direct Investment Attractiveness
Economic Well-Being	353(T)	89	82(T)	265(T)	Compensation
	340	401	435(T)	176(T)	Residential Internet Connectivity
	643	543	402	352(T)	Economic Well-Being
Employment and Productivity	362(T)	171	152(T)	261	GDP
	542(T)	172(T)	209	226(T)	Patents
	522(T)	257	251(T)	232(T)	Employment and Productivity
	70	666	87	790(T)	Industry Cluster Performance
	770(T)	635	428	317(T)	Industry Performance
Human Capital and Knowledge Creation	446(T)	135	131	5	Educational Attainment
	580(T)	259(T)	426	77	Human Capital and Knowledge Creation
	761	764	250(T)	186(T)	STEM Education and Occupations
	660(T)	518(T)	626	335(T)	Knowledge Creation and Technology Diffusion

Rank / 805 — Top 25% (Strength) — Middle 50% (Fair) — Bottom 25% (Weakness)

Note. Data sourced from StatsAmerica. For each indicator, the Redwood Region is ranked out of 805 U.S. counties with similar Indices of Relative Rurality (IRRs) compared to that of the Redwood Region.[159]

[159] This includes counties with 0.5 ≤ IRR ≤ 0.53. [REF]

In 2023, the region's only four-year university became the state's third polytechnic—Cal Poly Humboldt. Residents associated this development with possible upskilling of the region's workforce and also with attracting "new minds" to it. Many Collaborative members wanted to see Cal Poly, particularly its applied science departments, create more positions for students in the community, through, for instance, hands-on learning and apprenticeships. Participants also suggested creation of opportunities to create stronger pathways for students connecting Mendocino College, College of the Redwoods, and Cal Poly Humboldt to emerging industries. They also expressed optimism about the University's expansion, the new opportunities to commercialize ideas that will result from research conducted there, and possible leveraging of its innovation engine to benefit the region as a whole. The Education Services, Health and Social Assistance, and Leisure and Hospitality sectors are expected to account for nearly two-thirds of projected job growth over the current decade (see the Labor Market Analysis section).

Mental Health and Well-Being, Soft Skills Development

The mental health and well-being of the region's residents are both a product of the area's shortfalls in providers, workforce, training and a cause. Among both economic development planners and community members, concern is mounting about a potential epidemic of mental health issues and their comorbidities, which can result in disability and attrition from the workforce. Shortages of providers and facilities to provide intervention and care are barriers to better outcomes within the region. According to Collaborative members, other issues which inhibit residents from accessing the supports they need include: siloed provider networks, transportation barriers, fear of the stigma attached to pursuing mental healthcare within small communities, and complexity when trying to navigate a fragmented system of care.

> "One field that is lacking in support is mental health. My studies were heavily impacted by mental health."

Workforce development partners among the interviewees noted the need for a holistic approach to overcome the barriers community members face in their working lives. The essential strategy is to "get people into jobs, and then make sure that they progress up to a livable wage," but, as one respondent noted, disruptions like COVID and wildfires make this linear progression difficult for everyone.

> "[Workforce Initiatives need to understand] barriers like transportation, childcare, housing…understand the holistic approach that is needed. It takes working with regional partners, and looking at larger problems."

Because such a large segment of the workforce has been employed in an industry (cannabis)[160] that was illicit and so retains some informality in its working culture, capable workers struggle to "punch a clock" and work under conventional rules and norms. Another issue impacting workers' soft skill set is trauma; in particular, providers noted the need for assistance with issues like managing workday stress and interpersonal issues. As the data reveal, the region has low prime-age labor force participation, which is attributed to these factors (Figure 7.2).

[160] No reliable employment data are available for the cannabis industry (see Industry Cluster Analysis), but the effects of its recent collapse are easily seen in the communities who rely on it, as detailed in this article featuring an RRRISE Equity Council member: https://calmatters.org/economy/2023/02/emerald-triangle-cannabis-workers/

Regional disability rates are significantly higher than the state averages, affecting even young adults. Among prime-age adults who are unemployed or out of the labor force, a substantial proportion cite disability as their main reason for not working (Labor Market Analysis).

Opportunities and Barriers for Remote Workers. Despite a preference for "grow your own" approaches, there is widespread acknowledgment of the challenges that an aging and diminishing population poses. With its scenic landscapes and abundance of outdoor recreation opportunities, the region could attract and retain more skilled young people if opportunities for remote work were facilitated. The workforce-development strategy of the region's economic development partners is three pronged: "Build, Attract, Retain." Increased investment in broadband infrastructure could help achieve this and would also bolster digitally based economic activities and entrepreneurship in general. A Lake County participant noted that, despite destruction from catastrophic wildfire (2015-17), the county's residents are still experiencing in-migration from urban areas, a source of optimism. Many in the region believe that the favorable climate, clean coastal air, and access to abundant water will recommend this destination to climate migrants.

Social and Relational Capital

Figure 8.5 SWOT Analysis - Social and Relational Capital

Strengths

- Innovative social programs: These combat disconnection and disinvestment with connection, belonging, and resources.
- A human-centered perspective on economic well-being: Economic development practitioners prioritize the needs of people—housing, healthcare, purpose, and opportunity—as opposed to hyper focusing on standard economic indicators.
- Appetite for regional partnerships
- Strong and engaged community colleges: These aid in finding innovative ways to expand workforce training opportunities.

Weaknesses

- Negative perceptions of working culture: These include observations of low quality and unsustained cooperation, lack of a collective vision, fear of success and a "dream small" mentality, egos, grudges, scarcity mindset, and mistrust. A fear of failure causes professionals to not take the risks needed to progress with respect to key issues.
- Few young professionals to "pass the torch to": This leads to a lack of diversity in the public sector's current leadership.

Opportunities

- Better partnerships to strengthen training offerings, including offering apprenticeships: In particular, these are needed in natural resource careers.
- Community benefit agreements
- Community motivation to enhance B2B activity, create business incubators, and provide general support to entrepreneurs and small local businesses.

Threats

- Brain Drain.
- Lack of resourcing to support nascent partnerships and to provide support to networks and collaborations.

"The lack of institutions to do this work. That is our primary [economic development] problem."

"People want to work with each other and are invested in the community"

"What I've been doing just kind of on my own... working with people who are only Spanish speaking... It's hard [for them] to navigate the system."

Working Culture

Surprisingly, during the participatory SWOT research sessions, Collaborative members frequently emphasized the region's lack of capacity and the impact this has on its working culture, particularly in the public sector and economic development space. Cultural and organizational barriers mentioned frequently included: lack of capacity to engage in sustained, quality cooperation and collaboration, a "dream small" mentality, a scarcity mindset, mistrust and personality conflicts that disrupt collaborative efforts. The most frequently cited issue for organizations was lack of capacity, but working in silos, duplicative economic development efforts, and insufficient depth of experience in economic development were also mentioned. Relatedly, participants noted a dearth of energized leadership and a lack of succession plans to empower young up-and-comers. One of the consequences of this is a lack of professionals to "pass the torch on to." According to listening session participants, capacity constraints impact collaboration and innovation. RRRISE was seen by many as an opportunity to work regionally to overcome these challenges.

"It's difficult to get agencies to pivot or try something new, even if it's to their benefit."

Corroborating these concerns, the region's census response rate is low (a 75% response rate compared to the national median of 81%), a metric the *Opportunity Atlas* associates with strength of social capital strength.[161]

Partnerships. Enhanced collaboration between economic development agencies and establishing and strengthening cross-industry partnerships are potential sources of opportunities.

"We assume that NGOs have those connections to the community and business, but we often find that our non profit organizations are very siloed..."

[161] https://www.opportunityatlas.org/

Survey results provide additional context for the region's organizations and their growth capacity. Those key findings include:

- Most organizations are small (42% report having 0-5 staff members) and work at the county level.
- Although many organizations serve priority communities, relatively few work with non-federally recognized Tribes, unions, or the Hmong community.
- Few organizations explicitly work on environmental justice, and there is relatively little union presence. Therefore, few partnerships are reported with these types of organizations.
- The predominant partner category within the Collaborative consists of grassroots and community-based organizations (34%).
- At present, RRRISE's reach includes over 900 organizations and individuals in the region.

Capacity Constraints are a persistent theme for the region. Lack of economic development planning capacity impacts jurisdictions across the region; "everyone is spread really thin," was heard repeatedly. Good initiatives struggle to secure capital, navigate pre-development, and move into implementation. In particular, organizations that can provide support to convene desirable collaborations that break down silos are lacking. This relative lack of professional organizations in the region not only inhibits innovation and growth across sectors and industries but also most likely impacts the ability of leaders from disinvested and marginalized groups to attain leadership positions and influence outcomes.

> "In a rural community, capacity is a huge issue. We hear this all the time from city and Tribal planners... most organizations are treading water, we can't keep up with the current workload."

The Transportation, Warehousing, and Utilities; Construction; Other Services; and Wholesale Trade sectors are projected to experience faster-than-average job growth rates, suggesting a lowered risk of displacement for workers in these fields. Manufacturing; The Total Farm, Mining, and Logging; and Retail Trade sectors are expected to experience slower-than-average job growth rates, disproportionately impacting men, persons of color, and individuals with low levels of educational attainment (Labor Market Analysis).

Challenges identified in economic planning include the historical lack of planning infrastructure in rural areas, the need to reallocate resources after disasters, staff turnover, lack of funding and data, the need to prioritize mandates, community resistance, and rapid shifts in the economic development landscape due to policy changes and external factors like climate impacts and emerging opportunities (e.g., legalization of cannabis, wildfire, storm and flooding devastation, and offshore wind).

Tribal Collaboration. Greater collaboration between tribal nations and non-tribal jurisdictions is seen as a catalyst for positive development. However, much more needs to be done to create partnerships that can function beneficially for tribal collaborators. (See *Partner Mapping Analysis* for an in-depth treatment of this topic.)

Social Connection and Support. In conversations with residents from across the region, connection with one another appeared as the source of both the region's greatest opportunities and its greatest weaknesses. Interviewees mentioned isolation and social alienation repeatedly, and the need for better connections, especially across generations, was a recurring theme. Participants also noted the development of some excellent supportive programs that are implementing innovative solutions to these social issues: the workforce development program "BUILD"[162] in Lake County, which offers training in construction trades; Second Chance re-entry and support; Community Schools; child care expansion activities; and others. These support re-connection, fresh starts, and overcoming the barriers that working families within the region face. In another example, the family resource center in Humboldt County is hosting the region's first Guaranteed Income pilot, one of the few rural pilots in the nation. Social assistance is a promising sector named in the accompanying *Industry Cluster Analysis* report.

"What I enjoy most is to see the relationships that I'm building with a community – to see how I'm helping the community."

These issues are of heightened importance to priority communities. Direct feedback from these communities calls attention to their struggles in obtaining stable jobs offering sufficient pay to cover expenses, relevant skill-development opportunities, resources within their communities that meet basic needs of housing, transportation, child/family care and healthcare, and meaningful work structured in ways that fulfill the reasons they choose to live and work in this region—despite, at times, experiencing enduring and significant challenges and hardships. People in priority communities spoke, on one hand, about the impacts of trauma, violence, discrimination, and exclusion, and, on the other, of the importance of connection, social safety, and being valued. They also expressed a desire to be able to simply meet basic needs while selecting career paths that allow them to honor the many reasons they call this region home.

"I love what I do, but I need to be able to support myself at the end of the day and living paycheck to paycheck is not great."

Physical Capital

In disheartening interviews, residents consistently described road networks, water and sewerage connections, and the energy and communications infrastructure as "crumbling or absent." Lack of housing is the primary constraint cited with respect to economic and workforce development.

[162] [REF]

Figure 8.6 SWOT Analysis - Physical Capital

Strengths

- Renowned Blue Lake Rancheria microgrid initiative: This is inspiring similar projects across the region.
- West Coast leader on offshore wind development: The region's example is motivating additional infrastructure development along the coast and in transmission corridors in other regions.

Weaknesses

- A vast, rural, and remote region: Providing adequate network infrastructure coverage has inherent difficulties.
- Severe housing crisis: Several counties have the highest ratio of unhoused-to-housed residents in the state.
- Permitting: Obtaining permits for almost anything takes years.
- Critically outdated water delivery infrastructure: In particular, this challenges the region's small, remote, rural, and unincorporated communities. Few financial solutions are in sight to invest in upgrades.
- Inadequate grid: The current grid can no longer support economic development or housing construction initiatives. Delayed and denied hookups, fires caused by deferred maintenance, and rate hikes result in the region losing faith in provider PG&E.
- Underperforming solid waste sites and groundwater contamination threats indicate need for infrastructure investments in these areas.

Opportunities

- Funding to improve broadband
- Coverage and wireless access: Jurisdictions are receiving funding to do so, and many tribal areas, which need connectivity the most, are undertaking major investments in this infrastructure now.
- Synergistic development of better electrical transmission, broadband, and transportation infrastructure: The potential to do all three concurrently along key corridors, improving access for rural and remote communities.

Threats

- Climate risks: Available scarce resources are used to rebuild and recover from shocks instead of proactively addressing deficits, significantly delaying or postponing indefinitely infrastructure development.

Broadband Access limits other key opportunities, like the ability to deliver online training to entrepreneurs and workers or to attract remote workers. Respondents provided two examples. Many believe that attracting more remote workers to the region may help stabilize the pattern of economic boom and bust; however, at present, much work needs to be done to upgrade the electricity supply, deliver broadband infrastructure, and create housing to accommodate these workers. Several major resources are being launched to address this constraint. For example, Yurok TelecomCorporation has received a large grant to improve cell phone reception in the area, and five new towers will be built. The Tribe owns their airspace, and so providers wanting to expand their reach can use Tribal broadband capacity, expanding services to the community.

> "There is synergy with broadband. People haven't necessarily made connections between broadband and offshore—internet is a power hog—all the surplus wind power from offshore wind and expanded broadband is going to make this area an attractive place."

Transportation. Delayed and deferred maintenance is an issue for the region's transportation infrastructure. Road construction is a priority frequently mentioned in Del Norte and adjacent Tribal areas. One partner, associating this challenge with workforce development issues, noted that his organization sends apprentices away for training, and these apprentices often do not return to fill critical positions (*"We don't have training facilities, so when people go to train, they don't come back."*). Tribal communities experience the vulnerability of limited road infrastructure (*"We are so easily cut off from the world."*). In Del Norte County, The Last Chance Grade project was a major source of anxiety. Areas with only one way in and out can become "islands," especially concerning in the wake of natural disasters such as road closures due to landslides, fire, and flooding. Unpaved roads are also a significant contributor to airborne particulate matter and so present an opportunity to improve air quality (Climate Analysis).

> "I live really rural, so it would require a lot of drive time to be in person [for training]. And so… you're investing in the gas, you're investing your time in that total drive time. I think that can really pose a challenge for some of our rural entrepreneurs."

Airports in Arcata and Crescent City provide crucial connectivity to the outside and the potential development opportunities that accompany it. This critical piece of the region's infrastructure is due for runway rebuilds; an upgrade to modern, energy-efficient lighting; and safe, upgraded fuel-storage facilities. Current funding for these airports by the state is constrained, and Federal Aviation Administration's Airport Improvement Program (FAA AIP) funding will not cover the cost of all the upgrades needed.

Listening sessions and transit plans throughout the region stressed the need for enhanced public transit options. More frequent availability, extended hours, increased destinations, and Sunday service would benefit the communities they serve. Particular concern was expressed for youth, elderly, and disabled residents.

To help achieve California's carbon-neutral goals, infrastructure supporting improved access for pedestrians and cyclists should be considered as roads and highways are improved. In feedback to the Caltrans interactive map, over 75% of commenters mentioned being uncomfortable walking or biking because of heavy traffic or high vehicle speeds (Caltrans, 2021).

Water Delivery and Sewerage. Residents in numerous jurisdictions across the region mentioned good water infrastructure as a major issue. Some complained of high rates, others that low revenue resulted in a lack of funds to update water and sewer infrastructure in their small communities, a primary concern in Orick, which, like many other smaller and unincorporated communities, is worried about the risks of aged water infrastructure and the inability to fund wastewater treatment

facilities and leach fields (Climate Analysis). Special service districts attempt to maintain this crucial infrastructure but struggle, and, some residents reported, federal and county entities do not sufficiently meet obligations to maintain critical water infrastructure, e.g., levees to prevent flooding. That so much of the housing constructed in commodity boom towns was built informally is now creating problems—under current regulations, siting and layout make it impossible in certain locations to upgrade infrastructure to a system for which Humboldt County can issue a permit, which costs an exorbitant near $30,000 to acquire, reported one community leader.

> "Even the roads to get here sometimes, depending on the weather, half of them are closed."

> "Driving 2 hours to get to school is definitely tough… it's become an obstacle, even now, where it's like, some days, I just don't want to go, but I know I have to."

Constraints related to the rural and remote geography. Participants noted vulnerabilities related to limited infrastructure (*"just one way in and out"*); distance to major airports; difficulty in providing services in places with low population density; the aforementioned lack of broadband; distance to markets; lack of public transit infrastructure or of transportation for moving goods and high costs associated with doing so; and crumbling water infrastructure. Isolation creates other undesirable social and economic outcomes. In general, outdated and dangerous infrastructure was a very prevalent theme of discussions with residents from across the region. Transportation corridors are threatened by fires, landslides, and other climate-related threats. The Last Chance Grade in Del Norte County is one of the more startling road sections at risk from these.

> "Housing has been really transient. I would bounce around a lot to friends, house-sitting/couch surfing."

Housing as a limiting factor to economic growth. Across all industries and sectors, workforce housing was cited as the primary constraint to growth and well-being in the region. Medical fields are particularly impacted; participants frequently mentioned that difficulty recruiting and retaining medical professionals is due in large part to lack of housing. The Education sector and more prospective industries like offshore wind were also frequently mentioned as constrained by lack of housing, which impacts large employers and small firms alike. Currently, housing and broadband are major barriers to attracting skilled workforce from outside the area in crucial fields like education and health. Housing costs continue to increase and not enough housing is being produced to keep pace with demand. While, overall, California's housing stock has increased by 7% since 2010, the Redwood Region has had only a 1.3% growth in stock (Industry Cluster Analysis). Aging housing stock is associated with a heightened risk of lead poisoning in children, and emissions could be reduced by addressing residential wood burning (Public Health Analysis and Climate Analysis, respectively).

"There's only so much developable land – could be a good time to try something at scale. We have teachers every year who accept jobs and turn them down because they can't find housing. This touches the medical field as well – anyone who tries to recruit anyone out of the area. Building homes creates jobs for builders and subcontractors but the trick is keeping them affordable in the long term..."

Housing Development Constraints and Challenges. Interviewees attributed housing constraints to a host of factors. Single-family zoning, zoning restrictions specific to coastal communities, and the complexities of the permitting process were all cited as challenges. There are few large developers (*"most everything is built by DANCO"*). The prevalence of unincorporated rural communities contributes to this; counties are not as well positioned as municipalities to build housing. Northcoast municipalities are exploring annexing adjacent land as a strategy to get more units built on outlying areas. Many have made concerted efforts to incentivize owners to create an extra unit or two using ADU policies, or by subdividing slightly larger city lots. Listening session participants estimated that the time it consumed in getting a housing development project through local permitting can be between two and five years and at an exorbitant cost to the developer that imposes additional limits on financing as commercial capital will not fund these non-value-generating predevelopment activities. Orthodox approaches that focus on subsidizing the homeowner (to whom the cost burdens are then transferred) do not systematically address this issue. Urban concerns dominate housing policy in the state and so do not adequately address the constraints faced in rural areas, including the increased burden rural developers face when creating infrastructure "from scratch," a key difference from their urban counterparts.

As in many parts of arid California, the climate crisis is exacerbating the housing crisis in the Redwood Region. Lake County, where 60% of the housing stock was lost in catastrophic wildfires in 2016, is a stark example.

"The valley fire was eight years ago—we are only NOW getting a couple of new houses up. We lost almost 2,000 homes."

Many factors have delayed rebuilding, one being changes in regulations and replacement of older construction. Many families in Lake County were told that they had to revamp existing septic and sewerage connections in order to rebuild, creating delays and substantial added costs. Advocates there expressed the need for more funding dedicated to fire mitigation and home-hardening programs and sought to partner with local community colleges to add a workforce curriculum around fire-adapted, affordable housing construction techniques.

Municipalities there and across the region are focusing on big housing construction pushes and finding new ways to overcome such constraints. Notably, the region's northern Tribal Nations have succeeded in breaking down some barriers to producing housing—investing in tribal-led construction firms, creating land trust models for building affordable housing, and taking advantage of a different regulatory environment to build housing on tribal lands. Much more is needed, however, respondents noted.

The Housing Crisis in the Redwood Region. The region is disproportionately struck by California's homelessness crisis, with the highest ratios of unhoused-to-housed residents in the state. Neighborhood issues arising from encampments are a major concern with which municipalities and health and human service agencies must contend. One innovative environmental justice organization is framing this issue as such and thus helping to advocate for the dignity for those experiencing homelessness by providing basic waste management services, while also organizing clean-ups around encampments, many of which are located in conservation or other natural areas.

> "How do we make [housing] so that no one has to turn a profit [on the investment], people can just have a place to live?"
>
> "How do you create home ownership opportunities to establish roots, equity, and wealth?"

Recognizing that many housing policy prescriptions can be used to address the issue in urban contexts as well as rural ones, Redwood Region housing advocates are exploring innovative solutions applicable in both contexts. Thus, there is increasing interest in land trust models of housing development that can help low-income working families build wealth in addition to stabilizing their housing. Creating cooperatives and subsequently developing mobile home parks is one method of interest that could benefit many community members in the region. The Wiyot Tribe has initiated community land bank model housing developments in Mendocino County and may do so elsewhere in the region. Research participants in Del Norte expressed interest in both land trust models and restricted deeds as a way to maintain housing affordability while providing home-ownership opportunities.

The Natural Environment

The region's beautiful, unique, and often pristine natural landscapes are a source of pride and its primary strength. With a diversity of ecosystems and clean air, its environmental setting offers communities everything they need for economic well-being and physical, mental, and spiritual health.

Figure 8.7 SWOT Analysis - The Natural Environment

Strengths

- Resurgence of cultural burns and indigenous management practices. Localities have mobilized fire-prevention initiatives and increased training opportunities for land-management and ecosystem-restoration careers.
- Diverse climates and ecosystems, including a year-round growing season, enable production of a wide range of crops and horticultural products.
- Natural beauty of the region draws millions of visitors each year as it enables a wide range of outdoor recreational opportunities.
- The area is an ideal setting for research in the areas of natural and life sciences and marine biology.
- Oldest and largest lake in the state is located in Lake County. The region also has unique ecosystems and volcanic activity.
- The region is well positioned for renewable energy development.

Weaknesses

The region contains:

- Scars of the extractive economy, including disinvestment in certain areas.
- Remote areas easily cut off from the rest of the state.
- Historic marginalization, which has put priority populations at higher risk for suffering the negative impacts of the climate crisis.

Opportunities

- Ecotourism, recreational trails, agritourism.
- Expansion of regenerative agricultural activities.
- Dam removal, which is anticipated to increase salmon populations and which would increase recreational fishing opportunities and restore access to traditional diets for indigenous communities.

Threats

- Sea level rise in Humboldt Bay (Sierra Business Council, p. 43), which will destroy housing and infrastructure, displace communities, and cause economic loss.
- Risk to coastal areas under sea level rise projections. Particularly threatened is Humboldt Bay.
- Risk of wildfire and extreme heat in inland areas.
- Current and future impacts of climate change, which threaten native communities' access to traditional food sources such as fish, game, and wild and cultivated crops and which will impact the area's cultural, economic, and community health.

Legacy of Extractive Industries. The abundant natural resources within the Redwood Region provided the basis for its economic prosperity. Although extensive logging significantly diminished forested areas, the ecosystems have been resilient, providing some of the highest quality wildlife habitats in California. Over time, the extraction industries have waned, with government and social services now employing the majority of the region's workforce. Thus, despite a surge in visitations and growth in the service industry, the Redwood Region remains economically weaker than most other coastal regions in California.

Impacts of Climate Crisis. Throughout the region, various climate hazards are anticipated to impact key economic drivers. Rising temperatures are expected to reduce agricultural productivity, and increasing surface water temperatures may lead to tourism disruptions caused by harmful algae blooms. Endangered fish populations are likely to decrease fishing opportunities. Altered precipitation patterns may result in prolonged dry spells and extreme precipitation events, leading to water shortages for crops and pasture land. Severe storms could induce flooding, infrastructure damage, and the ruin of agricultural lands. Very frequently mentioned are the impacts of climate change the region is facing: lack of adequate water and increased wildfire risk. The knock-on effects this will have include limited access to electricity, large economic losses to business, inability to insure properties, loss of housing stock, and more. Sea level rise threatens the coastal infrastructure and Blue Economy. The region is also prone to non-climate-related disasters: Proximity to fault lines opens the region to the possibility of destructive earthquakes and tsunamis.

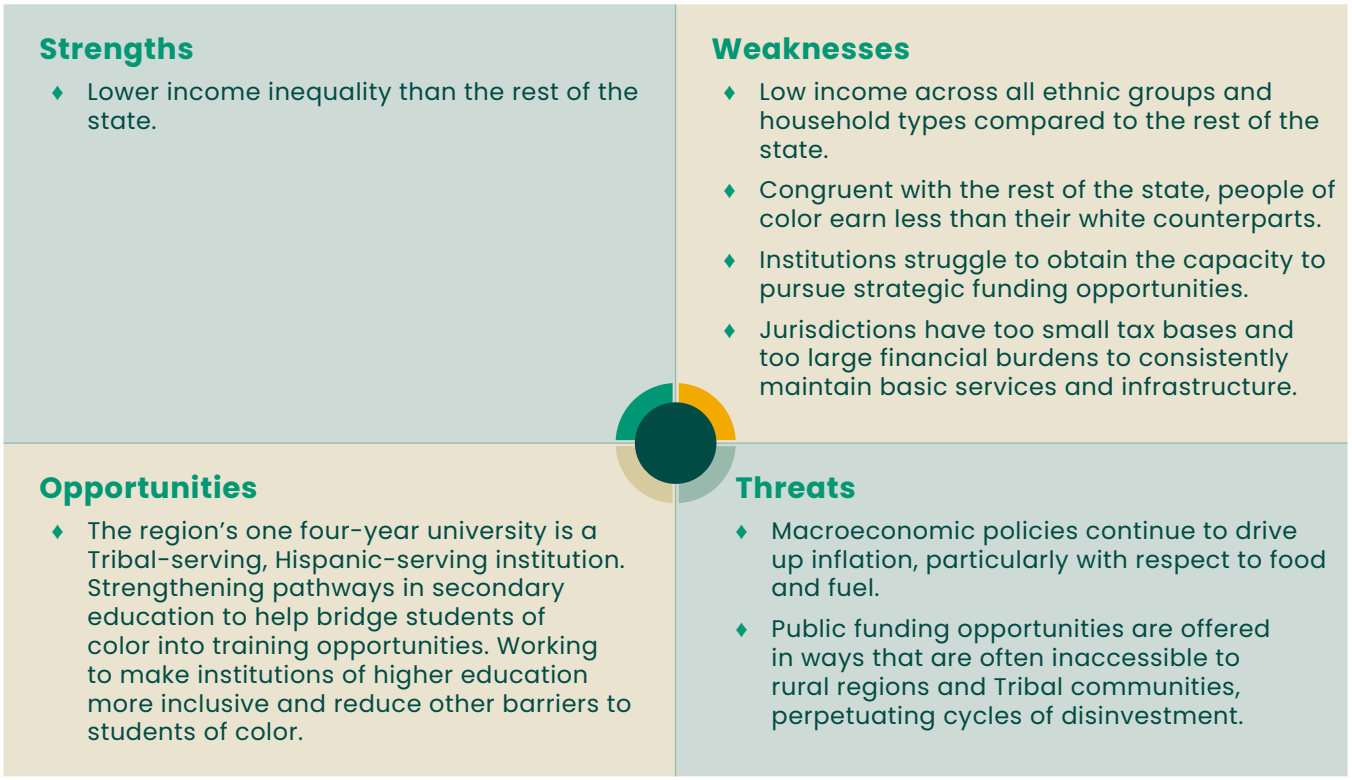
The heightened risk of wildfires, coupled with recent wildfire activity, has inflicted enormous economic losses on the agriculture industry. Additionally, the historic redwood forests along the region's inland boundary face the looming threat of wildfires, further jeopardizing the area's economic landscape. Sea level rise in Humboldt Bay could lead to flooding and erosion, leading in turn to severe infrastructure damage and possible public health concerns. Sea level rise projections indicate that communities around Humboldt Bay could be inundated, not only displacing residents and causing personal financial injury but also lowering home values, reducing the tax base, and so increasing poverty in the region. Public infrastructure like roads, water pipes, electricity towers, and wastewater treatment plants are within the inundation zone.

Research participants in both eastern Humboldt County and Mendocino County mentioned the positive development of local fire safe councils, and positive collaborations with CAL FIRE (the California Department of Forestry and Fire Protection). In addition, Lake was the first county in the region to create a climate resilience officer position. Thus, serious efforts aimed at climate adaptation and resilience planning are underway.

Financial Capital

The listening campaign revealed that the focus of local institutions was lack of resources and the barriers that prevented their attainment, whereas individuals and their advocates emphasized the lack of appropriate job opportunities and the high and rising cost of living, with the purchase of such essentials as housing, medical care, and childcare posing significant financial hardship. Thus, people remain in the Redwood Region because of their love for its land and communities, but at the sacrifice of building durable wealth and pursuing upward mobility.

Figure 8.8 SWOT Analysis - Financial Capital



Public Investment and Institutional Development

Respondents of public sector institutions were quick to bring up the following challenges and barriers the region faces in accessing funding:

1

Projects' Lack of Shovel Readiness: The primary reasons cited for this were either lack of planning:

> "We got $2.6 million to do this [wastewater infrastructure project], but we were supposed to be shovel ready and we didn't even have a plan."

Or failure to set aside adequate funding:

> "The approach to funding should change—the county or state should reinvest tax money by making the decision about funding at the beginning of projects."

The necessary sequence of predevelopment activities seems to be incongruent with risk-averse funding processes. Thus, if a project is needed and approved, public entities should set aside the funds while pre-development takes place so that the project can be started immediately and carried through to its completion without significant interruption. Tribal partners also cited challenges with respect to shovel readiness of projects.

2

Funding Technical Assistance and Basic Support of Partnerships: As one example, a resident of Willow Creek celebrated the work of local fire-resilience groups but questioned whether these would be able to continue because the funding needed to adequately support these partnerships would be available.

3

High County Budgets: As a consequence, few counties have the capacity to issue the grants that would provide consistent funding for economic development initiatives or would maintain staffing to carry out the work. One government respondent lamented,

> "We are focused on keeping the lights on."

4

Large swaths of land under state and federal conservation status impacts the tax base. This is particularly an issue in Del Norte County.

5

Being Reactive Instead of Proactive With Respect to Funding Opportunities.

> "[Our county] is simply reacting to federal and state funding opportunities, e.g., we need a bridge, so let's apply for this grant to do that."

6

Capacity Traps: Institutions struggle to obtain funds and fund staff hours in order to pursue funds and hire the staff needed to do so. Representatives of special districts in rural and remote areas noted that resource barriers sometimes prevent their applying for or receiving grants. For instance, their requests for funding to obtain resources needed to upgrade infrastructure have been declined because they failed to demonstrate sufficient financial stability to maintain the new infrastructure were they to be awarded funding. These cycles of disinvestment and low capacity play out in different ways across all counties and Tribal lands within the region.

However, due to rural disinvestment, the region is eligible for many tranches of state and federal funding because of the region's income data and other socioeconomic factors. Innovative ideas community members put forward include establishing a regional public bank and providing technical assistance to communities to form collaboratives and promote worker ownership.

Private Investment

Many communities, firms, and individuals in the Redwood Region do not have ready access to capital. "Banking deserts" (rural areas with relatively few financial service institutions) in the

region make it more difficult for individuals and local businesses to obtain conventional startup or expansion loans. According to research (e.g., Tolbert et al., 2014), the prevalence of independent local banks within a community or region is positively associated with increased business formation, higher wage and income levels, and lower poverty rates there. Addressing financial inclusion and asset-building through programs that provide increased access to financial services (e.g., affordable loans, credit counseling, and investment opportunities) is thus a key priority of the Collaborative, as are investments that leverage local, regional, state, federal, and philanthropic dollars to maximize economic benefits and further the inclusive vision and plan for Redwood Region economic vitality established in the regional roadmap.

Household Income and Wealth

Listening sessions with residents and service providers across the region emphasized the same point: Working people are being squeezed out of the local economy, and the data support this perception; with wages far lower than in the rest of the state and the increasing cost of essentials, a family of four with two adults working full time will, on average, spend 97% of their income to cover the basic essentials of housing, food, healthcare, and childcare. That of other, comparable areas is only 92% (see Figure 3.3).

Target Industries SWOT Analysis

The Redwood Region is characterized by a relatively diverse economic base spread across the four counties and Tribal Lands constituting the region. A quantitative analysis of economic performance, environmental impact, and available resources identified 11 key industries as potential targets for job and wage growth. Additionally, a survey of 97 Collaborative and community members and review of previous industry cluster studies (published in 2022) led to the creation of four broad groups that form the Collaborative's thematic working groups.

Arts, Culture, and Tourism

Health and Caregiving

Resilient and Renewable Energy

Working Lands and Blue Economy

A review of regional (county and Tribal) Comprehensive Economic Development Strategy (CEDS) documents confirms the importance of these sectors across the Redwood Region (with regional variability owing to geography, population, and other factors). Such targeted sectors, or industry "clusters," are characterized by:

1. Increased innovation activity and knowledge "spillover"
2. More specialized (and educated) labor pools
3. Lower transaction costs (communication, transportation, coordination, etc.)
4. Stronger networks of specialized suppliers and service providers (Porter, 1998)

Industry clusters tend to perform better in "thick" labor markets (i.e., markets having many buyers and sellers of labor), have more skilled workers in nonroutine jobs (i.e., a more educated workforce), and better occupational matching (i.e., matching skill sets to employer needs), leading to increased worker productivity. A focus on these sectors lends itself well to targeted workforce development programming that addresses industry-defined skill needs and provides public sector industry support.

The targeted-sector approach includes (but is not limited to) the following limitations:

1. The potential for reduced industry diversity (by focusing on specific sectors at the exclusion of others, such as emerging markets)
2. The potential for groupthink (at the expense of innovation)
3. Barriers to entry for new firms (through an anti-competitive blocking effect)
4. Increased fragility (less resilience) owing to reliance on more unitary sectors (Donahue et al., 2018)

A less diverse economic base can be more vulnerable to economic downturns, as evidenced by the exclusion of industries pertaining to offshore wind development within the cluster analysis.

The Education Services, Health and Social Assistance, and Leisure and Hospitality sectors are expected to account for nearly two-thirds of projected job growth over the current decade, while the Manufacturing, Total Farm, Mining, and Logging, and Retail Trade sectors are expected to experience slower than average job growth rates, disproportionately impacting men, persons of color, and individuals with lower levels of educational attainment.

Arts, Culture, and Tourism

Creative Placemaking Initiatives: Several rural, remote, Tribal, and unincorporated communities are in fact the gateways to the region for visitors arriving from the North, South, and East. Given that these are some of the most disinvested parts of not only the region but the entire state, there is a strong call to invest in upgrading tourism infrastructure in those specific communities. Better relationships with State and National Parks, including strategic placement of visitors centers and other park infrastructure, was frequently brought up in those communities. For many coastal communities, tourism became the backbone of the local economy once fisheries went into decline (highlighted by respondents from Mendocino but relevant in Del Norte and Humboldt as well).

Downtowns across the region bear the scars of a long history of commodity boom and bust cycles and natural disasters. In Crescent City, the capital city of Del Norte which was destroyed by a tsunami in 1964 and then subsequently built back within a year- planning practitioners, business advocates and others noted the need for creative placemaking which would uplift the community and draw visitors. The perception of downtown areas lacking charm is a challenge for marketing. That city's plans for revitalizing its waterfront areas highlights how more can be done to celebrate the region's original stewards by promoting education of indigenous cultures. Working together with the Tolowa Dee-ni Nation and other local Tribes, the City has created a plan for an interpretive trail that centers those cultures. Tribal collaborators note how allowing Tribal people to tell their stories makes a difference in the community. The acknowledgment, collaboration, and celebration is a hopeful indication of more Tribal inclusion in planning. Tribal members indicated that they hope to see more representatives on commissions, committees, and other forms of government led work moving forward.

Arts and Culture are a Source of Healing and Resilience: The Arts and Culture sector was highlighted by community members as a key enabler for helping youth thrive. Given the region's troubling statistics

with respect to mental health, substance use, and other well-being issues associated with isolation and alienation- the arts provide a powerful avenue to expression, connection, and belonging especially for young people. Additionally, the institutions in the sector have played a key role in establishing and/or fiscally sponsoring other organizations and initiatives that celebrate cultural identities- for Latinos, Indigenous community members, and other peoples of color. Arts advocacy groups across the region play a key part in making these special communities visible and celebrated on the North Coast.

Capitalizing on the Region's Rich Cultural History: Cultural heritage is an incredible and immeasurable strength of the region. There are aspects of the region's history that could be better celebrated and might help draw new visitors. One example, the aesthetic culture of the Back to the Land movement. As those artists are now aging and many unable to continue living off grid as they did when they arrived in the 1960s and 70s, some investors from the Bay Area have started to acquire these architecturally unique eco-homes and preserve them as B&Bs and retreats- ***"while telling the story of that movement intentionally"*** (in Mendocino). ***"Artists create that rising value [that draws people to the region]. And we need population coming in, we're not replacing ourselves."*** A popular idea from partners in the Arts and Culture sector is the creation of a regional Cultural Plan or Arts and Culture "trail"- a central brand that can make all the richness here more visible in one cohesive informational product.

Agricultural and Eco-Tourism Development: There is a recognition of the region's potential for agricultural tourism. Alexandre Family farm located in Del Norte County is a leader in the regenerative agriculture movement. In Southern Humboldt and Northern Mendocino, industry advocates have helped create cannabis centered agri-tourism opportunities and marketing campaigns to support them. Collaborative marketing initiatives, including shared efforts with neighboring counties and funding from Visit California, were mentioned as desirable. Recreational, multi-use trail development is also embraced by the region, with the Great Redwood Trail on its way and Del Norte County planning other opportunities to draw in hikers, bikers, equestrians, and others.

Hospitality as a Key Industry: In areas where traditional industries like logging and fishing have declined, tourism and hospitality are identified as the economic drivers that took their place. Tourism revenue, including Transient Occupancy Tax (TOT), contributes substantially to local economies. This was highlighted especially in communities on the Mendocino Coast. The seasonal nature of tourism can be a pain point, and jurisdictions are exploring strategies to focus on year-round productive activities and attractions. With respect to resilience in the face of shocks, COVID-19 posed challenges, it also brought opportunities, with increased tourism after restrictions lessened. The development of attractions like the Redwood Skywalk, for example, contributed positively to local tourism. There are budding career pathway programs for helping connect youth to opportunities in this industry, for example the "E3" Pathway Program in Del Norte.

Projects and Initiatives Highlighted by the Community

From CEDS and Tribal strategic plans, listening sessions, local table meetings, and surveys:

- Crescent City Harbor Revitalization
- Lake County Tourism Improvement District
- Redwood Experience Center

Health and Caregiving

Medically Underserved Region: To put it simply- ***"there is no medical care around here."*** People from all walks of life find themselves in the position of having to travel long distances to see a specialist- though of course this creates significant barriers for transportation limited and time and resource poor families. Community members elevated how senior populations who often have increased medical needs are particularly burdened by having to drive upwards of three hours to see a doctor. Being a medically underserved area was one of the most frequently mentioned weaknesses of the region. In addition to the acute shortage of providers; community members also noted the quality of care available leaves something to be desired, high turnover in medical staff and especially a lack of specialists. The cost of care, when one can access it, is also a huge barrier. One participant posited that Del Norte is one of the most expensive places in the country to give birth. The proportion of fixed income residents, and those on Medicaid and Medicare, have implications for reimbursement rates and the business models used by healthcare providers.

Behavioral and mental health (especially for youth), and trauma (particularly historical) was emphasized across all counties and tribal lands- substance use, lack of medical providers for these issues, and adverse childhood experiences came up repeatedly. The opioid epidemic is acute in the region.

> "I do think some counseling... just talking to someone a little bit more... At 18 years old, my best friend had committed suicide."

For those suffering from substance use disorder, or are in the tough position of having a child in need of behavioral healthcare, many have to go outside the area to find in-patient facilities. There is fear that funding for important youth programming is drying up as a result of the all but collapse of the cannabis industry (Prop 64 funding).

Medical and Public Health Innovations: Positively, respondents observed a growing movement in the region around Blue Zones (areas of the world where people routinely live to old age and chronic disease rates are low) and the health drivers that create them. Another cultural strength which relates to health and well-being for residents is the presence of strong mutual aid networks. Practitioners expressed that expanding telehealth could be an opportunity to improve access to services and the region already has several mobile providers who can meet folks where they are at to provide care.

Leadership on Economic Development Constraints: Leaders in the healthcare industry are taking on the housing crisis; exploring innovative solutions to alleviating this constraint to recruiting necessary personnel. Destination healthcare, for things like LASIK surgery for example, could offer a boon to rural communities who have clinics in place- Southern Humboldt respondents emphasized this potential.

Critical Need for Child and Elder Care: The lack of childcare providers remains a huge barrier for working families. At its worst in Humboldt County, childcare as a proportion of median earnings reached 37%. There is also a lack of therapists and service providers to support families with kids that have special needs, as highlighted in the behavioral health workforce statistics above.

Projects and Initiatives Highlighted by the Community

From CEDS and Tribal strategic plans, listening sessions, local table meetings, and surveys:

- Supportive housing developments for people with disabilities
- Support to childcare businesses and providers in Humboldt County
- Housing initiatives for medical staff

Renewable and Resilient Energy

High Potential for Renewable Energy Development: Lake County is one of only three sites worldwide where tapping into geothermal energy is relatively easy since it is so close to the surface. The coastal counties all host good sites for offshore wind development.[162]

Development of offshore wind in Humboldt Bay is much anticipated—"the biggest in the country!" However, listening session participants also frequently expressed pessimism, noting that the project will require years before being operational and that "cultural viewpoints" could block its completion. For instance, a respondent from a labor organization noted that the wind project will only begin hiring laborers in six years. ***"A huge challenge will be patience, hanging in there until things get off the ground,"*** one environmental activist commented. Another concern is sustainability of jobs after completion of major construction.

Also of interest to participants were the types of opportunities that will be afforded to local laborers (who are still majority non-union) during the port-redevelopment phase. From frequent mentions during listening sessions, the companies involved in this—Crowley, Vineyard Offshore—are already notable presences in the local community.

Another, more prospective project mentioned is a "hydrogen highway" for the Redwood Region. Defined as a chain of hydrogen-equipped filling stations and other infrastructure along a road or highway that would allow travel by hydrogen vehicles, this could be aligned with fleet conversion for transport within the region. A respondent commented that biomass-to-hydrogen conversion has become a more commercially viable technology than in the past and that there are successful hydrogen fuel projects in other parts of the country and worldwide. The concept underlying this technology is still in the preliminary feasibility stage, but Tribal planners throughout the region have expressed interest in it. Facilities could be co-located near forestry operations/mills where biomass is produced. A feasibility study commissioned by the Sonoma County and Mendocino County Economic Development District (SMEDD) is currently being conducted to explore a trucking route from Eureka to Oakland supported by hydrogen fueling.

Dissatisfaction With the Public Utility PG&E is resounding. Deferred maintenance of PG&E's above-ground infrastructure continues to constitute a dangerous fire risk. The utility's inability to promptly install electricity hookups to new residences and businesses is a major constraint reported throughout the region. However, the utility's infrastructure problems requiring resolution are

[162] Schatz Energy Center Offshore Wind Feasibility Study: https://schatzcenter.org/2019/07/oswstudy2/

significantly larger. During listening sessions, participants in Del Norte spoke of the large number of households that had been without electricity for 10 or more days in the wake of fires and so had to rely on emergency diesel generators. Inland communities wonder if the grid has the capacity to cool critical institutions during the heat waves projected to come.

> "We need PG&E to do their job better – removing and installing electrical drops is frustrating—a big problem for the county if we're ever going to meet housing and other goals. PG&E is a huge problem."

Energy Sovereignty Initiatives: Driven by concerns about the conventional grid, a project of major interest to the region is Blue Lake Rancheria's microgrid. Tribal partners and participants from rural and remote areas of the region alluded to this repeatedly. The Redwood Coast Airport Microgrid "the first 100% renewable energy, front-of-meter, multi-customer microgrid" was launched in 2022.

At present, electrical transmission capacity and connection to transportation corridors for wind energy generation are inadequate. Moreover, one partner noted that, in order for the local benefit of the wind energy project to be sustainable beyond construction of its infrastructure, the opportunity exists to synergistically expand both electrical and broadband access, facilitating establishment of new businesses along rural corridors and in places like Round Valley. The three corridors the state has already identified are the road from Fairhaven to Kneeland and the route down highway 36, along the 299, and then through southern Humboldt along the 101.

Energy provision in Lake County differs from that in the rest of the region; the grid there is sectioned, and, although supported by megawatt diesel generators similar to those used in Del Norte and other parts of the region, transmission lines are not all under threat. An important aspect of Lake County's Energy sector is geothermal energy coming from the geysers (by Calpine Corporation). Although the infrastructure was established for this in the 1970s or 1980s, addressing other environmental issues has a higher priority. The county receives funding through the "Full Circle Project," which injects secondarily treated wastewater into the steam fields of the geysers to generate that is delivered in partnership with Calpine Corporation, Northern California Power Authority, and now Open Energy. While saving on tertiary treatment of wastewater, this also results in 10 million gallons of water leaving the Clear Lake watershed basin, which supplements wastewater use. The community is unclear, over time, what impact this will have on the lake.

Projects and Initiatives Highlighted by the Community

From CEDS and Tribal strategic plans, listening sessions, local table meetings, and surveys:

- Energy careers curriculum, solar arrays on brownfield redevelopment sites in Hoopa
- Blue Lake Rancheria Microgrid
- Fort Bragg Oneka Seawater Desalination Pilot Study
- Toma Resilience Campus
- Offshore wind development

Working Lands and Blue Economy

Favorable Climate and Potential for Regenerative Agriculture. The most often mentioned strengths and sources of opportunities for the region lie in its natural beauty and abundant natural resources. Listening session participants noted the high potential for innovation in the Agriculture sector and Blue Economy. In particular, the wine industry, horticulture farms, regenerative livestock-production models, and local food economies are strong. The region is blessed with a climate that allows for year-round crop production. Its varied ecosystems and microbiomes therefore provide diverse opportunities, including expansion of regenerative agricultural practices on the grasslands. Advocates note that the region currently has more organic matter in its soil than 90% of the state, and great potential exists to continue sequestering carbon in the grasslands and building organic matter into the soil. The region therefore anticipates opportunities to further develop manufacturing industries linked to this sector.

Nature-Based Solutions and Ecosystem Restoration. The region contains opportunities to invest in sustainable infrastructure and nature-based solutions—wetlands, forest restoration, and innovations like the Arcata Marsh were given as examples. Partnering with the Redwoods National and State Parks to train a workforce in land- and resource-management careers is another opportunity contributors mentioned. For example, a heavy equipment regional training center has been proposed for Orick, a small and struggling rural community close to the Redwoods National and State Parks. There is potential for further developing science- and research-based industries along the coast and limnology research in Lake County. With respect to prospective industries like offshore wind and aquaculture development, preliminary data analyses indicate that labor shortages for such occupations as electricians and construction workers could number as high as a thousand or more workers- further indication of growing opportunities for thriving wage careers in the trades.

Case Study

Developing Blue Economy Initiatives in Mendocino County

The Noyo Harbor District in Mendocino County, in collaboration with West Business Development Center (West Center), was awarded a $3.2 million California Jobs First Pilot grant to revitalize the harbor and enhance its role in the California Blue Economy. The harbor, an important commercial and recreational fishing port in Mendocino County, has been a significant economic and cultural asset for over 72 years. The revitalization project, aligned with the 2019 Community Sustainability Plan, focuses on three key goals:

1. **Installation of a New Ice House:** An energy-efficient, environmentally sustainable ice-making facility will be built to support 80 commercial fishing vessels, benefiting over 300 jobs. This facility, housed in portable containers powered by solar energy, is expected to boost the harbor's fleet and economic viability.
2. **Marine-Based Business Training Program:** This program aims to equip small business owners and entrepreneurs in the marine sector with skills and opportunities for growth, fostering peer-to-peer learning and community partnerships.

3. **Community Fish Market Incubator:** Designed to enhance direct sales from fishing vessels to the community, this market will serve as an incubator for fleet members to apply new skills and improve customer engagement. The project includes a comprehensive marketing and branding strategy to ensure its sustainability beyond the initial two-year funding period.

Overall, the grant supports significant infrastructure improvements and economic development initiatives, positioning Noyo Harbor as a vital player in the regional and state economy. The Harbor District is also a key partner in the Noyo Ocean Collective, which is currently working on an aquaculture feasibility study.

Cultures United by a Love of the Land. Cultural factors contribute greatly to the region's strength. Community members expressed appreciation that the original stewards of the land still live here and that their traditional knowledge and practices are alive and can be used to more sustainably manage the forests and lands. The region's Tribal governments and nations are nationally and internationally recognized for their work to protect and restore its lands, forests, and rivers. Elevating their expertise as leaders in Redwood Region RISE thus constitutes an opportunity area for the Collaborative. The dam removal occurring on the Klamath river and other river-restoration work that may bolster the salmon populations provides an incredible opportunity tapping into this expertise, as are application of indigenous forest-management techniques e.g., cultural burns, which are addressed below.

Traditional Ecological Knowledge. Reducing the forests' fuel load and developing commercial uses for the resulting biomass constitutes a major climate-resilient, economic and workforce-development opportunity. Specifically, communities adjacent to forest conservation areas are excited about possible workforce training opportunities, for example, the proposed heavy equipment training site in Orick. Controlled burns, cultural burns, and other fire- and conservation-related

activities also constitute workforce-development opportunities. The potential for "cooperative" forest management amongst smaller, private landholders is also a cause of excitement. This would entail hiring firefighters in the off-season to process forests, i.e., remove dead trees and use them to provide firewood for those in need, and better manage forests to manage risk of fires.

Climate Vulnerability. The region is vulnerable to drought, fire risk, and sea level rise. Fire insurance is growing more costly, and some companies will no longer insure properties in the region. Vast natural landscapes are costly to manage, increasing that particular risk, which the long history of poor forest management practices has exacerbated by allowing high fuel loads to accumulate in heavily forested areas to drive catastrophic wildfire events. Agricultural industries are particularly vulnerable to this risk. The severe economic losses faced by the wine industry in Lake and Mendocino Counties due to smoke and other wildfire effects provide a stark example.

The region faces other environmental issues. Water rights are often contentious, particularly impacting communities near Clearlake. Commercial fish stocks are trending downwards, and sea level rise and acidification from climate change are occurring. Local fish stocks contain elevated mercury levels, posing a risk to Blue Economy industries (Climate Analysis). Important to note is that, while data on emissions sources are limited, those available suggest that industries within the Working Lands and Blue Economy cluster have higher emissions relative to economic value created than do other clusters.

Boom and Bust Cycles. The economic history of the Redwood Region is marked by commodity boom-and-bust cycles of natural resource extraction. Following the gold rush came waves of timber extraction. The housing boom of the 1960s decimated 90% of the old growth redwood forest, and this was followed by a decline in coastal fisheries by the early 1990s. Most recently, the newly legalized cannabis industry collapsed in 2022 and so is no longer considered a major economic driver for the region. This industry's collapse is having a significant negative impact in rural small towns across the region. Currently, the Redwood Coast region has lost agricultural jobs, gained construction employment, and lost services.

Projects and Initiatives Highlighted by the Community

CEDS and information gathered from Tribal strategic plans, listening sessions, local table meetings, and surveys highlighted the following projects and initiatives:

- Kelp, fungi, and abalone farming; hemp and hempcrete
- Local foods economy: food hubs, farm-to-table, dockside fish markets, local meat processing facilities
- Eco-tourism, outdoor recreation
- Monetizing forest carbon sequestration as a potential opportunity for forested and grassland ecosystems
- Ecosystem restoration and other natural resource management as possible career choices
- Aquaculture Innovation Hub
- Noyo Harbor Collective
- Tribal EcoRestoration Alliance

Conclusion

This Regional Plan Part 1 represents the culmination of extensive data analysis, community engagement, and partnership-building efforts. The report has surfaced key insights into the region's economic well-being, industry composition, workforce dynamics, public health, and environmental risks, with a particular focus on the experiences of priority communities, including those facing workforce barriers, rural and remote areas with limited access to services, and low-income communities in disinvested areas.

Through this process, the collaborative has identified four priority sector nodes - Arts, Culture, and Tourism; Health and Caregiving; Renewable and Resilient Energy; and Working Lands and Blue Economy - that reflect the region's shared economic development priorities and hold the potential or sustainable, inclusive growth. These sector nodes are supported by key underlying infrastructure nodes - housing, broadband, and transportation - that are critical to the region's economic competitiveness and quality of life.

The Redwood Region RISE collaborative is now poised to develop targeted strategies and investments that build on the region's strengths, address its challenges, and create a more equitable, resilient future for all its communities. In Regional Plan Part 2, the Collaborative draws on the data and insights surfaced in this report to craft a roadmap for inclusive and sustainable economic development. This involves working closely with industry leaders and community partners to identify high-impact projects, prioritize investments, and foster ongoing collaboration and capacity-building.

Central to this effort in Part 2 is the work of the RRRISE Sector Tables, which bring together industry leaders and community representatives to drive the development and implementation of regional strategies and projects. The Sector Tables play a critical role in identifying missing partners for outreach, reviewing data, shortlisting high-alignment projects, assisting with participatory decision-making, and identifying priorities for ongoing sector development. Through the development of sector-based and community development strategies, the Collaborative is working to identify and strengthen/grow:

- Key investment areas and workforce development needs to prepare for future disruptions and post-disruption transitions and the emergence of resilient industries, which is one goal of this Regional Roadmap,
- Underutilized synergies within the Redwood Region and with outside markets, with identification of opportunities for intra- and inter-sectoral and public-private cooperation to maximize benefits,
- Ways to effectively utilize and implement the Collaborative's Regional Roadmap, including high-quality job creation targets (pre- and post-disruption) in resilient industries, informed by the needs of disinvested, priority communities in the Redwood Region, and
- Investments that have multipliers and benefits across the Redwood Region, including investments that leverage local, regional, state, federal, and philanthropic dollars to maximize economic benefits, and which reflect the inclusive vision and plan for Redwood Region economic vitality established in the Collaborative's Regional Roadmap.

These strategies were released September 2024, and comprise the second part of the Roadmap-Regional Plan Part 2 (revised May 2025).

The Redwood Region has a rich history marked by the resilience and innovation of its diverse communities. From the original stewardship of the land by Indigenous peoples to the boom-and-bust cycles of resource extraction industries, the region has experienced both prosperity and challenges. Today, the Redwood Region faces a critical juncture, with threats such as climate change, worsening economic disparities and disruptions, and workforce barriers. However, the region also possesses unique strengths and opportunities for sustainable, inclusive growth.

As the Redwood Region RISE collaborative moves forward with this work, it will continue to center the voices and needs of priority communities. By leveraging the region's unique assets, fostering cross-sector collaboration, and investing in the infrastructure and workforce of the future, the Redwood Region can emerge as a model for sustainable, inclusive economic development, realizing its vision statement: ***"The Redwood Region is a healing place where everyone belongs, with stable jobs, accessible healthcare, and a thriving natural environment. Together, we work towards a future where anyone can thrive."***

Appendices

A. Glossary of Terms

Arcata Economic Development Corporation (AEDC)	AEDC is the former name of Redwood Region RISE's Fiscal Agent (now called North Edge Financing) responsible for project coordination, fiscal oversight, and reporting.
California Center for Rural Policy (CCRP)	CCRP is the Regional Convener and is responsible for project leadership; Collaborative facilitation; research, analysis, technical assistance with plan preparation; and communication.
California Governor's Office of Business and Economic Development (GO-Biz):	A government agency in the State of California, responsible for providing technical assistance to California Jobs First/Regional Investment Initiative regions.
California Jobs First	California Jobs First, the rebrand of CERF, was created to promote a sustainable and equitable recovery from the economic distress of COVID-19 by supporting new plans and strategies to diversify local economies and develop sustainable industries that create high-quality, broadly accessible jobs for all Californians. This initiative is a partnership between OPR, GO-Biz, and LWDA to support resilient, equitable, and sustainable regional economies.
California Labor & Workforce Development Agency (LWDA)	A government agency in the State of California, responsible for California Jobs First/Regional Investment Initiative to promote safe and fair workplaces, deliver critical worker benefits, and promote good jobs.
Cluster	A group of industries that through our analysis was defined as related and interconnected.
Collaborative	Collaboratives are broad-based regional groups convened by a skilled and impartial intermediary to plan for economic recovery and a sustainable and equitable economic future. These collaboratives shall prioritize equity, sustainability, and job quality, and advance a shared prosperity where workers and communities across California's diverse regions share equally in the benefits of a carbon-neutral future. When referencing "Our Collaborative", it is members in the Redwood Region.
Community-based Organization (CBO)	A Community-based Organization is one that is driven by community residents in all aspects of its existence (Its governing body, staff, and office location; Priority issues identified and defined, including finding solutions and program design, implementation, and evaluation components).

Community Economic Resilience Fund (CERF)	CERF (now California Jobs First/Regional Investment Initiative) was created to promote a sustainable and equitable recovery from the economic distress of COVID-19 by supporting new plans and strategies to diversify local economies and develop sustainable industries that create high-quality, broadly accessible jobs for all Californians. The initiative is being developed by OPR, GO-Biz, and LWDA to support resilient, equitable, and sustainable regional economies.
Comprehensive Economic Development Strategies (CEDS)	The purpose of the CEDS is to bring public and private sectors together to develop a strategic plan to guide local economic development efforts and to strengthen the Region's economy. It comprises four elements (summary background, SWOT analysis, strategic direction/action plan, and evaluation framework).
Disinvested Communities	♦ The California Jobs First grant program defines 'disinvested communities' as any of the following: ♦ Census tracts identified as 'disadvantaged' by the California Environmental Protection Agency. ♦ Census tracts with median household incomes at or below 80 percent of the statewide median income or with the median household incomes at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted pursuant to Section 50093 of the California Health and Safety Code. ♦ 'High poverty area' and 'High unemployment area' as designated by the California Governor's Office of Business and Economic Development California Competes Tax Credit Program ♦ California Native American Tribes as defined by the Native American Heritage Commission (NAHC) Tribal Consultation Policy.
Economic Development	The process of improving the economic well-being of a community by creating jobs, increasing incomes, and promoting sustainable, resilient, and equitable growth.
Employment Development Department	A government agency in the State of California, responsible for California Jobs First/Regional Investment Initiative administration.
Gini Index	A measure of distribution of income across a population ranging from 0 (perfect equality - everyone has the same income) to 1 (perfect inequality - one person has all the income).
Industry	For this report, this refers to a single 3 digit NAICS code industry (e.g., Hospitals, NAICS: 622). Technically, these are "subsectors".
Industry Cluster	A geographic concentration of related companies, organizations, and institutions that share markets, workers, supply chain components, and accrue other productive benefits from co-locating.
North American Industry Classification System (NAICS)	A system used to help compare statistical data for similar businesses when analyzing products and services.

North Coast Opportunities (NCO)	NCO is one of the Outreach & Community Engagement partners and is responsible for developing regional outreach and engagement strategies; coordinating with regional Community-based Organizations; ensuring that the voices of disinvested communities are represented; and reporting.
Office of Planning and Research (OPR)	A government agency in the State of California, responsible for California Jobs First/Regional Investment Initiative planning.
Priority Populations	The term used to describe the Redwood Region's "disinvested communities".
Public Use Microdata Areas (PUMA)	Geographic areas within a state that contain no fewer than 100,000 people and no more than 200,000 people each.
Public Use Microdata Sample (PUMS)	Data files containing records about the characteristics of housing units and the people residing in them.
Redwood Region RISE (RRRISE)	Our Region's California Jobs First initiative is called Redwood Region RISE (Resilient Inclusive Sustainable Economy), and includes Tribal Lands, and the counties of Del Norte, Humboldt, Lake, and Mendocino.
Regional Investment Initiative (RRI)	Formerly known as Community Economic Resilience Fund (CERF). The Regional Investment Initiative is a new approach to economic development that seeks to center disadvantaged communities as part of California's transition to a clean energy, carbon neutral economy.
Required Partner Groups	The different groups the State has deemed as necessary to have balanced representation within the Governance Structure of the Collaborative: ♦ Labor organizations, ♦ Employers, businesses, and business associations, ♦ Grassroots and community-based organizations, community organizers, and community members, ♦ Government agencies, ♦ Economic development agencies, ♦ Philanthropic organizations, ♦ Education and training providers, ♦ Workforce development entities, ♦ Environmental justice organizations, ♦ Worker centers, ♦ Disinvested communities, ♦ California Native American Tribes, and ♦ Other regional interest holders capable of contributing to the success of the project.

Senate Bill 162	Governor Newsom signed this bill to establish a $600 million initiative to create high-quality, accessible jobs, and help build resilience to the effects of climate change and other global disruptions impacting the state's diverse regional economies.
True North Organizing Network	This organization is one of the Outreach and Engagement partners, primarily responsible for convening work in Del Norte County. They support community organizing and power building efforts in our Region.
Traditional Ecological Knowledge (TEK)	The knowledge, practices, and beliefs developed by Indigenous communities over generations regarding their relationship with each other and the environment.
Sector	A highly aggregated group of related industries defined by NAICS. These include "2 digit NAICS codes: "(e.g., Healthcare and Social Assistance, NAICS: 62).
Sectoral Strategy	A sectoral strategy is an employer-driven workforce development approach that directly aligns occupational skills training and other workforce development services with the needs of businesses.

B. Partnership Survey

Redwood Region RISE Survey

Welcome to the Redwood Region RISE Survey!

Your survey responses will help us learn about community members and organizations interested and/or available to participate in economic development planning and decision-making in Redwood Region RISE (Resilient Inclusive Sustainable Economy):

Tribal Lands, Del Norte, Humboldt, Lake, and Mendocino Counties. This information is a required part of our region's plan, and your responses are very important!

If you're not representing an organization/affiliation, this survey will take about five minutes to complete. For those representing an organization/affiliation it will take about twelve minutes to complete this survey.

We will use the survey results to prepare these parts of our regional plan:

- A searchable directory of people and organizations interested and available to participate in the Redwood Region RISE planning process.
- Graphics and charts that illustrate all combined survey responses.
- A written analysis of the take-aways.

You can choose not to include your name in the directory and still participate in this survey. Even if you choose to be listed in the directory, all responses in Sections 2 and 3 will be kept confidential.

If you have any questions about this survey, please contact: ccrp@humboldt.edu

Thank you for your time!

SECTION 1: Your Information

1. Email

2. What is your name? (Required Question)

3. Which county or area do you live in? Check all that apply.

   - Del Norte
   - Humboldt
   - Lake
   - Mendocino
   - Tribal Lands

4. If desired, please provide additional information about the area or Tribal Land that you live in. (For example, the name of the city, town or neighborhood in which you live.)

5. If applicable, what is your occupation or title?

6. Would you like to participate in economic development meetings and discussions in your community? Check all that apply.

   - Yes
   - No

7. How would you like to contribute to the Redwood Region RISE planning process? Select all that apply:

   - Attend Zoom meetings of the High Road Transition Collaborative (HRTC) on every last Thursday of the month
   - Participate on a Tribal Planning Table (Tribal members only)
   - Participate on a Local Planning Table
   - Receive the newsletter
   - Receive a mini grant to help Redwood Region RISE recruit community feedback from priority populations/members for Local Planning Tables (more information on this opportunity will be provided upon request)
   - Help us spread the word to encourage people to join the Local Table Meetings
   - Flyering/Promoting/social media/Giving out surveys for community feedback
   - Receive/attend update meetings a few times a year (in addition to or instead of HRTC meetings)

8. Do you represent an organization?

   Examples may include educational institutions, business associations, economic development, community organizations, and others.

   Please note: If you select NO you will skip directly to Section 4, as Sections 2 and 3 pertain only to organizations.

   Select one.

   - Yes (Skip to question 9)
   - No (Skip to question 22)

SECTION 2: Organizations

You are answering these questions because in a previous question you indicated that you represent an organization.

9 What is the name of the organization that you represent?

10 Which areas does your organization serve? Select all that apply:

- Del Norte
- Humboldt
- Lake
- Mendocino
- Tribal Lands

11 If desired, please provide additional information about the areas or Tribal Lands your organization serves.

12 What is your organization's primary physical address?

13 At what geographic scale does your organization operate? Select all that apply:

- National
- State
- Regional (Del Norte, Humboldt, Lake, and Mendocino Counties)
- County
- City
- Neighborhood/Census Designated Place

14 Please choose one response that best describes your organization:

- Business/Business Association
- Economic Development Agency
- Education or Training Center
- Environmental Justice Organization
- Federally/non-federally Recognized Tribe
- Government Agency
- Grassroots/Community-based Organization
- Labor
- Philanthropy
- Workforce Development

15 Which of these priority communities does your organization primarily serve (if any)? Select all that apply:

- Advocates for People of Color (e.g., Black Lives Matter, Asian Americans Advancing Justice, New Hmong Rising Association, etc.)
- Communities of Color
- Immigrants with Documentation (e.g., work visas)
- Individuals that live in extremely remote/ rural areas of the Redwood Coast Region
- Individuals who were Formerly Incarcerated

- Individuals with Hearing Impairment
- Individuals with Intellectual Developmental Disabilities
- Individuals with Learning Disabilities
- Individuals with Physical Disabilities
- Individuals with Vision Impairment
- Individuals without Broadband Access
- Individuals without Documentation
- Lesbian, Gay, Bisexual, Transgender, Queer, Asexual, Intersex + (LGBTQAI+)
- Member of ethnic minority communities
- Members of religions
- Monolingual Hmong-Speakers
- Monolingual Spanish Speakers
- New Citizens
- Non-federally recognized Tribal Nations
- Seniors
- Tribal Citizens
- Tribal Governments
- Unions
- Workers
- Youth

16 If not listed above, please describe the community your organization serves.

17 What is your organization's annual operating budget?

- $0 to $100,000
- $100,000 to $500,000
- $500,000 to $2 million
- $2 million to $5 million
- $5 million to $10 million
- Over $10 million
- I'm not sure.

18 How many full-time staff does your organization employ? Please provide approximate full-time equivalencies (FTEs).

- 0 to 5
- 6 to 10
- 11 to 25
- 26 to 100
- More than 100

19 I would like to be included in a directory of organizations available to partner on economic, community and environmental planning initiatives.

SECTION 3: Partnerships

This section of the survey asks about your partnerships with other organizations in our region.

Important Instructions
As you answer the survey questions, please keep these instructions in mind:

- Please answer from the perspective of the type of partner that best describes your organization.
- Answer from the perspective of the primary address you use when doing economic development work within our region. If your organization has more than one office in our region, please use the main office address.
- Answer from the perspective that best describes the usual type and quality of relationship you have with other partners in one category.

20 The following questions are meant to gauge your or your organization's level of connection with the following organization types. Please evaluate your/your organization's level of involvement with the following organizations.

I/my organization interacts with partners on economic development issues as follows:

	I don't know anyone at this type of organization.	I know someone at this type of organization but don't regularly exchange information with them and have never worked with them.	I regularly exchange useful information with a person in this type of organization but have not/ do not work with them on a project.	I regularly exchange useful information with a person in this type of organization and have worked with them on one or more projects.	I'm in regular contact with people in this type of organization, have participated in a planning process with them before, and have worked with them on projects.	I depend on a person in this type of organization for important information and we collaborate closely on plans and/ or on one or more projects.
Economic Development Organizations						
Community Development Organizations						
Business/ Business Associations						
Education or Training Centers						
Environmental Justice Organizations						
Federally or non-federally Recognized Tribes						

Government Agencies						
Grassroots or Community-based Organization						
Labor Organizations						
Philanthropic Organizations						
Workforce Development Organizations						

21 If desired, please provide further comment on the types of projects and plans that you have worked on with these partners (Optional).

SECTION 4: Capacity and Support

These questions ask you to describe your or your organization's capacity to participate in economic development planning and implementation processes and support that could help encourage broader community participation.

22 Please evaluate your/your organization's capacities to participate in economic development planning and implementation processes:

	No/Limited Capacity	Some Capacity	Adequate/High Capacity
Knowledge/awareness of relevant plans or funding opportunities			
Commitment to build on community strengths and opportunities			
Commitment to address community problems			
Staff			
Partners/relationships			

Skills (in-house)			
Specialized Expertise (in-house or access to consultants)			
Training/professional development			
Funding			
Organizational leadership			
Tools/Infrastructure (broadband, office space, equipment, etc.)			

23 If desired, please provide further explanation of your or your organization's capacities.

24 This question seeks to help us understand barriers that may prevent you or your organization's ability to achieve broader participation in economic development planning.

Please evaluate the barriers, if any, that you or your organization face in reaching the people you serve/your constituents.

	Not a barrier at all	A challenge, but manageable	A significant and difficult challenge
Community Distrust			
Difficulties increasing awareness/ understanding			
Digital inequity (lack of access to broadband or devices)			
General disinterest			
Geographic/ transportation			

Lack of cultural connectivity			
Lack of time to participate			
Language barriers			
Other organizational capacity constraints (staffing, resources)			
None of the above			

25 If desired, please describe any other barriers not listed above or specific populations affected.

26 I/my organization could benefit from access to the following types of training (choose all that apply)

- Redwood Region RISE Basics – what is required in this planning process and what types of projects can be promoted for funding.
- Economic Development Basics – the who, what, where, why and how economic development can create wealth.
- Public Funding Basics – how governments fund economic development projects
- Community Investment Models - how community members can drive change and attract resources
- Project Development - phases of major projects from conceptualization to implementation and opportunities for community input
- Apprenticeship and Career Pathways Programs – what they are and what is available in our region
- Cultural History of our Region
- Immigration in our Region
- Working with Tribes
- Building Community Power – what does community power look like and what does it mean to shift power to communities.
- Board and Committee Leadership Responsibilities – how to participate on a leadership board
- Equitable, collaborative, participatory decision-making
- Employer-Worker Collaboratives – what they are and how they work
- Carbon neutrality – what it means, what are CA's goals and how these goals affect our region.
- Climate resilience – strategies to achieve this goal.

27 If desired, please describe any other training opportunities that you or your organization may benefit from.

28 Please provide your best contact email if you would like to receive more information about Redwood Region RISE, and/or want to be included in our directory:

C. Industry Cluster Methodology

Using the NAICS 3-digit classification system, all industries are assessed based on degree of specialization relative to employment levels in California and changes in employment over the past decade as an indicator of employment resilience to secular factors such as automation. A high level of specialization in an industry cluster is a potential indication of export-oriented trade relationships with other regions that bring in wealth into the region. These industries were organized into clusters based on an assessment of supply chain relationships and in consultation with the Redwood Region RISE collaborative expertise.

Figure C.1 below, describes the precise methodology for determining which industries exhibit evidence of specialization and employment resilience. Specialization is evaluated by calculating location quotients (LQ) which calculate the relative level of employment in each industry compared to the same industry statewide.[160] The RRRISE Collaborative thanks Dr. Robert Eyler at Sonoma State University for his feedback on this methodology.

Figure C.1 Criteria for Identification of Specialized and Resilient Industry Clusters

Criterion	Metrics	Rationale
Established foothold and stable data	Employment ≥ 50	Industries with fewer employees have highly unstable estimated labor market statistics leading to spurious calculations. These industries may present opportunities for development, but these data should not be used as evidence to support decision-making.
Positive indication of specialization or increasing specialization	The industry must either be specialized (LQ ≥ 1.25) or approaching specialization (LQ is at least 0.75 and increased by more than 0.1).	An LQ ≥ 1.25 for an industry is an indication of specialization as an exporter and is an indication of potential competitive advantage. An increasing LQ is a sign of increasing specialization which could be an indication of emergent competitive advantage.
Job Stability and Resilience	Non-negative job growth from 2013 to 2019 or non-negative job growth from 2013 to 2022.	The industry must have either had a non-negative job emerging from the Great Recession (2013) to pre-pandemic (2019). Declines in industry employment during this period cannot be attributed to COVID and are more likely to be due to long-term non-cyclical factors that may persist into the future. To account for the possibility that more recent favorable factors are contributing to employment, an industry can alternatively be included if it experienced non-negative job growth from 2013 to 2022 (the most recent data year available).

[160] A location quotient (LQ) calculates the ratio of the percent of the local workforce employed in an industry divided by the percent of state or national workforce employed in an industry. For example, if 0.91% of the local workforce is employed in Animal Production and Aquaculture while only 0.12% of the statewide workforce is employed in that industry, then the LQ for Animal Production and Aquaculture is 0.91%/0.12% ≈ 7.6. This indicates that a much higher concentration of the local workforce is employed in this industry which suggests a high degree of specialization. A high degree of specialization is an indicator of potential comparative advantage.

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Redwood Region RISE

CALIFORNIA JOBS FIRST

Regional Plan Part 2

Latest revision: May 2025

California's Redwood Region
Tribal Lands, Del Norte, Humboldt, Lake, and Mendocino Counties

NORTH EDGE Business Financing & Community Development

CCRP California Center for Rural Policy

Cal Poly Humboldt.

A Product of Redwood Region RISE
The California Center for Rural Policy at Cal Poly Humboldt

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As of April 2025, the U.S. Economic Development administration has formally accepted Redwood Region RISE's Regional Plan Part 2, alongside the other 12 Jobs First regional plans, as Comprehensive Economic Development Strategies, allowing communities across California to accelerate local economic investment.

CCRP. (2025). Redwood Region Regional Plan Part 2
California Center for Rural Policy at Cal Poly Humboldt

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The California Center for Rural Policy at Cal Poly Humboldt is a research and policy center committed to informing policy, building community, and promoting the health and well-being of rural people and environments.

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Introduction

Redwood Region Resilient Inclusive Sustainable Economy (RRRISE) is the Redwood Region's California Jobs First Regional Investment Initiative.[1] Home to 33 Tribal Nations and comprising four counties- Del Norte, Humboldt, Lake, and Mendocino- the region boasts many natural and cultural assets including breathtaking coastline, the globally important redwood forests that give it its name, and diverse cultures including Indigenous peoples who continue to reside on their ancestral lands. Historically, the region has suffered commodity boom and bust cycles, and lack of economic diversification creates vulnerability for its communities.

Redwood Region RISE ("the Collaborative") is a growing coalition of over 150 organizations united in advancing California Jobs First's vision: an inclusive approach to economic development that centers disadvantaged communities in the state's transition to a clean energy, carbon-neutral economy—creating good-paying jobs and thriving communities for all. Guided by participatory design and shared governance, the Collaborative completed its Planning Phase (Feb 2023–Sept 2024) and has since entered Implementation (Oct 2024–Sept 2026). During Planning, RRRISE achieved two major goals:

1. **Constituted the Collaborative-** Created five governing bodies- a regionally and sectorally balanced executive body (the Voting Member Block), an Equity Council to guide design and action on inclusivity, a Tribal Planning Table to ensure Tribal representation and priorities are centered, Local Tables surfacing and elevating subregional priorities, and Sector Tables, who crafted the strategies reported on here.

2. **Crafted a Regional Roadmap to guide action-** Part one of this Roadmap ("Regional Plan Part 1") released in June of 2024, and revised in May 2025 provides a comprehensive data portrait of the region- its economic and social characteristics, state of public health, workforce, and industries, and its anticipated climate impacts and challenges. In this report, Regional Plan Part 2, this data is used to inform development strategies, which the region looks to enact over the next decade.

[1] The goal of the California Jobs First Regional Investment Initiative, is to ensure that as California's economy grows and adapts to climate change and other challenges, that good-paying jobs and prosperous communities are created for the benefit of all Californians. Key to the program is empowering the state's diverse regions and residents to meaningfully participate as leaders in this process. More information can be found here.

This report, which was released September 2024 and revised in May of 2025, contains two primary sections. First, sector strategies are detailed for each of the region's four target sectors: (1) Arts, Culture, and Tourism; (2) Health and Caregiving; (3) Renewable and Resilient Energy; and (4) Working Lands and Blue Economy. Then the report delves into the actions and investments needed to enable growth in those industry sectors and maximize benefits to priority communities,[2] via cross-cutting sector strategies. These include strategies for Broadband, Entrepreneurship, Food Security and Access, Housing, Transportation and Infrastructure, and Workforce Development.

The report closes with an overview of how these strategies are carried forward by the Collaborative, and the steps needed to institutionalize RISE, carry forward its vision for systems change and deliver well-being for its communities.

Watch Redwood Region RISE's Strategy Video

In October 2024, RRRISE entered its Implementation Phase, which will continue through September 2026. Four Sector Investment Coordinators were onboarded to work alongside the Collaborative, building regional project portfolios, supporting project development, providing technical assistance, and helping secure outside funding. The RRRISE Catalyst Funds program was launched in November 2024, with $9 million allocated for pre-development projects. Selected RRRISE Catalyst Awardees were announced in April 2025, with their Period of Performance running from May/June 2025 through September 2026.

Additionally, the State launched two independent funding opportunities: a $125 million Implementation Funding allocation supporting projects aligned with the State's Economic Blueprint, and a $15 million Tribal Investment Initiative for Tribal-led planning, pre-development, and implementation projects. Both programs operate independently of Redwood Region RISE through State-run Request for Proposal (RFP) processes, with key application deadlines in 2025 and 2026.

[2] More information on how Redwood Region RISE defines Priority Communities can be found here.

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Redwood Region RISE's Vision and Goals

"We envision the Redwood Region a healing place where everyone belongs, with stable jobs, accessible healthcare, and a flourishing natural environment. Together, we work towards a future where anyone can thrive."

- Redwood Region Resilient, Inclusive, Sustainable, Economy Collaborative Vision Statement

Figure 1 Redwood Region RISE Theory of Change

Redwood Region RISE Theory of Change			
	Current State	**RISE's Role**	**Desired State**
Economic Development	Few organizations with capacity to secure and expend funds, volatile funding and budgets, siloing, limited regional cooperation on shared goals. Lack of traded sectors and low investment from outside the region. Private sector union membership declined over previous decades. Marginalization and alienation of groups in the workplace, high attrition from the workforce in prime age.	♦ Shared agenda setting. ♦ Networking, trust, and relationship building across the region. ♦ Unlocking the potential of new and/or "unlikely" partnerships. ♦ Investing in developing concepts and moving them towards funding proposals. ♦ Helping organizations seed investment in promising industries, connect industries to trained workers, promote inclusion and support of priority communities to enter and complete training opportunities and onto careers.	Creating critical mass helps the Region pursue and secure more state, federal, and private funding and investment. CBOs serving priority communities and valued (and funded) partners in Workforce and Economic Development initiatives. Projects desired by communities are designed and executed at an accelerated pace.

Redwood Region RISE Theory of Change			
	Current State	**RISE's Role**	**Desired State**
Equity	Dearth of well-funded advocacy and human dignity organizations, relative lack of leaders of color or young people in leadership positions, rampant and severe economic marginalization of Priority Communities. Generational trauma inflicted on Indigenous communities, funding processes and consultation mechanisms that are not conducive to meaningful and mutually beneficial partnerships with Tribal partners and other groups. History of extractive or exploitative relationships in public and private sectors between privileged and underprivileged groups. Lack of support for initiatives brought forward from Priority Communities.	♦ Invest in leadership and capacity building initiatives for priority communities, including BIPOC, Tribal, and youth leaders. ♦ Name and begin to dismantle barriers to meaningful partnership. Create conditions for human dignity and affinity groups and leaders to receive project funding, as leads, collaborators, and/or experts on their communities' needs. ♦ Build allyship and supportive relationships around BIPOC and Priority Community conceived and led initiatives.	Priority communities in the Redwood Region are empowered advocates and leaders in the community. Organizations are culturally competent and prepared to partner with diverse groups and leaders to execute initiatives benefiting the community.
Climate	Region is unprepared for ever increasing risks from fire and sea level rise. Priority communities particularly impacted by the climate crisis. Traditional Ecological Knowledge and local innovation drive climate solutions, but are inadequately resourced and scaled.	♦ Help direct investment into initiatives that promote low-carbon investment, increase resilience of the landscape and communities, and help shift CA towards its climate goals.	The region has reliable infrastructure, adequate resources, and social capital to address increasing both emergent and long-term climate risks associated with heat, drought, flooding, sea level rise, and wildfires. Traditional Ecological Knowledge is recognized and supported across the region, creating more resilient landscapes and improving ecosystem health.

Redwood Region RISE Theory of Change			
	Current State	**RISE's Role**	**Desired State**
Climate (continued)			The region is recognized as a leader in sustainable technologies and industries. The region relies on 100% clean, reliable electricity and renewable fuels as its primary sources of energy.
Overall Impact	Exciting economic initiatives occurring, but benefits restricted to a few. Gross disparities in well being and wealth across communities. Challenges finding housing and career opportunities drives away younger generations.	♦ Data-driven, results based accountability on shared goals via MEL. ♦ RISE Collaborative holds a collective vision and impact model to drive change.	Delivering on goals- More capacity, more integration amongst groups across the region, more investment and development, reduction in income and health disparities. Greater opportunities and thriving for younger generations.

The goals of California Jobs First's Regional Investment Initiative, and therefore RISE's goals, are complex and layered. At the heart of the RISE's vision is recognition that creating stronger working relationships across the region and between traditional and non-traditional economic development players is the catalytic ingredient to move the needle on the goals we share. RISE will enable its vision and goals through capacity building, strengthening collaboration and partnering, and facilitating inclusive and long-term investment to realize a future of shared prosperity and ecological health.

Regional Snapshot and SWOT

The following section summarizes the key findings of Regional Plan Part 1, which informed the strategies in this plan.

Summary of the Region's Strengths, Weaknesses, Opportunities, and Threats

Strengths

- The remaining stands of globally significant, old-growth redwood forest are predominantly located in their namesake region—sequestering millions of tons of carbon while drawing over a million visitors to the region each year.
- The original inhabitants of the region still live on their ancestral lands, preserving thousands of years of traditional knowledge and best ecological practice with respect to land and forest management.
- Land ethic: The region's unique social history continues to foster a culture of deep connection to and reverence for its lands and waters. The region excels at eco-innovation and has a strong sustainability ethos.
- The region possesses two- and four-year universities that are proactively engaged in creating pathways for young residents to realize career aspirations and in providing re-training initiatives.

Weaknesses

- An economy composed largely of non-tradable sectors, not (yet) driven by major, globally competitive industries. Historic reliance on sale of primary commodities.
- Small private sector (esp. Del Norte).
- Low diversification makes the region vulnerable to boom-and-bust cycles.
- Prevalence of historic and childhood trauma, high incidence of mental health issues and related disabilities, insufficient care facilities, and behavioral health workforce. Social isolation and alienation, remote and disconnected communities. Poor mental health outcomes disproportionately impacting disinvested communities.
- High attrition rate from the workforce at prime age; high disability rate at prime age, likely related to the above.
- The region experiences high levels of poverty, driven in part by low labor force participation and low wages. Exacerbating poverty is the region's high cost of living and scarcity of critical, enabling services (e.g., healthcare and housing). High rates of poverty disproportionately impact disinvested communities, including people of color, people with disabilities, and LGBTQIA2S+ individuals.
- Institutions exhibit chronic low capacity, lack of key institutional partners to advance economic development initiatives, and nascent or absent collaboration on key issues facing the region due to lack of capacity.
- Aging, obsolete infrastructure creates vulnerabilities in water delivery, transportation, energy, communications, and other crucial systems. Degraded waste sites jeopardize drinking water and fisheries.
- The housing crisis is severe on the North Coast. Outdated stock is associated with high incidences of lead poisoning in children.

Opportunities

- Restoring forest health is a major job-creation opportunity for the region, climate-adaptation opportunity for the state, and carbon-sequestration opportunity for the world. Natural resource and ecosystem restoration careers are thus a major opportunity.
- A recent feasibility study found three call areas along the Redwood Region to be viable for offshore wind development, which is already underway in Humboldt Bay.
- Regionally, a unified focus on four key areas for economic development and diversification: Arts, Culture, and Tourism; Health and Caregiving; Renewable and Resilient Energy; and Working Lands and Blue Economy. Construction needs in these sectors coupled with urgent needs for infrastructure updates and housing development drive the promise of building- and trades-based industries in the priority clusters.
- The region's need for medical professionals presents an economic development opportunity with the promise to deliver thriving wage careers for Redwood Region residents.

Threats

- Catastrophic wildfires have enormous economic, health, and social impacts with impacted inland jurisdictions perpetually in "recovery mode." Wildfires play a major role in and are potentially the leading regional source of greenhouse gas emissions.
- Sea level rise puts key coastal assets at risk. Extreme heat events are predicted to become more frequent and severe in inland areas. The area's fog belt may decline.
- Natural disasters: Communities in the region are also frequently recovering from earthquakes and tsunamis. Flooding is an issue.
- The rising cost of essentials and rising incomes in urban areas push young people and skilled workers out of the region.
- A shifting regulatory environment and burdensome regulations hinder infrastructure development. Public funding opportunities are delivered inaccessibly, perpetuating cycles of disinvestment.
- Artificial intelligence and automation put lower wage workers in various fields at risk of displacement.

Key Takeaways from Regional Plan Part 1: Highlights from the report's seven primary chapters.

Economic History and Social Overview

- The Redwood Region's economy has faced boom-and-bust cycles, heavily reliant on natural resources. Diversification is needed, but the region's comparative advantage remains its natural assets.
- The region is rural, remote, and culturally diverse, home to California's largest Indigenous communities. Population is aging, and despite a regional decline, town centers are growing, stressing housing availability.
- Over 95% of the region is classified as "disinvested" by the California Jobs First definition.
- The region has potential in sustainable development sectors, including offshore wind, sustainable forestry, and local food production.

- Economic development is hindered by capacity constraints, with few dedicated organizations, and many leaders juggling multiple roles. Tribal involvement is crucial but often occurs too late in planning processes.
- The region lags in GDP growth and suffers from low median incomes and high poverty rates, especially among residents of color. The cost of living is high relative to wages.

Climate and Public Health

- Environmental risks include water contamination, wildfires, and sea-level rise, with Humboldt Bay being particularly vulnerable. Wildfires also threaten the working lands sector.
- Investment in water infrastructure and waste disposal is a critical environmental justice issue.
- The region faces high mortality rates from various causes, with significant health disparities linked to smoking, substance use, and poor mental health.

Industries and Labor Market

Four key industry clusters are identified:

Arts, Culture, and Tourism

Resilient with growth potential, but challenges in translating this into thriving wage jobs.

Health and Caregiving

Expected to grow but faces challenges in attracting and retaining skilled professionals.

Renewable and Resilient Energy

High potential for economic growth, especially in wind energy, but requires workforce development.

Working Lands and Blue Economy

Strong in diversified industries but needing higher wages and increasing regenerative and sustainable practices.

- Legacy industries have seen job losses, and workers struggle with low wages and career stagnation.
- Family-sustaining jobs are growing in healthcare, teaching, and skilled trades, but local training programs often fail to meet demand.
- High school graduates are less prepared for secondary training, creating a barrier to workforce development.

Specific data highlights from Regional Plan Part 1 are provided throughout this report, providing rationale for the chosen strategies and tactics.

Regional Strategies

Introducing Target Sectors

The RRRISE convening team worked closely with the Collaborative to identify key sectors to prioritize in the region's economic development and diversification strategies. The process used to do so was as follows:

1. Review previous Industry Cluster analyses, such as the EDD's "Targets of Opportunity" report (November 2021), exploring industry clusters in Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity Counties. The RRRISE convening team consulted the authors of that report to understand the methodology and any challenges that arose during report preparation.

2. Receive qualitative input from the Collaborative during listening sessions during which participants identified opportunities and threats on the horizon from the perspective of key drivers in the region and industry strengths. A qualitative data coding software program was used to identify themes and nodes of regional interest in different sectors.

3. Map and survey partners to identify key industries by the "people power" needed to develop them. Collaborative members (107 in total) responded to a survey querying them as to the key issues needed for economic development. What emerged were 10 priority areas that received strong agreement and corresponded with previous assessments.

4. Analyze publicly available quantitative data to obtain the findings reported in Regional Plan Part 1, Chapter 6.

The result was the ultimate articulation of RISE focus sectors, which are as follows:

Figure 2 Priority Sectors in the Redwood Region

Sector	Related Industries
Arts, Culture, and Tourism	Performing Arts; Museum, Historical Sites, etc.; Scenic and Sightseeing Transportation; Food Services and Drinking Places; Accommodation; Transit and Transportation; Motion Picture and Sound Recording; Amusement, Gambling, and Recreation.
Health and Caregiving	Hospitals; Social Assistance; Ambulatory Health Care Services; Nursery and Residential Care Facilities; Health and Personal Care Stores.
Renewable and Resilient Energy	Construction; Repair and Maintenance; Utilities.
Working Lands and Blue Economy	Leather and Allied Products Manufacturing; Beverage Manufacturing; Fishing, Hunting, Trapping; Animal Production and Aquaculture; Food Manufacturing; Textile Mills; Crop Production; Wood Products Manufacturing; Support Activities for Agriculture; Furniture and Related Products Manufacturing; Forestry and Logging; Building Materials and Garden Equipment.

Cross-Cutting Issues and Sector Enablers
Broadband
Entrepreneurship
Food Security and Access
Housing
Infrastructure and Transportation
Workforce Development

Beginning in December 2023, RISE assembled tables of sector-involved organizations and individuals to collaboratively design the target sector strategies reported on below. Over the course of six months, each sector table met regularly- analyzing data from the region, identifying priorities, crafting strategies and timelines, and beginning to identify transformative investments and initiatives that could advance those strategies. Those are reported first in this plan, in the section entitled "Target Sector Strategies".

Redwood Region RISE's Listening Campaign and Priority Communities

As part of RISE's Listening Campaign, 20 Community Based Organizations were recruited to hold deep listening conversations with members of Priority Communities to understand their challenges and enablers. The results of this work are reported on in the Insights Report, which informed the work of the Sector Tables in formulating their strategies. The insights report is available here.

RISE thanks the following organizations for their work connecting crucial community voices to our initiative:

- True North Organizing Network
- North Coast Opportunities
- Arts Council of Mendocino County
- Arbor Youth Center (RCS)
- Black Humboldt
- Centro del Pueblo
- HC Black Music & Arts Association
- Ink People
- Lake County Community Foundation
- Laytonville Healthy Start FRC
- Middletown Art Center
- Norcal Lao Foundation
- Nuestra Allianza FRC
- Playhouse Arts
- Sacred Life Recovery Services
- Vision of Hope village
- Weaving Wellness & Diversity Management
- Westside Community Improvement Association

Throughout the Planning Phase RISE conducted a Listening Campaign; holding over 400 conversations with community leaders, organizations, and residents. This, along with data analyzed for Regional Plan Part 1, identified the key enabling sectors which require investment and support for the region to be successful in its plans. These are the "cross cutting sectors" which comprise the second half of this plan. Additionally, strategies highlighted in the Health and Caregiving target sector strategies are also key enablers for the economy as a whole.

Target Sector Strategies

This following section details the Redwood Region RISE target sector strategies, crafted collaboratively over a six month period (January-June 2024), then ground truthed in local communities via five feedback sessions held in July 2024. Tables created sector specific SWOT analyses, identified key investments and a 10 year timeline for implementing their strategies. Example project concepts, drawn from the Redwood Region RISE project inventory and reviewed by the tables, provide concrete examples of beneficial social, environmental, and economic investments in the region. Please note that example projects have not been awarded funding or endorsed by the RISE voting members- funding awards will be decided in early 2025.

Arts, Culture, and Tourism

Arts, Culture, and Tourism Sector Strategies

Vision

We believe in utilizing the responsive, flexible, and innovative industries of arts, culture, and tourism to stimulate economic activity, create sustainable living conditions within the sector, provide service to our communities, and promote the values of hope, joy, equity, exploration, and creativity, thereby raising the quality of life for everyone.

Watch the Arts, Culture, and Tourism Sector Strategy Video

Rationale

Tourism has been a significant industry for the region since the mid-19th century, whereas the contributions of Art and Culture have only more recently been recognized as providing synergistic growth and diversification opportunities. Historically, many industries within the sector deliver lower wages, may lack in typical employee safety nets and upward mobility, and are often defined by gig and seasonal work (Yang et al., 2021). With this important caveat in mind, the Arts, Culture, and Tourism sector is a key economic sector in the region, drawing significant visitor numbers and revenue. The region has a higher than average arts vibrancy index rating. Encompassing agritourism, the Redwoods and coastal attractions, seasonal festivals and heritage sites celebrating indigenous and other local cultures, the sector has both well-established regional assets and capacity and potential for further development.

"We have a thriving, nice art community, you know. People in my experience are way more down to earth here."

Annually, the area's state and national parks attract approximately 5 million visitors. Overall, visitors generate about $1.3 billion in spending (Dean Runyan Associates, 2023)—about $4,081 per Redwood Region resident, exceeding the statewide equivalent of $3,433.

Local feedback emphasizes the need to balance tourism development with community needs, particularly housing. There are concerns about the impact of short-term rentals on housing availability and affordability.

"Everybody's trying to figure out how to survive as that [corporate] money comes in. You know, as corporations buy up clusters of inns. All the inns in Albion got bought by a corporation recently. One corporation. But all these small B&Bs in Little River…what's gonna happen now?"

Arts, Culture, and Tourism, shows signs of employment specialization and resilience in two industries, including Museums, Historical Sites, and Similar Institutions (NAICS 712[3]) and Performing Arts, Spectator Sports, and Related Industries (NAICS 711). These industries have a minimal carbon footprint, but support few family-sustaining occupations.

Reading RISE's Industry Tables

In Regional Plan Part 1 and in this report, we have provided data overviews of each priority sector. These definitions are intended to help the reader interpret those tables:

Employment: The number of workers in the Region who are employed by that industry.

Location Quotient (LQ): A ratio of ratios: the ratio of workers employed by that industry compared to total workers in the REGION, compared to the ratio of workers employed by that industry compared to total workers STATEWIDE.

% Change in Location Quotient: The change in location quotient between 2013 and 2022. Industries shaded blue are becoming more prominent in the region and those in yellow are becoming less prominent, when compared to the state.

% Job Growth: How many more workers are employed in the industry compared to 2013.

Job to Job Multiplier: A measure of how many additional jobs are created as a result of one new job in a specific industry or sector.

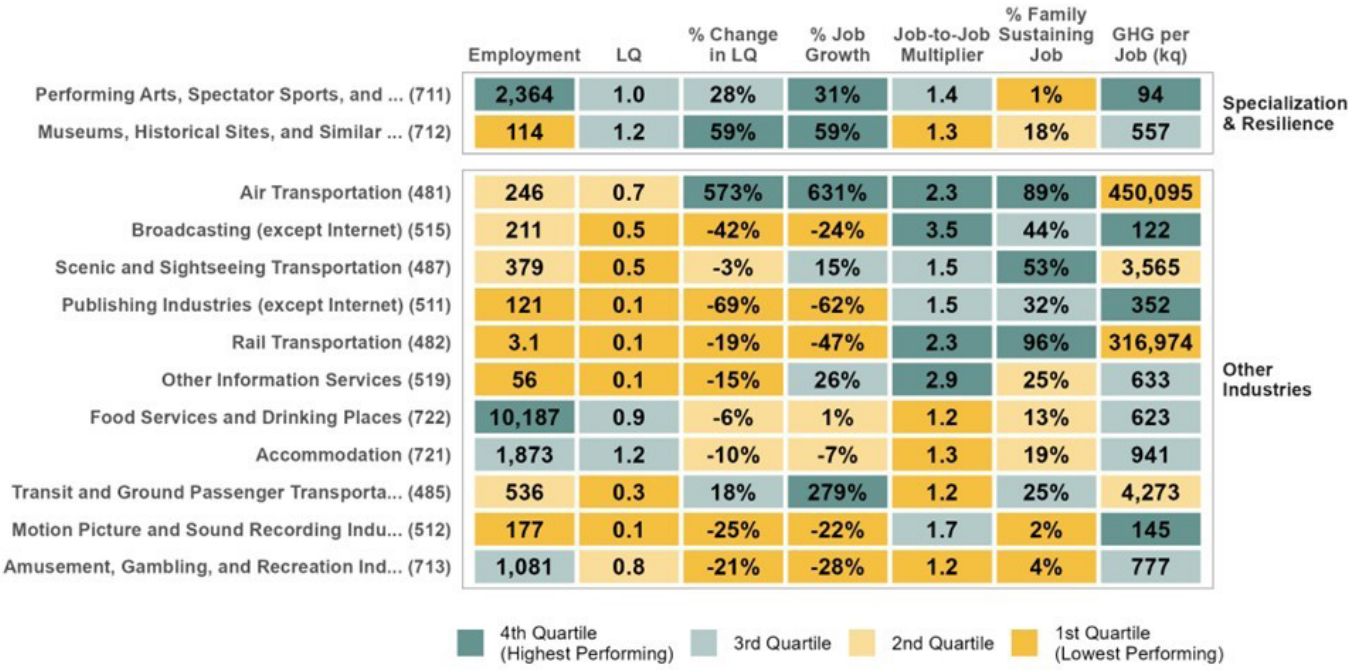
% Family Sustaining Job: Calculated at $27.49/hour or higher.

Green House Gas (GHG) per Job: Reported in kg of carbon per job, these estimates are derived from national EPA data and may not reflect the true value for local jobs.

[3] North American Industry Classification System (NAICS) codes are numeric codes that identify a business's primary industry. They are used by federal statistical agencies to collect, analyze, and publish data on the U.S. economy. NAICS codes are also used for administrative, regulatory, contracting, and taxation purposes. More information is available on the Census Bureau's website.

Scenic and Sightseeing Transportation (NAICS 487) appears underdeveloped, given the region's numerous natural attractions, with a location quotient of just 0.5. This industry supports a high proportion of family-sustaining occupations, with a relatively moderate climate impact.

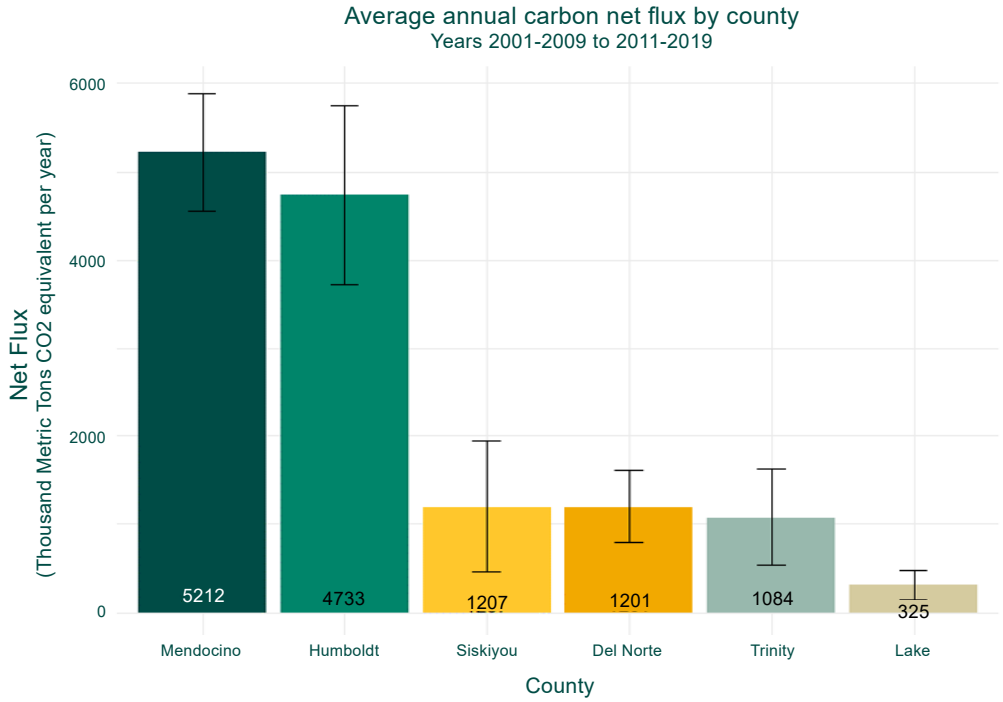
Figure 3 Arts, Culture, and Tourism Industries Performance



Note. Data source from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

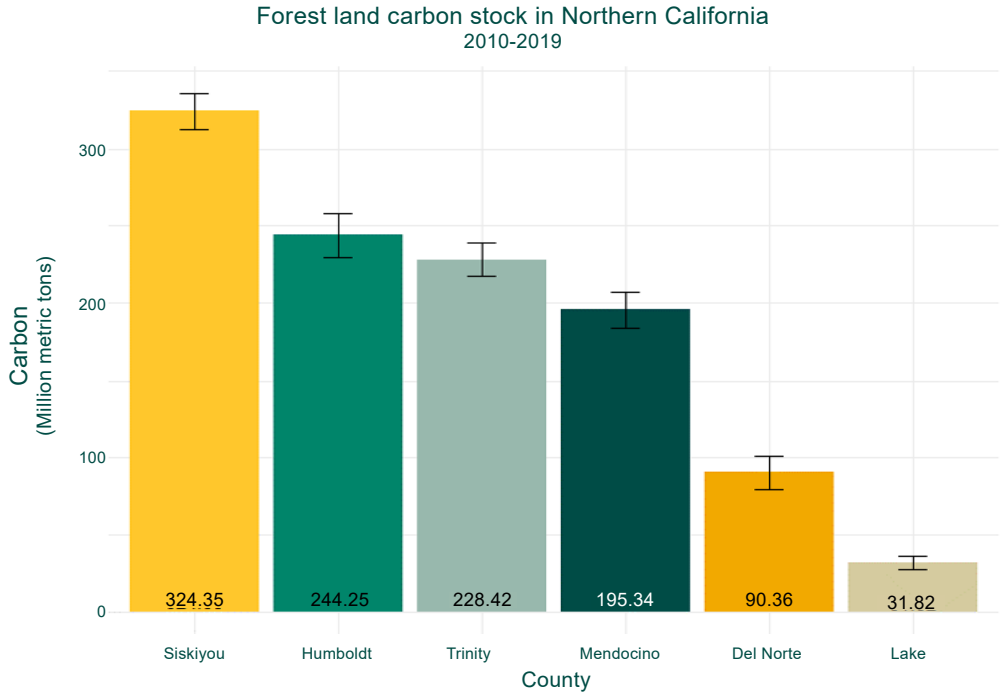
It should be noted that the IMPLAN data is sourced from the Environmental Protection Agency (EPA) for their USEEIO Version 2.0 model. This model uses the U.S. EPA GHG and Sinks: 1990-2016 data; specifically the Land Use, Land-use Change, and Forestry data. This data does not account for storage of carbon in timber lands, or substitution emissions. The graphs below show more on carbon sequestration and rates in Northern California.

Figure 4 Average Annual Carbon Net Flux by County (Years 2001-2009 to 2011-2019)



Note. Data sourced from the California Board of Forestry and Fire Protection. Graph shows the net total carbon sequestration rates per county for all forest pools, including growth, harvest, and mortality. Lines represent the standard error.

Figure 5 Forest Land Carbon Stock in Northern California (2010-2019)



Note. Data sourced from the California Board of Forestry and Fire Protection. Graph shows the total rate of carbon in forest land. This combines the carbon in live trees, dead trees, and understory vegetation that are aboveground and belowground, as well as down wood, the forest floor, and soil. Lines represent standard error.

While the COVID-19 pandemic, inflation, and other shocks temporarily disrupted these industries, the outlook for this sector looks strong (*Economic Impact*, n.d.). From 2013 through 2022, traveler spending to the region increased 27.1%, and industry earnings increased 70.4%—outpacing the equivalent statewide figures of 20.3% and 53.6% (Dean Runyan Associates, 2023). Furthermore, the EDD projects that Redwood Region Leisure and Hospitality sector employment will grow faster than any other sector through 2030. A challenge for the sector is translating this growth into family-sustaining occupations. There is a noted need to focus on increasing visitor spending rather than just visitor numbers, with cultural events potentially generating more revenue than outdoor recreation.

> "[We have] $59 air flights from Burbank. We should be leveraging a different demographic of people who can travel here now. We can have a foodie tour. We can have a recreation tour. We can have a fishing tour."

The first thing to note about the Arts, Culture, and Tourism (ACT) Sector is the sheer diversity and complexity of classification. This is a sector of industries that is broadly inclusive of fine artists, tour guides, professionals working in digital and print media, as well as landscape architects, furniture builders, and restaurateurs – and the list goes on and on. Preliminary review of sources such as the 2023 Otis College Report on the Creative Economy and the University of Texas at San Antonio indicate a sector that includes over *110* distinct six-digit NAICS codes.

This diversity is further complicated by the seasonal and "gig work" nature of much of the sector, so that getting an accurate sector assessment can be an exceedingly daunting task. Again, according to the 2023 Otis College Report: *The creative sectors do not share a cohesive workforce infrastructure and employer-worker arrangements vary from one industry to another, which has created large obstacles for policy making. Many individuals do not practice their art or creative pursuits as their primary, wage-earning job. Yet many counts of the workforce focus only on those employed full-time by organizations.*

While the Otis College Report was in the context of the creative economy, many of the same issues are identifiable in other tourism-associated industries, such as Outdoor Recreation. Ultimately, while none of these challenges are unsurmountable, they are very real and unresolved, both regionally and nationwide. Use of census data as well as improved regional data-collecting systems, in addition to IMPLAN analysis, could provide a clearer picture of the true economic impact of the sector.

> "I think when communities are supporting the arts and people see that happen, it does give people a sense of hope. It creates a sense of community hope."

Keeping in mind such sector and regional issues as the lack of sustainable career options, rural isolation, and shortage of professional networks, it is important to recognize the tense, inequitable, and often extractive relationships between rural and urban populations, as can be displayed in a few direct findings from Redwood Region RISE, noted below:

- One particularly relevant statistic from the Public Health Summary: 43% of Grade 11 students in the Redwood Region reported "Feelings of Sadness or Hopelessness," compared to the state-wide average of 37%.
- From the Insights Report: *"People often leave the region to move to less remote, larger communities with more opportunities for education or jobs…People who love this region aren't able to make a living or a life here."*
- And finally, from Regional Plan Part 1: *"Over and over, research participants expressed anxiety that the Redwood Region is not a place of opportunity for young people."*

"I think I love living in Humboldt County because being a Tribal member, we've never relocated, we've always been where we are. And so that just really makes me feel like this is where I'm supposed to be."

These rural-urban dynamics are not only expressed in the data and statistics and the interviews, as artists themselves consistently return to this theme in their own work. The story of the wide-eyed country kid getting off the bus in the big city and ready to make their fortune may be a trope–but many tropes manifest due to being grounded in lived experience.

The extractive relationship between urban and rural areas is often cyclical. Not only are many of the "best and brightest" in a rural region compelled to leave to pursue better (or even in some cases just *existing*) job opportunities. Even if a rural community can raise its own profile and attract new tourists, residents, and businesses–as seen in the section on sector weaknesses–it often falls victim to gentrification and rising cost of living. This dynamic forces long-term residents even further towards the outskirts and increasing levels of community hopelessness, *further* encouraging exodus to other larger communities with more opportunities. This is the spiral that needs to be disrupted. Disruption of this extractive cycle will not only require the hard work of building out and structuring new, income-generating career opportunities, but also of fundamentally shifting the economic narrative of the region. A central idea incorporated into Redwood Region RISE is the Hope Economy theory of change, as outlined in the Regional Report, Part 1:

"In the Hope Economy theory of change, by cultivating a (realistic) belief in a hopeful future, individuals are more empowered to act, innovate, and better contribute to economic activity and growth, thereby restoring a sense of agency, self-efficacy, and community pride…

The idea is that the approach helps create an inclusive environment that supports innovation and growth in disinvested communities by fostering hope, thereby tapping into a latent creativity resource, and likely multiple new marketable opportunities."

Creativity and narrative-building are bedrock proficiencies of the ACT Sector, and an emphasis on a Hope Economy-based approach to economic development promises to not only grow and refine the ACT sector, but to also have multiplicative effects across other sectors throughout the region.

When synthesizing Table input into regional strategies, we have initially designated three main overarching strategies: (1) Regional Networking and Resource Sharing; (2) Training and Skill Development; and (3) Creative Placemaking. The first two are similar to RRRISE's general strategies for development, while the third is more directly specific to the sector. Further, under each strategy we have listed three tactics, or groupings of specific ideas/needs/potential investments for the sector. These listed strategies and tactics are, of course, non-exhaustive, but intended as jumping-off points, and represent initial needs/solutions identified by the Sector Table.

"I think that [Great Redwood Trail] has a lot of opportunity. I've seen this bike trail in South Carolina and it has amazing stuff. You can rent bikes and you can stop at these little markets and eat. It's really fun and cool."

Arts, Culture, and Tourism Sector Strategies

Strategy 1: Regional Networking and Resource Sharing

This strategy emphasizes regional asset mapping, sector networking, sector data-collection and landscape assessment, sector advocacy, and innovation investment. This broadly aligns with the *Industry Strategies* cluster from the Regional Report. This strategy has been listed first, since comprehensive sector assessment, data-collection, and networking are all part of a foundational groundwork that is integral for the successful future implementation and evaluation of additional strategic investments in the sector.

Regional Networking and Advocacy

As seen in the Sector Overview in the "Strengths" section, we are blessed in this region with an abundance of ecological and cultural resources. Sector Table Members repeatedly called attention to the difficulty in staying up-to-date and connected with what activities their compatriots were engaged in, even within their own communities let alone the entire region. Regularly, one member or another would be heard to say to another something along the lines of, "Oh, you're doing that? I had no idea!" This relative lack of connectivity means that we are not fully actualizing the total arts, culture, and tourism assets and opportunities for joint projects and knowledge-sharing. Additionally, it could hamper regional advocacy to promote investment in the sector while addressing structural inequities between rural and urban California.

Most professionals and organizations within the sector are highly motivated to build relationships with one another. But without external support, such networking done regionally is almost always facilitated and maintained on a volunteer basis by already over-worked individuals and resource-tapped organizations. Such systems are inherently vulnerable and commonly wane after some period. Because of this, the Sector Table recommends the strategy of investment in regional asset mapping and networking efforts, leveraging existing local arts agencies, tourism centers, and colleges as primary partners and resources.

Regional Branding and Promotion

A recurring theme that emerged during Sector Table meetings and individual interviews was members having a lack of confidence in or connection with regional or community-wide marketing strategies, symptomatic of under-investment and a fractured approach to branding and marketing in the sector. The Sector Table recommends strategic investment in a regional approach to branding the Redwood Region as a hidden gem of arts and cultural engagement for tourists and residents alike. Leveraging current and planned "Visit California" resources, funding and strategic planning, such branding would build on the regional core strengths of outdoor recreation-based tourism, positively link the sectors of arts, culture, and tourism, and would also create a significant opportunity for cross-cutting strategy development in collaboration with the Working Lands Sector in agritourism.

In addition, by leveraging low fare air travel options to the region and implementing better connectivity and tourism services to the airport, the Redwood Region can further achieve its tourism goals. Improved air accessibility with lower fares and increased flight frequencies can attract more visitors to the area, enhancing the reach and impact of the regional branding and marketing strategies. This enhanced connectivity can contribute to the overall growth and development of the tourism sector in the region.

Local feedback emphasizes the importance of aligning with Visit California's regional marketing plan, focusing not only on hub communities but also on gateway and smaller, isolated communities.

Regional Data-Collection and Asset-Mapping

As noted in the Sector Overview, the Arts, Culture, and Tourism sector is particularly diverse and wide-reaching. Coupled with the reality that many professionals within the sector are often working multiple jobs (or "gigs"), which may have vastly different levels of documentation, be seasonally employed, or may be relatively off-the-grid entrepreneurs, this means that gathering high-quality, accurate data can be particularly challenging. Additionally, while many Arts, Culture, and Tourism-oriented organizations, businesses, or professionals want to gather data on their operations and can clearly see the benefits, most of these same entities have very limited human resources and can rarely spare the work-hours necessary to obtain said data, let alone employ a specialist with the required skill set for data acquisition and synthesis. There is a need to fund research and data on the art/culture scene in the region as such data is often lacking. Larger research projects tend to overlook rural areas because artists are not familiar with how to make their operations "count" for large data reports ("counting" usually means reporting art sales, and many rural artists and artists of color sell by word of mouth or through market style sales).

Another facet of this tactic is that to fully unlock the potential of sector development, innovation will be required. As noted above, many organizations in the sector are not only limited in personnel, but cash strapped, forcing them often out of necessity to maintain operations "as they've always been done." For all the above reasons, the ACT Sector Table, as well as RISE consultants, recommend strategic investments in a regional "landscape assessment" of the sector as well as an on-going regional sector datahub.

Strategy 2: Training and Skill Development

This strategy emphasizes sector-specific entrepreneurship training and other skill development. Sector-specific training is required to create, support, and sustain entrepreneurship among workers in the sector. Artists, culture workers, and tourism-based entrepreneurs are uniquely positioned to develop partnerships with other sectors and implement new programs and cross-sector strategies to create more diverse, socially valuable, and community-based professional pathways for sector workers. This aligns with the *Skill Strategies* of the Regional Report.

Entrepreneurship Support

Whether as mural artists, river guides, or landscape designers, workers in the sector often find themselves in business for themselves. Indeed, for many professionals in the sector, entrepreneurship represents perhaps the only opportunity for career upward mobility–a regional issue that is particularly severe in the Art, Culture, and Tourism Sector. This dynamic requires individuals to develop the broad skill sets of small business owners, while continuing to develop their own craft. Professionals employed by an organization (particularly nonprofits) may have so little staff support that their job duties more closely resemble that of a small business owner. Entrepreneurship is particularly strong in the Outdoor Recreation (and related Tourism) industries, and industry representatives have called for increased investment in entrepreneurship development programs, as well as the potential development of new and innovative programs, such as a pilot program that could match budding entrepreneurs in the industry with data-identified community needs or areas of regional growth.

> "We've been talking about getting an apprentice program [in the arts] started so that young people can sort of find out that all of this exists. And they can consider as they grow up in this community, they can actually dig clay from under their feet or they could harvest wood from the forest where that's a huge part of our history and culture here."

Partnerships with other Sectors

Cross-cutting strategies between sectors are core to RISE's philosophy. As noted above in the section on Regional Branding, that tactic opens many possible collaborations with the Working Lands Sector through agritourism in the areas of cannabis, wine, and niche farm products such as dairy. Additionally, there are also findings within RISE's data that indicate a rich vein of potential partnerships with the Health and Caregiving Sector:

> "Monitoring isolation and loneliness and promoting quality social connection may therefore be effective approaches to improving the health of the region."
> **- Regional Plan Part 1: Public Health Summary**

The research on the positive effects of active participation in arts, culture, and outdoor activities on mental and physical health is robust and extensive. There is a novel approach of holistically addressing behavioral health, known broadly as *social prescription*, by which primary-care providers might prescribe a patient such activities as seeing a play with friends, taking a pottery class, or taking part in a guided nature tour. Social prescription programs are a long-time mainstay of behavioral health care in other countries such as the UK, and are rapidly taking root across the nation, including in the entire state of Massachusetts and a new pilot program at Stanford University. There are significant and growing resources for this kind of development, and investment in this area could not only provide new and sustainable career pathways for sector professionals but could also be a key strategy in addressing the health crises present in the region.

New Certification and Professional Development Programs

New career pathways within the sector are enabled or facilitated by new certification and professional development programs. For one concrete example, Outdoor Recreation industry leaders have identified access issues for the many layers and types of certifications required or desired in the industry (wilderness rescue, sailboat instruction, dive certification, etc.). For almost all these certifications it is necessary to travel to urban centers. And once those certifications are obtained, many industry professionals choose to relocate for better career opportunities. Industry leaders suggest that investment in a "home-grown" program of certifications training for Outdoor Recreation would significantly enhance regional competitiveness.

As another example, certifying artists and cultural workers along with tourism workers as Certified Tourism Ambassadors has been in place since 2015 in Lake County and is proposed for Mendocino Counties and would support regional branding and engagement with and through the arts and cultures for tourists and residents. Finally, existing social-emotional learning and teaching pedagogies for training artists in educational and social goals could be leveraged to train artists to contribute directly to the communities where they have chosen to live, offering after-school, school-based, senior center, and other arts-based engagement. With rigorous and accessible training, artists and cultural workers have enormous potential to contribute to the health and well-being of their communities in ways that leverage their artistic disciplines and creativity.

In-depth collaboration with institutions of higher learning, government agencies, and industry organizations would be required, but significant investment in new pilot programs, partnered with such institutions, would manifest many long-term benefits and competitive edges for the sector, its workforce, and the region. Exploring partnerships with community colleges and high schools to broaden career pathways in the arts and tourism sectors, potentially including programs that combine practical skills with entrepreneurship training, are seen as a need in north coast communities.

Strategy 3: Creative Placemaking

This strategy emphasizes investment in new community hubs, development of mobile services to reach isolated communities, and improved quality of life through cultural development. This strategy is in alignment with Redwood Region RISE's *Infrastructure and Transportation Strategies* and is primarily targeted at community service organizations and nonprofits, as well as local governments throughout the region, with vital secondary benefits accrued to the entire sector through community and economic development and increased access to workspaces and affordable housing. Creative placemaking not only creates spaces that attract tourists but also bolsters the morale and sense of place of local residents. By integrating arts, culture, and creativity into community spaces, creative placemaking initiatives can help make an area more appealing to visitors while also fostering a sense of identity and pride among the local community. This approach not only enhances the overall aesthetic and cultural vibrancy of a place, but also contributes to its economic and social well-being.

Community Hubs

The wide geographical distances in the region, coupled with decades of state under-investment in rural areas, precipitates the sector's need for infrastructure investments, including maker spaces (with potential mobile units), affordable live/work studio options, visitor centers, community cultural hubs, and so on. In most cases and many communities, this investment would not necessarily require construction of new facilities, but could instead be focused on redevelopment of under-utilized buildings and neighborhoods, becoming an additional driver of community economic revitalization. Communities emphasize the importance of investing in physical infrastructure such as parks, trails, and family-friendly spaces that benefit both the community and tourism.

Integration of Sector in Economic and Community Development Efforts

Professionals within the sector are experts in the management and sustainable development of all the cultural and ecological resources that we value in this region and consider integral to our quality of life. This expertise is vital to leverage to develop communities where people not only can live, but they *want* to live–which not only benefits existing individuals and communities in the region, but is an enticement for new investment and relocation.

> "That's kind of the model we're all gearing ourselves toward: the destination retreat income needs to then turn around and serve the local economy and the local people."

Case Study

The Mendocino Art Center is a physical gathering space for artists that is exploring how to be more inclusive and connected to diverse members of the community. Its programming includes a gallery space, workshops, residency programs, lodging, and events.

More information: www.mendocinoartcenter.org

However, it is important to also make the distinction between Creative Place*making* and Creative Place*keeping*. According to the US Department of Arts and Culture, Creative Placekeeping is

> "...the active care and maintenance of a place and its social fabric by the people who live and work there. It is not just preserving buildings but keeping the cultural memories associated with a locale alive, while supporting the ability of local people to maintain their way of life as they choose."

As described in the Sector SWOT, gentrification and erosion or exploitation of vulnerable cultures is a real risk in the development of the sector. We must take caution that in the process of place*making*, we are also *keeping* the places necessary for a high quality of life for all residents. This strategy is less of a call for specific investments, and instead a strong recommendation to include professionals from the sector in all aspects of economic and community development, decision-making, and visioning.

Community Investments and Mobile services

The vast distances and limited public transportation within the region make it often extremely difficult for organizations to reach everyone who would benefit from their services, and the most remote communities are often most underserved and vulnerable. There are already regional examples of mobile services in the sector, such as Playhouse Arts' Wonder Wagon, and further development of similar services would be an important investment, particularly when viewed through the lens of regional equity. Lake County just re-launched their long dormant Bookmobile, and a companion Mobile Arts Studio (and possible tool lending library) could partner with the County Library to establish community-based programs bringing essential assets to remote communities and creating economic opportunities for artists and cultural workers.

Figure 6 Arts, Culture, and Tourism: Alignment with Key Program Objectives

Job Quality and Access	Equity	Climate
♦ Laying the foundational 'groundwork' to strategically innovate the Sector: • Leverage local and regional partners to develop a **regional asset map** and strengthen **regional networking** (joint projects, knowledge-sharing). • Develop a **regional sector datahub** to enable organizations to strategically innovate. • Develop a **regional brand** that positions the Redwood Region as an arts and cultural hub, aligning with "Visit California" resources to complement outdoor recreation tourism.	♦ Collaborate with the Health and Caregiving Sector, leveraging an **evidence-based holistic approach to address behavioral health** (specifically for BIPOC and disability communities) through participation in arts, culture, and outdoor activities, simultaneously alleviating the shortage of mental health providers. ♦ Advocate for and ensure equitable access to resources to ensure economic resilience across the region, particularly focusing on isolated and underserved communities through **mobile services and targeted outreach**. ♦ **Center and integrate Indigenous approaches** in community-building and cultural development. ♦ **Address funding gaps** and extractive relationships between rural and urban arts organizations (particularly for BIPOC and LGBTQIA2S+ organizations) and attract more investment to rural areas by leveraging unique cultural and ecological strengths, creating a more sustainable and equitable funding environment. ♦ Promote inclusive, **community-centered tourism** through creative placemaking/placekeeping to boost cultural vibrancy, attract visitors, and prevent gentrification, ensuring long-term residents are not displaced.	♦ Most industries within Arts, Culture, and Tourism have relatively **moderate climate impacts** ("do no harm"). ♦ Focus on **regenerative approaches** that align with the region's nature and stewardship economy. ♦ **Creatively educate** people on the importance of **preparing for and mitigating the impacts of climate-related disasters**, such as wildfires and floods. ♦ Collaborative with the Working Lands Sector on climate-conscious **agritourism** in the areas of cannabis, wine, and niche farm products such as dairy. ♦ Join forces with the Working Lands and Renewable and Resilient Energy Sectors to invest in **ecotourism**– creatively educate and guide the public on responsible travel to natural areas.
♦ Launch **innovative entrepreneurship development and educational programs** to enhance skills in underserved sectors, match (budding) entrepreneurs with community needs, and align educational opportunities with regional needs for workforce readiness, now and in the future. ♦ Foster a **"Hope Economy"** to retain and grow talent in the region, addressing higher suicide consideration and sadness reported among youth and adults compared to the state average. ♦ Address the historical weaknesses of low wages and seasonal work, particularly in tourism and hospitality, by regionally advocating for better **job quality and stability**. ♦ Provide more **professional opportunities and infrastructure**, like affordable housing, to improve job quality and access for young professionals in the region.		

Implementing Arts, Culture, and Tourism Strategies

Developmental Dyads

While formulating the above strategies and tactics, another model for assessing the goals and impact of each strategy was developed. This was to sort non-exhaustive clusters of strategic goals/intended results into new categories, with six categories being arranged into three dyad sets. Those dyads are listed here:

A. **Physical Infrastructure -** Cultural centers, maker spaces, mobile creative spaces, interpretive centers, parks, trails, training institutes, and housing.

B. **Knowledge Infrastructure -** Regional asset mapping, regional branding, relationship-building. Conceptual and relational infrastructure.

A. **Tourism (outward facing) -** Outdoor activities, cultural sites and events, and creative placemaking.

B. **Community Wellbeing (inward facing) -** Creating/changing infrastructure and programs to mobilize artists in their communities - mental health, social work, policy engagement, educational programs. Activating outdoor sites as locations of health and wellness. Creative placekeeping.

A. **Immediate Action -** Training artists in entrepreneurship, regional branding, physical infrastructure development.

B. **Long Term Planning -** Ongoing regional data collection, a regional praxis of data collection and research, training institutes that are expanding and opening new possibilities/connections in the sector.

Exploring these dyads also highlighted a tension within the sector analysis in the Regional Plan Part 1: To varying degrees, all aspects of these dyads are present within the general philosophy, core values and stated goals of Redwood Region RISE. However, when reading the Sector Opportunities:

> Arts, Culture, and Tourism: The sector has many opportunities, including (among others) museums, theaters, and art galleries, cultural events (festivals, concerts, art exhibitions), including traditional arts and Indigenous cultural practices, and development of heritage sites. Develop culinary, cultural, eco-, experiential, and other niche brands of tourism.

While all of these represent real and worthwhile investment opportunities, they also primarily hew to the 'Type A' categories of the dyads: *Physical infrastructure, Tourism*, and *Direct Action*. It should not be expected for one short paragraph to be exhaustive, nonetheless we strongly encourage a 'balanced' model of sector investment, which treats the dyads as holistic, synergistic systems for development - like twinned, mutually supportive trees.

> "If you can put the money into the creative core of each little community, it changes the vibration of everything."

Figure 7 Arts, Culture, and Tourism: Key Indicators of Success

Community quality of life:

- Placemaking/keeping, behavioral health, community narratives, and a new 'Hope Economy'.

Thriving live/work conditions for sector workers/participants:

- Sustainable, thriving careers readily available in the region for sector participants, with opportunities for upward mobility. Sector participants can benefit from career stability and safety nets, such as affordable health insurance.
- High levels of successful new entrepreneurship. Collaboration within the sector.
- RISE-identified projects/investments with similar or synergistic goals and strategies within the ACT sector can find points of collaboration, build relationships, and enhance regional impact and efficiency through cooperation, viewing each other as potential collaborators rather than competitors.

Collaboration with other sectors:

- Agri- and eco-tourism are prime targets for collaboration with the Working Lands sector. Potential collaborations with Allied Health present some of the most intriguing and compelling future possibilities in the fields of mental health, social prescription, and socio-emotional learning.

Regional impact:

- *Reach* - number of communities/individuals served, with emphasis on geographical scope and impact on underserved and isolated priority communities.
- *Replicability* - the potential for successful pilot projects to serve as a template for similar projects throughout the region and beyond.
- Tourist visitation and hotel occupancy rates (tracked by season), patrons and guests of events and other arts and culture activities.

Environmental sustainability:

- Waste generated by tourists and event goers, the carbon footprint of travelers, and damage to natural resources through overuse or creation of new sector infrastructure is kept with sustainable bounds through careful planning and regenerative practices.

Achievability

The goals outlined in this strategic report are as broad, multi-varied, and intertwined as the Arts, Culture, and Tourism Sector itself. However, it is the opinion of the Sector Table that all are highly achievable, due to the many strengths and opportunities present within the sector and region, including:

- Deep reserves of cultural/ecological assets within the region (universities, non-profits, parks, tribes, etc.)
- The desire for strong community/regional networks, and great potential to empower them with more investment.
- Shifting state priorities and a transition to economies of hope, transformation of rural narratives, grass-roots organization, and an emphasis on mental/physical health and community well-being.

Relevance and Alignment

The Arts, Culture, and Tourism Strategic Report aligns itself with California Jobs First and Redwood Region RISE strategies in the following ways:

- The foundational approach is *data-driven and ground-truthed*. A comprehensive assessment of the sector is the bedrock for the development of future strategies and for the evaluation of sector investments. Data assessments are also intended to be on-going and iterative, staying nimble and up to date as conditions in the sector shift.
- Strategies are focused on the *resilience* of the sector. As seen in the SWOT analysis, threats to the Arts, Culture, and Tourism Sector can not only be catastrophic, but sudden and unpredictable in their onset. Building collaborative networks and pre-emptive planning for future shocks are a necessary and prudent investment in the sector.
- Strategies are focused on *collaboration and collective effort*, both within the sector itself and in cross-cutting partnerships with other regional sectors. Isolation and disinvested rural resources are weaknesses of the sector, but the proactive, creative, and entrepreneurial spirit of the sector is one of its greatest strengths. Collaborative strategies employ one to address the other.
- Strategies are focused on *stewardship and sustainability*, not extraction and exploitation. The Redwood Region's economy has been focused on resource extraction for centuries, whether timber, fish, or water. A regional shift to creative placemaking and community-led tourism has the potential to center the transformational power of culture and nature to create healthy and vibrant places to visit and live.
- Strategies are based upon the foundational question: *Are people thriving, with hope for the future?* As also seen in the SWOT analysis, the sector has historically struggled with the standard of 'high-end jobs'. Strategies centered in entrepreneurship support, industry networking, advocacy, and creation of new career pathways are all formulated with the intent of addressing living conditions and opportunities for sector professionals. Meanwhile, an emphasis on creative placemaking, community leadership, and the employment of the sector in social health and innovation are the tools by which the sector can play its part in the growth of prosperous, flourishing, and conscientious communities throughout the Redwood Region.

> *"The precise role of the artist, then, is to illuminate that darkness, blaze roads through that vast forest, so that we will not, in all our doing, lose sight of its purpose, which is, after all, to make the world a more human dwelling place."*
>
> **– James Baldwin**

Example Projects

- A Hub that will serve as shelter and central orchestration in times of disaster and will include spaces and support for allied emergency programs, overnight lodging, environmental research and demo sites, workforce training in environmental sciences, TEK, wildfire management, construction, and other industries, bringing together both environmental and arts nonprofits.
- Creating enhanced arts, culture, and tourism experiences: Establish Redwood Region Branding as an "off-the-beaten-track" arts & culture destination and place to live, in addition to the well-known natural beauty. Align with "Visit California" branding strategies ('North of Ordinary') and pilot through Welcome Centers in Ukiah and Eureka for the Region.
- BIPOC Cultural Partnerships and Community Centers: Bring together key partners, BIPOC centered organizations, frontline community partners and allies to implement a local and regional research, training, workforce development, co-working, educational and cultural arts center. Foster intersectional strategies that include arts, health, agriculture, BIPOC leadership, social justice, and ecological restoration.

10 Year Timeline

Year 1

- Following the recommendation of the Sector Table and RGS, direct a sizable portion of first-year Catalyst funding ($300k-500k) to an RFP for a comprehensive sector landscape assessment.
- Fund administrative support for on-going sector networking and advocacy, collaboratively coordinated through local arts agencies, visitor centers, and colleges.
- Direct funding to facilitate local alignments with Visit California's regional marketing plan, emphasizing not only hub communities but gateway communities and smaller, isolated communities. Coordinate this effort through Welcome Centers in Ukiah and Eureka.
- Using Catalyst funding, create a diverse portfolio of smaller ($5k-40k) targeted investments intended to move projects and collaborative groups of projects in alignment with RISE and the Arts, Culture, and Tourism Sector's strategic goals, towards the next phase of obtaining more funding from other state, federal, or private sources.
- Concurrent with the execution of the landscape assessment, fund the creation of a sector datahub to maintain and disseminate data obtained from the landscape assessment, supplement through ongoing data-gathering and analysis, and track the success and development of Catalyst investments.

Year 2

- Comprehensive sector landscape assessment in progress.
- Continue development and implementation of the datahub. Procure additional sources of funding for ongoing operation.
- Continue to fund administrative support for on-going sector networking and advocacy. Procure additional sources of funding for future operations.
- Continue funding development of local alignments with Visit California's regional marketing plan. Procure additional sources of funding for future investment.
- Direct the most sizable portion of second-year Catalyst funding to expansion of the targeted investment portfolio.

Year 3

- Regional collaboration with Visit California, the sector network, and the datahub are all on-going.
- The datahub begins assessment of Year 1 Catalyst targeted investments. Results are reported back to the Sector Network to identify how additional assistance may be given and which strategies/projects have seen the most success.
- The datahub maintains and adds to the database created by the landscape assessment. This data is synthesized and disseminated as part of advocacy efforts, and is shared with the sector network, to assess and make recommendations on future developments in the sector.

Year 4

- Regional collaboration with Visit California, the sector network, and the datahub are all on-going.
- The datahub begins assessment of Year 2 Catalyst targeted investments. Results are reported back to the Sector Network to identify how additional assistance may be given and which strategies/projects have seen the most success.
- The datahub maintains and adds to the database created by the landscape assessment. This data is synthesized and disseminated as part of advocacy efforts, and is shared with the sector network, to assess and make recommendations on future developments in the sector.

Years 5-8

- Normal operations of regional marketing, the sector network, and the datahub continue. Check-ins with the Catalyst targeted investment portfolio continue, and annual updates on the state of the sector are issued.

Year 9

- Normal operations of regional marketing, the sector network, and the datahub continue. Check-ins with the Catalyst targeted investment portfolio continue, and annual updates on the state of the sector are issued.
- Begin major update to the landscape assessment.

Year 10

- Normal operations of regional marketing, the sector network, and the datahub continue. Check-ins with the Catalyst targeted investment portfolio continue, and annual updates on the state of the sector are issued.
- Conclude major update to the landscape assessment.

Humans of the Redwoods

Kyle on Del Norte's Ecotourism Potential, Young Adult Opportunities, and Local Naturalists Doing 'Rad Activism'

As an interpreter for Jedediah Smith State Park, Kyle Buchanan witnesses firsthand the importance of Del Norte's natural resources in the community's emotional and economic well being. As a young adult, he sees a lack of the sort of social spaces common to young adults in more populated areas, but has found a thriving naturalist community passionate about protecting Del Norte's most precious resources.

Youth In Crescent City

Kyle Buchanan first fell in love with Del Norte while on a road trip. Once he found a dream job interpreting for Jedediah Smith State Park, he left his hometown of Long Beach to move up to the much more remote Crescent City. Kyle spends his free time riding his bike, botanizing, birding, surfing, and

exploring all that Del Norte has to offer. As a young adult, he sees a lack of the sort of social spaces common to young adults in more populated areas. However, for him, it's not always about that.

"It is difficult to think about what there is in Crescent City for young people, because I feel like that's heavily embedded in what young people should be doing at a certain age. There's different forms of outdoor recreation and different forms of naturalizing in the outdoors, and sometimes that's not really perceived as a young person thing. But the young people here are all about it. And as long as people are happy, like myself, I think there's that for young people."

A Dangerous Road

The remoteness of Del Norte is a part of its appeal to Kyle, but also is a hindrance when it comes to transportation. Erosion caused by seasonal fires often leads to landslides that bottleneck the few roads in and out of Crescent City. Much of the region doesn't have reception which puts pressure on having a reliable vehicle that won't get stranded out in the backroads where Kyle often recreates.

"It's really difficult sometimes to get in and out of Crescent City. The landslides, fires, and all the construction that needs to happen afterwards definitely restricts transportation."

Ecotourism Opportunities

While its wilderness can make Del Norte difficult to navigate to and from, it's these natural resources that are the backbone of its tourism industry. Kyle sees a lot of economic potential by bolstering ecotourism opportunities like organized biking, kayaking, and backpacking tours similar to places like Moab, Utah.

"We could use more ecotourism businesses, where people really take advantage of what a beautiful area this is. I mean, we have redwoods, we have the Six Rivers National Forest, and coastal habitats just all within a 15 minute drive from each other."

Read Kyle's full story

Health and Caregiving Sector

Rationale

Unlike traded sectors driven by market demand, the primary challenge for the Health and Caregiving sector lies in attracting and retaining skilled workers to fulfill the region's health and social care needs. As discussed in Regional Plan Part 1, the region faces health provider shortages and, the projected need for caregivers and health professionals is exceptional.

The sector aligns well with High Road objectives, featuring minimal to moderate greenhouse gas (GHG) emissions and supporting industries that offer a significant number of family-sustaining jobs. However, the wages in the Social Assistance sector, which includes essential services like childcare, remain low.

Figure 8 Health and Caregiving Industries Performance

	Employment	LQ	% Change in LQ	% Job Growth	Job-to-Job Multiplier	% Family Sustaining Job	GHG per Job (kq)	
Hospitals (622)	3,999	1.6	12%	9%	1.7	76%	2,034	Specialization & Resilience
Social Assistance (624)	10,739	1.6	8%	29%	1.1	4%	177	
Ambulatory Health Care Services (621)	5,865	0.8	-6%	7%	1.4	61%	228	Other Industries
Nursing and Residential Care Facilities (623)	2,247	1.1	-2%	-2%	1.3	30%	419	
Health and Personal Care Stores (446)	946	1.0	-2%	-10%	1.3	18%	58	

4th Quartile (Highest Performing) | 3rd Quartile | 2nd Quartile | 1st Quartile (Lowest Performing)

Note. Data sourced from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

The employment growth outlook for these industries is projected to be faster than average, reflecting in large part the evolving needs of an aging population. The primary constraint on sector employment growth is anecdotally, the region's capacity to attract, retain, and train skilled providers.

> "Community Health Outreach Workers (CHOW) and wellness coaches are an on-ramp to more opportunities in the medical profession. CHOWs and wellness coaches can fill in workforce gaps."

Industry-Specific Assets

The Health and Caregiving sector includes a wide range of industries and services dedicated to promoting, maintaining, and restoring the health and well-being of community members. Within the RRRISE region, a variety of ways exist by which to characterize these sectors: (1) The breadth of their industry concentrations and capacities for employment; (2) The ways in which the industries do or do not meet the basic infrastructure needs that lead to economically prosperous communities; and (3) Their impact on health outcomes and health inequities in the region. The Health and Caregiving sector encompasses several industries across the Redwood Region: ambulatory and acute medical care, behavioral health care,

dental care, allied medical care, caregiving, and social care sectors. The region has durable organizations and collaboratives that actively seek solution-oriented approaches while trying to continually adjust to population needs and economic challenges.

"We need more specialty doctors in the area, maybe we can incentivize them to relocate here in some way. We also don't have urgent care here so we must go to the hospital to be seen if we don't want to wait months for a doctor's appointment."

Watch the Health and Caregiving Sector Strategy Video

Vision

Redwood Region RISE Health and Caregiving Sector Table is committed to working with the diverse and dedicated voices in our communities to create a 10-year plan that will align with our core values and respond to the diverse regional needs by:

- Treating health and caregiving as essential infrastructure for economic prosperity;
- Addressing the acute shortages of personnel and a need for a diversified labor force in health and caregiving fields, with both long- and short-term workforce pipeline strategies;
- Recommending economic investments that improve health equity and social determinants of health (or social drivers of health-SDOH) outcomes which will lead to a healthier region;
- Looking at cross sector opportunities that will provide essential foundations for economic prosperity and improved health outcomes.

These investments will support the foundation of a sustainable regional Health & Caregiving sector, that includes a wide range of industries, including:

- Healthcare Services (i.e., Ambulatory Medicine, Acute Medicine, Dental Care, Behavioral Health, etc.);
- Allied Health and Support Services (i.e., PT, RT, OT, Imaging, Lab Tech, Pharmacy, EMS, etc.);
- Caregiving Services (i.e., childcare, eldercare, disabilities support services, etc.).

This work will improve economic prosperity and health outcomes for ALL who live in the Redwood Region.

Background

Health and Caregiving includes a wide range of services dedicated to promoting, maintaining, and restoring the health and wellbeing of community members. In considering Schroeder's Social Determinants of Health (a framework that suggests that health disparities and outcomes are shaped not only by access to healthcare services but also by broader social, economic, and environmental factors) it makes sense to employ an aligned approach to these complementary industry sectors. The current state of the Health and Caregiving sectors in the RRRISE region can be characterized in a variety of ways: (1) By examining industry composition and opportunities for employment; (2) By the ways in which the industries do or do not meet the basic infrastructure needs that lead to economically prosperous communities; or (3) Their impact on health outcomes and health inequities in the region. A synopsis of each of these defining characteristics is provided below.

Industry Occupation Opportunities

Despite the significant and evident challenges around access to health and caregiving services, Healthcare and Social Assistance are two of the largest industries by employment in the Redwood Region and represent a larger share of regional employment when compared to the state average. Employment concentration and change since 2001 has demonstrated a 14.6% increase for Health Care and Social Assistance (data current as of 2022). Despite the rise in employment concentration, wages for these industries remain below the state average. Within the industries there's a clear shortage of workforce in key roles, some of which are high-road occupations such as registered nurses, nurse practitioners, licensed behavioral health and social work roles, and social/healthcare service managers. While shortages in high-road occupations are important to address, so too are other key workforce roles in the industries that face current and projected shortages but have lower annual median wages. These roles include: home health and personal care aids, medical assistants, nursing assistants, dental assistants, peer support specialists, substance use/behavioral health counselors, and other healthcare support workers.

Health and Caregiving as Infrastructure

As stated above, access to health and caregiving services is challenging in the Redwood Region. Lack of adequate access to these key pieces of infrastructure leads to increased morbidity and mortality, difficulty in the management of chronic conditions, inadequate access to preventative care, productivity loss and economic inequality, and overall undermining of economic development and growth. All four counties in the Redwood Region meet the criteria for *Health Professional Shortage Areas (HPSA)* for primary care, mental health, and dental care. Access to caregiving and social services is harder to quantify from existing data sets, though anecdotally it's identified as a challenge in the Redwood Region. Data from Cal HHS does indicate that the number of licensed day care slots per 1,000 children in the North Bay region (which includes the Redwood Region counties) are consistently below the state average rate. In addition to limited access, affordability of services also is a significant issue. On the whole, costs of healthcare and childcare as a proportion of total costs of living in the Redwood Region exceed state averages.

Findings from RRRISE's qualitative research and listening sessions echo the data, with many respondents indicating lack of adequate access to medical and childcare as significant gaps in the regional infrastructure that undermine economic prosperity.

> "The fact that there isn't a dentist or only one is crazy to me. And then it took most of the year that I first got here to get mental health help. That's absurd. And unfortunate. Really unfortunate because there's such a need up here, such a huge need..."

Lack of access and affordability of services is influenced by policies and systems that don't reflect the needs of rural regions. In a 2019 article from the health policy research journal, Health Affairs, Probst, Eberth, and Crouch seek to understand why rural populations disproportionately suffer from adverse health outcomes. Per their research, they define a concept called *structural urbanism* as a "bias towards large population centers stemming from three factors: a market orientation in healthcare, which necessitates a critical mass of paying customers to make services viable; a public health focus on changing outcomes at the population level, which differently allocates funding towards large populations centers; and the innate inefficiencies of low-population and remote settings, in which even equal funding can never translate into equitable funding." They suggest that these biases disadvantage rural health systems leading to increased health disparities and compromised care continuums in rural regions. These systemic inequities likely have significant influence in the overall viability of the healthcare system in our rural geographic landscape.

Health Outcomes and Inequities

Per the Public Health Analysis report for Redwood Region RISE, authored by CCRP, RRRISE communities experience "significant health disparities when compared to California as a whole. These disparities include elevated premature death rates, disability rates, and behavioral risk factors. Key determinants contributing to these disparities include high rates of tobacco use, substance use, and mental health challenges, leading to consequences such as lung cancer, respiratory disease, motor vehicle deaths, drug-induced liver disease, and suicide." Additionally, disability rates are significantly higher than state averages with mental health substance use-related issues as the leading cause of disability among young adults aged 34 and younger. The region also experiences adverse outcomes related to social drivers of health (SDOH), including high rates of poverty, homelessness, social isolation, adverse childhood experiences (ACES), and low educational attainment. Specific communities in the Redwood Region that have been marginalized by systemic inequities related to race, ethnicity, poverty, disability, lack of access to community resources, gender, sexuality, geographic, and other factors (previously characterized as "disinvested communities") experience more pronounced health disparities and inequitable outcomes as compared to their counterparts. These social inequities in health and caregiving compound the existing health disparities in the region, creating a complex web of challenges that require comprehensive, equity-focused interventions to address effectively.

> "Cultural concepts around how we talk about health and wellness. A culture of health and cultural humility. Includes the workforce, training, undoing assumptions about certain groups."

Industries and Occupations in the Sector

The Health and Caregiving Sector Table encompasses several industry clusters across the Redwood Region including ambulatory and acute medical care, behavioral health care, dental care, allied medical care, caregiving (childcare, senior care, care for individuals with disabilities), and social care sectors.

Based on data reviewed, the sector table also identified occupations which would serve as a priority focus for strategy recommendations. These roles are occupations that have significant current and projected workforce shortages in healthcare, behavioral health, dental, caregiving, and social care fields. It's important to note, while some of the positions in focus meet the "high-road" job criteria, other critical roles may be lower paying but still essential in sustaining local health and caregiving systems.

Sector Table Organizing Framework

To develop a comprehensive approach to table recommendations, North Coast Health Improvement and Information Network (NCHIIN) and table participants agreed to an organizing framework to help capture the scope and depth of proposed work. As mentioned above, this includes organization around three key focus areas for the health and caregiving sectors: (1) Increasing the Workforce Pipeline; (2) Supporting Health and Caregiving as Essential Infrastructure in Economic Prosperity; and (3) Improving Health Equity and Addressing Social Drivers of Health. Each of the table's workgroups is organized around one of the focus areas above and is responsible for refining their respective objective, identifying strategies that address key issues within their focus area, and the tables shared outcomes.

Figure 9 Health and Caregiving Sector Framing

Strategic Approaches for Economic Prosperity

Developing comprehensive strategies for industries as broad as health and caregiving is a challenging endeavor, particularly when faced with the diversity of partners, industry specific needs, compressed timelines, and the diverse geographic participation of the region. Additionally, NCHIIN team and table participants wrestled with not re-treading existing work and ensuring alignment with ongoing workforce and economic development initiatives. Significant effort was invested in daylighting recent relevant economic development and workforce efforts (i.e., the North Coast Health Leadership's team's behavioral health assessment) to better understand the current state of the field. Even with focused and intentional efforts, we are certain our work has limitations and our recommendations will need to be continually revisited as implementation of the Regional Plan takes shape.

Industry SWOT

During the April 29th in-person convening, 25 sector table members completed a SWOT for the regional caregiving and healthcare industries. The notes from this session were transcribed and shared at subsequent workgroup meetings, giving additional opportunity for reflection and refinement. Participants signified the health and caregiving sector industries shared motivation around collaboration and collective impact as strengths, as well as shared competencies about SDOH, ACES, trauma, and the importance of prevention. Structural and systemic challenges such as lack of adequate housing, transportation, and structural urbanism were identified, along with labor shortages and organizations working in isolation. The sector table pointed to emerging assets in our region (the Cal Poly Humboldt/College of the Redwoods Health Workforce Training Hub) and other workforce initiatives, as well as flow of funding opportunities through CalAIM, CYBHI, and other state initiatives as particular opportunities for our industry sector. Threats identified include unfunded state mandates impacting the sector and other policies that impede rural success, rising elder populations and other populations with high needs, and categorical funding as threats to the health and caregiving industries. The full SWOT is provided below.

"It would also be nice if we [caregivers] were compensated for driving to the physicians. I come from out of county to take care of her, but I don't get any reimbursement for that. It's kind of hard, especially since the wage is so low."

Figure 10 Health and Caregiving Sector SWOT

Strengths

- Passion and Commitment of labor force
- Educational/training opportunities are present in the region
- Community Collective Impactive competency
- Cross-organization collaborative culture
- Shared language and awareness of issues like ACES, trauma, early interventions
- Variety of service providers in the caregiving/social care space

Weaknesses

- Housing access - impacts both the health and caregiving industries
- Low Pay - particularly present in social care/caregiving, but also in key roles in the healthcare industry
- Access to basic services that allow basic needs being met is poor (dental, behavioral health, some medical, housing, etc.).
- Ruralness/structural urbanism - rural healthcare systems don't thrive in the competitive/capitalist structures that allow urban systems to do well; Policies don't uplift rural success
- Poverty - impacts health, well being, attainment of equitable health outcomes
- Variety of resources (social services) but not well connected; folks operating in silos
- Labor shortages - both industries
- CalAIM underutilized in our region
- Services don't focus on the whole person
- High acuity populations
- Services often delivered at cost centers (jails, hospitals, acute psychiatric facilities, etc.). Not enough opportunity for earlier intervention and access to services
- Prevention and early intervention under prioritized and/or undervalued
- Transportation infrastructure - impacts the ability of labor force to participate in some roles and impacts the ability of residents to access services
- Access to workforce pipelines particularly K-12 is inequitable - available in some districts and not others. May be easier for kids with privilege to access.
- Competing parallel processes impacts collective outcomes
- Health care access is abysmal
- Childcare access is out of reach for many working-class families
- Community transitions of care (from jail to release; from hospital to home; from higher acuity services to lower acuity services) are weak

Opportunities

- Variety of dollars that can be leveraged right now to focus on prevention and early intervention (Community Schools, FFPSA, CalAIM, CYBHI, etc.)
- Additional opportunities to expand access to training
- Training facilities being built that can meet local demand (Cal Poly Hub; efforts underway in Lake/Mendocino through Mendocino Community College)
- Opportunity for aligned or regional recruiting for key healthcare positions/roles
- The foundational knowledge and awareness of ACES/trauma can now be leveraged for collective action (moving from awareness to action)
- Elders can be caregivers for people with disabilities for extra income

Threats

- Lack of funding in certain areas or siloed funding makes sustaining specific service streams challenging (particularly true in social care industries)
- Policies that are an impediment to rural success (i.e., unfunded mandates from the state that are difficult to employ in rural)
- Low income individuals want to join the labor force but it compromises their access to social service or other safety net benefits
- Challenges regarding clinical licensing in California creates limitations around recruitment
- State unfunded mandates for acute care institutions (hospitals) - retrofit
- State budget reductions are going to impact programs that address prevention and SDOH
- Rising elderly population and populations with disabilities will place more need on the system

Health and Caregiving Sector Strategies

The NCHIIN team wishes to extend its deep gratitude for the Health and Caregiving Sector Table participants who have dedicated countless hours to the development of these strategy recommendations. Their vision, wisdom, insights, and guidance will help positively impact the future of health and caregiving industries in our region. Contributors to these strategies are listed in Appendix A.

Strategy 1: Determine How to Best Address the Limited Access to Healthcare and Caregiving Services in our Redwood Region

Key Components and Specific Objectives

1 Invest in Additional Regional Workforce Assessments Focusing on Priority Occupations to Fully Understand Workforce Needs

a. Justification: There are often limitations with available workforce data for our region (lags, lack of granularity, aggregating our data with other regions, etc.). Investing in assessment and aligned strategies might better guide strategic approaches to future workforce initiatives.

b. Limitations: There's sensitivity in the sector about analysis paralysis and redundant assessment processes. Once assessments are completed, actional next steps and shared accountability to action and progressing relevant strategies must accompany the assessment work.

c. Timeline: Near Term (1-3 years)

d. Measurable Benchmarks: Identification of priority workforce areas for additional assessment, hiring of contractors/evaluators, completion of assessment.

e. Relevant and Existing Projects: North Coast Health Leadership Team Behavioral Health Assessment (Existing Project)

f. Alignment: Aligns with RRRISE focus on high-road jobs for specific occupations, assessment should also focus on equitable representation in the workforce.

2 Cultivate, Maximize, and Expand Workforce Pipeline Programs

a. Justification: Several workforce pipeline programs exist (particularly pertaining to healthcare workforce development) in the RRRISE region, but more coordination and maximization of impact across programs is important. Additionally, adequate and equitable representation of students and priority communities in workforce development programs should also be prioritized.

b. Limitations: Pipeline programs are important, but direct service providers who might provide onsite mentorship, training, and workforce experience face limited capacity to serve as partners in workforce pipeline programs. Categorical funding for workforce programs may create limitations on occupations of focus or opportunities for alignment and coordination.

c. Timeline: Midterm (4-7 years)

d. Relevant and Existing Programs: Redwood Coast K-16 Workforce Pathways Pipelines (Existing), K'ima:w Medical Center Workforce Pipeline Program (Existing), Smart Workforce Center teen job training programs (Identified in RRRISE Project List), New building for Allied Health Services at Mendocino College (RRRISE Project List)

e. Alignment: Aligns with RRRISE focus on high-road jobs for specific occupations, assessment should also focus on equitable representation in the workforce.

3 Explore Coordinated Recruitment and Retention Strategies for Maximum Impact

a. Justification: While individual organizations will develop their own recruitment and retention strategies tailored to their specific workforce needs, we should consider what regional systems and policies could be implemented to make the RRRISE region a highly attractive location for health and caregiving sector employment.

b. Limitations: Competitive issues and wage disparities exist within our sector when competing for candidates from a recruiting perspective. These are true and existing constraints to advancing regional work.

c. Timeline: Midterm (4-7 years)

d. Relevant and Existing Programs: Lake County Healthcare Workforce Summit (Existing), North Coast Health Leadership Team Behavioral Health Assessment (Existing), Work of local workforce development boards (Existing)

e. Alignment: Aligns with RRRISE focus on high-road jobs for specific occupations, assessment should also focus on equitable representation in the workforce.

Case Study

The Del Norte County and Tribal Lands Health Career Pathways Program has been focused on a grow-your-own medical workforce approach to help address the shortage of healthcare workers by encouraging youth to consider healthcare careers, cultivating their interest, and helping them develop professional skills that they can utilize in their communities. This approach is based on the idea that health professionals are more likely to stay and work in the community they were raised in. To date, this work has included funding a health career teacher at Del Norte High School and adding a Science Based Health Pathway to the curriculum. The program also helped to reinstate a partnership between College of the Redwoods and Sutter Coast Hospital to reinstate the Licensed Vocational Nurse (LVN) to Registered Nurse (RN) bridge program. These efforts were supported through the California Endowment's Building Healthy Community Program.

More information: https://ccrp.humboldt.edu/health-career-pathways-0

4 Socialize and Promote Telehealth Adoption

a. Justification: Expansion of telehealth services has increased significantly in recent years. In rural and geographically isolated communities (such as those represented in RRRISE), telehealth may provide an important solution in accessing medical and behavioral health resources. While these services are currently available, more work must be done in the deployment of telehealth to socialize the concept among patients, providers, and healthcare organizations. Additionally, efforts must be undertaken to ensure that telehealth services are enmeshed with other members of a patient/client's care team.

b. Limitations: Payment and provision of telehealth services can be complex (especially in FQHC and CHC settings), access to key infrastructure (broadband), and equipment (computers, smart devices) might impose limitations for engagement in telehealth services for patients/clients.

c. Timeline: Near to Midterm (1-7 years)

d. Measurable Benchmarks: Improvement in penetration and utilization of telehealth services over baseline.

e. Relevant and Existing Programs: Work to develop broadband infrastructure in RRRISE footprint (RRRISE Project list).

f. Alignment: Telehealth supports climate neutrality and offsetting carbon footprint by reducing impacts from both patient and provider travel (including providers that typically travel from outside the Region).

5 Support Childcare Stabilization Initiatives

a. Justification: In response to the pandemic, Humboldt County partners leveraged American Rescue Plan Act (ARPA) funds to establish a cross-sector collaborative to provide financial support to child care providers and family members in Humboldt County, recognizing that child care provides a healthy foundation for children alongside reliable caregiving services for working parents. The Health and Caregiving Sector Table proposes learning from the Humboldt County model and exploring how it might be scaled in other communities.

b. Limitations: Funding limitation

c. Timeline: Midterm- Long Term (4-10 years)

d. Measurable Benchmarks: Sustained services through Humboldt County Child Care Stabilization initiative; evidence of discovery and expansion for other RRRISE areas.

e. Relevant and Existing Programs: Humboldt County Child Care Stabilization Fund (Existing).

f. Alignment: Supports equity as it funds lower income care providers and supports job creation in both the service delivery (caregivers) and in the service (enabling families to participate in the workforce because adequate childcare is available).

"Our region has desirable and vibrant communities. Doctors stay and practice here because they are called to working with Rural and Tribal communities. We need to emphasize the purpose and passion of the work when recruiting."

Strategy 2: Support and Expand Capacity

Key Components and Specific Objectives

1 Explore and Advance Hub Models

a. Justification: Hub models can provide shared infrastructure and improved organizational efficiency through shared services such as workforce development/deployment and training, administrative services (billing, contracting), and shared technical infrastructure. Studying the feasibility and scope of hub models in the RRRISE region, may provide critical infrastructure that will support more efficient delivery of services, provide a common forum to work on system interventions, and expand administrative capacity of organizations to participate in new funding streams such as CalAIM, CYBHI, etc.

b. Limitations: Yet to be determined

c. Timeline: Feasibility-Near Term (1-3 years); Implementation- Midterm

d. Relevant and Existing Programs: Existing hub models in California and nationally, HIE and CIE infrastructure (indicated on the RRRISE project list) are assets to build from.

e. Alignment: Indeterminate

2 Invest in Regional Capacity-Building Resources

a. Justification: In addition to hub infrastructure, many health and caregiving organizations would benefit from better access to capacity building resources. Examples of such resources include, low-interest revolving loan programs, access to low-cost grant writing and strategic planning services, or other shared infrastructure programs (CIE, HIE, etc.).

b. Limitations: On-going funding sources to make sure these services are available at low to no cost.

c. Timeline: Midterm (4-7 years)

d. Relevant and Existing Programs: From the CCRP Project List: Regional HIE/CIE programs, Improving access to the rural accelerator grant, establishment of a regional loan program.

e. Alignment: Indeterminate

3 Require Investment as Part of Large-Scale Development Processes

a. Justification: As new large-scale industry initiatives enter into the RRRISE landscape (Wind Farms, Noyo Harbor project, etc.), community benefit investments should be included as part of RFP and RFA processes. While these projects bring many job opportunities to our region, there may also be an impact on the already over-resourced health and caregiving systems. The Health and Caregiving Sector Table recommends studying the palatability of health and caregiving community benefit requirements for large projects and developing a strategic process for bringing this work to fruition.

b. Limitations: Unknown

c. Timeline: Feasibility; Near-Term (1-3 years); Implementation Midterm (4-7 years)

d. Relevant and Existing Programs: Models in California for Housing Trusts, Wellness Trusts, etc. might serve as fiscal intermediary examples for community wellness.

e. Alignment: Indeterminate

Strategy 3: Address System and Policy Issues

Key Components and Specific Objectives

1 Invest in Backbone Support and Capacity Expansion for Existing Collaboratives Addressing Social Determinants of Health and Health Equity

a. Justification: A number of collective impact, SDOH, and health equity collaboratives exist in our region, but even with intentionality, sometimes work in silos. Rather than create redundant processes, the sector table recommends developing a better understanding of ongoing initiatives in the region that address health equity and look for opportunities to scale scope and impact. This would include working with community common tables that are advancing health equity efforts (Live Well Humboldt, Accountable Communities for Health, Family First Prevention Act Cross-Systems Collaborative, etc.) to expand reach and impact of these existing collaboratives. Intentional effort must be brought forward to deepen the collaborative practices of these tables and lean into shared accountability.

b. Limitations: There may not be equitable distribution of collective impact initiatives in all Redwood Region counties. Existing initiatives may have specific focus areas and/or categorical funding that could impede expansion/alignment.

c. Timeline: Near-term (1-3 Years)

d. Relevant and Existing Programs: Live Well Humboldt (existing), Accountable Communities for Health (Humboldt, Lake, Mendocino Counties; Existing), FFPSA collaborative (existing), RANCHO Health Equity work (Existing)

e. Alignment: Focus on priority populations.

2 Direct Dedicated Investment to Priority Communities to Provide Community-Designed and Driven Solutions to Address SDOH

a. Justification: Communities that have inequitable health outcomes should be supported and resourced to drive solutions that are culturally responsive to their needs and cultural practices. Directed Community Benefit investment dollars (per the previous recommendation) may serve as a revenue source that can also be leveraged for this strategy.

b. Limitations: To accomplish this there needs to be better intentionality and inclusion of key community members, Tribal organizations, etc.

c. Timeline: Midterm (4-7 years)

d. Relevant and Existing Programs: Black Humboldt's Black Leadership Fellowship Program (RRRISE Project Inventory)

e. Alignment: Focus on priority populations.

3 Invest in Data and System Analysis to Support Future Planning

a. Justification: There are often limitations with available data for our region (lags, lack of granularity, aggregating our data with other regions, etc.). Investing in assessment and aligned strategies might better guide strategic approaches to future sector initiatives.

b. Limitations: Sensitivity to over assessment being an impediment to work being accomplished, following from assessment there must be a strategic plan to help guide implementation of strategies and clear investment in accomplishment and driving work forward.

c. Timeline: Near-term (1-3 years)

d. Relevant and Existing Programs: Behavioral Health Workforce Assessment (Existing)

e. Alignment: Indeterminate

4 Invest in Rural Policy Advocacy to Advance Solutions that are Responsive to our Rural Region

a. Justification: Many policies that are set are centered in the urban experience and create unintended consequences for rural communities and partners like those in the Redwood Region footprint. The sector table proposes a rural policy platform and advocacy training and support for policies that address structural urbanism and impede rural success in the health and caregiving sectors.

b. Limitations: Some participants can't engage in lobbying or similar work due to non-profit status. There will need to be clear commitments around who can advance legislative and advocacy work on behalf of the sector.

c. Timeline: Near-term (1-3 years)

d. Relevant and Existing Programs: Several sector table members have existing policy and legislative expertise, may look at individual county policy platforms to look for alignment.

e. Alignment: Increasing advocacy for rural areas supports equity by centering the needs of underserved rural populations and communities

"I'm gonna say push out some broadband to more rural areas so we get health access through telehealth."

Figure 11 Health and Caregiving Alignment with Key Program Objectives

Job Quality and Access	Equity	Climate
♦ Address workforce shortages in key healthcare and caregiving positions through better **alignment and sharing of recruitment and retention best practices**, investment in rural workforce data, and advancing rural advocacy for policy changes. • Create a regional clearinghouse to track scholarship and incentive opportunities, support peer-to-peer and mentorship relationships, and improve access to workforce training and pipeline programs across different educational stages. ♦ **Cultivate, maximize, and expand workforce pipeline programs**, particularly in healthcare: • Better coordination, ensure equitable representation, and address the limitations of current programs. ♦ Recognize that some critical roles in the Health and Caregiving Sector **may not meet the "high-road" job criteria**, but are still vital to sustaining local health and caregiving systems. ♦ **Invest in training opportunities in the region:** • Build local facilities to meet demand and leverage existing knowledge in trauma and prevention for collective action.	♦ **Leverage existing community projects** to ensure that the needs and interests of priority communities are integrated into broader regional efforts. • Better **alignment and scaling** of ongoing initiatives in the region to avoid redundancy and to strengthen collaborative practices across different groups working on health equity. • Target health equity and SDOH, ensuring that priority communities benefit from regional economic growth. ♦ **Advocate for rural policies** that address structural urbanism and healthcare access, and support the unique needs of rural communities, which often face different challenges in the health and caregiving sectors. ♦ **Research and increase investment in prevention and upstream interventions**, particularly those that can positively impact SDOH and health equity. ♦ **Support ongoing community engagement with priority communities** throughout the implementation process, ensuring that their needs and interests are consistently represented.	♦ **Develop sustainable infrastructure:** • Implement energy-efficient designs and sustainable materials in health and caregiving facilities to reduce carbon footprints. • Promote the use of renewable energy sources (e.g., solar, wind) within healthcare and caregiving infrastructures to lower greenhouse gas emissions. ♦ Ensure that health and caregiving facilities are built or retrofitted to **withstand extreme weather events** and other climate-related disruptions. ♦ **Develop robust emergency response plans** for health and caregiving services to maintain continuity during climate-induced disasters, protecting community health. ♦ **Implement comprehensive waste management strategies**, including recycling and proper disposal of medical and caregiving waste to minimize environmental contamination. ♦ Encourage/incentive the procurement of **eco-friendly medical supplies** and caregiving products to reduce the overall environmental impact of these sectors. ♦ **Incorporate environmental health evaluations into public health initiatives** to identify and mitigate pollution, poor air quality, and other environmental hazards that affect community health. ♦ **Invest in green spaces and promote active transportation** (e.g., walking, cycling) to enhance environmental quality and public health. ♦ Advocate for **holistic regional and state policies** that promote sustainable economic growth while safeguarding environmental health, particularly in rural and underserved areas.

Job Quality and Access	Equity	Climate
♦ Expand access to healthcare and caregiving services in underserved and priority communities to **address disparities** and improve overall health outcomes. ♦ Ensure **recruitment strategies are inclusive**, particularly focused on priority communities to create a diverse and representative workforce. ♦ Provide **equitable access to training and education programs** to close workforce gaps and ensure all community members (specifically priority communities) have opportunities for career advancement. ♦ Implement strategies to make healthcare and caregiving services more affordable, **reducing financial barriers for priority populations.** • Address challenges like housing and limited public transportation, which are impacting the ability for people (specifically priority communities) to work in the Health and Caregiving Sector (among others). ♦ **Prevent (priority) worker displacement:** • Create **high-quality, family-sustaining positions** that offer healthcare, retirement benefits, and career advancement opportunities, and supportive and safe working conditions (especially in rural and remote areas). • Ensure **job stability and pathways** for career growth within the Sector. ♦ Support community-designed and driven solutions that are culturally responsive and focused on SDOH to **allocate resources directly to communities facing inequitable health outcomes.** • Leverage **community benefit investment dollars** to fund these efforts. • Focus on **improving SDOH** such as housing, transportation, education, and economic opportunities to enhance the overall well-being of priority communities. ♦ **Address low pay, particularly in social care and caregiving roles**, which are essential but often undercompensated. Conduct collective wage studies and ensure that roles in rural areas are appealing through housing affordability and other social cohesion factors. ♦ **Increase connectivity and engagement** among priority communities and Health and Caregiving organizations in the region: • Actively involve priority communities in the planning and implementation of health and caregiving strategies to ensure their needs and interests are consistently represented. • Build strong partnerships with local organizations and community leaders to address public health needs collaboratively and effectively.		

Job Quality and Access	Equity	Climate
	♦ Develop programs to **mitigate the health impacts of climate change**, such as heat-related illnesses, respiratory issues from poor air quality, and vector-borne diseases, particularly in priority (vulnerable) communities. ♦ Ensure that environmental policies and health initiatives do not disproportionately impact priority communities and actively work to **rectify existing inequities**.	

Cross-Cutting Strategy Recommendations

The Health and Caregiving Sector Table has identified several cross-cutting recommendations that will involve the participation of all sector tables and RRRISE participants.

1. Review housing capacity and accessibility in the Redwood Region footprint to understand housing infrastructure's impact on the vitality of our focus industry sectors and priority communities as a cross-cutting strategy. Access to adequate housing presents challenges for health and caregiving workforces collectively in our region.
2. Recognize rural capacity for healthcare and caregiving services as a cross-cutting strategy that intersects with other industry sectors and priority communities. If our region has inadequate access to health and caregiving services, it's unlikely we can bring in high-road economic opportunities and occupations to our communities. Adequate investment in stabilizing and growing this sector will be crucial for the continued growth of our communities.
3. Invest in broadband infrastructure. Broadband infrastructure is vital to the delivery of equitable telehealth services but also impacts the other sector focus areas. Supporting access to reliable, high-speed, and affordable internet is vital to economic development in our region.
4. Cultivate the Redwood Region as desirable and vibrant communities where individuals seek to live, work, and play. In order to recruit and retain workforce (across all industry sectors), our communities must provide the necessary infrastructure, social cohesion, economic opportunities, job opportunities, and cultural desirability that make the region a vibrant place to live.

"Better and more housing and transportation. More docs and specialists, a mobile health unit for dental treatments and physical diagnosis."

Figure 12 Health and Caregiving: Key Indicators of Success

- Convening of cross-sector partners to develop sector policy platform, establishment of policy platform, meetings with legislative leaders.
- Development of priority analysis areas (workforce, prevention investments, composition of health and caregiving systems), RFP launch, completion of analysis work.
- Identification of health equity or SDOH priority areas, identification of partnering communities, evidence of investment.
- Asset mapping of specific collaborative SDOH and health equity efforts in the region, Evidence of cross-collaborative convening and alignment, investment in backbone support of collaboratives.
- Additional exploration and refinement of top capacity building strategies, feasibility studies to assess the likelihood of strategy implementation, sustainability, and success, rates of utilization once live.
- Completion of a hub feasibility study for RRRISE communities, solicitation of pilot and planning funds, evidence of implementation.
- Increased number of pipeline programs over baseline, increased participation in pipeline programs over baseline, evidence of coordinated and regional planning across pipeline programs.

Example Projects

- A feasibility study to understand motivations and perceptions of health and caregiving community benefit investments to strengthen local infrastructure. The study would examine existing models, evaluate actor buy-in, and begin to socialize the concept among key partners.
- Evaluate and advance Hub Models in RRRISE territories: conduct an assessment of existing hubs, applicability in the rural setting, core service use cases, assessment of participants, and proposed fee structures. In coordination with the Arts, Culture, and Tourism (ACT) Table, this assessment would also explore use cases about how a hub might provide pathways to job opportunities for ACT workers who are interested in joining the health and caregiving workforce in paraprofessional roles.

10 Year Timeline

Near-Term (1-3 years)

1. **Invest in additional regional workforce assessments**
   - Identify priority workforce areas for assessment
   - Hire contractors/evaluators
   - Complete assessments
2. **Explore and advance hub models (feasibility study)**
   - Study the feasibility and scope of hub models in the RRRISE region

3. **Invest in backbone support for existing collaboratives**
   - Develop understanding of ongoing health equity initiatives
   - Expand reach and impact of existing collaboratives
4. **Invest in data and system analysis**
   - Conduct assessments to guide future sector initiatives
   - Develop strategic plans based on assessment results
5. **Invest in rural policy advocacy**
   - Develop a rural policy platform
   - Provide advocacy training and support

Midterm (4-7 years)

1. **Cultivate, maximize, and expand workforce pipeline programs**
   - Coordinate existing programs
   - Ensure equitable representation in programs
   - Address limitations of current programs
2. **Explore coordinated recruitment and retention strategies**
   - Develop regional systems and policies to make RRRISE region attractive for health and caregiving sector workers
3. **Implement hub models (based on feasibility study results)**
4. **Invest in regional capacity-building resources**
   - Establish low-interest revolving loan programs
   - Provide access to low-cost grant writing and strategic planning services
   - Implement shared infrastructure programs (CIE, HIE, etc.)
5. **Require investment as part of large-scale development processes**
   - Implement community benefit requirements for large projects
6. **Direct dedicated investment to priority communities**
   - Support community-designed and driven solutions to address social determinants of health
7. **Continue telehealth adoption efforts**

Long-Term (8-10 years)

1. **Support childcare stabilization initiatives**
   - Sustain services through Humboldt County Child Care Stabilization initiative
   - Expand to other RRRISE areas
2. **Ongoing implementation and refinement of all initiated strategies**
3. **Evaluate impact of implemented strategies and adjust as needed**

- **Continuous/Cross-Cutting Strategies**
  1. **Review housing capacity and accessibility in the Redwood Region**
  2. **Recognize and address rural capacity for healthcare and caregiving services**
  3. **Invest in broadband infrastructure**
  4. **Cultivate the Redwood Region as desirable and vibrant communities**
  5. **Focus on job quality, equity, and climate considerations in all strategies**

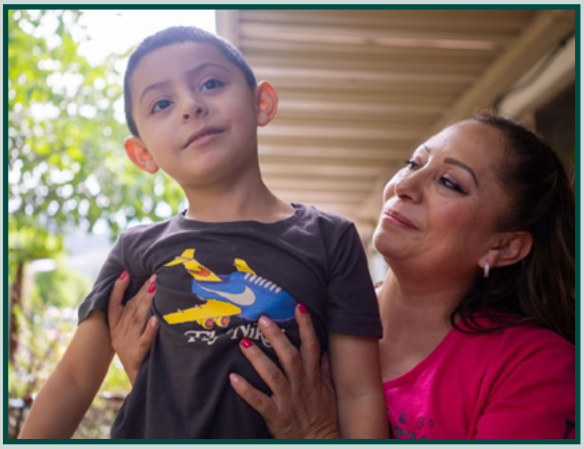
Last Words

Developing a comprehensive set of strategies across a diversity of partners in a compressed time frame has its limitations. NCHIIN and Sector Table participants put forward a good-faith effort to support a comprehensive set of strategies that will drive towards our proposed outcomes of supporting a thriving health and caregiving infrastructure that supports equitable health outcomes for all. We approached the task with the intention of building on existing efforts and leveraging existing assets, with a clear lens on the needs of the sector and individuals it serves. We would like to offer the above recommended portfolio of strategies with the intention it was created: responsive, flexible, robust, but likely imperfect. Given this, the sector table sees the strategies as a foundational activity from which our sector can iterate as policies, the environment, and other factors evolve.

Further, the Sector Table has recognized that strategy recommendations for Roadmap inclusion is not enough. Without dedicated resources and active stewardship for such broad collective impact strategies, the work is unlikely to move forward. We respectfully request continued financial investment in the advancement of the strategies recommended as well as deployment of shared accountability measures to ensure active progress is made on our shared goals. Sector table participants have indicated an interest in continuing their collective work, particularly that is focused around advancing specific strategies, should resources allow.

Humans of the Redwoods

Tania from Mendocino on Motherhood, Immigration, and Reliable Behavioral Healthcare



As a monolingual Spanish-speaking immigrant, Tania Chavez has had an extra level of difficulty navigating Mendocino's workforce. Now that she's raising an autistic son, her language barriers and the local lack of services have her considering moving. Tania envisions a future with more clinics which would provide more jobs in care services, resulting in "happier children, happier teachers and happier parents."

A Safer Place to Live

Mendocino's natural beauty and slow-paced way of life has long attracted folks. For Tania Chavez, it reminds her of her hometown in Mexico. "It looks very similar to where I come from. I like the tranquility, not living in a bigger city, not so much danger. I don't know, I like it, I don't see myself anywhere else." Chavez moved to Ukiah 24 years ago from Mexico after being invited up by her aunt, in hopes of finding more opportunities and a safer place to live. She was able to get documented and start working, but over the years she's noticed the few jobs that were available to monolingual Spanish speakers are disappearing.

> "My son had a great teacher. I want to get more involved in his education, but there's no interpreter."

Navigating Limited Resources

She currently takes care of her 4-year-old autistic son full-time while her husband works to support them. Navigating the scarce resources for her son and communicating with the school has been continuously difficult as a monolingual Spanish speaker. While her son currently has the services he needs, they are at threat. "There are hardly any speech therapists in Ukiah… There is one [speech therapist] who accepted my child. But she is already retired. And I'm afraid that any moment she'll tell me no more. And what am I going to do then?"

Waiting For Care

There's also a need for behavioral therapists, says Tania. "My coordinator told me that they can no longer put people on the waiting list because they can't… Some have been on the waiting list for more than a year. It is a big concern. I feel so bad for the other mothers whose children don't have access to the health care they need. I felt bad for them because fortunately my son does have [resources]. I don't know for how long, but for now he has occupational therapy, behavioral therapy, and speech therapy. He needs it very much." Chavez thinks of moving somewhere like Sacramento, which has more reliable and consistent services for her son.

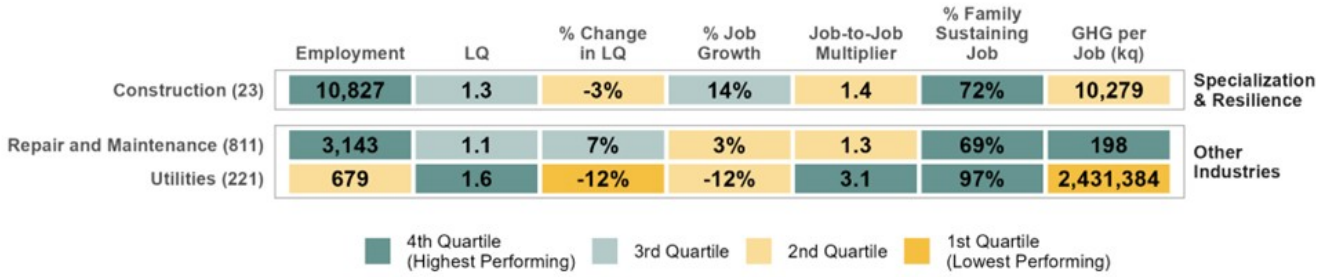
Read Tania's full story

Renewable and Resilient Energy

Rationale

The region aspires to develop a Renewable and Resilient Energy (RRE) industry sector primarily centered around energy efficiency and renewable energy. Industries supporting such an industry include Utilities, Construction, and Repair and Maintenance, among others. These industries support a high proportion of family-sustaining occupations. Therefore, additional economic activity in these industries is likely to continue to foster and promote family-sustaining occupations.

Figure 13 Renewable and Resilient Energy Industries Performance



Note. Data sourced from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

The Redwood Region has great potential for developing its RRE sector. Establishing both energy efficiency and renewable energy investments offers significant potential for job creation and economic development. Energy efficiency investments are often labor intensive and so tend to create more jobs per dollar invested than do renewable energy projects. Moreover, energy efficiency jobs are often cross-sectoral and local (in industries like construction, manufacturing, and installation/maintenance). From an economic development standpoint, energy efficiency provides ongoing energy cost savings for households and businesses and frees up dollars that can be spent in local economies. Efficiency also has the benefit of added resilience: For example, reducing total energy demand can mitigate energy price volatility and supply disruptions.

Renewable energy investments also generate jobs in construction, manufacturing, and operations, although at a somewhat lower labor intensity than does energy efficiency. However, renewable energy can provide significant boosts to local economies as an export industry, especially in rural areas such as the Redwood Region, with strong renewable resources that can be sold outside the region (see the discussion below). Both efficiency and renewables offer opportunities for building local supply chains and spurring innovation as these industries grow. As such, a transition strategy (as is being developed by the RRE Sector Table) that prioritizes both energy efficiency and renewable energy based on regional strengths can maximize overall job creation and economic development while accelerating the shift to a clean, resilient energy system.

The offshore wind industry has high potential to contribute to the Redwood Region's economic growth, GHG emissions reduction, and climate goals. Preliminary economic modeling shows significant (yet highly uncertain) potential impacts statewide (modeling of regional impacts is currently being conducted). Estimates of Humboldt offshore wind job creation potential are difficult to pin down with present insights; the Schatz Energy Research Center at Cal Poly Humboldt is currently working on IMPLAN models to do so. Actual jobs and job creation estimates per GW (gigawatt) from studies across the nation use different job calculation procedures or models (IMPLAN, JEDI) based upon different assumptions, and on-site,

construction stage, supply chain, and induced job numbers are often aggregated. Offshore wind also presents opportunities for innovation and industry-specific asset development, and policy trends support renewable energy growth and job creation. As the industry grows over the next 10-20 years, further innovations in design, materials, and construction techniques are expected to drive down costs and improve technologies and operational efficiency.

Watch the Renewable and Resilient Sector Strategy Video

Vision

The RRE vision for the Redwood Region can showcase how rural communities can lead the transition to a clean energy future. The vision encompasses a carbon-neutral energy sector where all residents, including those in the most remote areas, have access to affordable and reliable clean energy. The RRE sector table envisions a future where community-owned energy projects keep economic benefits local. Supporting cutting-edge research drives innovation in energy storage and microgrid technologies, enabling strong energy infrastructure to be resilient in the face of climate impacts and other disruptions. Central to this vision is a thriving and diverse workforce that reflects the region's demographics and values. By leveraging the region's abundant natural resources, rich cultural heritage, and spirit of innovation, a flourishing clean energy economy can be created that not only meets local needs but positions the Redwood Region as a leader in rural energy solutions.

"Let's focus on using technology to address environmental needs. We could become the new green tech hub."

Background

The RRE sector is dynamic and rapidly evolving, sitting at the intersection of environmental sustainability, economic development, and social equity. The sector encompasses a wide range of technologies and practices, including solar and wind energy, advanced energy storage solutions, smart grid and microgrid systems, energy efficiency advancements, biomass and waste-to-energy technologies, green hydrogen production, and electric vehicle infrastructure, among others. The state is supportive of such technologies in support of its clean energy goals,and incentivizes their adoption through programs such as the Renewable Portfolio Standard 25 and Cap-and-Trade 26 programs.

While the RRE sector is concerned with energy technology, it also addresses critical challenges faced by people and communities. A key purpose of the sector table discussions has thus been to assess ways to: (1) Ensure reliable and equitable access to clean energy in underserved rural areas; (2) Develop a skilled and diverse workforce ready for the clean energy transition; (3) Reduce greenhouse gas emissions to combat climate change; (4) Enhance community energy resilience to extreme weather events; and (5) Foster local economic development through sustainable energy industries.

The RRE sector currently includes occupations such as solar installers, energy auditors, electrical engineers, and plumbers, with new occupations emerging in wind energy, microgrids, transmission and distribution, energy storage, community energy, and energy-related circular economy applications. The sector is poised to become a cornerstone of the Redwood Region's economy, driving innovation, creating high-quality jobs in myriad new occupations, and ensuring a sustainable future for generations to come.

The RRE sector must navigate and address several critical environmental challenges:

- Climate change impacts, including rising temperatures and changing precipitation patterns, impact energy demand patterns and infrastructure performance. Sea-level rise threatens coastal energy infrastructure and vital revenue derived from tourism, while increased frequency and intensity of extreme weather events strain grid resilience.
- Grid resilience and modernization present both challenges and opportunities. The region's aging infrastructure is vulnerable to climate impacts and cyberattacks, necessitating significant upgrades to accommodate increasing renewable energy integration and electrification. Balancing grid stability with high penetration of variable renewable sources remains a key challenge.
- Wildfire risk poses a growing threat to transmission lines and other energy infrastructure, necessitating innovative approaches to vegetation management and grid design. The potential for Public Safety Power Shutoffs (PSPS) further underscores the need for local, resilient energy systems.
- Balancing renewable energy development with habitat and biodiversity conservation is crucial; this effort includes mitigating impacts of wind and solar installations on wildlife and managing potential conflicts between energy projects and protected areas. Water resource management in energy production, particularly with an increasing drought risk, is another key consideration.
- Developing sustainable end-of-life solutions for renewable energy equipment and maximizing the potential of waste-to-energy technologies while minimizing emissions are essential for creating a truly sustainable and circular energy system. The sector must also address potential air quality impacts, particularly from biomass energy projects.
- Land use conflicts between renewable energy development and other uses (agriculture, forestry, recreation) must be carefully managed, as well as community concerns about visual impacts and changes to local landscapes. Ensuring that the benefits of clean energy transition are equitably distributed and addressing historical environmental burdens in priority communities are paramount.
- Finally, quantifying and preserving the carbon sequestration potential of natural landscapes and integrating green infrastructure into energy system design present both challenges and opportunities for the sector.

Analysis of the RRE sector's Strengths, Weaknesses, Opportunities, and Threats (SWOT) provides valuable insights for strategic planning:

Figure 14 Renewable and Resilient Energy Sector SWOT

Strengths

- Abundant and diverse renewable energy resources, as well as emerging Tribal leadership in renewable energy projects
- Strong culture of environmental stewardship
- The presence of leading research institutions
- Modest numbers of skilled workers with transferable skills from traditional energy and resource industries
- Strong policy support at the state level for the clean energy transition
- Unique geography offering opportunities for innovative solutions

Weaknesses

- Aging and limited grid infrastructure (particularly in remote areas)
- High upfront costs for renewable energy projects in a region with economic challenges
- A limited local manufacturing base for clean energy technologies
- A notable numbers and skills gap between the current workforce and emerging clean energy job requirements

Opportunities

- Rapidly growing global market for clean energy technologies and services
- Increasing federal and state funding for clean energy and resilience projects
- The potential to become a leader in rural clean energy solutions, including energy efficiency
- The potential ability to leverage synergies with other sectors (e.g., agriculture, forestry) for integrated resource management

Threats

- Accelerating climate change impacts
- Rapid technological change that may outpace local workforce development efforts
- Competition from other areas for clean energy investments and talented workers
- Uncertainty in the long-term federal policy landscape for clean energy incentives
- Cybersecurity risks to increasingly digitized energy systems
- Public concerns about land use changes and visual impacts of large-scale renewable projects
- Potential supply chain disruptions
- Economic disruptions in traditional industries during the energy transition

By leveraging its strengths, addressing its weaknesses, seizing opportunities, and mitigating threats, the Redwood Region can better position itself as a leader in rural clean energy development.

Renewable and Resilient Energy Sector Strategies

Strategy 1: Strengthen Regional Workforce Development

Key Components and Specific Objectives

The first RRE strategic pillar focuses on creating a robust pipeline of skilled workers ready to meet the demands of the evolving clean energy sector. This strategy is crucial not only for a successful energy transition, but also for ensuring that the economic benefits of this transition are widely shared.

> "I really like the idea of energy that we produce here. Staying here. And if we are utilizing our sea and our land for renewable energy project[s], it seems fair to me that we should get the electrons first and free."

A cornerstone of this strategy is establishing partnerships between Tribal, public, private, and business entities to launch ongoing investments in comprehensive clean energy workforce training programs. These programs will cover a wide range of skills needed in the sector, from solar installation and wind turbine maintenance to energy auditing and microgrid operation, as well as installation and maintenance of vital electric vehicle charging infrastructure. These programs will be accessible to a diverse range of learners, including those transitioning from traditional energy sectors, young people entering the workforce, and individuals from priority communities. It will be important to expand K-12-to-career pathways in partnership with educational institutions and industry. Dual enrollment programs with community colleges for early career exploration should be developed with newly established research partnerships to drive innovation and attract talent. Existing programs such as Mendocino College's Sustainable Construction and Energy Technology Program, and Foundation for California Community Colleges' Resilient Careers in Forestry program should be leveraged to the extent possible.

A key initiative proposed by the RRE sector table is the "Clean Energy Corps," targeted at disinvested communities, dislocated and unemployed workers, and Tribal members. This program (currently in the pre-feasibility stage) could be designed to enable job creation in clean energy (in partnership with industry) and to provide paid training and job placement services, helping to ensure that the benefits of the clean energy transition address community energy needs, while providing opportunities for employment to those who need them the most. In support of this (and similar) efforts, and recognizing that many individuals face barriers to participating in workforce development programs—the RRE sector table also proposed the development of comprehensive wraparound support services for trainees, including child care assistance, transportation support, mental health resources, health care, and help with basic needs. Such regional programming could offer financial literacy training and assistance with securing training stipends or scholarships, in addition to addressing other identified barriers to participation.

To prepare our workforce for the future of energy, sector table participants saw a great value in more digital skills development and circular economy job training as part of the energy workforce development programming (e.g., training in smart grid technologies, energy management software, and principles of material recovery and reuse in clean energy systems and in other sectors). Training programs would need to be inclusive, flexible, and culturally responsive, with modular, stackable credentials that allow for multiple entry and exit points. This approach would allow learners to build their skills over time in a way that fits their individual circumstances and cultural backgrounds.

In addition, targeted diversity and inclusion initiatives should be implemented to ensure that the clean energy workforce reflects the diversity of regional communities, including outreach programs to underrepresented groups, mentorship programs pairing experienced professionals with new entrants to the field, and partnerships with organizations serving the region's diverse communities and Tribal nations. Finally, particularly in rapidly evolving fields like clean energy, learning must be continuous. Ongoing upskilling programs and online learning platforms for clean energy professionals should be developed to continually update worker skills throughout their careers.

Julia Nikhinson

Strategy 2: Support Community Energy Resilience and Reliability

Key Components and Specific Objectives

The second strategic pillar focuses on building a decentralized, resilient energy system that enhances community self-reliance and economic stability. This strategy recognizes that the transition to clean energy is not just about changing energy sources, but about reimagining the entire energy system to be more responsive to local needs and more resilient to disruptions.

Key components of this strategy include:

- The deployment of community microgrids that combine local renewable energy generation, energy storage, and smart controls to provide reliable power even when the larger grid is down.
- Comprehensive energy efficiency and electrification programs for low-income, climate and health-impacted households to reduce energy bills (for those who need it most), improve indoor air quality and comfort, and reduce greenhouse gas emissions. In remote communities, off-grid energy solutions such as standalone solar-plus-storage systems or small-scale wind energy installations, should be explored.
- Grid modernization is a crucial aspect of this strategy, including utility implementation of smart grid technologies that enable better monitoring and control of the energy system, facilitating the integration of more renewable energy, and improving overall reliability.
- To ensure continuity of essential services during emergencies, clean backup power systems for critical facilities such as hospitals, emergency services, and community centers should be developed; these systems will primarily use solar energy and battery storage, providing a clean alternative to diesel generators.
- Innovation in energy generation can also be pursued through pilot projects in waste-to-energy and bioenergy, including community-scale organic waste digesters to produce biogas and the use of forestry residues for bioenergy production (reducing wildfire risk while generating energy).
- Supporting Tribal- and worker-owned clean energy enterprises is another key objective. By promoting local ownership of energy resources, we can ensure that the economic benefits of the clean energy transition stay within our communities.
- Finally, there is high potential for automation and robotics to enhance the efficiency and safety of renewable energy manufacturing and waste management. The integration of these technologies in ways that create high-skill job opportunities for local workers should be supported.

Strategy 3: Foster Information and Resource Sharing

Key Components and Specific Objectives

Develop Robust Ecosystem of Knowledge Exchange

The third strategic pillar focuses on creating a robust ecosystem of knowledge exchange, collaboration, and public engagement. This strategy recognizes that the transition to a clean energy future requires not just technological change, but also social and cultural shifts. By fostering information and resource sharing, the RRE sector can accelerate innovation, build public support, and ensure that best practices are widely adopted across our region.

Key components of this strategy include:

- Establishing regional "Clean Energy Hubs"—physical centers that would serve as one-stop shops for clean energy information, demonstration sites for new technologies, and community gathering spaces for workshops and events; to reach our more remote communities, the hubs would deploy mobile units that can bring clean energy resources and education directly to underserved areas.
- Integrate Traditional Ecological Knowledge into modern energy solutions by partnering with Tribal Nations and developing educational programs that highlight indigenous approaches to resilient resource management.
- A comprehensive digital knowledge platform can be developed to support the physical and mobile hubs; this online resource would provide access to clean energy information, job listings, training resources, and real-time data on our region's energy use and renewable energy production, and energy (and other sector) workforce dynamics; the platform could also include tools to help residents and businesses plan their own clean energy projects.
- Development of collaborative research networks through partnerships among academia, industry, and community organizations; with universal design as an underpinning, these networks would focus on solving the unique challenges of implementing clean energy in rural and Tribal contexts.
- Public education and engagement programs for building broad-based support for the clean energy transition, through accessible and multilingual multimedia educational campaigns to increase public understanding of clean energy benefits and opportunities; citizen science programs could be developed to allow community members to participate directly in energy and climate-related research projects.
- Finally, provide policy and regulatory support to local governments, recognizing the complex policy landscape surrounding energy; this would include technical assistance in developing clean energy policies and establishing a regional energy policy working group to coordinate advocacy efforts.

Figure 15 Renewable and Resilient Energy Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ Develop community-owned energy projects through public-private partnerships; implement sliding-scale efficiency upgrades for low-income households, offering free audits and covering up to 100% of upgrade costs based on income level.	♦ Construct climate-resilient microgrids in vulnerable communities using a combination of solar, wind, and battery storage; design systems to operate independently during extreme weather events and integrate seamlessly with the main grid.	♦ Create Clean Energy Job Corps with guaranteed living wages at least 150% of local minimum wage; partner with unions to develop comprehensive apprenticeship programs covering solar installation, wind turbine maintenance, and grid modernization.
♦ Implement diversity quotas in clean energy hiring, requiring a certain percentage of new hires to come from underrepresented groups; create mobile training units equipped with solar panels and wind turbines to provide hands-on training in rural areas.	♦ Implement AI-optimized renewable energy integration system for the grid using machine learning algorithms to predict energy demand and supply; develop real-time load balancing capabilities to maximize renewable energy utilization.	♦ Provide comprehensive transition assistance for fossil fuel workers, including relocation support, paid retraining programs, and guaranteed job placement services in the clean energy sector through partnerships with major utilities and renewable energy companies.
♦ Establish energy cooperatives managed by elected community boards; implement participatory budgeting processes for deciding on energy projects and profit allocation, ensuring equitable distribution of benefits.	♦ Develop land management strategy using satellite imagery and AI to identify optimal areas for biomass production, forest conservation, and carbon sequestration; create a blockchain-based credit system to reward sustainable land management practices.	♦ Integrate clean energy curriculum into high school vocational programs, providing hands-on experience with solar panels and wind turbines; offer tuition reimbursement for related degrees and industry certifications, tied to a commitment to work in-state.

Implementing Renewable and Resilient Energy Strategies

10-Year Implementation Timeline

The implementation strategy is structured across four phases over a ten-year period

2024-2025: Foundation Building

In this initial phase, focus on laying the groundwork for long-term success. Key activities include:

- Conducting comprehensive regional energy needs and workforce assessments.
- Establishing a regional coordinating body for clean energy initiatives.
- Launching pilot training programs and initial wraparound services.
- Identifying sites for the first wave of microgrid and resilience hub projects, with consideration of prioritizing brownfields for greatest utilization of land area. Grants are available through the EPA for remediation of such sites in the region.
- Developing our regional energy data platform and public engagement strategy.

2025-2028: Scaling Up

- Building on the foundation laid in the first phase, scale the efforts:
  - Expand regional workforce programs with the goal of training 2,000 workers.
  - Retrofit 2,000 low-income homes for energy affordability.
  - Establishing two Regional Clean Energy Hubs and two mobile units.
  - Launch a regional clean energy innovation challenge to spur new ideas and startups.

2028-2031: Accelerating Transformation

- In this phase, we will significantly ramp up our efforts and begin to see transformative changes:
  - Expanding workforce and apprenticeship programs to emerging industries like offshore wind and green hydrogen.
  - Reaching a 25% energy burden reduction for 2,000 households.
  - Establish a clean energy curriculum in 75% of regional high schools.

2031-2034: Realizing the Vision

- In the final phase, work toward achieving our ambitious 2034 goals:
  - Reaching the target number of trained clean energy workers, with at least 50% from priority communities.
  - Support the buildout of Tribal-owned clean energy assets.
  - Complete home electrification and efficiency retrofits.
  - Deploy community-owned renewable energy projects.
  - Reduce regional power outage duration by 50%.

This phased approach allows us to build momentum over time, learn from early experiences, and adjust our strategies as needed to ensure we meet our 2034 goals.

Figure 16 Renewable and Resilient Energy: Key Indicators of Success

- By 2034, train 2,000 new clean energy workers, with at least 50% coming from disadvantaged groups; this target reflects both the scale of workforce needs in the clean energy transition and our commitment to equity and inclusion.
- Strive to achieve 75% job placement rates within one year of training completion through strong partnerships with employers, effective job matching services, and ongoing support for graduates as they enter the workforce.
- Increase the diversity of the energy workforce to reflect regional demographics more closely.
- By 2030, establish clean energy career pathway programs in all regional high schools to provide students with the opportunity to learn about and prepare for careers in clean energy.
- Create 100 paid internship and apprenticeship positions in the clean energy sector by 2034; these hands-on learning opportunities can help bridge the gap between classroom learning and real-world job skills, providing valuable experience to newcomers in the field.
- Develop specific Tribal workforce goals in partnership with Tribal Nations, tailored to the unique needs and aspirations of each Tribal community.
- By 2030, deploy three community microgrids across the region; these installations would provide critical energy security and community support, particularly in areas vulnerable to power outages.
- Reduce the energy burden by 40% for 1,000 low-income households by 2034 through a combination of energy efficiency upgrades, electrification, and assistance with renewable energy adoption.
- Achieve 100% clean energy access for Tribal Nations in our region by 2034.
- Reduce regional power outage duration by 50% by 2030, significantly improving energy reliability for all residents.
- By 2034, source 5% of our region's energy from circular economy initiatives, showcasing the potential of waste-to-energy and other innovative approaches.
- Support the launch of 10 new Tribal and worker-owned clean energy businesses by 2034, promoting local economic development in the clean energy sector.
- By 2034, establish four fixed Regional Clean Energy Hubs and four mobile units to provide the physical backbone of the information-sharing infrastructure.
- Commit to hosting 10 community energy workshops annually across the region, covering a range of topics from basic energy literacy to advanced clean energy technologies and policies, including Tribal knowledge and practices.
- Achieve a substantial and measurable increase in public understanding of clean energy sources, uses, and distribution by 2034 (measured through community surveys and assessments).
- Increase enrollment in energy-field workforce development programs by 25% by 2034 over 2024 levels, reflecting growing interest and opportunities in the clean energy sector.
- Increase adoption of energy-efficiency and electrification programs through information sharing and community engagement.
- Create a comprehensive regional energy data platform with participation from 75% of municipalities in our region. This platform would provide transparency and insights into the region's energy system (supply, demand, workforce, etc.).

Partnerships and Funding

The success of the strategies relies on effectively leveraging existing resources, forging strong partnerships, and capitalizing on emerging funding opportunities. A multi-pronged approach to ensure the achievability of goals includes:

Federal Funding: Aggressively pursue funds from the Inflation Reduction Act, Infrastructure Investment and Jobs Act, and other federal programs focused on clean energy and climate resilience; these federal investments in clean energy provide a unique opportunity to accelerate the energy transition.

State Support: California's ambitious climate goals and associated funding programs, including those from the California Energy Commission and Strategic Growth Council, align closely with regional objectives; it will be important to work closely with state agencies to ensure the region benefits from these initiatives.

Industry Partnerships: Collaboration with clean energy companies, utilities, and industry associations will be crucial; these partnerships will help align workforce development efforts with market needs and secure private investments in clean energy projects.

Educational Institutions: Partnering with K-12 schools, community colleges (e.g., Mendocino College Sustainable Construction and Energy Technology Program), and universities to develop comprehensive educational pathways and drive research and innovation will play a key role in preparing our workforce and in advancing clean energy technologies.

Community Organizations: Close collaboration with local non-profits, community action agencies, and grassroots groups will help ensure that programs are equitably designed and effectively implemented. These organizations bring invaluable local knowledge and can foster community trust and involvement.

Labor Unions: Partnerships with unions will be crucial for developing high-quality apprenticeship programs and ensuring job quality standards in the clean energy sector.

Financial Institutions: Engage with local banks, credit unions, and community development financial institutions to develop innovative financing mechanisms for clean energy projects, making clean energy more accessible to all.

Philanthropic Organizations: Seek support from foundations focused on climate action, rural development, and just-transition initiatives. Philanthropic funding can provide crucial support for innovative pilot projects and community engagement efforts.

Relevance and Alignment with Broader Initiatives

The strategies proposed here are closely aligned with key state and federal priorities, enhancing their relevance, and increasing opportunities for support and collaboration:

At the state level, California's SB 100 goal of 100% clean electricity by 2045 provides a strong policy backdrop for these efforts. Regional goals and timelines are designed to keep pace with and even exceed state targets, positioning the Redwood Region as a leader in California's clean energy transition. The strategies here also directly support the state's objectives for carbon neutrality and climate resilience. By focusing on both clean energy deployment and community resilience, the strategies address mitigation and adaptation simultaneously.

Example Projects

- **Community-Owned Energy Projects:** Invest in community-owned energy projects that create local economic benefits, cutting-edge research that drives innovation in energy storage technologies, and energy infrastructure that is resilient in the face of climate impacts and other disruptions.
- **Resilience Hubs:** Identify sites for the first wave of microgrid and resilience hub projects, investigate brownfield remediation sites for their energy project potential.
- **Microgrids:** Deploy community microgrids that combine local renewable energy generation, energy storage, and smart controls to provide reliable power even when the larger grid is down. By 2030, deploy three community microgrids across the region; these installations would provide critical energy security and community support, particularly in areas vulnerable to power outages.

At the federal level, the approach here aligns closely with the Justice40 Initiative, which aims to deliver 40% of the overall benefits of climate and clean energy investments to priority communities. The emphasis on equity and inclusion in workforce development and energy access supports this important federal priority. The strategies here also support national goals for clean energy job creation and economic revitalization. By focusing on workforce development and local ownership of clean energy resources, a model for how rural regions can thrive in the clean energy economy will be developed.

At the regional level, the above approach addresses critical challenges identified in broader economic development plans:

- **Economic Diversification:** The strategies create new job opportunities and business models in the clean energy sector, helping to diversify the regional economy away from declining traditional industries.
- **Community Resilience:** By enhancing energy reliability and local energy production, the strategies build resilience to climate impacts and other potential shocks.
- **Rural Infrastructure:** The focus on grid modernization and distributed energy resources will improve infrastructure and service delivery in rural areas.
- **Innovation and Talent Retention:** By creating exciting opportunities in clean energy innovation and entrepreneurship, the strategies should help retain and attract talent to our region.

By focusing on equitable access to clean energy and green job opportunities, the strategies directly contribute to broader economic well-being, particularly for disinvested communities—they support the health and well-being of community residents and the local workforce, create pathways out of poverty, improve energy affordability, and enhance local economic circulation through community-owned energy projects. The emphasis on resilience—from workforce adaptability to microgrid deployment—aligns closely with the need to prepare for and mitigate the most likely shocks facing the region, including climate-related disasters and economic disruptions. In summary, these strategies are not developed in isolation, but are carefully crafted to align with and support broader initiatives at the state, federal, and regional levels. This alignment enhances the relevance of the work and increases the likelihood of successful implementation and long-term impact.

Figure 17 Renewable and Resilient Energy Sector Policy Alignment

- The emphasis on offshore wind development directly supports SB 100's clean electricity goals and aligns with AB 525's offshore wind planning mandates.
- Strategies for developing microgrids and improving energy resilience align with SB 1339's microgrid commercialization objectives.
- The focus on community-owned energy projects and equitable access to clean energy supports SB 350's (the Clean Energy and Pollution Reduction Act) goals for increasing renewable energy use, especially in disadvantaged communities.
- Initiatives in energy storage and grid modernization align with AB 2514's energy storage targets.

Last Words

The Redwood Region stands at a pivotal moment in its energy future. The transition to a clean, resilient, and equitable energy system presents both significant challenges and unprecedented opportunities. By embracing this transition, the region can address the pressing issues of climate change and economic inequality while positioning itself as a leader in rural energy innovation.

The strategies outlined in this report provide a roadmap for this transformation and encompass workforce development (to ensure our communities benefit from clean energy job opportunities), infrastructure development (to enhance our energy resilience and reliability), and knowledge sharing (to accelerate innovation and build broad-based support). However, the success of these strategies depends on the active engagement and collaboration of all communities and partners in the Redwood Region. From policymakers and business leaders to educators and community members, everyone has a role to play in this transition.

Humans of the Redwoods

Pliny of Humboldt on Overcoming Stigma for Justice-Involved Individuals and Rural Communities Banding Together

Born and raised on the Hoopa reservation, Pliny McCovey is a part of a vibrant and resilient culture, but has also seen that way its rurality impacts reliability of local services. Now working at a job training program in Eureka, he is familiar with the climate of the local labor market and Humboldt's unemployed population. The region's nuanced needs require small communities to band together to work for a prosperous future.

Beautiful Hoopa Valley

"It's literally one of the most beautiful places on this planet. I truly believe that. We take it for granted a lot of times - the nature, the water, the trees, everything that surrounds us." Pliny was raised with his culture in his ancestral lands of Hoopa. After spending some time in Oregon and Nevada, he moved back 15 years ago.

"We Hoopa Tribes are one of the lucky Tribes, so to speak. The fact that the reservation was built around our ancestral lands versus being placed [somewhere else]. It's where my ancestors have been for tens of thousands of years. I still get to go back to it now and then and participate in dances and things like that. I'll always have that connection, whether or not I'm living there."

Remote Setbacks

While Hoopa's isolation affords it some breathtaking views, outdoor recreation, and ancestral connection, it makes it harder for its community to access resources. The closest public transportation is five miles out in Willow Creek where an HTA bus leaves twice a day, and to catch that from Hoopa people have to either hitchhike or get a ride and hope to make it in t ime. There is a medical center in Hoopa, but community members have a difficult time navigating dental care, with appointments getting scheduled 6 months to a year out. Pliny sees opportunities for job training to fill in the lack of providers in the area.

> "I think it's important to have a local workforce here that's available to handle these types of jobs and also be able to keep that money circulating here in a small county"

Workforce Trends

Pliny has been living in Eureka for the past three years, helping folks with substance abuse disorder and justice-involved individuals with workforce development, using his own experiences to help fight the stigma. Through his work at the Jefferson Community Center, he has an intimate look into the needs of the local community and local labor market trends. The boom and bust cycles of timber, fishing, and now cannabis have left the job market in a depressed state, eliminating a lot of gainful employment. Pliny believes that instead of outsourcing labor, it's crucial to train the local workforce for big projects in the area.

"A lot of times when big projects have occurred up here in Humboldt County, the workforce is brought in from the Bay area or other regions. They come in, do the work, and then when the project is over, they and the money both leave. I think it's important to have a local workforce here that's available to handle these types of jobs and also be able to keep that money circulating here in a small county. I think that's the secret of it, is that we need to continue to provide opportunities for workers so the economy can continue to circulate and grow here."

Read Pliny 's full story

Working Lands and Blue Economy Sector Strategies

Definitions

Working lands are actively managed areas, privately or publicly owned, dedicated to agricultural, forestry, or productive purposes, supporting economic activities related to food, fiber, and timber production. This includes farm land, range land, and forest land, among others. While some activities on working lands may not directly produce agricultural or forestry products, they provide ecosystem services benefiting the community and agricultural economy. These activities can encompass forest rehabilitation, fire prevention, critical habitat restoration/enhancement, range land services, value-chain product manufacturing, food production and distribution businesses, and various non-profit initiatives aimed at supporting a thriving working lands economy.

The blue economy is defined by the World Bank as the "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem health." The concept of the blue economy emphasizes the importance of using ocean resources in a way that balances economic benefits with the need to conserve marine biodiversity and protect the ocean's ecosystem. It aims to create a future where ocean-based industries are sustainable and contribute to the overall well-being of coastal communities, as well as the global economy.

Rationale for Inclusion

Agriculture and the Blue Economy represent key areas of regional employment specialization as shown by their sector location quotients and job growth. Notably, the Fishing, Hunting, and trapping sectors (NAICS code 114) along with Animal Production and Aquaculture (NAICS code 112) have experienced significant increases in employment and specialization. Additionally, the region shows emerging potential in leather goods manufacturing (NAICS code 316), likely benefiting from its connections to the livestock industry. However, compared to other industries, these sectors face significant challenges, including lower wages and higher environmental impacts.

Major commodities traded within the Redwood Region's Agriculture and Blue Economy sectoral cluster include livestock (e.g., beef and dairy), wine grapes and wine, cannabis, Dungeness crabs, and oysters. In Lake and Mendocino, wine grapes are the dominant agricultural commodity, whereas the northern counties specialize somewhat in livestock production and are more diversified than the southern counties. For example, by market value, about one-quarter of Del Norte's agricultural output consists of nursery products (e.g., plants for landscaping, flowers, sod).

The region's aquaculture, which consists almost entirely of oyster farming, constitutes a substantial portion of Humboldt's agricultural output, amounting to $17.4 million in market value or 12% of statewide aquaculture production by market value. In the three coastal counties, commercial fishing—by market value, almost entirely Dungeness crabs —remains a key industry as well, with an annual market value of approximately $37.4 million and accounts for nearly 80% of the state's Dungeness crab landings.

Figure 18 Working Lands and Blue Economy Industries Performance

	Employment	LQ	% Change in LQ	% Job Growth	Job-to-Job Multiplier	% Family Sustaining Job	GHG per Job (kq)	
Leather and Allied Product Manufacturin... (316)	91	3.6	316%	266%	1.2	0%	1,428	Specialization & Resilience
Beverage and Tobacco Product Manufactur... (312)	1,531	3.5	-13%	5%	1.7	46%	5,512	
Fishing, Hunting and Trapping (114)	2,990	84	59%	68%	1.1	6%	5,561	
Animal Production and Aquaculture (112)	1,429	8	26%	70%	1.5	3%	61,734	
Food Manufacturing (311)	1,438	1.0	4%	1%	2.6	8%	24,801	Other Industries
Textile Mills (313)	36	1.0	220%	70%	1.2	0%	13,073	
Crop Production (111)	3,165	2.6	5%	-22%	1.2	1%	25,964	

4th Quartile (Highest Performing) | 3rd Quartile | 2nd Quartile | 1st Quartile (Lowest Performing)

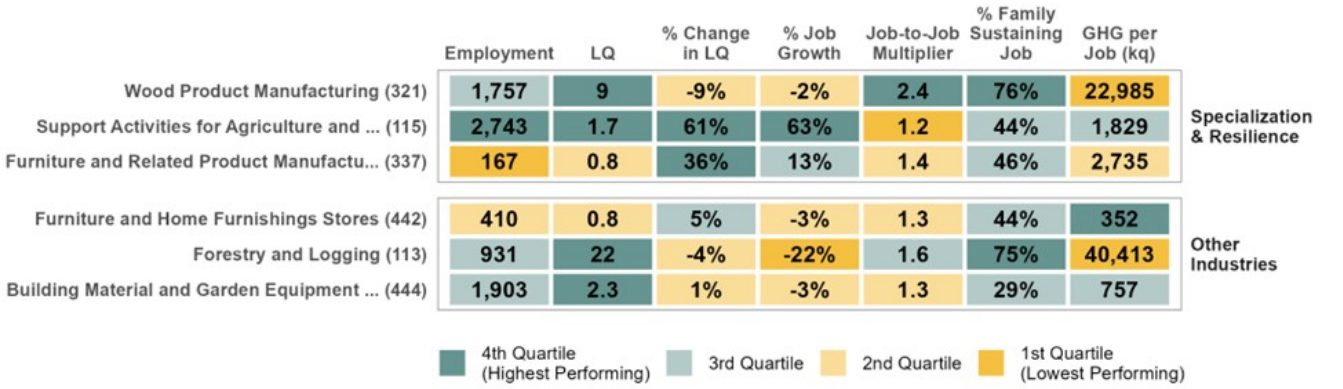
Note. Data source from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data which include only employees.

Timber continues to be a key commodity in Del Norte, Humboldt, and Mendocino Counties. Although the importance of timber to the regional economy has declined over the past decades, recent years have seen a stabilization in production levels. Concurrently, there has been a significant increase in the market value of this production—nearly doubling the region's share of the overall market value of lumber produced in California.

Stable production levels and consistency in proportion of production by volume in relation to state figures, coupled with a marked increase in market value share, suggest that the value of the Redwood Region's definitive commodity has appreciated relative to other timber materials produced in the state. In 2013, the Redwood Region produced about 32% of statewide lumber market value; by 2023, this had increased to 54% (excerpt from Regional Plan Part 1).

The Wood Products cluster maintains a high level of employment specialization. Despite a surge in market value, employment in core sectors like Forestry and Logging is experiencing long-term stagnation or decline. Conversely, industries higher up the value chain, such as Wood Products Manufacturing, show more resilience to these trends. The price of value-added lumber products has steadily increased over the past decade. These products maintained their appreciated value in 2023, even as general lumber prices declined from their peak in 2021.

Figure 19 Wood Products Industry Performance



Note. Data source from IMPLAN. Author's calculations. 2022 data with 2013 growth comparison. NAICS codes shown in parentheses. Employment figures include proprietors and may differ substantially from QCEW data, which include only employees.

The cluster supports numerous family-sustaining jobs; however, aligning with environmental goals is a challenge. Nationwide, the Wood Products Manufacturing industry, for instance, is associated with high levels of greenhouse gas (GHG) emissions per job and increased air pollution, though associated forestry operations are net decarbonizers. Statewide, AB 197 directs the California Air Resources Board (CARB) to assess the social cost of carbon. CARB has recently developed sophisticated modeling tools to quantify and track the carbon impacts of Natural and Working Lands-more work is needed to understand how local industries are performing with respect to emissions over the lifecycle of timber operations.[4]

"One of my friends may be interested in moving up here and I know he's involved with land restoration as a job. And another one of my friends who lives here is also like involved in ecological restoration. So I feel like we're in a great space for it and, honestly, could be a really good example for the rest of the state."

Working Lands

Working Lands Vision

The Redwood Region stands as a global leader, innovating circular natural resource and agricultural economies rooted in tradition to cultivate regenerative ecosystems that yield enduring health, wealth, and climate benefits for a vibrant and diverse community for generations to come.

Watch the Working Lands and Blue Economy Sector Strategy Video

[4] California Legislative Action (2016). AB-197 State Air Resources Board: greenhouse gases: regulations.

Our Working Lands sector encompasses a diverse array of industries dedicated to managing and producing goods from arable land and forest areas. Within the Redwood Region, this sector serves as a vital driver of sustained economic growth, supporting livelihoods, and enhancing environmental resilience. Its primary industries include agriculture and forestry, complemented by ancillary sectors such as ecosystem services, food, fiber, and forest product manufacturing and food and distribution.

Working Lands Background

The Redwood Region is rich in resources, but unsustainable management and large-scale industrial extraction have disrupted its ecological balance and community values. Challenges like restrictive public policies, high land prices, and limited agricultural land further hinder the region's economic viability. Indigenous Tribes, who have been displaced and whose Traditional Ecological Knowledge was suppressed, continue to face cultural erosion and environmental degradation. To address these challenges, we advocate for regional collaboration to disrupt conventional economic paradigms, by supporting projects that create incentives and market mechanisms that promote job creation, skill development, and enhanced purchasing power for regional enterprises. Encouragingly, notable progress has been made, suggesting a turning of the tide. Substantial potential and momentum exist in creating systems that offer our industries and communities new opportunities and a revitalized purpose.

Figure 20 Working Lands Sector Specific SWOT

Strengths

- **Robust Natural Ecosystems:** Diverse and fertile forests, prime agricultural land, and ample water resources.
- **Tribal Stewardship:** Tribal groups safeguard land and water, practicing Traditional Ecological wisdom.
- **Educational Institutions:** Active role in career pathways and re-training, ensuring an adaptable workforce.
- **Entrepreneurship and Innovation:** Strong focus on workforce enhancement, carbon sequestration, forest and fiber cultivation, and diversified food production.
- **Strong Forestry and Dairy Industries:** Economic stability and innovation in sustainable practices.
- **Collaborative Ecosystem:** Businesses, educational institutions, and community organizations create a dynamic and resilient ecosystem.

Weaknesses

- **Economic Disparities:** Wage disparities, high living costs, and food insecurity, with a reliance on low-margin extraction industries.
- **Social Health Issues:** Prevalence of trauma, mental health problems, and high poverty rates.
- **Aging Infrastructure:** Risks to transportation, water, and energy systems, coupled with a severe housing crisis.
- **Geographical Isolation:** Contributes to political weakness and challenges in building strong networks.
- **Environmental Challenges:** Impacts of climate change threaten sustainability in agriculture and forestry.
- **Lack of Diversity in Leadership:** Underrepresentation of minority groups in decision-making processes.
- **Regulatory and Capital Barriers:** Hinder forest-related projects and agricultural initiatives.

Opportunities

- **Economic and Environmental Alignment:** Working lands provide a platform for sustainable economic growth.
- **Educational Leadership:** Cal Poly Humboldt can drive economic development through research and skilled workforce development.
- **Forest Health Restoration:** Opportunities for job creation, climate adaptation, and carbon sequestration.
- **Tribal Co-Management:** Integrating Traditional Ecological Knowledge with contemporary conservation strategies.
- **Economic Diversification:** Focus on healthcare, renewable energy, and tourism for growth and workforce expansion.
- **Unused Agricultural Land and Water Resources:** Potential for sustainable development and prosperity.
- **Food Hubs:** Enhance sustainability and economic resilience through centralized processing and distribution.

Threats

- **Climate Change:** Risks from sea-level rise, extreme heat, wildfires, drought, and natural disasters.
- **Rising Costs and Urban Pull:** Drive young people and skilled workers away, depleting the local talent pool.
- **Regulatory Complexities:** Hinder infrastructure development and perpetuate cycles of disinvestment.
- **Technological Displacement:** AI and automation threaten to displace lower-wage workers and disrupt local economies.
- **Insurance Market Risks:** Rising premiums due to worsening climate conditions.
- **Shifting Demographics:** Urban flight increases land costs and weakens community cohesion.
- **Lack of Market Drivers:** Insufficient incentives for sustainable economic practices leave the region vulnerable.

Working Lands Sector Strategies

Overview

Goals

1. Thriving Agriculture, Forestry, and Supporting sectors
2. Regenerative and Resilient Ecosystems
3. Flourishing, Connected, and Empowered Communities

Strategies

1. Expand and Integrate Markets
2. Build Collective Capacity
3. Enhance Workforce and Community Resilience

Focus Areas

A. Enhance Agricultural and Forestry Production

B. Develop Value-Chains

C. Conduct Marketing Campaigns

D. Build Sector Table Capacity

E. Develop Strategic Partnerships

F. Champion Advocacy

G. Develop and Engage Workforce

H. Enhance Resilience and Adaptation

Strategy 1: Expand and Integrate Markets

Objective: Enhance the region's ability to create and sustain businesses, industries, and quality jobs by expanding and integrating markets for food, fiber, and forest products.

Enhance Agricultural and Forestry Production

Focus Areas

A circular green economy requires two interconnected practices: regenerative farming and effective forest management. Healthy forests, maintained through sustainable logging and controlled burns, contribute to healthy soil for farms by preventing erosion, promoting organic matter decomposition, and regulating the water cycle. In turn, regenerative farming practices that build soil health through cover cropping and reduced tillage will not only improve water retention and reduce reliance on pesticides, but also act as carbon sinks, mitigating climate change.

Optimizing forest, dairy, livestock, and crop production, will require extensive research on production practices, soil health, and climate adaptability. We will introduce activities that are well-suited to the region's climate and soil conditions to diversify agricultural production and expand market opportunities. Simultaneously, we will invest in technology that will enhance yields through advanced techniques and optimize resource use to reduce input costs. We will also collaborate with research institutions to further develop innovative production methods.

Our vision includes implementing regenerative practices including cover cropping, reduced tillage, and holistic grazing to enhance soil fertility and biodiversity. By adopting efficient water management strategies, including rainwater harvesting and efficient irrigation systems, we will support sustainability efforts and alignment with the state's Natural and Working Lands Climate Smart Strategy. Farmers will be educated in climate-smart practices and ecosystem restoration techniques, to restore and maintain long-term soil health and resilience.

Implementing effective forest management practices include Indigenous-led ecosystem services, sustainable logging to minimize ecological impact, reforestation efforts to restore degraded areas, and the preservation of existing forest ecosystems. By promoting agroforestry, in which trees and shrubs are integrated into agricultural landscapes, operators will improve biodiversity, enhance soil structure, and provide additional income streams. Additionally, fostering community-based forest management will ensure that local partners are actively involved in conservation efforts, leading to more resilient and sustainably managed forest resources. Implementing these strategies will contribute to a balanced and thriving agricultural and forest ecosystem, supporting long-term environmental and economic benefits.

We will establish working lands innovation hubs, such as research and development centers, which will focus on creating new agricultural products and techniques while leveraging existing facilities for logistical support and industry collaboration.

Develop Value-Chains

Focus Areas

To enhance agricultural profitability, we will prioritize and promote value-added processing. This involves transforming raw agricultural products into higher-value items, thereby increasing profitability for producers. Investments will be made to modernize existing processing facilities and construct new ones with advanced technology. Additionally, developing infrastructure to support efficient processing and packaging is crucial, ensuring that facilities meet high standards of quality and food safety.

We will enhance storage facilities, which are vital to reduce post-harvest losses and maintain product quality. Investing in temperature-controlled storage solutions can further ensure the preservation of agricultural goods. We will establish cooperatives and producer groups that will be able to leverage collective purchasing power and shared resources, creating efficient systems for collaboration between producers, distributors, and storage/manufacturing facilities.

Improving regional transportation networks and infrastructure is necessary to facilitate the movement of agricultural and forest products. We will develop robust logistics networks that will ensure the timely and efficient delivery of products to markets, thereby supporting the overall value chain.

Increasing the region's manufacturing of forest products is crucial for creating economic value within the local community. We will invest in the development of facilities for processing raw forest materials into finished goods, such as consumer goods, mass timber, and other lumber products so that the region can generate additional revenue and job opportunities. This local processing will not only enhance economic resilience but also support sustainable forest management practices in alignment with the state's Wildfire and Forest Resilience Action Plan.[5] We will facilitate investments and activities that improve forest health, such as selective logging and reforestation, these practices will ensure the longevity and productivity of forest ecosystems.

Moreover, producing building products from sustainably sourced wood can significantly contribute to decarbonizing the state's construction sector, reducing construction costs, and contributing to affordable housing development. Engineered wood products, such as mass timber, offer a renewable and low-carbon alternative to traditional building materials like steel and concrete. By integrating these products into construction practices, the state can reduce greenhouse gas emissions and promote sustainable building practices. Overall, our focus on value-added processing of forest products aligns economic development with environmental stewardship, driving both local economic growth and broader sustainability goals.

We will enhance and expand our capabilities to process value-added dairy products, a key strategy for increasing agricultural profitability and supporting rural economies. By reducing transport costs and creating additional high-value products such as cheese, yogurt, and specialty dairy items, producers can capture more of the value chain and enhance their revenue streams. We will make investments to enhance dairy processing facilities and adopt advanced technologies that are essential to improve efficiency, product quality, and food safety standards.

Furthermore, we will promote value-added processing of meat, crops, and fiber, which is essential for enhancing agricultural profitability and meeting consumer demand for diverse, high-quality products. We will invest in modern processing facilities, so that producers can transform raw meat into packaged cuts, sausages, and ready-to-eat meals, while vegetables can be processed into canned, frozen, or pre-prepared products and raw wool and hemp can be transformed in fiber-based goods such as clothing and other materials. These value-added products not only extend shelf life but also cater to convenience-driven markets.

We will establish food hubs and distribution centers that can streamline the supply chain, reducing costs and improving market access for small and mid-sized producers. Efficient food distribution networks are crucial to ensure that fresh, high-quality products reach consumers promptly, supporting both local food systems and broader market reach. Emphasizing sustainable practices in processing and distribution will further align with consumer preferences and environmental goals, ultimately driving economic growth and food security.

[5] Forest Management Task Force (2021). California's Wildfire and Forest Resilience Action Plan. https://wildfiretaskforce.org/wp-content/uploads/2022/04/californiawildfireandforestresilienceactionplan.pdf

Conduct Marketing Campaigns

Focus Areas

We will promote the unique attributes and characteristics of a region as essential for enhancing its brand identity and attracting investment. By highlighting the cultural heritage, quality, and sustainability of regional products, a strong market presence can be established. We will achieve this by emphasizing the distinctiveness of local produce, traditional farming methods, and eco-friendly practices. We will leverage digital marketing strategies, such as social media, websites, and online marketplaces, which can increase product visibility and drive consumer demand, reaching a broader audience and building a loyal customer base.

We will develop sustainable tourism ventures that showcase working lands activities, culture, and natural resources that can create engaging agritourism experiences such as farm stays, tours, and festivals. These ventures attract visitors and generate additional revenue while involving local communities in tourism activities, creating extra income streams, and promoting regional culture. Agritourism not only offers visitors a chance to experience the region's agricultural lifestyle firsthand but also provides educational opportunities about sustainable farming and food production practices.

Driving tourism and agritourism will be significantly enhanced by our sector-specific marketing activities. For the forestry and timber sector, we will promote sustainable forestry practices and the unique qualities of local wood products can attract eco-conscious tourists and investors. We will organize timber tours and workshops to educate visitors on sustainable logging and woodcraft, adding value to the tourism experience.

In the dairy sector, we will conduct marketing activities that can focus on the artisanal and high-quality nature of local dairy products. Dairy farm tours, cheese-making workshops, and tasting events can draw visitors interested in gastronomy and food production. Highlighting the region's commitment to animal welfare and regenerative practices can further enhance its appeal. For the meat industry, we will showcase the quality and sustainability of local meat products through farm visits, butchery demonstrations, and culinary events that can attract food enthusiasts and support local producers. We emphasize traceability, regenerative, and ethical farming practices that can differentiate regional meat products in the market.

> "Then the other one is like food tourism, right? We have some great cheese. So why not a cheese trail up here?"

Crop farming will be promoted through activities such as harvest festivals, pick-your-own produce events, and educational tours that highlight sustainable agriculture techniques. These events can engage visitors and foster a deeper appreciation for the region's agricultural heritage.

We will enhance food systems through initiatives like farmers' markets, food festivals, and farm-to-table dining experiences that can boost local food tourism. These activities support local producers, create direct connections between consumers and farmers, and promote the region's culinary diversity.

We will host community events, workshops, and seminars that can raise awareness and foster local support for working lands initiatives. These events will include educating the public on the sustainability and benefits of regional agricultural practices and highlighting the importance of supporting local producers. We will utilize various media channels for promotional campaigns that can effectively highlight the region's food, fiber, and forest products and practices. We will engage with local and national media to showcase success

stories and innovations that can further elevate the region's profile, attract investment, and stimulate economic growth.

Additionally, we will form partnerships with local businesses, schools, and organizations to amplify these efforts. Collaborations will lead to joint marketing initiatives, educational programs, and community-driven projects that enhance regional branding. We will create a cohesive and compelling narrative around the region's agricultural and cultural assets; these strategies will drive both economic and social benefits, fostering a vibrant and resilient local economy.

Strategy 2: Build Collective Capacity for Impact

Objective: Empower individuals, organizations, and communities to collaborate effectively towards common goals, fostering a culture of trust, transparency, and inclusivity

Build Sector Table Capacity

Focus Areas

The sector table will continue to bring together key partners from various industries to develop and manage projects, continue to refine strategy, and procure funding. By fostering a cooperative environment, the sector table will continue to develop strategic initiatives that enhance regional development, promote sustainable practices, and drive economic growth. This collaborative approach ensures that diverse perspectives are considered, leading to well-rounded and effective solutions that benefit the entire community. Through regular meetings and active participation, the table will work towards a shared vision and actionable plans for the region's future.

> "I like that people that are not professional farmers still farm and there's just more nature and more engagement and awareness of the land."

To enhance community engagement, we will improve the flow of information and better broadband access that is essential for fostering transparency and collaboration. We will utilize digital platforms and holding regular meetings can ensure all partners remain informed and engaged. We will encourage active participation from all engaged parties in decision-making processes through open dialogues and feedback sessions that help address concerns and gather valuable input. This inclusivity strengthens community ties and ensures that the needs and perspectives of all groups are represented.

Furthermore, the sector table will explore opportunities for public-private partnerships and collaborations with academic and research institutions. These partnerships will bring in additional expertise, resources, and innovative ideas, enhancing the overall effectiveness of the initiatives. By leveraging the strengths of various sectors, the sector table will drive comprehensive and sustainable regional development.

The sector table and supporting groups within the Redwood Region meticulously compiled an inventory of ongoing and proposed projects through a comprehensive and collaborative process. This involved extensive community interviews, sector table discussions, and careful reference to the California Jobs First Redwood RISE application process. By engaging a diverse array of partners, this effort ensured that a wide range of perspectives and needs were considered, resulting in a well-rounded and inclusive project list which was compiled into the Redwood Region RISE project inventory. Community engagement interviews provided invaluable insights and feedback, while sector table discussions facilitated in-depth analysis and prioritization. The structured approach of the Redwood Rise application process further enhanced the evaluation and selection of potential projects.

To effectively organize the collected information, a detailed database was created. This database includes key metrics such as budgets, jobs created, and other relevant data points. Each project was meticulously assigned to a primary tactic and sector category (e.g., timber vs. dairy), ensuring clarity and focus in

mapping budgets to planning and implementation phases. This organized approach allowed for efficient tracking of progress and outcomes, making the management and reporting processes more streamlined and effective.

We will identify and fast-track projects that can be quickly implemented using existing resources which is vital for kickstarting initiatives effectively. By focusing on projects with immediate impact potential and scalability, the sector table ensures that efforts lead to swift and tangible benefits for the community. This approach not only delivers quick wins but also builds momentum and demonstrates the working group's effectiveness in driving positive change.

In addition to these strategic initiatives, the sector table will emphasize continuous improvement and adaptation. By regularly reviewing progress and outcomes, the group will refine strategies and approaches to better meet evolving regional needs. This dynamic and responsive method ensures that the table's efforts remain relevant and impactful over time.

Overall, the continued work of the sector table is pivotal in fostering a collaborative and strategic approach to regional development. By engaging diverse partners, prioritizing impactful projects, and ensuring transparency and inclusivity, the sector table can drive significant and lasting improvements for the region.

Develop Strategic Partnerships

Focus Areas

We will develop partnerships with academic institutions that are crucial for supporting research and development in the Working Lands economy. By leveraging collective expertise and resources, innovation in our sector can be fostered. We will develop internship and apprenticeship programs that will provide hands-on experience in Working Lands industries and related fields. By partnering with educational institutions to offer credit and certifications, students gain recognized qualifications while acquiring practical skills. We will promote updated curricula to reflect the latest advancements and needs in our working lands industries, and incorporating practical training and real-world applications into educational programs, ensures that education remains relevant and effective.

We will continue collaborative partnerships between government agencies, NGOs, businesses, and community organizations that are essential for pooling resources, expertise, and networks.

We will establish a regional coalition focused on sustainable agricultural and forestry development and market expansion will promote resource sharing and joint initiatives. We will create platforms for sharing resources, knowledge, and expertise among coalition members and leverage the strengths of each partner, fostering a collaborative environment that drives innovation and sustainable practices.

Furthermore, the sector table will explore opportunities for public-private partnerships and collaborations with academic and research institutions. These partnerships will bring in additional expertise, resources, and innovative ideas, enhancing the overall effectiveness of the initiatives. By leveraging the strengths of various sectors, the working group will drive comprehensive and sustainable regional development. Engaging with research institutions will also facilitate the development of new technologies and practices that can be directly applied to improve the efficiency and sustainability of the Working Lands industries.

Public-private partnerships (PPPs) play a critical role in driving regional development by combining the strengths and resources of the public sector with those of the private sector. These partnerships will lead to innovative solutions and investments that might not be possible through public funding alone. PPPs can support the development of infrastructure, technology, and market access, thereby boosting the productivity and sustainability of the Working Lands economy.

To maximize the benefits of PPPs, the working group will actively seek partners from other regions and industries. This can include collaborating with technology firms to introduce advanced agricultural and forestry technologies, partnering with financial institutions to create tailored financing solutions for farmers and producers, and working with logistics companies to enhance supply chain efficiency. These cross-regional and cross-sector partnerships bring in new perspectives, expertise, and investment, driving innovation and growth in the local economy.

We will develop programs that connect urban markets with rural producers to ensure mutual benefit. We will provide marketing and sales services to assist producers in reaching target markets, while offering training and support helps them navigate market demands and consumer preferences. We will establish mechanisms to improve access to capital, such as grants, loans, investments, and incentives for sustainable practices and development, and will support innovative working lands projects and start-ups. Additionally, providing training and resources to improve financial literacy among producers, and offering workshops on financial planning, budgeting, and investment strategies, will empower them to manage their finances effectively.

Champion Advocacy

Focus Areas

We will advocate for policy reforms that are essential for fostering a supportive regulatory environment in agriculture and forestry. By working with local agencies to streamline regulatory processes, reduce barriers, facilitate compliance, and incentivize sustainable approaches, our sector can thrive. We will engage in policy dialogue at the state and national levels to ensure that regional interests are represented and favorable conditions for working lands development are secured. Acting as a representative for the working lands community in policy discussions and decision-making processes is crucial. We will build relationships with policymakers that can influence legislative agendas in favor of sustainable industries, ensuring that the needs and priorities of our sector are considered in the creation of new policies and regulations.

We will reduce the regulatory burden for agriculture and forestry that is critical to enhancing productivity and promoting sustainable practices. Simplifying compliance requirements and streamlining approval processes can significantly decrease the time and resources producers spend on administrative tasks, allowing them to focus more on their core activities. Implementing more flexible and adaptive regulations that account for the unique challenges and opportunities within the agricultural and forestry sectors can

foster innovation and efficiency. Additionally, providing clear guidelines and support for meeting regulatory standards will help producers navigate the legal landscape more effectively, ensuring compliance while minimizing disruptions to their operations. By reducing bureaucratic hurdles, the industry can operate more smoothly, driving economic growth and environmental sustainability.

Additionally, we will work with county and state planning and building officials to streamline the building permit process and allow the use of local innovative natural building materials that can significantly lower the cost of construction and provide affordable housing. This collaboration can help promote sustainable building practices, reduce environmental impact, and support local economies by utilizing regionally sourced materials. Simplifying the permit process will expedite development of housing projects, addressing the urgent need for affordable housing and contributing to the overall well-being of the community.

Strategy 3: Enhance Workforce and Community Resilience

Objective: Enhance the capacity of the workforce, community, and natural ecosystem to adapt to challenges and changes in the environment, economy, and society.

Develop and Engage Workforce

Focus Areas

We will increase access to Career and Technical Education (CTE) programs which are essential for providing pathways to various roles within our working lands economy. We will help develop certification programs that validate skills and knowledge in key areas such as sustainable farming, agribusiness management, forestry, and food safety that can enhance the industry's professional standards. Additionally, we will promote continuing education opportunities for current workers and help them advance their skills and knowledge, with scholarships and financial support available for those seeking further education.

We will introduce industry-specific programs that are tailored to support producers, which will be crucial for helping new entrants and young farmers participate effectively. We will provide resources, mentorship, and apprenticeship opportunities that can facilitate their integration into the industry. We will promote training in modern and Indigenous natural resources management practices, business management, and technology use, as well as workshops and seminars on emerging trends and innovations in agriculture, which will further enhance their capabilities.

We will support our current workforce by not only recruiting new talent but also leveraging the skills and experience of existing workers. We will implement professional development programs that offer advanced training and certification opportunities that can help current employees stay up-to-date with industry advancements. We will encourage continuous learning through workshops, seminars, and online courses to ensure that the workforce remains knowledgeable and adaptable. We will provide pathways for career advancement and recognize the achievements of experienced workers to boost morale and retention rates. We will create a supportive work environment that values employee contributions and fosters professional growth, which is key to maintaining a motivated and skilled workforce.

Supporting our workforce involves providing programs and resources to assist individuals in finding and retaining employment. We will promote the development of career counseling and job placement services that will connect workers with Working Lands employment opportunities. To improve job satisfaction and retention rates among workers, we will implement programs that offer competitive wages, benefits, and career advancement opportunities. This comprehensive approach ensures a skilled and motivated workforce, contributing to the sector's overall growth and sustainability.

Through project implementation, we will ensure that disadvantaged communities have more access to education and career opportunities which is vital for fostering inclusivity and economic development. Tailored programs that address the unique challenges faced by these communities can provide the necessary support and resources for meaningful participation in our sector. This includes targeted outreach, mentorship programs, and financial assistance to overcome barriers to entry. Additionally, we will create initiatives that promote diversity and equity within agricultural and forestry education and employment will empower individuals from underrepresented backgrounds. To help make the sector more equitable, we will also explore tailored support for emerging farmers of color and those using cooperative models to ensure the industry is accessible to diverse populations. By focusing on the needs of disadvantaged communities, the sector can become a more equitable and robust industry, driving social and economic progress while enhancing the overall resilience and sustainability of the workforce.

Enhance Resilience and Adaptation

Focus Areas

We will promote robust risk management practices that are essential for preparing for and responding to environmental, economic, and social challenges. This involves development of contingency plans and emergency response strategies for various scenarios to ensure readiness. We will diversify revenue streams that can reduce dependency on single commodities or markets, and encourage crop diversification and alternative income sources providing greater financial stability and resilience for the region at large.

We will foster a culture of continuous learning and adaptation which is crucial for improving resilience. We will encourage experimentation with new practices and technologies that can help our region adapt to new challenges and opportunities. We will build strong partnerships with research institutions, government agencies, and industry experts enabling staying informed and adaptive, facilitating collaboration on research projects and pilot programs that explore innovative solutions.

We will enhance community resilience by implementing fire-resistant conservation practices and land management techniques to mitigate wildfire risks. We will develop community-based wildfire response plans and training programs to increase preparedness and reduce potential damage. We will engage community members in resilience planning and decision-making processes to ensure that local perspectives are considered. Also, we will promote community-driven initiatives that can enhance local capacity to adapt to changes and challenges, fostering a more resilient and cohesive community.

Figure 21 Working Lands Sector Alignment with Key Program Objectives

Equity	Job Quality and Access	Climate
♦ Identify and address challenges that our priority communities are encountering and tailor support (including, but not limited to, outreach, financial assistance, and mentorships) to help them thrive. ♦ Enhance and encourage community engagement and transparent dialogue to ensure the needs of our community are being met.	♦ Develop sustainable tourism ventures (agritourism, ecotourism, harvest festivals, etc.), cross-pollinating with the Arts, Culture, and Tourism sector. ♦ Increase access to educational programs, including apprenticeships, mentorships, and internships. ♦ Honor and recognize the skills and knowledge of the current workforce by providing pathways to advance. ♦ Offer competitive wages and benefits. ♦ Develop infrastructure to produce and promote value-added products.	♦ Prioritize and implement regenerative practices to build ecosystem resilience. ♦ Maintain healthy forests through sustainable logging practices, controlled burns, and conservation and preservation. ♦ Utilize water management practices (regenerative practices, rainwater harvesting, efficient irrigation systems) to enhance vulnerability to climate change.
	♦ Integrate sustainably sourced and engineered wood products in the construction of housing to reduce GHG emissions while simultaneously creating jobs throughout the region. ♦ Establish cooperatives and producer groups to connect with local organizations (schools, hospitals, producers, distributors and manufacturing facilities	

Implementing Working Lands Strategies

Key Indicators of Success

The Working Lands sector has identified a set of success metrics that will allow us to comprehensively assess our progress. They capture workforce development, sustainable practices adoption, financial stability and diversification, innovation and efficiency, community preparedness for wildfires, local food security, job and wage growth, and carbon sequestration. By tracking these metrics over time, we can assess the effectiveness of our region's initiatives and make informed adjustments to achieve our desired outcomes.

Figure 22 Working Lands: Key Indicators of Success

Increase in Sales

- Track overall sales growth.
- Measure the sales volume generated through new sales channels.
- Gather customer feedback to gauge satisfaction and identify areas for improvement.

Development and Sales of New Products

- Track the number of new products developed.
- Measure the sales performance of new products.
- Monitor customer feedback on new products.

Development and Utilization of New Infrastructure

- Evaluate the total amount invested in new facilities.
- Track the number of facilities built or upgraded.
- Measure resulting efficiency improvements in the supply chain.

Effectiveness of Regional Marketing Strategies

- Track the number of marketing campaigns run.
- Measure reach and engagement metrics of marketing campaigns.
- Assess sales growth attributed to marketing strategies.

Number of Contracts Secured with Local Institutions

- Track the number of contracts secured.
- Measure the volume of products supplied through these contracts.
- Monitor client satisfaction.

Expansion of Market Reach through Partnerships

- Track the number of new partnerships formed.
- Measure the extent of geographic expansion.
- Monitor sales growth achieved outside the local region.

Innovation & Efficiency

- Monitor the adoption of new technologies by agricultural and forestry operations.
- Track participation in research and pilot programs.
- Measure improvements in productivity (yields, resource use, production costs).

Collaboration and Engagement

- Track participation rates in affiliated meetings.
- Measure information exchange through digital platforms.
- Collect partner feedback on decision-making processes.
- Monitor the number of collaborative projects undertaken.

Project Impact

- Track the completion of prioritized projects.
- Assess effective and equitable resource allocation.
- Monitor the success of supported existing projects.
- Evaluate tangible benefits for the community from implemented initiatives.

Strategic Partnerships

- Track the number and outcomes of collaborative research projects with academic institutions.
- Measure participation rates in internship/apprenticeship programs.
- Monitor the frequency of knowledge and resource sharing within the regional coalition.

Market Access and Financial Support

- Measure the increased number of producers connecting with urban markets.
- Assess the effectiveness of marketing and sales services.
- Track the number of working lands projects benefiting from financial aid programs.
- Monitor participation rates in financial literacy training.

Policy Advocacy

- Track the number of policy reforms enacted that improve the regulatory environment for agriculture and forestry.
- Measure the reduction in bureaucratic hurdles for agricultural and forestry operations.
- Monitor the implementation of policy incentives for sustainable practices.

Policy Influence

- Track participation in policy discussions at various levels.
- Measure the strength of relationships built with policymakers.
- Monitor the successful inclusion of working lands priorities in legislative agendas.

Real-World Application

- Track the integration of current agricultural and forestry advancements into educational offerings.
- Monitor the use of practical training opportunities for students.
- Assess the speed of project implementation (time taken from concept to action)

Workforce Development

- Track enrollment and completion rates in training programs focused on sustainable practices, business skills, ecosystem restoration, and food safety.
- Monitor changes in participant performance before and after training.

Sustainable Practices Adoption

- Track the percentage of working lands implementing sustainable practices.
- Monitor the rise in job placement rates linked to these practices.

Financial Integration

- Measure the number of income sources for working lands' operations (e.g., diversified crops, value-added products, agritourism).
- Track changes in reliance on single-commodity markets.
- Monitor key financial metrics such as operating income, profitability ratios, and debt-to-equity ratios.

Carbon Sequestration

- Measure the total amount of carbon sequestered annually by working lands.
- Track the number of projects implemented specifically for carbon sequestration.
- Monitor changes in soil organic carbon levels and biomass on working lands.
- Evaluate the economic benefits gained from carbon credits or similar incentives.

Community Wildfire Preparedness

- Track the percentage of private lands with implemented risk management plans.
- Measure the number of community members trained in wildfire response protocols.
- Monitor risk reduction and changes in reported financial losses after risk management plans are implemented.

Local Food Security

- Track the volume or value of locally produced food through sustainable practices.
- Monitor changes in food insecurity rates and access to affordable, nutritious food.
- Track the implementation of measures to minimize food spoilage and optimize distribution networks.

Jobs and Wages

- Track the number of jobs added by project and NAICS sector.
- Monitor wage growth by project and NAICS sector.
- Track tax revenue generated per NAICS sector.

Investment Plan

Funding Resources

Accomplishing this 10-year vision for resilient, equitable, and economically prosperous working lands in the Redwood Region will require robust, ongoing investment from a broad range of regional, statewide, and national public and private supporters—in other words, dedicated fundraising support. The Funding Database developed by the Working Lands Sector Table highlights current and possible future funding sources for working lands projects in the Redwood Region.

Over the course of this past year working with key partners in the Working Lands Sector, we have mapped out the geographical distribution of work and physical assets across the region. The primary objective of this exercise was to identify current opportunities for enhanced collaboration and connectivity among people with vested interest. Additionally, we aimed to create a visualization of the most critical physical gaps in the circular economy, which pose risks and weaknesses.

This mapping endeavor is not merely a static representation; rather, it is intended to be a dynamic and evolving tool. It will serve as a foundation for tracking progress and guiding decision-making as we advance towards the development of a thriving resilient region. Leaders and Project Coordinators of the strategy moving forward will have the ability to continue updating this map, ensuring its utility in steering the course of the efforts, as well as mapping successes.

By clicking on this link, you can go directly to the map and interact with these features, and it can be added over time as new enterprises come online and become part of the Working Lands ecosystem.

The total financial investments needed for these projects are summarized in the timeline below. Investment amounts have been estimated per category and tactic and are distributed across three distinct phases over the next 10 years. This phased approach facilitates the strategic allocation of resources, ensuring sustained and impactful development throughout the Redwood Region. By planning investments in these structured phases, we aim to maximize the benefits and support the long-term resilience and prosperity of the region's working lands. The figure below provides an example investment map with strategy alignment for some key projects proposed by table members.

Figure 23 Working Lands Strategy Venn Diagram

EXPAND & INTEGRATE MARKETS
- Sawmills For Small-diameter Trees
- Mass Timber Processing Facility
- Wood Products Marketing Network
- Biomass Processing Facility
- Bioenergy & Central Wood Processing Plant
- Resilient Food System Network
- USDA Meat Harvest & Processing Plant
- Dairy Regeneration & Innovation Center
- Wool Scouring & Processing Plant
- Animal Husbandry Training Center
- Industrial Hemp Processing
- Tree Seed Forest Nursery
- Native Tree Nut Processing Facility

BUILD COLLECTIVE CAPACITY
- Rural Grant Accelerator Program
- Small Business Development Center
- Regional Loan Fund
- Educational Endowment Program
- Forest Alliance Collective
- Farming Cooperative Program
- Cooperative Agricultural Network

ENHANCE WORKFORCE & COMMUNITY RESILIENCE
- Inter-Tribal Workforce Development Program
- Community Garden & Learning Centers
- Youth & Internship Training Hub
- Forest Health & Watershed Learning Center
- Fire Science Learning Center
- Forest Restoration Innovation Hub
- Disaster & Resilience Planning Group

Example Projects

- **Bioenergy facility (Tribal-led project):** to convert agricultural and forest waste into 100% renewable, carbon-neutral bioenergy. The facility will also produce biochar, a saleable byproduct for agricultural use that stores carbon. With a 15-year power purchase agreement with PG&E for 200 kW of clean energy, this project will generate revenue for the Tribe, provide clean energy to the grid, and reduce the region's substantial biomass. This initiative will reduce wildfire risks, lower greenhouse gas emissions, and improve soil health through carbon sequestration.
- **Tribal Food Sovereignty Initiative:** Multiple projects will bring together key partners to implement a Food Sovereignty initiative on Tribal Lands. These projects will provide spaces for workforce training, education, research, and innovations in regenerative agriculture, green business development, and ecological restoration. They will uplift cultural foodways and arts, offering multi-sector training and apprenticeship programs prioritizing Indigenous voices and including other BIPOC and Frontline communities. Infrastructure will include facilities for food production, storage, aggregation, recovery, distribution, composting, and meat processing /distribution.

- **North Coast Resilient Food USDA Meat Processing Facility:** The Hmong Association of Crescent City (HACC) plans to establish a cultural village and a collectively owned ranch with a USDA-certified slaughterhouse for organic beef, pork, and chicken. This initiative will pave the way for a larger regional facility, serving producers across four counties, enhancing processing capabilities, supporting more agricultural producers, and promoting economic resilience and regenerative practices.
- **Mass Timber Manufacturing and Small-Diameter Sawmill Infrastructure:** A mass timber production facility to address California's need for sustainable construction materials and forest management. Mass timber, an eco-friendly alternative to steel and concrete, reduces environmental impacts. Compact sawmills are planned for Weitchpec and near Fort Bragg to process small-diameter trees locally, reducing transportation costs and enhancing wildfire resilience. These energy-efficient operations will demonstrate investment opportunities, benefiting local economies and sustainable forest management.
- **Dairy Regeneration and Innovation Center:** A Dairy Regeneration and Innovation Center, funded by diverse sources, ensures the viability of humane, climate-friendly, regenerative, organic, and grass-fed dairy milk sheds. The center would focus on value-added testing, innovation, and product development. It includes DHIA milk testing, a nutrient density lab, and fosters community partnerships with CR and Cal Poly Humboldt. Environmental benefits include improved soil health, water retention, reduced erosion, and carbon sequestration.
- **Wool Scouring and Processing:** Expand the region's wool processing capabilities to connect ranchers directly to consumers by enhancing the manufacturing of finished goods. California's current lack of wool scouring capacity limits the marketability of locally grown wool. The project will establish a facility capable of processing 400,000 pounds of wool annually, supported by Fibershed, which advocates for regenerative fiber production. This mid-scale wool scouring initiative will increase access to domestic processing, reducing the need to export U.S. wool for processing. By providing regional wool producers with domestic capabilities, the project will create opportunities for increased revenues and jobs related to value-added production, supporting a circular fiber economy and promoting sustainable practices in the wool industry.
- **North Coast Resilient Food System Network:** Aims to enhance food production, processing, distribution, and workforce development. Plans include developing a food hub, Health Village, commercial kitchen, and expanded food processing facilities. The project will establish a cold storage chain, expand the cooperative distribution, enhance an online wholesale marketplace, and implement the Food as Medicine program. It will create a food waste recovery model, expand farmer training, support Tribal food sovereignty, aim to increase local food production by 10%, create over 100 jobs, and improve access to fresh food for disadvantaged communities and the youth of our region.

Timeline

Phase 1: Year 0

Convene, Conceptualize, Charter
Budget: $4,850,000

In the initial phase, our primary focus will be on convening key partners, conceptualizing the overall strategy, and establishing a formal charter to guide our efforts. This phase is crucial for laying the groundwork and building a strong foundation for subsequent stages. We will organize meetings and workshops to bring together key players from various sectors, ensuring a collaborative approach. This phase will also involve setting up the organizational structure and enhancing our capacity to manage the ambitious goals of the project.

Our recommendation is to focus on critical groundwork activities before full-scale implementation (Phases 2 and 3). These activities, funded by California Jobs First Catalyst funds, include:

- **Sector Table Capacity:** Creating foundational governance and infrastructure around prioritization and decision-making.
- **Fund Development and Financing Strategies:** Creating innovative financial vehicles to secure the additional investment needed for future phases.
- **Project Coordination:** Establishing a well-coordinated structure to ensure smooth implementation of future projects.
- **Market Research:** Gaining a deep understanding of regional market needs and opportunities for circular solutions.
- **Regional Marketing and Branding:** Developing a compelling narrative and brand identity to attract engagement and build momentum.

By strategically utilizing the Catalyst funds for these upfront activities, we lay the groundwork for a thriving circular economy.

Phase 2: Years 1-2

Design, Develop, Demonstrate
Budget: $28,080,000

In this phase, we will focus on designing detailed plans, developing necessary systems, and demonstrating the feasibility of our initiatives. This involves creating planning and feasibility models to ensure our strategies are practical and sustainable. We will prioritize infrastructure projects that are critical to the success of our objectives, such as establishing food hubs and processing facilities. Additionally, targeted marketing activities will be initiated to raise awareness and promote the regional working lands economy. The circular economy emphasizes keeping resources in use for as long as possible, minimizing waste and environmental impact. Our proposed investments in Phase 2 target various aspects of this model:

- **Value-Added Forest Products Manufacturing:** New processing infrastructure will ensure the highest value of our forest resources are captured locally before shipping out to larger markets. These new businesses will support our region's forest health and wildfire mitigation projects, provide stable and enjoyable jobs, and establish our region as a leader in sustainable forest products innovation.
- **Food System Infrastructure:** Includes a USDA-certified slaughterhouse, dairy-processing facility, food recovery infrastructure, and expanded food hubs with cold storage nodes. Strengthens the local food system and creates jobs in processing, distribution, and food recovery.
- **USDA Meat Processing Facilities:** Establishing USDA-certified meat processing facilities to enhance local meat production and meet regulatory standards.
- **Dairy Innovation Hub and Processing Facilities:** Developing a hub for dairy innovation and expanding dairy processing facilities to support local dairy producers and promote new dairy products.
- **Workforce Development:** Investing in career and technical education (CTE) courses and internships to equip youth and young adults with skills needed for the circular economy, ensuring a future workforce capable of operating and maintaining infrastructure and businesses.
- **Producer Collaboration and Market Access:** Organizations dedicated to organizing local agriculture and forestry producer collaboration around production planning, aligning with regional demand. Web-based systems enhance this connection, creating efficiencies for buyers and suppliers.
- **Centralized Back-End Systems:** Supporting small businesses with centralized systems like accounting or logistics will reduce administrative burdens, allowing them to focus on innovation and growth.
- **Strategic Subsidies:** Incentivize local institutions and low-income individuals to purchase goods from local producers at fair prices, creating a strong local consumer base.
- **Grants and Loans:** Provide necessary capital to new and expanding circular enterprises, further accelerating the circular economy.

Phase 3: Years 3-10

Enhance & Expand
Budget: $71,498,040

This phase will focus on the full-scale implementation and expansion of our initiatives, ensuring that the systems we establish are sustainable and lasting. We aim to build robust infrastructure, provide extensive training programs, and conduct ongoing marketing activities to support the regional working lands economy. Our efforts will be directed towards developing value-chain infrastructure, enhancing workforce development, and providing continuous education to people with vested interest. This phase will also prioritize expanding our capacity to meet the growing needs of the project.

Building upon the strong foundation laid in Phases 1 and 2, this phase outlines strategies that will solidify our region as a leader in the circular economy. These investments will further bolster our economic resilience and unlock a new wave of opportunities for local businesses and residents.

- **Fire Technology and Forest Health Training:** Investments in training create a skilled workforce to manage forests sustainably and mitigate wildfire risks.
- **Bioenergy Facility:** Converting waste into energy and biochar enhances resource utilization and ecosystem health.
- **Composting Infrastructure:** Local compost production reduces waste and provides nutrient-rich amendments for farms and forests, aligning with climate goals.
- **Tribal Food Sovereignty Villages:** Supporting Tribal food production strengthens cultural practices and contributes to a diverse food system.
- **Food-as-Medicine Model:** Collaborating with healthcare partners promotes preventative health and supports local food producers.
- **School Kitchen Renovations:** Enabling schools to participate more in the circular food system improves food quality for students and reduces reliance on external food sources.
- **Lease-to-Own Food Trucks:** Lowering barriers to entry fosters food business startups and increases access to locally produced food.
- **At-Home Food Production Kits:** Promoting homegrown food production enhances community resilience and food security.
- **Local Food Purchasing Coordination:** Staff dedicated to connecting buyers with local producers improves efficiency and increases the volume of local food procured.
- **Land Acquisition and Remediation:** Investing in land revitalization expands food production capabilities.
- **Seed Collection and Native Nut Harvesting:** Job training programs in these areas promote sustainable land management and local food security.
- **Hemp Farm Development:** Introducing a new industry creates jobs and opportunities for processing hemp into various circular products.

Beyond Phase 3

Beyond phase 3, we will be well on our way to transforming our regional economy into a model of sustainability and resilience. The circular economy will thrive, characterized by efficient resource use, thriving ecosystems, proliferation of good paying jobs, and a robust network of local businesses. The infrastructure and systems established will continue to support local production, processing, and distribution, reducing dependency on external sources and enhancing food security. Continuous workforce development will ensure a skilled labor force adept at maintaining and advancing sustainable practices. Ongoing marketing and educational efforts will keep the community engaged and informed, fostering a culture that values and supports the local economy. The region will be recognized as a leader in sustainability, attracting further investment and inspiring similar initiatives elsewhere. This vibrant economy will not only provide economic benefits but also promote social equity, environmental stewardship, and overall community well-being.

Funding Opportunities

Securing funding for this ambitious 10-year plan will require a comprehensive fundraising plan from public and private sources and extensive investment in fund development. The list below includes examples of funding sources that may be explored. It is not meant to be exhaustive. See the Funding Resources table for more information on public funding opportunities.

Federal

- **Department of Agriculture:** Many programs supporting farming, livestock, dairy production, forestry, marketing, connections to local consumers, farm-to school, etc.
- **Environmental Protection Agency:** Community Change Grants Program
- **Department of Health and Human Services:** Community Services Block Grants
- **Department of Labor:** Critical Sector Job Quality Grants

State

- **California Dept of Food and Ag:** Beginning Farmer and Farm Worker Program, Resilient Food Systems Infrastructure Program, Community Food Projects, Dairy Plus Program
- **CalFire:** California Forest Improvement Project
- **Department of Conservation:** Climate Smart Land Management Program
- **CalRecycle:** Edible Food Recovery, Farm and Ranch Solid Waste Clean Up and Abatement, Organics Grant Program
- **Economic Development Department:** Farmworkers Advancement Program (FAP) Technical Assistance (TA) and Developmental Evaluation (DE)
- **California Strategic Growth Council:** Tribal Capacity Building Program
- **Pacific Coast Coalition:** Dairy Business Innovation Initiative
- **Department of Education:** California Career Technical Education Incentive Grant

County/City

- County Departments of Health and Human Services
- Social Services Administration
- Economic Development Departments
- Chambers of Commerce
- City Councils/Boards of Supervisors
- County Offices of Education
- Educational institutions (K-12, higher education)
- UC Cooperative Extensions
- Resource Conservation Districts

Foundations

- Community Foundations (Humboldt Area Foundation, Wild Rivers Community Foundation, Community Foundation of Mendocino County)
- Regional, State, and National foundations

Supporting Document Links:
Funding Resources
Asset Map
Project Inventory

Achievability

The development of our economy is intricately linked to broader circumstances that must be considered for economic prosperity. While not explicitly addressed in this report, issues such as housing availability, broadband, power and water, and basic infrastructure are essential components. As the local economy evolves, investments in these areas will be necessary to support a vibrant community of residents who live and work in the region. These elements are critical to ensuring that the infrastructure can support the growing needs of the community as it develops.

Relevance and Alignment

The Redwood Region will advance three key priorities by investing in a Working Lands workforce: adaptation to climate change, workforce preparation, and growing businesses with high-wage job potential.

Targeted Working Lands investments will enable Northern California to build resilience against climate change by promoting agriculture, forestry, and ecosystem services, improving processing infrastructure, and shortening supply chains. Recent experiences with climate-driven events, such as flooding and wildfires, highlight the need for an economy that can withstand mounting climate risks. By focusing on sustainable practices, our region will not only protect its natural resources but also create new opportunities for job growth and economic stability.

Workforce preparation is another critical priority, with a focus on equipping workers with the skills needed for emerging industries. Investing in agriculture, forestry, and natural resource science education, production technologies, and education that advances innovative trades will prepare our workforce for the future. As California's economy undergoes profound transformation driven by the need for regenerative production and value-added processing, as well as repair of aging infrastructure, the demand for skilled workers in construction, engineering, and other infrastructure-related occupations will increase. By bridging the gap between employers and educational institutions, the community can ensure that workers are equipped with the necessary skills to thrive in these evolving industries, fostering greater equity in training and employment.

Finally, growing businesses with high-wage job potential is essential for the economic prosperity of the Northern California rural communities. Expanding markets, streamlining permitting processes, and attracting private investment will create a conducive environment for business growth. If federal and state funding for climate and infrastructure development is more equitably released to our rural Northern California counties it will help the most disinvested communities meet the specific skill set needs of the State's priority industry sectors. This approach will help maximize the economic potential of the region, providing high-quality jobs and enabling residents to overcome the challenges posed by higher living costs. Through targeted investments and collaborative efforts, our Northern California counties can navigate upcoming transitions and build a thriving, sustainable economy for the future.

Figure 24 Working Lands and Blue Economy Sector Policy Alignment

- Sustainable forestry and agriculture practices align with AB 32's goals for reducing greenhouse gas emissions. The region's emphasis on regenerative agriculture and forest management supports this policy.
- The focus on ecosystem restoration and natural resource management careers aligns with SB 859's aim to expand sustainable forest management.
- Strategies for developing local food systems and improving agricultural productivity align with Sustainable Groundwater Management Act (SGMA)'s goals for sustainable water use.
- The Blue Economy initiatives, particularly in aquaculture and sustainable fishing, support the objectives of the California Ocean Protection Act.
- The region's approach to cannabis cultivation transition aligns with the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA)'s regulatory framework.

Humans of the Redwoods

Poua of Del Norte on the Hmong Community, the Housing Market, and Motherhood

Since moving to Crescent City, Poua Vang has become a part of a vibrant Hmong community working towards bringing a meat processing plant to Del Norte. As a mother and an entrepreneur, she just doesn't feel that it's quite the right fit yet. She experiences first-hand how small-town sentimentality can get in the way of growth, but she sees a lot of opportunity for development.

Land of Enchantment

As a member of the Hmong Association, owner of a boba shop, full time business analyst, and mother, Poua is staying busy in Crescent City. It's the surrounding beauty that really helps keep her grounded. "I can walk down the beach. I can go to the redwoods. I tell people, well, the redwoods are my backyard and the ocean is my front yard, so I'm right in between."

Poua has been living in Crescent City for three years after moving from Madison, Wisconsin, where her family still lives. She's connected with a local Hmong community to celebrate her culture with. "There is a small community here, and it's really wonderful because everybody just gets together and is very welcoming, and it just feels like home."

> "A lot of the farmers and the Hmong community are really feeling the lack of meat processing facilities."

(Agri)Cultural Needs

The Crescent City Hmong Association that Poua is part of is looking to empower the Hmong community and provide for Del Norte's ranchers by opening a Hmong-owned meat processing facility. Since a recent closure in Humboldt, the closest facilities are four to six hours away, which makes it pricey for farmers to process their meats, and accounts for unnecessary carbon emissions with the transportation involved.

Read Poua's full story

Blue Economy

Blue Economy Vision

The Redwood Region is poised to become a global leader in rural regenerative blue economies. To achieve this, we will form collaborative networks of partnerships to advocate for policy and investment, drive innovative technologies, revitalize infrastructure, create robust and expanded markets, and advance ocean/water research.

Watch the Working Lands and Blue Economy Sector Strategy Video

Blue Economy Background

Over the decades, communities in rural Del Norte, Humboldt, Lake, and Mendocino Counties have had to confront economic, environmental, and regulatory challenges that have both reduced and challenged marine based opportunities and conservation practices for water resources. However, what has arisen are strong, resilient communities that are both strategically and geographically positioned and willing to embrace new approaches to ensure we continue to be a vital economic driver and essential player in California's thriving blue economy.

The findings from Regional Plan: Part 1 provide valuable insights into the current state of the Blue Economy sector and its potential for growth and resilience. Key findings include:

- The presence of a strong network of commercial fishing and port management is emerging in the region.
- Opportunities for conservation aquaculture, such as abalone, oysters, purple urchin, and seaweed as sustainable alternatives.
- Challenges such as the aging workforce in the fishing industry, regulatory uncertainties, and limited capital for infrastructure improvements.
- Opportunities for innovation and technology adoption to enhance efficiency and competitiveness.
- Significant threats are posed by climate change, sea-level rise, regulatory complexities, and unsustainable fishing practices.

Sector Specific Environmental Challenges

Environmental impacts affect our ability to achieve economic stability. In recent years, the Northern California coast has experienced several environmental ocean degradations (loss of kelp forests, sea star wasting disease, development of purple urchin barren has negatively impacted fisheries). While work continues to address issues, to truly make an impact requires concerted efforts from governments, communities, and individuals working together to reduce carbon emissions, mitigate pollution, implement sustainable fishing practices, and protect coastal habitats. A few of the challenges are:

- **Coastal Erosion:** Rising sea levels and increased storm intensity due to climate change have accelerated coastal erosion along the Northern California coast. This erosion threatens coastal communities, infrastructure, and habitats.
- **Ocean Warming:** Like much of the world's oceans, the waters off the Northern California coast have been warming due to climate change. This has significantly disrupted marine ecosystems, altered species distributions, and impacted fisheries.
  - Ocean Acidification: Increased levels of carbon dioxide in the atmosphere have led to higher levels of acidity in ocean waters. This can harm marine life, particularly organisms with calcium carbonate shells like shellfish.
  - Harmful Algal Blooms (HABs): These blooms occur when certain types of algae grow rapidly and produce toxins that can harm marine life and humans. HABs can lead to fish kills, shellfish poisoning, and disruptions to coastal ecosystems.
  - Marine Debris: Plastic pollution, and other types of marine debris have become a significant issue along the Northern California coast. This debris can harm marine animals through ingestion, entanglement, and habitat destruction.

Our region remains a pristine and unpopulated environment when compared to other parts of California. By leveraging our expertise, resources, and environmentally aware culture, we are confident in our ability to mitigate and adapt to change.

Blue Economy Sector Strategies

To achieve our vision, we have outlined four key strategies: Champion Advocacy, Expand Markets, Advance Ocean Research, and Drive Innovation. By implementing these strategies, the region can make significant progress towards becoming a global leader in rural regenerative blue economies.

Strategy 1: Champion Advocacy

Advocate for policy changes, streamlining permit process, and economic investments for infrastructure.

> "I think they're waiting on getting their permits and it's taking quite some time. I don't think they need about like, 10 or so permits and I think they only got like, three. It might be a while. It's been in talks for a while, just like that wind farm that's coming in."

This strategy centers on raising awareness of our region's blue economy initiatives by building coalitions and alliances with local, state, and federal legislators. By sending representatives from our region to Sacramento, we can actively participate in policy discussions, identify areas where permitting can be streamlined, and advocate for ongoing support of initiatives that support equitable access to fresh food.

Effective communication is essential for connecting our community on the critical issues in our region. We will develop targeted educational materials about the blue economy to be used in forums, seminars, and workshops to inform and engage our partners, the public, and legislators.

In order to sustain and expand our goals, we will continue to identify and seek funding opportunities from government grants, private investors, private academic institutions, and philanthropic organizations.

Strategy 2: Expand Markets

Expand markets for commercial fishing, invest in local working harbors to ensure a diverse range of services can flourish

To expand our market, we will prioritize investing in critical infrastructure including, cold storage facilities, processing plants, and distribution networks. These investments are essential to streamline our supply chain and ensure the highest product quality throughout every stage of the process.

We will collaborate with local restaurants, hotels, schools, and hospitals to incorporate regional seafood and fresh produce into their menus, ensuring our community directly benefits from our region. Additionally, we will also establish more direct-to-consumer sales channels, making it easier for individuals to access and enjoy our local offerings.

By developing regional marketing strategies, we will build partnerships outside of our local region, broadening our market presence and boosting recognition of our products.

Strategy 3: Advance Ocean/Water Research

Expand research to enhance understanding of ocean ecosystems, local waterways, and lakes

We will partner with local research institutions, universities, and marine science organizations on research projects in key areas such as sea level rise, climate change adaptation, disaster preparedness, ocean health, and economic analyses of the blue economy sectors. To support these initiatives, we will secure funding through grants, government programs, and private donations. The findings from this research will be disseminated through publications, conferences, workshops, and outreach programs to inform policy decisions and raise public awareness.

Throughout this collaborative process, we will actively engage with our local partners, including fisherfolk, Indigenous communities, and environmental organizations. Together, we will create an entrepreneurial accelerator/incubator that integrates research, technology, and business practices to develop new products and services.

Strategy 4: Drive Innovation

Develop innovative technology solutions that contribute to the circular economy and economic resilience

We will invest in technology and infrastructure for data collection, monitoring, and analysis of oceanic, coastal, lake, and waterway systems. We will also implement technology solutions such as bringing community partners, commercial fisherfolks, and researchers together to enable the ability to collect real time ocean data. We will utilize technology solutions such as a fisherfolk app for traceability and transparency in the supply chain.

Case Study

In our region, Tribes and Indigenous communities have been at the forefront of researching and protecting local waterways.

In Lake County, the Big Valley Band of Pomo Indians began a cyanobacteria and cyanotoxin monitoring program on Clear Lake in 2014 with another shoreline Tribe, Elem Indian Colony. Together the two Tribes' Environmental Departments have collaborated with equipment, resources, and time to test the water for toxins produced by cyanobacteria. The visible blooms began to be a regular presence on the lake in 2009, and the California Office of Environmental Health Hazard Assessment (OEHHA) recommended monitoring in 2012. The Tribes stepped in to do this work to protect the lake, the Tribal citizens, and residents and visitors to the lake. Through the Tribal EcoRestoration Alliance, several local tribes and the US Forest Service, are exploring restoring the tule plant along the lake's edges to act as a natural water filter. The Tribal EcoRestoration Alliance also offers paid workforce development opportunities in Native Stewardship.

More information:
www.bvrancheria.com/clearlakecyanotoxins
www.tribalecorestoration.org

Figure 25 Blue Economy Sector Alignment with Key Project Objectives

Equity	Job Quality and Access	Climate
♦ Focus on addressing workforce challenges, promote diversity, and offer training in marine-based jobs, alternative energies, etc.		♦ Invest in research on climate change impacts, disaster preparedness, and nature-based solutions for coastal resilience.
♦ Bridge the gap between employers and educational institutions to ensure workers have the needed skills for existing and emerging industries.		
	♦ Partner with educational institutions and technical schools to train workers in construction, engineering, and science to support the Renewable and Resilient Energy sector.	

Example Projects

- **Rebuilding local docks:** This would help revitalize the local fishing industry, enhance commercial activity, and attract tourism. Modernized docks will improve operational efficiency for local fisherman and seafood processors, create construction jobs and long-term employment in marine-related industries, and draw tourists and recreational activities.
- **Watershed/floodplain restoration:** Can provide substantial economic benefits by mitigating significant flood risk to agriculture and residential communities. By restoring natural floodplains, projects can enhance water quality, support local agriculture, and create opportunities for ecotourism and outdoor recreation. This habitat restoration and flood management initiative will reduce economic losses from flood damage lowering flood insurance and disaster mitigation costs while increasing community and tribal access to important ecological wetland communities.
- **Marine Science Hub:** Can boost the regional economy by becoming a center for marine research, education, and ecotourism. Will provide an innovative approach that connects environmental conservation with economic growth, creating a model in where coastal communities can thrive economically while protecting ecological resources threatened by climate change. It will facilitate partnerships with academic institutions and promote sustainable marine practices, leading to increased investments for ongoing research.
- **Aquaculture Innovation Center:** Creating jobs, fostering research and development, and attracting investment in sustainable seafood production. By positioning the region as a leader in aquaculture technology and practices, the center is expected to stimulate local businesses, increase tourism related to marine science, and generate new revenue streams through the export of high-quality seafood products.

Implementing Blue Economy Strategies

The Redwood Region Blue Economy presents a multitude of promising opportunities for sustainable growth. Some highlights are streamlined permitting, efficiently managed dredging, advancements in direct sales and harvesting technologies by fisherfolks, and the proliferation of online platforms for seafood commerce are just a few examples. Additionally, infrastructure improvements and collaborative research initiatives will further enhance the region's potential for both economic and environmental prosperity.

Some immediate actions/steps the Blue Economy Sector table has defined as important to the creation of new industries and job growth:

Shorten Supply Chain & Regional Food Resiliency

- **Direct to Retail, Direct To Consumer Sales:** Establish partnerships with local retailers or set up farmer's markets to sell directly to consumers.
- **Cold-Storage & Processing Facilities:** Invest in infrastructure for storing and processing seafood locally to maintain freshness and quality.
- **Distribution Channels & Co-packing:** Develop efficient distribution networks and co-packing facilities to streamline the supply chain.
- **Emergency Food Distribution:** Develop protocols and infrastructure for distributing food during emergencies to ensure food security.

Creating Market Demand

- **Fisherman Application & Community Markets:** Develop an app connecting consumers directly with fisherfolks for fresh seafood purchases. Establish community markets to showcase and sell locally sourced seafood.
- **Engaging Institutional Buyers:** Work with schools, hospitals, and other institutions to incorporate local seafood into their menus.

Technology & Storytelling

- Utilize technology for online sales platforms and storytelling to create consumer interest and trust in local seafood.
- Support Marine science and education organizations.

Essential Regional Needs

- **Port Infrastructure & Maintenance:** Invest in dredging, electrification, and shared equipment to improve port efficiency and sustainability.
- **Permits and Licenses:** Advocate for streamlined permitting processes and joint permits to reduce barriers to business.
- **Workforce/Entrepreneurial Development:** Focus on addressing workforce challenges, promoting diversity, and offering training in marine-based jobs and alternative energies, etc.

- **Research & Technology:** Invest in research on climate change impacts, disaster preparedness, and nature-based solutions for coastal resilience.

Financing/Investments

- **Low-Interest Revolving Loans:** Establish financing mechanisms to provide low- interest loans for seafood industry projects.
- **Private Investment & Sustainable Revenue Models:** Attract private investors, particularly in renewable energy projects, and develop sustainable revenue models for long-term viability.
- **Improvement Grants:** Develop a California Air Resource Board (CARB) grant program to upgrade engines to meet new standards and support work with lenders to create cash flow solutions to mitigate financial hardship for the fleet.

Key Indicators of Success

The Blue Economy Sector has identified a comprehensive set of success metrics to assess progress across various domains. These indicators span coalition building, policy influence, research and innovation, market development, and technological integration. By tracking these key performance indicators, interest holders can evaluate the sector's growth, impact, and sustainability over time. The following list represents a holistic approach to measuring success in the Blue Economy, encompassing both quantitative and qualitative metrics that reflect the industry's multifaceted nature.

Figure 26 Blue Economy: Key Indicators of Success

- Number and strength of coalitions, alliances, and partnerships formed
- Frequency and quality of representation in policy discussions (state and federal levels)
- Number and attendance of forums, seminars, and workshops hosted
- Amount of funding secured from various sources (including research funding)
- Effectiveness and reach of communication materials and regional marketing strategies
- Adoption and support of policies advancing the Blue Economy industry
- Increase in direct-to-consumer sales and market reach expansion
- Development and utilization of new infrastructure
- Number of contracts secured with local institutions
- Quality and quantity of research outputs in key focus areas
- Establishment and success of entrepreneurial accelerator/incubator programs
- Partner engagement in research processes
- Dissemination and impact of research findings
- Implementation and integration of innovative technology solutions
- Investment in data collection and monitoring infrastructure
- Collaboration between commercial fishing, research, and technology sectors

Achievability

The development of our economy is intricately linked to broader circumstances that must be considered for economic prosperity. While not explicitly addressed in this report, issues such as housing availability, broadband, power and water, and basic infrastructure are essential components. As the local economy evolves, investments in these areas will be necessary to support a vibrant community of residents who live and work in the region. These elements are critical to ensuring that the infrastructure can support the growing needs of the community as it develops.

Relevance and Alignment

This Blue Economy strategy, when implemented, will focus on supporting projects that will diversify our rural local economies by developing new industries and reinvigorating legacy industries with innovative technologies and 21st century infrastructure to create high-quality, broadly accessible jobs as our state implements the transition to a carbon-neutral economy.

The Redwood Region will advance three key priorities by investing in a Blue Economy workforce: adaptation to climate change, workforce preparation, and growing businesses with high-wage job potential. Targeted Blue Economy investments will enable Northern California to build resilience against climate change by promoting aquaculture, improving harbor infrastructure, and shortening supply chains. Recent experiences with climate-driven events, such as flooding and wildfires, highlight the need for an economy that can withstand mounting climate risks. By focusing on sustainable practices, our region will not only protect its natural resources but also create new opportunities for job growth and economic stability.

"They're taking down dams along the Klamath river. That's helping fish flow. I hope the fish come back."

Workforce preparation is another critical priority, with a focus on equipping workers with the skills needed for emerging industries. Investing in marine based science education, blue economy technologies, and education that advances innovative trades will prepare our workforce for the future. As California's economy undergoes profound transformation driven by new technologies like offshore wind, and aquaculture techniques as well as repair of aging infrastructure, the demand for skilled workers in construction, engineering, and other infrastructure-related occupations will increase. By bridging the gap between employers and educational institutions, the community can ensure that workers are equipped with the necessary skills to thrive in these evolving industries, fostering greater equity in training and employment.

"Off-shore wind is supposed to be a little ways out, off the shore, but it could impact a lot of the commercial fishing jobs. They'll be dredging the waters too. So that might impact a lot of the oyster farming out there."

Case Study

In Humboldt and Del Norte Counties, Indigenous communities have led a historic, decades-long effort to remove dams from the Klamath River in an effort to restore the ecosystem, including a healthy salmon run. This effort has included extensive scientific research and economic development planning. Efforts related to the dam removal are expected to create more than a thousand jobs in support industries, such as food service and other related sectors. Long term, healthy salmon runs would add an estimated 450 jobs in the commercial and recreational fishing industries. Klamath salmon support commercial fisheries worth $150 million per year and a local recreation industry that contributes millions to the Klamath Basin economy.

More information:
klamathrenewal.org

Finally, growing businesses with high-wage job potential is essential for the economic prosperity of the Northern California Coastal community. Expanding markets, streamlining permitting processes, and attracting private investment will create a conducive environment for business growth. If federal and state funding for climate and infrastructure development is more equitably released to our rural Northern California counties it will help the most disinvested communities meet the specific skills needs of the State's priority industry sectors. This approach will help maximize the economic potential of the region, providing high-quality jobs and enabling residents to overcome the challenges posed by higher living costs. Through targeted investments and collaborative efforts, our Northern California counties can navigate upcoming transitions and build a thriving, sustainable economy for the future.

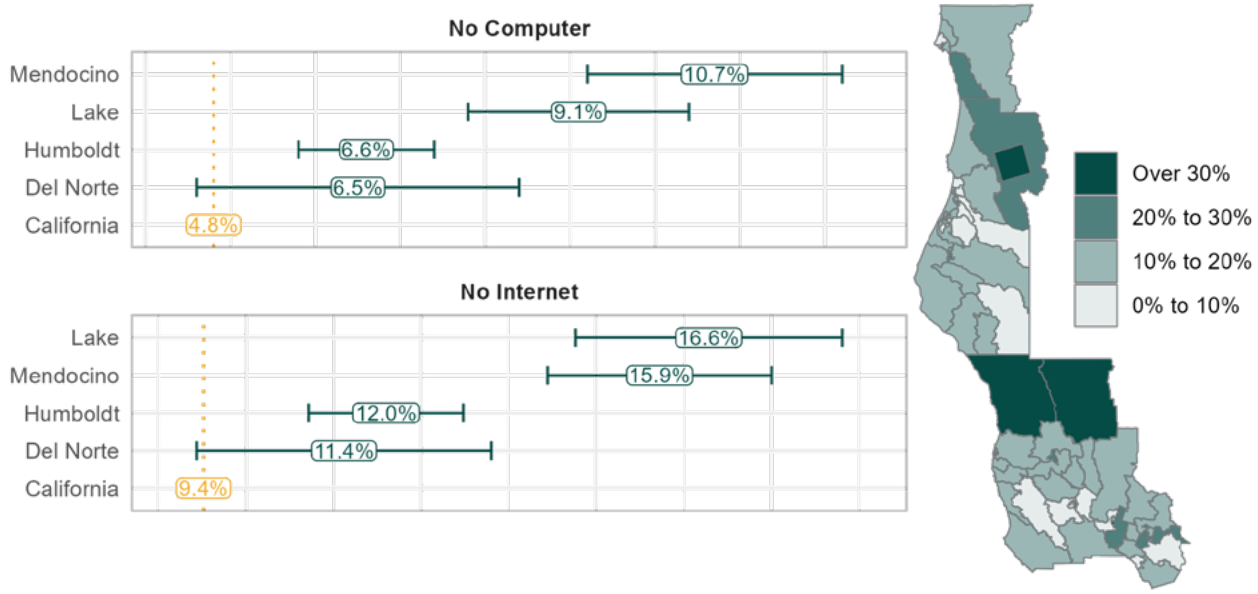
Key Enablers

The success of target sector strategies will hinge on several key enablers of the economy at large. During listening sessions with community leaders, this theme was repeated over and over, with a particular emphasis on housing and broadband as key cross-cutting sectors which require investment in order to support the growth of target industries. In this section we provide an overview of these key enablers and strategies which may be employed to prepare the region for an inclusive, just transition.

Broadband

Rationale

Figure 27 Households Without Internet Access (2017 - 2021)



In remote areas of the region, approximately one-third of households lack any home internet access. This digital divide is even more pronounced in Tribal communities, where only 65% of the population has broadband access, compared to 98% in urban areas. These disparities highlight the urgent need for targeted intervention and support to ensure equitable access to digital resources and opportunities. Significantly more households in the Redwood Region lack internet access in the home compared to the rest of California.

"We need more accessible resources for historically underrepresented or repressed people. Affordable or free internet/broadband to rural areas."

Broadband is a necessary infrastructure component for the region to utilize telehealth and remote employment and education opportunities, and to benefit from other emerging opportunities trends that build the health and wealth of all residents.

Background

The Redwood Region faces significant challenges in broadband access and adoption, hindering economic development, educational opportunities, and overall quality of life for residents.

Despite years of efforts from both federal and state governments to support rural broadband deployment, the region's geographic and geologic challenges, coupled with low population density, have resulted in a lack of investment by larger telecom and cable companies. This has left many communities underserved or entirely unserved.

However, recent developments present new opportunities for addressing these challenges. The State of California has funded a middle mile network that can serve as backhaul for many underserved and unserved remote communities. This infrastructure investment provides a crucial foundation for last-mile connectivity solutions. Additionally, there is growing recognition of broadband's critical role in supporting telemedicine, remote work, and educational access–all of which are particularly important in the Redwood Region's rural context. The COVID-19 pandemic has further underscored the importance of reliable broadband access, as more aspects of daily life, including work, education, and healthcare, have shifted online. This increased reliance on digital connectivity has created a renewed sense of urgency and opened up new funding opportunities for broadband expansion in rural areas.

Key issues addressed by this strategy include:

1. A significant digital divide, with approximately one-third of households in remote areas lacking home internet access.
2. Pronounced disparities in Tribal communities, where only 65% of the population has broadband access, compared to 98% in urban areas.
3. The critical role of broadband in supporting telemedicine, remote work, and educational access.
4. Increased reliance on digital connectivity highlighted by the COVID-19 pandemic.

Broadband Strategies

The broadband expansion strategy comprises five key initiatives designed to improve connectivity, promote economic development, enhance climate resilience, and ensure digital equity:

1 Regional Broadband Coalition Establishment

This initiative focuses on forming a diverse, collaborative group to coordinate broadband efforts across the Redwood Region. The coalition will develop comprehensive strategies for both middle mile and last mile connectivity, with a particular emphasis on innovative solutions and digital equity. By ensuring representation from all counties and Tribal areas, this coalition will drive inclusive decision-making and advocate for equitable access at state and federal levels. It will also facilitate knowledge sharing and best practice dissemination among partners, coordinate funding applications, and resource allocation across the region.

2 "Dig Once" Policy Implementation

This policy will mandate the consideration of broadband conduit installation in all public works projects throughout the region. By integrating broadband infrastructure planning with other construction activities, this approach will significantly reduce costs and accelerate deployment. The policy will prioritize underserved areas and create opportunities for local and Tribal businesses in infrastructure development. It includes developing standardized procedures and specifications for broadband infrastructure installation, establishing a regional database of planned infrastructure projects to facilitate coordination, and providing training and resources to local governments for policy implementation.

3 Innovative Connectivity Solutions Deployment

This strategy focuses on assessing and piloting cutting-edge technologies to provide internet access in challenging areas. By exploring culturally appropriate ways to implement high-speed connectivity, especially in Tribal and remote areas, this initiative aims to bridge the digital divide while spurring job creation in technology deployment and maintenance. It includes establishing partnerships with technology providers to test and deploy innovative solutions, creating a regional innovation fund to support local broadband technology development, and developing case studies and sharing learnings from pilot projects across the region.

4 Digital Equity Fund Creation

This regional fund will be established to subsidize internet costs and provide digital literacy training for eligible households and businesses. By focusing on low-income, elderly, and historically underserved populations, including a significant allocation for Tribal communities, this fund will directly address affordability barriers and skill gaps that hinder broadband adoption. It includes developing partnerships with local organizations to deliver digital skills training, implementing a device access program to ensure households have necessary hardware, and creating a regional digital navigator program to provide one-on-one support.

5 Public-Private Partnerships for Broadband Development

This initiative will create a framework for collaboration between public entities and private sector partners in broadband deployment. These partnerships will leverage private sector resources and expertise while ensuring public interest goals are met, with a particular focus on including disinvested communities and Tribal enterprises in both infrastructure development and workforce opportunities. It includes developing risk-sharing models to incentivize private investment in underserved areas, establishing clear performance metrics and accountability measures for partnerships, and creating a regional broadband investment prospectus to attract private sector partners.

Regional Assets

The following organizations and initiatives have been identified as key assets for the broadband expansion strategy in the Redwood Region:

- Redwood Coast Connect (RCC): Regional consortium hosted by Cal Poly Humboldt, focusing on rural broadband accessibility
- Cal Poly Humboldt Regional Internet Exchange and Innovation Center
- North Coast Tribal Chairmen's Association: Represents Tribal interests in regional broadband initiatives
- Redwood Region Economic Development Commission (RREDC): Supports broadband as part of economic development efforts
- North Coast Small Business Development Center: Assists businesses in leveraging broadband for growth
- Local Internet Service Providers (ISPs): Experienced in deploying solutions in challenging rural environments
- California Emerging Technology Fund: Provides resources and advocacy for broadband adoption in underserved communities

Implementation

A Regional Broadband Coalition could serve as the primary coordinating entity for this broadband strategy, working with local and state government agencies for policy support and regulatory alignment. Private sector ISPs and technology companies will contribute to infrastructure deployment and innovation. Funding will be pursued through diversified sources, including federal programs (e.g., USDA ReConnect, NTIA's BEAD Program), state initiatives (e.g., California Advanced Services Fund), and innovative models such as public-private partnerships and community investment initiatives.

The implementation will follow a phased approach over a ten-year period:

1. **Assessment and Engagement (Months 1-6):** Comprehensive needs assessment and community engagement.
2. **Planning and Funding (Months 7-12):** Detailed technical planning and funding strategy development.
3. **Initial Deployment (Months 13-24):** Infrastructure deployment and launch of digital literacy programs.
4. **Expansion and Evaluation (Months 25-36):** Continued deployment, program refinement, and impact assessment.
5. **Scaling and Sustainability (Years 4-10):** Widespread implementation and focus on long-term sustainability.

Risk mitigation measures include diversification of funding sources to ensure program sustainability, use of innovative last-mile solutions to address geographic challenges, robust digital literacy programs to address adoption barriers, partnerships with experienced providers to mitigate technical challenges, and proactive engagement with regulatory bodies to streamline permitting processes. By strategically leveraging its unique assets and implementing a comprehensive, collaborative approach to broadband expansion, the Redwood Region aims to bridge the digital divide and catalyze economic growth. This strategy represents a significant policy intervention aimed at enhancing connectivity, promoting digital equity, and fostering a more resilient and prosperous rural economy.

Possible Funding Sources

Funding for the strategy will come from a variety of sources. Federal programs such as the USDA ReConnect Program and the NTIA's Broadband Equity, Access, and Deployment (BEAD) Program will be key potential funding sources. At the state level, the California Advanced Services Fund (CASF) will be an important resource.

The strategy will also explore innovative funding models, including public-private partnerships and community investment initiatives. Partnerships with financial institutions to leverage Community Reinvestment Act (CRA) funds will be explored as a way to support broadband expansion in low-income communities.

Figure 28 Broadband Sector Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ A Digital Equity Fund could: (1) Directly address affordability barriers to internet access; (2) Focus on low income, elderly, and historically underserved populations; and (3) Allocate significant resources specifically for improving connectivity and digital literacy in Tribal communities. ♦ RISE can promote public and private partnerships that include requirements for affordable access and coverage of underserved areas in partnership agreements and actively seeks partnerships with Tribal enterprises and organizations to develop and implement broadband solutions. ♦ A dig once policy would prioritize underserved areas and create opportunities for local and Tribal businesses in infrastructure development.	♦ In general, strategies enable more comprehensive broadband coverage, supporting climate-smart technologies and practices. ♦ Broadband coalition could incentivize green energy use in broadband infrastructure through partnership agreements.	♦ Broadband expansion stimulates job growth in the lucrative utilities industry, with the need for installation and maintenance. ♦ Expansion would also enable remote work opportunities across various sectors, as well as digital careers. Establishing more broadband connectivity reduces vehicle trips to urban centers for medical, educational, or work commitments. ♦ Public-private models stimulate private sector investment in the region, creating direct and indirect jobs, and creates opportunities for local businesses, including Tribal enterprises, to partner in broadband initiatives. ♦ Innovative connectivity solutions create jobs in technology deployment and maintenance, and enable remote work and entrepreneurship in previously disconnected areas.

This broadband expansion strategy aims to leverage recent developments, including state funding for a middle mile network, to address these challenges and create a foundation for equitable economic growth and community resilience. The strategy recognizes that broadband access is not just about infrastructure, but also encompasses digital literacy, affordability, and relevance to local communities. By addressing all these aspects, the strategy seeks to ensure that broadband becomes a tool for economic empowerment and social inclusion across the Redwood Region.

Entrepreneurship

Rationale

The Redwood Region faces significant economic challenges, with over 95% of the area qualifying as "disinvested" under California Jobs First criteria. Regional economic growth has stagnated relative to state averages, with per capita output in 2022 at 47% of the statewide average, declining from 62% in 2001. These metrics underscore the imperative for innovative economic development strategies, particularly those fostering entrepreneurship and cross-sector innovation.

Small businesses are in fact a cornerstone of the regional (and American) economy, driving significant employment and economic activity. These enterprises, defined as those employing fewer than 100 people, comprise over 98% of all businesses in the United States. Remarkably, 89% of small businesses have fewer than 20 employees, and 80% are sole proprietorships with no employees. Yet despite their individual size, small businesses collectively employ 47% of the private-sector workforce, totaling more than 59.9 million people. They contribute substantially to job creation, generating approximately 1.5 million new jobs annually.

> " I'm trying to start a business [...] but accessing startup funds is very very difficult. So I'm working hard to get started, but unable to get to the part of the movie where I get paid."

Background

This entrepreneurship strategy addresses critical regional economic issues: diversification of the economic base to mitigate sector-specific vulnerabilities, creation and retention of high-quality employment opportunities, attraction and retention of skilled human capital, development of locally-owned enterprises to enhance economic resilience, and stimulation of innovative solutions to region-specific challenges.

By prioritizing entrepreneurship, the region aims to leverage its unique assets and foster a more dynamic, resilient economy that generates opportunities across all demographic segments. This approach recognizes the potential for entrepreneurship to drive innovation, create jobs, and build community wealth, particularly in rural areas that have historically been overlooked by traditional economic development strategies.
The strategy also acknowledges the interconnectedness of entrepreneurship with other sectors, such as education, technology, and natural resource management. By fostering a robust entrepreneurial ecosystem, the Redwood Region can create synergies across various industries, leading to more sustainable and diverse economic growth.

> "I think many people are interested in having their own business but don't love the support. I want local businesses. I am not interested in supporting a company that comes in and skims off profits."

Strategy

The entrepreneurship strategy comprises four interconnected initiatives designed to cultivate an innovation ecosystem and support both nascent and existing enterprises:

1 Entrepreneurial Culture Cultivation

This initiative focuses on establishing a "Redwood Region Innovators" brand identity to create a cohesive identity for the region's entrepreneurial community. It implements regular entrepreneurship showcases and thought leadership series, featuring successful local entrepreneurs. A coordinated multi-channel communication strategy will be deployed to highlight local success stories and promote available resources. The initiative also includes creating mentorship programs pairing experienced entrepreneurs with new ventures and developing recognition programs for innovative local businesses and entrepreneurs.

2 Entrepreneurship Education Enhancement

This initiative aims to scale existing programs to increase participant reach and impact, while also initiating new programs such as an intensive "Summer Institute for Entrepreneurship." It focuses on developing a comprehensive entrepreneurship education continuum from K-12 through tertiary education, integrating financial literacy modules into entrepreneurship curricula. The initiative also establishes partnerships with local businesses for experiential learning opportunities and creates specialized programs focusing on social entrepreneurship and sustainable business practices.

3 Entrepreneur Support Infrastructure Optimization

This initiative establishes a network of business incubators and accelerators to provide physical space, mentorship, and resources to support early-stage businesses. It includes developing and maintaining a comprehensive entrepreneurial resource navigator and implementing sector-specific support programs aligned with regional strengths. The initiative launches an "Entrepreneur E-Zone" digital platform for knowledge exchange and collaboration, facilitates regular cross-sector networking and innovation workshops, creates co-working spaces in rural communities to support remote workers and local entrepreneurs, and develops a regional supply chain network to support local businesses.

4 Capital Access and Resource Allocation Improvement

This initiative establishes a dedicated "Redwood Region Entrepreneurship Fund" offering a range of financial products tailored to different stages of business development. It focuses on cultivating a regional angel investor network and exploring community investment cooperative models. The initiative provides targeted financial literacy and investment readiness programs, develops partnerships with local banks and credit unions for entrepreneur-friendly lending programs, creates a microloan program for small-scale rural entrepreneurs, and establishes a regional crowdfunding platform to support local ventures.

This strategic framework is designed to create synergies across all elements, fostering a comprehensive ecosystem that supports entrepreneurs throughout their development trajectory. The sector-neutral approach facilitates innovation across diverse industries, capitalizing on the region's heterogeneous economic base.

"I believe that bringing more entertainment to the region, encouraging companies to bring jobs to this region, providing extra support to local businesses and encouraging a more diverse region would help develop this beautiful area of Northern California."

Regional Assets

The following organizations and initiatives have been identified as key assets for the entrepreneurship strategy in the Redwood Region:

- Blue Lake Rancheria Tribe's Toma Resilience Campus and Resilience Business Incubator (opening 2025)
- Regional Community and four-year Colleges: Offer workforce development and entrepreneurship training, provides research support and entrepreneurship education programs
- Local Chambers of Commerce: Provide business support and networking opportunities
- Redwood Region Economic Development Commission: Offers business assistance and financing options
- SBDCs- Northcoast SBDC, West Business Center
- CDFIs- North Edge, RREDC, Lake EDC

Figure 29 Entrepreneurship Sector Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ Priority communities often find opportunities in entrepreneurial fields that are more supportive than wage labor.	♦ The region has a history of producing sustainability focused enterprises and eco-innovation.	♦ Strategies increasing entrepreneurial activity result in job creation. ♦ Entrepreneurial activities can provide increased flexibility in working hours, which may be more compatible with balancing caretaking responsibilities, for example.

"We need financing! Capital funding for startups, women in business. Build it locally."

"Work with the city on initiatives that will attract more BIPOC individuals to the area. Make it easier for queer businesses and organizations to develop such as fast-tracking, prioritizing liquor licensing, event permits, etc."

Strategy Implementation

The RRRISE Collaborative could leverage its membership to provide coordination and backbone support to these initiatives. Private sector entities will contribute through mentorship and investment. Funding will be pursued through diversified sources, including state and federal grant programs, private sector partnerships, and innovative community investment models.

The implementation will follow a phased approach:

Phase 1 (Year 1-2)

- **Foundation Building** - Establish key partnerships, conduct needs assessments, and launch pilot programs.

Phase 2 (Year 3-4)

- **Scaling Up** - Expand successful initiatives, increase investment in support infrastructure, and enhance regional branding efforts.

Phase 3 (Year 5-6)

- **Accelerating Growth** - Focus on widespread adoption of entrepreneurial practices, significant expansion of funding options, and increased integration with other economic sectors.

Phase 4 (Year 7-10)

- **Sustaining Success** - Achieve self-sustaining entrepreneurial ecosystem, realize significant increase in new business formation and job creation.

Risk mitigation measures include diversification of funding sources to ensure program sustainability, phased implementation allowing for iterative learning and adjustment, continuous partner engagement and feedback incorporation, adaptive management protocols to respond to emergent challenges, and capacity building through targeted investments in training and support.

Case Study

El Centro Latino Del Lago is an ongoing business advising program run by the Lake County Economic Development Corp. in partnership with the Lake County Chamber of Commerce and the California Hispanic Chamber of Commerce. Launched in 2024, it is a new program to assist Latino business owners and potential entrepreneurs in Lake County. It offers a six-week training program with workshop topics that include how to start a business, business planning, marketing, cost analysis, and strategies for success.

More information:
https://lakeconews.com/news/78206-latino-business-assistance-and-entrepreneurship-program-announced
https://lakecountycaedc.org/centro-latino-del-lago/

By strategically leveraging its unique assets and implementing a comprehensive, collaborative approach to entrepreneurship development, the Redwood Region aims to catalyze a thriving, innovative rural economy that generates opportunities across all demographic segments. This strategy represents a significant policy intervention aimed at addressing the region's economic challenges and fostering a more resilient, diverse, and prosperous rural economy.

Food Security and Access

Rationale

Many residents of the Region struggle with food insecurity due to complex transportation and income challenges. After COVID-era emergency allotments expired in February 2023, food insecurity intensified as federal programs like SNAP reduced budgets and reinstated work requirements (USDA, 2023). This disproportionately affected rural and Tribal communities, where smaller populations make operating grocery stores economically challenging. In our region, 21.4% of Humboldt County and 22.8% of Del Norte County residents experience food insecurity, significantly higher than the California average of 17.5% (Feeding America, 2021). Tribal communities face even greater challenges, with our Region's Tribes facing food insecurity rates as high as 90% (Sowerwine et al., 2019). The USDA has designated much of our region as a food desert, with some residents in remote areas traveling over 20 miles to reach the nearest grocery store (USDA ERS, 2021) and 77% of Tribal residents in the Mid-Klamath Basin traveling over two hours (Sowerwine et al., 2019). This situation is exacerbated by frequent road closures due to extreme weather events, which can completely cut off food supply chains to our geographically isolated region (Humboldt County Office of Emergency Services, 2022). These factors underscore the urgent need for a comprehensive, locally-focused food security plan that addresses the unique challenges of our remote, rural, and Tribal communities.

"Lack of fresh food impacts wellness in a place where accessible medical treatment is already a challenge."

"We've been eating ramen for the last eight months and it's embarrassing."

Figure 30 Food Security and Access Data in the Redwood Region

County	% Food Insecure	% Below SNAP Threshold	% with low access to grocery*
Del Norte	14.6%	70%	32%
Humboldt	15.8%	79%	15.7%
Lake	15.4%	78%	18.7%
Mendocino	15.1%	76%	17.4%
Klamath Basin Tribes	75%	N/A	N/A – data indicates that the barrier to access faced by the majority of community members include distance, gas money, and lack of vehicle access.[6]

[6] https://www.ers.usda.gov/data-products/food-environment-atlas/go-to-the-atlas/

Strategies

1 Support Ongoing Policy Advocacy and Community Outreach and Support

Increasing Market Match Nutrition Incentives and access to CalFresh enrollment at farmers' markets across the region benefits local producers and lower-income individuals and families. Not all Certified Farmers' Markets in the region offer year round Market Match benefits, which are designed specifically to increase consumption of fruits and vegetables. In 2023 Market Match led to $19.4M in spending of incentives and CalFresh benefits at 294 sites in 116 cities across 38 CA counties. This translates to approximately 38.8M servings of CA grown fresh fruits and vegetables. There are several expansion opportunities for Market Match and SNAP benefits programs being piloted across the state.

Expansion of Women, Infants & Children (WIC) and Senior benefits programs to include electronic benefits transfer and increasing the number of approved sales outlets will benefit local agricultural producers by bringing more of those federal benefits directly into local economies through independent grocery stores as well as farmers' markets.

A comprehensive county-level food purchasing plan supports agricultural production and benefits the local economy. Existing programs, where approved, such as the Cottage Foods Operations allow small-scale home chefs to create value added food products in their home at a lower cost, reducing barrier to entry into this viable market opportunity.

Smart land use planning with a focus on keeping agricultural and working lands in active production, reducing opportunities for conversion of prime soils and prime ag land to development and incentivizing climate resilient agricultural practices supports agricultural producers and increases the available food supply.

Food recovery projects exist in Humboldt, Del Norte, and Mendocino counties but remain small-scale. According to the state, "feeding hungry people through food recovery is the best use of surplus food and a vital way for California to conserve resources and reduce waste thrown in landfills."

2 Expand Supply Chain Infrastructure for Local and Emergency Food

This includes developing new or expanding existing food hubs in the Region, equipping communities with commercial kitchens, cold storage facilities, and processing equipment, as well as connecting local producers with institutional buyers and providing distribution of aggregated goods.

It will also expand small scale agricultural production, processing, and distribution through training for new and beginning farmers/ranchers, ongoing support for direct market sales channels (farm and fish markets) and emergency food outlets (food banks and mobile pantries), and coordination of food system actors to enhance the capacity of local producers to access retail and wholesale market outlets. Special attention will be given to remote and Tribal communities to reduce food insecurity and improve health outcomes, including individuals utilizing regional food banks and pantries and youth in regional school districts.

Additionally, this initiative will engage communities around building capacity to meet needs during times of emergency. It will coordinate actors in emergency services planning, food production and distribution, public health, and education. This includes working with local Offices of Emergency Services to incorporate feeding plans into their emergency strategies, establishing strategically located hubs for emergency feeding operations, and creating a more resilient regional food system capable of withstanding supply chain disruptions caused by road closures, extreme weather events, or other emergencies.

3 Reduce Incidence and Severity of Cultural Food Insecurity

Cultural food security emphasizes the critical importance of having access to desired foods. This may be food included in Indigenous diets or traditional foods of individuals from other areas (immigrants, university students, traveling healthcare workers). It is inherently connected to food sovereignty–a person or community's ability to exercise control over food choices and the activities that enable the existence of those choices.

This initiative is multipronged, incorporating workforce development, enhancement of cultural competence among partners, Indigenous self-determination and landscape-scale co-management, access to capital and capacity-building efforts, and support for connectivity across priority communities.

It prioritizes leadership from priority communities as a key foundation, but it also creates opportunities for relationship building and transfer of knowledge. It allows for implementation of culturally-specific practices (such as Hmong livestock slaughter practices or Tribal cultural burning).

Specific activities could include:

- Creating learning exchanges between priority communities and external partners to build relationships, increase cultural competence, and share lessons learned.
- Supporting workforce development in food systems organizations that increases hiring from and leadership of priority populations.
- Promoting the implementation of capacity-building programs such as the IDA program sponsored by NorthEdge to increase number of BIPOC food businesses.
- Identifying opportunities to support Indigenous landscape management activities through funding, collaboration, and awareness-building (e.g., reducing stigmas associated with cultural burning).
- Supporting development of infrastructure for cultural foods including food truck commissary kitchens and wild foods processing.

4 Build Capacity for Community Ownership of Small-Scale Food Outlets

This initiative will help to overcome the constraints faced by very small food stores and highly rural communities which lack a grocery store. Two examples within the region can be upheld as models of success. The Hoopa Shopping Center was established after successive closures of regional chain grocery stores impacted the rural and Tribal community; the Hoopa Tribe developed a Tribally-owned grocery store which gives the community greater control over its food resources and establishes a greater commitment to the local community's food needs. The Salmon River Outpost, a small general store, was reopened under new ownership, with the help of the regional CDFI, North Edge, a community funder dedicated to supporting community ownership of assets.

Areas of focus include:

- Create awareness of successful strategies and resources available for supporting food needs of remote and underserved communities.
- Implement training programs for store owners and connect them with specialists who can support them in creating community-owned operations, managing business challenges, increasing local purchasing, and accepting food benefits payments.
- Work with last mile distributors to modify restrictive procurement agreements, allowing remote stores to source fresh produce from local farms or prepared foods from cottage food makers.

5 Expand Partnerships for Institutional Purchasing and Food-As-Medicine Programs

Increasing the number of larger institutional buyers (such as universities, colleges, hospitals and school districts) of local agricultural products benefits producers and consumers. Food Hubs play a critical role in increasing the efficient transfer of small-scale farmers products directly to larger buyers. Cal Poly Humboldt and North Coast Growers Association's Harvest Hub have been working in partnership to ensure the university can buy locally grown products, but there are several hurdles to cross to achieve this goal. Individual farmers benefit from the support Harvest Hub offers in achieving the food safety planning and production planning needed for meeting the demands of larger buyers.

Food as Medicine is a concept growing in popularity which integrates consistent diet and nutrition resources with reducing the prevalence of chronic illness. Fresh food vouchers, often distributed directly through doctors offices and other health care providers, can play a critical role in achieving these goals. Open Door Community Health Centers, the largest healthcare provider in Humboldt County, has had tremendous success with this concept while also supporting local agricultural producers by offering a "prescription for farmers' markets" in the form of fresh food vouchers which can be spent directly with farmers at regional farmers' markets.

"Provide more access to healthy foods-low calorie and high nutrition and make available places to work out and exercise as well as guides like local hiking trails and local fauna and flora."

Figure 31 Food Security and Access Sector Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ Community involvement and collaboration in food systems design results in more equitable outcomes. ♦ Deferring to leadership from within priority communities results in active participation and self-determination. ♦ Affordability of local food is increased through aggregation. ♦ Subsidizing cost of local food increases access and security.	♦ Aggregating locally produced food and centralizing distribution can reduce some GHG emissions compared to individual farms distributing products. ♦ Enhancing Indigenous food sources promotes cultural food security and Indigenous practices employed in landscape management mitigates climate risks associated with floods/slides, fire, and drought. ♦ Enhanced local food production and aggregation/ storage can temporarily mitigate risks associated with extreme climate events.	♦ Indigenous food security enhancement promotes jobs that prioritize cultural values and contribute to living wage jobs because these jobs often have parity with federal and state land management agencies. ♦ Expanding food security leads to better individual access to, and ability to retain, jobs. ♦ Alignment of working lands jobs with automation and technology increases demand for higher-skilled workers. ♦ Increasing revenues through value-added processing creates jobs and also increases opportunity for working lands jobs to achieve higher-paying wages.

Housing

Rationale

The Redwood Region lacks quality, accessible, and affordable housing. Housing production has not kept pace with demand, especially in rural areas. While California's housing stock has increased by 7% since 2010, the Redwood Region has had only a 1.3% growth in stock (Industry Cluster Analysis). This has resulted in a significant housing shortage and increased housing costs throughout the region. According to the California Housing Partnership's 2024 Housing Needs Report, more than 11,000 low-income renter households in the region do not have access to an affordable home.[7]

[7] By county this includes 755 low-income renter households in Del Norte, 6,215 low-income renter households in Humboldt County, 1,401 low-income renter households in Lake County, and 2,757 low-income renter households in Mendocino.

When it comes to buying a home, data from the California Association of Realtors shows a steep increase in the median price of homes across the region over the past decade, which outpaces increases in wages:

125%
increase in median price of homes in Del Norte County since 2014

73%
increase in median price of homes in Humboldt County since 2014

86%
increase in median price of homes in Lake County since 2014

71%
increase in median price of homes in Mendocino County since 2014.[8]

A lack of quality, affordable, and accessible housing across all economic sectors limits economic growth and prosperity and endangers critical community infrastructure. Without housing stability, our emerging and marginalized workforce must focus on meeting basic needs—and this prevents many from effectively participating in education, workforce training, and employment opportunities. A shortage of quality housing makes it difficult to recruit and retain medical professionals, educators, and other professionals. The lack of affordable housing also challenges small businesses, government agencies and other employers when looking to attract and retain workforce. Anticipated developments like offshore wind, with an increased demand on housing for construction workers and permanent employees, will only exacerbate this problem.

"Housing costs, food costs, healthcare and transportation are most important to me. (...) As an adult, I have always had to put the majority of my monthly income into rent alone. If I had more expendable income that would improve my quality of life, lower stress, and give me more opportunities to pursue my creative career."

Background

Rising construction costs have significantly impacted housing accessibility in the Redwood Region. Over the past ten years, California's construction cost index shows a 55% increase, with nearly 40% of that occurring in the last four years alone. In this four-county region, new construction costs are around $350 per square foot, almost double the cost of new construction in states like Texas. These rising costs have led to fewer new homes for ownership, particularly in rural areas where wages have not kept pace with the increase in construction expenses, making home ownership more challenging than ever. Additionally, the scarcity of housing has driven regional vacancy rates below the state average, intensifying competition and increasing costs. While 44.8% of renters statewide spend more than 35% of their household income on housing expenses, the percentage is even higher in this rural region.

"Buying a house seems unaffordable. Feels like I'll always be renting."

Moreover, rental properties are increasingly being diverted to primary residences or vacation and temporary rentals. Rising maintenance and repair costs, insurance, and tenant protections that limit deposits and rental increases have led many property owners to exit the rental market, choosing to invest their funds elsewhere.

[8] Source: California Association of Realtors data via the EDD website.

Landlords often take advantage of temporary workers, such as traveling nurses and construction crews, who generally earn higher incomes than permanent residents, thereby artificially elevating rental costs and displacing local residents. The cost of labor and materials for construction has increased approximately 40% in the last five years, and wages have not kept pace. Consequently, much of the region's housing supply, which is older and requires maintenance, remains deteriorated as many homeowners cannot afford necessary repairs and upgrades, such as painting and reroofing.

The region's geographic features, including coastline, mountainous terrain, and protected habitats, limit opportunities to build outside city limits or in unincorporated areas. To increase housing inventory, communities may need to focus on infill development, which can lead to increased traffic congestion, parking demands, and neighborhood shading—factors that often prompt community opposition. Geographic limitations may also necessitate locating new low-income or affordable housing within primary communities, where lot size and other regulatory requirements for funding cannot always be met, further complicating development efforts and provoking protests from neighbors.

Legislation and funding mechanisms often fail to account for the rural realities of the Redwood region. Much of the area lies along the coast, where the California Coastal Commission retains significant power to slow or block housing projects, even when lawmakers attempt to reduce barriers to development. Land suitable for low-income housing often does not meet regulatory requirements due to factors such as size, isolation, or distance from major transportation hubs, making it difficult to utilize low-income housing programs fully. Despite legislative efforts to prevent individuals and groups from obstructing housing development, local authorities may still yield to community pressure and deny housing projects, even when they meet regulatory requirements, indicating a need for additional legislative tools to ensure suitable projects are approved.

The region also faces a significant shortage of skilled workers in the building trades, which hinders the ability to meet labor demands for new construction and maintenance. Contractors in the area often have waitlists of a year or more for standard projects like roofing and painting. The lack of qualified companies and a skilled workforce contributes to delays and increases the cost of maintaining the existing housing inventory, exacerbating the region's housing challenges.

1 Housing Strategy

Addressing Rural California's housing shortage is critical to building resilient regions and communities. A Comprehensive Rural Housing Policy can identify and address barriers to housing production and access, inform an appropriate policy agenda and identify opportunities for regional action that increase the inventory and access to quality affordable housing for all sectors of the community.

Policy formation should include:

1. A comprehensive assessment that identifies and clearly defines the root causes of rising housing costs and other barriers to development.
2. A map of regional and community assets (property, partners, programs).
3. Identification of innovative solutions to address the barriers to new construction, decrease costs, incentivize the rehabilitation of existing housing, and increase access to affordable housing across the income spectrum.

These solutions could include:

- New policies could reduce builder risk to incentivize new construction and increase the availability of rental housing.
- Redefining "workforce Housing" to include less conventional housing models such as rooming/ boarding houses, employer provided housing (dorms, temporary, subsidized or employer owned), mobile home parks, cluster developments, and more.
- Policies that strengthen program supports & housing access for low-income, emerging and re-entry workforce and those at risk of losing housing (youth, low income, previously incarcerated, etc.).
- Exploring new methods and materials for new construction and repairs, including fire hardening.
- Increasing access to home financing responsibly.
- Funding mechanisms and policies that support residential use and conversion of underutilized spaces, like hotels and commercial buildings, into housing.
- Programs and supports that assist owners in protecting the structural integrity of existing housing.
- Explore the development of workforce training programs that focus on conducting repairs and retrofits to improve the quality and longevity of the existing housing stock. This could use funding sources like the Section 504 Home Repair program that provides loans to very-low-income homeowners to repair, improve, or modernize their homes or grants to elderly very-low-income homeowners to remove health and safety hazards.
- Supports for officials to more effectively enforce build by right (and not obstruct development because of neighborhood objections), subsidize infrastructure upgrades, provide pre-approved plans, etc.
- Incentives and supports for property owners to maintain residential rental housing and decrease diversion.
- Formation of a housing trust fund with dedicated funding for housing production, preservation, and related activities, such as grant funding for construction or rehabilitation, infrastructure, land acquisition, or impact fees; low-interest construction, acquisition, or gap financing. This would allow communities to take advantage of California's matching funds for the creation, rehabilitation, or preservation of affordable housing, transitional housing, and emergency shelters.
- A workforce development plan that includes a building trades skills inventory and industry sector assessment to determine the high demand, high wage occupations needed (and available) in the building trades, mapping of Pathways from high school, internships should be mapped and plan to develop training programs to address gaps.
- Cross-sector coordination with government agencies, employers, religious organizations, and anchor institutions to identify underutilized land and parcels that can be used to develop housing. Working with healthcare providers, schools (including school districts, universities, and community colleges), and churches can be especially helpful since they often have large real estate holdings in central locations close to jobs that can be used for housing development.[9]

[9] For example, Yes In God's Backyard is a movement to work with faith-based institutions to use their land for affordable housing development.

- Support for the creation and capacity-building of local mission-driven developers and Community Land Trusts to support the creation of more affordable housing that meets community needs. Currently, the region has a shortage of developers who have the experience and capacity to compete for State affordable housing programs.
- Introduction of streamlined policies, advising efforts (like pre-approved architectural plans), and financing tools that help existing homeowners add additional housing capacity to their properties through the creation of Auxiliary Dwelling Units (ADUs) that can increase the number of units on the market.[10]
- Support for the research and development of climate-friendly building technologies and materials using value-added lumber and hemp products that can support more affordable housing development (like mass laminated timber or hempcrete). These technologies can be both used in the region and potentially exported to new markets, creating family-sustaining jobs and career pathways. This can be done with the Working Lands sector.
- Support a market study on the viability of alternative models of homeownership and community shareholding in the region–including condos, cooperatives, shared housing models, and neighborhood real estate investment trusts–that help prevent displacement and build wealth for lower-income residents.[11]
- Continue to build cross-sector support for low-income renters and job seekers–including expanded renter rights and education; landlord engagement; and as well as anti-speculation policies (like vacation rental limits).
- Provide community members and employers with resources to build shared support for the development of affordable housing, for example: Humboldt County Association of Governments Keys Campaign.

Strategy Implementation

RRRISE could use its convening power to create working groups that drive regional Housing conversations forward. The Coalition should seek to fund the comprehensive housing study to create the policy agenda and identify opportunities for advocacy, policy reform, and innovative measures to bring more housing to market on the North Coast.

Regional Assets

- For-profit Developers
- Non-profit Developers
- Building Trade orgs and labor groups
- Housing advocates
- Housing supportive services providers
- County govt actors (housing commissions, etc.)
- Municipal govt actors
- Policy makers and advocates
- Tribal housing organizations
- Neighbors
- Property Owners
- Building materials suppliers (need less expensive and innovative materials)
- Housing Authorities

[10] Los Angeles Backyard Home Project provides CDFI financing options to help homeowners build an ADU and housing a low-income tenant using Section 8 Housing Choice Vouchers for seven years.

[11] Examples include URban Institute's New Models for Community Shareholding Equity – Investing in Neighborhood Real Estate Investment Trusts and Cooperatives, San Joaquin Valley Council of Governments – Alternative Housing Ownership Models Innovative emerging legislation on Tenant / Community Opportunity to Purchase.

Access to safe, affordable housing also supports critical community infrastructure vital to health, welfare, and resilience. An adequate housing inventory increases the successful recruiting and retention of all workforce. In addition, adequate workforce housing supports rural communities in attracting needed medical professionals, educators, and other professionals. Housing is also a fundamental foundation that allows access to other basic needs, health care, food security, broadband/information access, etc-all critical for attracting and retaining workforce. A consistent and sufficient housing inventory will also help employers, including small business, government agencies and others to more successfully attract and retain a diverse workforce, offering increased access to high-quality jobs, including those in disinvested communities.

Greater access to low income/affordable housing would allow our most vulnerable residents, including entry level workers, working seniors and others to more easily remain employed and meet their basic needs. Increasing the housing inventory to address the anticipated influx of both construction and permanent workers for new developments like offshore wind, will allow long-standing and permanent residents to more easily compete with these workers for limited rural housing. Increasing the inventory of quality housing will also provide high-quality jobs in Building Trades/Construction.

Figure 32 Housing Sector Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ Historically, land use and zoning policies have excluded affordable housing and created racial, economic, and housing segregation. These conditions have limited physical and economic mobility, exacerbated income disparities, compromised food security, limited access to health care and affected other harmful consequences, most particularly for historically marginalized and disinvested groups. ♦ Engaging these community members in the development of a comprehensive housing policy that increased access to quality affordable housing will help to increase opportunities to secure basic supports and quality, well-paying employment.	♦ Including provision for research and development of new climate friendly technologies will help to address environmental impacts. ♦ Increasing housing availability in rural areas close to employment centers will decrease commuting and greenhouse gas emissions, reducing environmental impact in these areas.	♦ An adequate supply of accessible, affordable quality housing in rural areas will provide individuals with the opportunity to access and retain quality living wage jobs at various locations in our isolated communities and allow employers to attract and retain qualified employees. Quality affordable housing will also allow individuals to participate in workforce training and other educational programs that will allow them to increase skills and access high quality jobs. Provisions to build collaborative building trades workforce development programs that include educational institutions, private sector experts and others will also increase sector-specific opportunities in this high demand, high wage sector.

Humans of the Redwoods

Despite Suffering From Cannabis Industry Fallout Post-Legalization, Kathy Finds a Supportive Community in Humboldt

At the cannabis industry's prime, Kathy Perri didn't need to worry about housing, healthcare, or feeding her family. The financial repercussions of legalization took away her livelihood and now she's still trying to pick up the pieces, but high demand for social services makes it hard to actually get reliable help. Through the care of her community she finds the support she needs.

A Thriving Industry

Humboldt has a long history of boom-and-bust industries. Cannabis legalization spurred Humboldt's most recent bust, leaving folks like Kathy Perri adjusting to a whole new way of life. Kathy moved to Shelter Cove 24 years ago, working at the campground and deli until she was invited to work on cannabis farms. She loved the family-friendly atmosphere.

"It was awesome because I could pick my kids from school and bring them along. There were barbecues, and pools for my kids to swim in during the day when they didn't have school. I brought my mom a few times a month, 30 years older than me. She was in her 70s. She'd go trimming with me too. And it was like a family back then."

Kathy had done some guerilla growing before she moved to Humboldt, but she found that the local industry really supported her and her family back then. "I always had money. I was never n welfare or food stamps. I raised my kids with no Medi-Cal. I didn't have to worry about that. It was a good industry, it was easy. I mean, hard work... It was just different because we could make a lot of money and it was more communal back then, way more stable than now."

> "I've never in my life thought I would be homeless."

Industry Fallout

Kathy noticed the industry changing throughout the years. The camaraderie was dissolving, the market became more cutthroat, and prices were dropping. Eventually she decided it was best to move on, but the transition forced some unforeseen changes into her life. She now barely gets by with two part-time jobs and disability checks.

"It's way different for me now. I get food stamps. I don't have my own place. I'm on Medi-Cal, I barely have a vehicle, I mean, I work hard and I still never have any money. I can't even find a place to live. I just can't even afford to rent a place. I never thought I'd be in this situation, especially at my age. I never, ever thought I'd end up like this. Ever."

Perri doesn't have much family to turn to in times of need, but the community she's found in Humboldt means everything to her and provides her with the care she needs." I used to think about moving, but I don't think I'll ever get out of here because I don't care how much money I can make somewhere else. I'm happy here. And you know, money's not everything."

Read Kathy's full story

Infrastructure and Transportation

Rationale

Communities are concerned with disaster preparedness and vulnerabilities related to limited road infrastructure. Lack of transportation, supply chain infrastructure, and connectivity constraints industry growth and access to markets (see Working Lands SWOT, e.g.). Incidence of motor vehicle related accidents and deaths are higher in the region than the rest of the state. Many communities are divided by highways and major thoroughfares, and there is a general lack of workforce housing that is pedestrian and transit friendly. Dirt roads are a primary source of air pollution in the region. Challenges disproportionately impact remote areas and Tribal communities; many are present due in part to the region's rurality, dispersed population, and diverse geography. During the RISE Listening Campaign, many residents and service providers discussed how transportation impacted access to economic opportunities citing long commute times and limited public transit–challenges that are especially acute for young people, people with disabilities, and those who cannot afford a car or bicycle.

> "I live really rural, so it would require a lot of drive time to be in person [for training]. And so... you're investing in the gas, you're investing in the time... I think that can really pose a challenge for some of our rural entrepreneurs."

Strategies

1 Improving Connectivity, Safety, and Walkability

Jurisdictions across the region are already working to create more pedestrian friendly town and city centers. Caltrans and the California Coastal Commission are also working to incorporate multimodal transportation elements into many transportation projects, including in Mendocino and Humboldt counties. RISE could use its convening power to promote adoption of best practices and identify and name key zones for pedestrian friendly development. The full implementation of the Humboldt County Regional Climate Action Plan and Regional Transportation Plans for Del Norte, Humboldt, Mendocino, and Lake Counties would also support these practices. Funding for clean vehicles may be available through the state's On-Road Heavy-Duty Voucher Incentive and Clean Cars 4 All-programs.[12]

Another key area which could benefit from awareness raising and prioritization at the regional level is accessibility of public spaces for residents with disabilities. Actions identified by the Collaborative include creating and disseminating a guidebook for inclusive design (of spaces, programs, communications materials, etc.), creating a regional multi-modal transportation plan connecting remote areas to economic centers, developing Public Service Announcements (PSA) to promote the importance of road safety, and procuring state and federal funding to increase non-motorized transportation usage and traffic safety, especially along major highway corridors and roads connecting Tribal Lands to other communities.

[12] https://ww2.arb.ca.gov/our-work/programs/road-heavy-duty-voucher-incentive-program
https://ww2.arb.ca.gov/our-work/programs/clean-cars-4-all

"Lack of transportation options as a disabled person is a major limitation to access employment"

Case Study

LOCAL CASE STUDY: The Humboldt Transit Authority (HTA) is committed to fully transitioning their bus fleet to zero emission in compliance with the Innovative Clean Transit regulation. In 2022 HTA was awarded a $38.7 million grant funded by the California Climate Investment fund through California State Transportation Agency's Transit and Intercity Rail Capital Program (TICRP) to introduce 11 New Flyer fuel cell electric buses (FCEBs) and a hydrogen fueling station at HTA's facility in Eureka. With 11 new zero-emission FCEBs added to the fleet and the hydrogen station, this project will help kickstart a hydrogen supply chain on the North Coast. In addition to laying the foundation for a zero-emission transit fleet, this project also creates a new intercity transit service, the Redwood Coast Express. This service will connect local riders from Eureka to Ukiah linking riders to Mendocino County and south to the SMART train and the San Francisco Bay Area with fuel cell electric buses.

More information:
https://www.caclimateinvestments.ca.gov/2023-profiles/hta

Humboldt Climate Action Plan:
https://humboldtgov.org/DocumentCenter/View/131636/Humboldt-RCAP_Public-Draft_w-Appendices?bid Id=

This would include adoption of "Smart Growth" planning strategies, which includes creating a streetscape that is inclusive to all modes of transportation. Zoning and Form-Based Code policies would be implemented by cities, counties, and town advisory boards to encourage businesses to build their storefronts directly on the street, with parking in the rear of buildings. Sidewalks would be promoted as public spaces, with human-friendly street trees, art, and furniture abounding. Curbs would include ramps to ensure accessibility. Curb bulb-outs would promote the safe crossing of streets by pedestrians. Bike lanes and 'sharrows' would be prioritized, along with high quality transit stops. Public spacemaking would be encouraged, such as parklets, pocket parks, and converted alleyways to enhance the human experience on the streetscape.

Towns can implement innovative programs that promote sustainability and community engagement. One such program involves the creation of edible food gardens in spaces where business owners have parklets in front of their establishments. Through this initiative, business owners can opt into programs that fund urban foraging, encouraging people to visit these areas and pick fresh, locally grown produce. This not only promotes a sense of community and connection to nature but also supports sustainable practices and local food systems.

2 Infrastructure to Support Supply Chain Development and Market Access

While tribes, counties, and municipalities all have their own infrastructure and transportation priorities, there is a sense that regional coordination could be of benefit to support supply chain efficiency and access to markets for the region's producers. For example, regional distribution hubs could improve market access in the region, particularly for rural and Tribal producers. Asset mapping and visualization around things like cold storage networks (see Working Lands Sector Strategies above) helps make gaps and priorities visible. Named constraints to market access and flows of goods and services include specific parts of Highway 101 which are too narrow for conventional trucking. Another area of interest for the region's entrepreneurs is use of port infrastructure for shipping, which some feel is underemphasized/utilized.

3 Resilience and Disaster Preparedness

Concerns have surfaced around vulnerability of communities due to the limited presence and condition of road networks, particularly in rural and remote areas. More work is needed for example on fire hardening around roads, with projects already underway in Mendocino which create jobs for crews and increase fire safety.

There is a bigger picture concern around whether and how much planning for climate change impacts is driving current decisions around where to site development. Some of the largest economic development projects in the region-offshore wind development, large scale foreign investment into an aquaculture endeavor, a transatlantic cable landing, and associated mill site redevelopment initiatives-are all taking place in one of the most vulnerable areas on the California coast with respect to sea level rise (Humboldt Bay). There are anticipated shifts in population centers happening from within the region and also driven by climate refugees coming from drought and fire stricken areas elsewhere in the state and the nation.

Actions identified by the Collaborative include creating an asset map to identify local key resources in the event of large-scale disasters, encouraging regional training opportunities around community-level disaster preparedness, aligning regional strategies with state strategies, promoting the use of electric vehicles for public transportation, and to ensure that rural remote and Tribal communities, inclusive of traditional ecological knowledge and practices, are included in these planning efforts.

Additionally, the Collaborative identified that mobility hubs could benefit priority communities in the region, especially during extreme weather events. These hubs could operate as cooling and heating centers, and route to remote communities in the region, allowing use of electricity, water, and Wifi. At the same time, they can be used as a hub to get enrolled or access county-level benefits. Mobility hubs could also assist rural and remote communities in receiving health services (ex. mobile medical/dental), as medical transportation was elevated as a barrier for many.

> "If we are working on creating more equitable accessible solutions to jobs and employment, transportation and public transportation are a huge part of that to me, because there are so many places I just don't get to go."

To strengthen our strategies for a carbon-neutral economy transition, we must focus on improving our infrastructure to support sustainable practices. Investing in renewable energy infrastructure is vital for a successful transition. This includes expanding and upgrading our energy production and distribution systems to accommodate renewable sources such as solar, wind, and hydroelectric power. Upgrading our electrical grid to support two-way energy flows and storage capabilities will also be essential to maximize the use of renewable energy and ensure a reliable power supply.

Enhancing our transportation infrastructure is crucial for reducing carbon emissions. More can be done to increase ridership on public transportation systems, building electric vehicle charging stations, and creating infrastructure to support walking and cycling as alternative modes of transportation.

Improving energy-efficient building infrastructure is another key aspect of transitioning to a carbon-neutral economy. Retrofitting existing buildings with energy-efficient technologies and constructing new buildings that meet rigorous energy efficiency standards will help decrease overall energy consumption. Additionally, investing in sustainable and resilient infrastructure that can withstand the impacts of climate change, such as extreme weather events, will be crucial for building a carbon-neutral economy that is adaptable to future challenges.

Incorporating green infrastructure, such as green roofs, permeable pavement, and urban green spaces, into our communities can help mitigate the effects of climate change, reduce urban heat islands, and improve overall environmental quality. Such initiatives can also contribute to carbon sequestration and biodiversity conservation, fostering a more sustainable and resilient environment.

Integrating advanced technology into our infrastructure, such as smart grid systems, energy management systems, and IoT (Internet of Things) devices, will enable us to optimize energy use, reduce wastage, and improve overall system efficiency. Leveraging data analytics and real-time monitoring can help us identify opportunities for energy conservation and make informed decisions to support our carbon-neutral economy transition.

Implementation

Assets to be leveraged:

- Humboldt County Association of Govts (HCAOG) and Mendocino County Council of Governments (MCCOG) [RISE Voting Members]
- Local Caltrans units
- California Highway Patrol (CHP)
- Tribal Planning Depts
- Green transportation advocates
- County and Municipal Governments
- County Offices of Education
- Community Colleges
- Red Cross
- Training Providers

Figure 33 Transportation and Infrastructure Sector Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ Reduce air pollution burden on rural and remote communities. ♦ Create better connectivity and safety for priority communities.	♦ Improve climate resilience of rural and remote communities; strategies help fire-safe roads. ♦ Promote green transportation including shared transit, biking and walking.	♦ Job and procurement opportunities for local workers and firms. *Tribal communities note a need to create more equitable opportunities for Tribal firms to bid on these infrastructure contracts.

Workforce Development

Rationale

The Redwood Region has worker shortages in occupations that have family sustaining wages. While there are existing training pathways into these occupations, completion rates for these programs are too low to meet demand. The region has high rates of ACEs and high attrition from the workforce due to cognitive and behavioral disability, higher rates of mental health conditions including depression, anxiety, and health conditions that are correlated with trauma. Employers report that this affects worker productivity, resilience, and turnover. Shortages of childcare providers, lack of transportation, and lack of higher wage opportunities are barriers reported by priority communities.

Background

Discussions of the workforce development system often focus on the Workforce Innovation and Opportunity Act (WIOA), federal legislation that establishes and funds a system of public services designed to help two customers: workers and employers. WIOA services help job seekers and workers, including youth and those with significant barriers to employment, find, keep and advance in high-quality jobs and careers. WIOA also funds services to help employers hire and retain skilled workers. Since WIOA was authorized in 2014, increasing attention has been devoted to forming connections between workforce, education, and social services to build pathways to careers and successful employment. However, alongside the public systems that serve workforce functions, private employers invest considerable resources in developing, procuring, and implementing workforce development and training programs to attract, train, and upskill a workforce that meets their needs.

"We need policies that hold agencies, organizations, corporations etc. accountable to ensure that their offered wages grow with the rising cost of living whether they are private/public, nonprofit or otherwise. We need to create better accessible education programs and trade schools that give people the opportunity to thrive without living in poverty."

Workforce development is best understood not as a publicly funded service system, but as a complex ecosystem that must be cultivated, diversified, and balanced. It is the practical application of strategies critical to powering the economy. Workforce development strategies must enable government to government and public-private partnerships, maximize public and private investments within and across industry sectors, equip a workforce with skills that meet immediate and long-term business needs, design quality jobs and career pathways that build family and community prosperity, prepare for and manage disruptions and shocks, and generate ongoing analysis, planning, and resources required for innovation and resilience (Oleary, Overly, and Datar).

RRRISE has established a foundation for this work guided by a vision in which "*...everyone belongs, with stable jobs, accessible healthcare, and a flourishing natural environment. Together, we work towards a future where anyone can thrive.*" To build a regional workforce development ecosystem serving this vision, workforce strategies must address specific challenges outlined in the SWOT assessments relayed above and summarized here.

The Redwood Region is a newly designated planning area covering four profoundly rural counties and Tribal Lands, many of which experience capacity challenges in carrying out workforce development programming. It is served by three separate Workforce Investment Boards covering vastly different geographies and populations. Only one of the four counties in the region has a dedicated public workforce development office and staff in all four counties responsible for economic and workforce development are overburdened and carry multiple responsibilities. Tribes in the region have expressed a need for increased capacity in this realm in the form of dedicated staff positions for economic development and workforce development, which some have and others do not. The region is well served by North Coast Indian Development Council who provides workforce development programming.

Compounding these capacity issues, most employers in the region are small businesses which don't typically participate in or drive the design of public sector workforce programs in a coordinated way and struggle to meet their own workforce needs, while larger employers–primarily concentrated in government and health sectors–are confronted by both resource and labor shortages that limit their capacity to guide or contribute to workforce training resources at a county-wide or regional scale. The recent arrival of national and international developers in the emerging offshore wind industry have introduced new challenges and opportunities to these dynamics.

Additionally, the region is facing a wave of retirements in skilled trades (construction, maintenance, repair) providing critical support to anchor industries with few younger members of the workforce to come behind. This creates current backlogs and logjams in accessing labor to conduct emergency response efforts, public works construction projects, business development and residential improvement–like ADUs–even when policy is supportive, costs are prohibitive. Anchor industries like tourism, arts, culture, hospitality, and social services providing safety net and wraparound support are primarily staffed with entry-level and lower skilled jobs. Residents across the region report a culture of disposable labor, poor treatment, and limited opportunities for advancement.

The region has high rates of adults with ACEs and high attrition from the workforce due to cognitive and behavioral disability, higher rates of mental health conditions including depression, anxiety, and health conditions that are correlated with trauma. These outcomes are disproportionately concentrated in priority populations. Employers report that this affects worker productivity, resilience, and turnover. Shortages of childcare providers, lack of transportation, and lack of higher wage opportunities are also barriers reported by priority communities.

The RRRISE sector and cross-cutting strategies outlined in this plan include commitments to growing key features of the workforce development ecosystem: Data and analysis, K-12 and post-secondary career pathways programs, on the job training, apprenticeship programs, entrepreneurship, and investments in infrastructure like broadband, healthcare, and housing. The success of these initiatives will depend on coordinating and leveraging investments across the sectors to ensure jobseekers, incumbent workers and employers in priority communities lead, design, and access these resources and businesses participate in building the capacity of a regional workforce ecosystem to deliver benefits to all workers, businesses and communities.

This includes:

- Leveraging funding resources–federal, state, and other grant programs and business investments–across the region.
- Using key data–such as that developed and proposed in this plan to understand workforce gaps and opportunities, make strategic investments, identify and nurture strategic partnerships, and track impact.
- Resourcing leadership in priority communities to help identify and track the unique characteristics, opportunities, and workforce development needs of priority communities.

- Integrating the needs of employers and workers by creating industry-based, worker-focused training partnerships (i.e., High Road Training Partnerships)–where employers collaborate to build sector strategies based on quality of product and service achieved through innovation and investment in people–the local workforce-thereby generating family-supporting jobs where workers have agency and voice.
- Applying local and traditional knowledge along with evidence of best practices to design workforce development solutions that work in our region's rural context.
- Developing training and assistance to implement strategies effectively and improve them over time.

"A lot of jobs require degrees that require more education that people don't have [access to] in the community."

Strategies

Strategy 1: Build Capacity of Regional Workforce Development Leaders, Providers and Partners to Plan and Implement Best Practices That Build Workforce Readiness

In this region, where many residents lack access to information on viable career paths, lack experience and skills or experience barriers to employment, resources must be developed and aligned to help prepare them to find, secure and flourish in jobs in their chosen field of work. Further, the absence of a coordinated and resourced workforce development ecosystem limits the capacity of partners to access best practice research, technical support and training that can better prepare them to build workforce readiness and success.

There is a rich and growing fund of research, assistance and funding supported by federal and private organizations (foundations, think tanks, etc.) documenting workforce best practices, including those serving people facing barriers to employment. Few, however, address the needs and circumstances in highly rural areas. California, through collaborative efforts of the CA Workforce Development Board, Employment Development Department, California Department of Education, CA Community College Chancellor's Office, CA Community College Foundation, Department of Social Services, Department of Developmental Services, Department of Industrial Relations and other agencies/departments, has invested in grant programs funding pilots, TA and evaluation to demonstrate what works for people experiencing barriers to employment to enter, participate in, and complete broader workforce preparation, training and education programs, and to obtain and retain employment. State agencies are now collaborating on a Master Plan for Career Technical Education and Jobs First Council to better align funding, practices and support resources that:

1. Ensure the success of individuals either preparing to enter or already enrolled in workforce and education programs.
2. Address racial and ethnic exclusion and inequity in the labor force and enhance racial and economic justice.
3. Create pipelines to quality jobs, upward mobility, and income security for workers historically excluded from quality jobs and economic prosperity.

This statewide focus on equitable skill-building to further economic and climate justice and resilience has provided templates for success and creates opportunities for rural regions to define what successful practices across the education and workforce development continuum of services should be and achieve. The relative dearth of strategies that are directly applicable to profoundly rural areas points to the need to build the capacity of partners in the RRRISE workforce development ecosystem to translate these practices to local conditions, test and pilot, and scale successful practices to break down barriers to employment as well as work collaboratively with employers to support hiring and retention of nontraditional job candidates and those confronting barriers to employment.

"There needs to be more work readiness... A lot of high schools around here don't have those programs that really uplift kids to have trade skills that they want to go into."

Coordinate and Support Communities of Practice; Develop and Provide Training and TA on Best Practice Models for Working with Priority Communities

Examples of relevant training in models and practices meeting needs of priority populations could include Workforce Navigator Approaches, Co-enrollment Approaches, or Self-directed Services Approaches. Of central importance to the region however will be scaling uptake of Trauma-informed Approaches amongst key employers and training programs. Doing so could involve:

- Training programs that integrate trauma awareness, resilience-building, and mental health components. Educate workforce professionals and employers on trauma's impact on job performance and retention. Provide trauma-informed coaching alongside technical skills training. Ensure that all staff involved in workforce development are trained in trauma-informed care. This training should cover how trauma affects individuals' behavior, learning, and engagement in work environments.
- Establish trauma-informed practices in workforce organizations. Train staff to recognize and respond to trauma signs. Create safe, supportive environments for staff and clients. Offer resources to address staff trauma and prevent secondary traumatization.
- Partner with employers for trauma-informed workplaces: collaborate with employers to implement trauma-informed practices. Educate employers on trauma's impact on employee performance and retention. Assist in developing trauma-informed management practices and policies. Provide ongoing support to maintain trauma-informed workplaces.

Seed Pilots and Scale Effective Experiential Learning Models

Support coordination of regional "grow your own" workforce approaches. This tactic would take direction from leadership bodies in Strategy 1, communities of practice established above, and coordinate efforts to build on-ramps to and stand up new training and education programs, including:

- Adult education, family literacy, digital literacy and English as a Second Language
- Career exploration

- Mentorship and Internship opportunities
- Dual enrollment and post-secondary career pathways programs
- Integrated career education and training programs
- On the job training
- Apprenticeship programs
- Entrepreneurship programs

These programs take time and resources to develop. It is critical to cultivate partnerships not only across leaders but also people working in the field with the future and current workforce to conduct pilots and demonstration projects. These can be seeded through communities of practice that are built on relevant training and TA, grants and other funding vehicles. Provide and coordinate processes and resources to scale effective practices.

Strategy 2: Foster Regional Cooperation on Workforce Strategies

RRRISE holds the potential to foster a thriving workforce development ecosystem built on shared leadership and multi-national and multi-sector partnerships that help align information, document needs, establish shared interests and draw down resources that enable partners to efficiently and effectively design and implement skills-based workforce development solutions.

Multiple strategies in this plan call for investments in data, mapping, and analysis that can drive sector and workforce development. This creates a clear need for regional coordination, cultivation of strategic partnerships among and between governments, public workforce actors and private businesses, and forums or structures that support diverse actors within and across sectors to discuss implications for skills development and demand. This work can create avenues to direct education, training and skills development programs along a continuum of providers to train the region's existing workforce–which experiences significant barriers to employment–to meet a range of skills needed by the region's employers, including nonprofits, small businesses, public sector employers, and global investors.

Implementation

A. **Leverage and coordinate the work of collaborative sector-based structures**, partnerships and projects underway (K-12 collaborative, WIBs, AJCs, adult ed consortia, RANCHO) to build out the network or continuum of job training and business service.

B. **Build high-road structures** – Bring forward and resource work underway in each sector and seed pilots to grow capacity of partnerships directing industry-based, worker centered employment and advancement opportunities.

C. **Resource leadership** in Tribal and priority communities to fully participate in designing all facets of the workforce development infrastructure.

Figure 34 Workforce Development Sector Alignment with Key Program Objectives

Equity	Climate	Job Quality & Access
♦ Improve wraparound services, coordination, trauma-informed practices, and access to training/retraining opportunities for priority communities.	♦ Strategies prepare the regional workforce to realize opportunities in growing clean energy and climate adaptation related occupations.	♦ Strategies provide overall guidance for improving prevalence of and access to thriving wage careers.

Regional Assets

- Those housed in the region's polytechnic university and institutions of higher education with outstanding R&D capabilities, including:
  - K-12 Collaborative, RANCHO, and Building Healthy Communities led and supported by Cal Poly Humboldt
  - Mendocino College, College of the Redwoods, Cal Poly Humboldt career pathways initiatives
- Tribal economic development and workforce organizations
- Offices of Education in each county and Tribal education programs
- Employer networks and Chambers of Commerce

These initiatives are all committed to increasing economic diversification and resilience and training workers to meet employment demands. Increasing knowledge, coordination and information across this work will improve alignment with regional job quality and access, equity, and climate goals.

A network of RRRISE partners–including Tribal, state and local governments, education institutions and training providers, employers, entrepreneurs, community organizations, and social service and infrastructure service providers–should be at the table to design and implement comprehensive workforce development strategies addressing workforce ecosystem infrastructure, sectoral and cross-sectoral capacity-building requirements, business leadership, and focused attention on enabling industries as set forth in other sections of this plan.

A Path Forward: Institutionalizing Community-Led, Climate Forward Planning

The Redwood Region has embraced the opportunity to build a shared agenda for an equitable, prosperous, healthy, and sustainable future for all our residents. The 150-plus organizations involved in the Collaborative have worked to create a common vision, define priorities and goals which unite the diverse communities of the region, and get real and actionable on steps we can take to make that future manifest. At the heart of the Collaborative's vision is the recognition that creating stronger working relationships across the region and between traditional and non-traditional economic development players is the catalytic ingredient to move the needle on the goals we share. To realize a future of shared prosperity and ecological health, the Collaborative will advance key components:

Shifting False Narratives Paternalism and Divested Communities

By RRRISE Equity Council Members, Pathways of Purpose and Black Humboldt

Paternalism = the act of limiting a person's or group's autonomy or liberty to promote their own good. It can also imply that the behavior is done against or without the will of the person, or that it expresses an attitude of superiority.

Narrative Shifts

BIPOC and priority community founders and entrepreneurs commonly deal with issues of inequity for competitive regional funding. They experience a lack of opportunity as dominant, and often white-led organizations monopolize the funding landscape.

These entities frequently get funded on behalf of BIPOC and priority communities, to solve issues for them. As a result, BIPOC led nonprofits are frequently at risk for not having funds to operate and are often unable to pay staff living wages to do their cultural placemaking and provide critical community programs and services.

The culture of paternalism towards underserved communities must be flipped and the narrative shifted locally-"capacity issues" do not exist due to race, gender, class, ability or otherwise, they are assigned and imagined limitations of divested communities created systemically. The false narratives excuse the continuation of historical extraction, economic and social oppression of BIPOC and priority communities in our area and beyond. Divested communities need access to equitable and direct investments that are self-directed and sustainable.

Suggested Community Investments:

- Accessible BIPOC led educational opportunities and workshops
- Accounting, business automation and financial literacy
- Building credit and understanding the credit system
- Creative workspaces, and brick and mortar commercial properties
- Culturally competent strategic management and grant writing support
- Equitable access to grants, lines of credit, capital, no and low interest loans
- Fiscal sponsorship by BIPOC organizations (perhaps outside the area)
- Free and lower cost legal services
- Incorporation, fee waivers, IRS and CA State forms, board development etc.
- Marketing, branding, and communication support
- Online business support and remote work opportunities
- Paid internships and apprenticeships
- QuickBooks training courses
- Strategic partnership development, with oversight and accountability
- Support getting certifications
- Translation and bilingual services for business
- Universal Design, Subtitles, Transcriptions and Accessibility for People with Disabilities

By RRRISE Equity Council Members, Pathways of Purpose and Black Humboldt

- Inclusive Economic Growth: Our collaborative governance structure ensures that historically marginalized voices are integral to decision-making processes. Cross-cutting strategies address systemic barriers, creating pathways for equitable participation in economic opportunities.
- Sustainable and Resilient Economy: Focus on four key sectors aligns with the region's strengths and future opportunities, moving beyond boom-and-bust cycles. Emphasis on renewable energy and climate resilience prepares the region for a carbon-neutral future.
- Community Well-being: Strategies for housing, food security, and healthcare address fundamental needs of all residents. Investment in arts, culture, and tourism celebrates and leverages the region's rich cultural heritage.
- Improve Inclusion of Tribal Communities: The Tribal Planning Table promotes the centering of Tribal priorities in the plan. Specific strategies address unique needs and opportunities of Tribal Nations.
- Building Regional Capacity: Use catalytic partnerships to overcome resource and staffing constraints.
- Strengthening avenues to partnering with industry: Focus on workforce development and entrepreneurship creates a skilled local workforce and nurtures innovation.
- Building out inclusive project investment paths with a longer-term horizon. Infrastructure improvements, especially in broadband, lay the foundation for long-term growth.

The success of the initiative moving forward will hinge on continued embrace of a collective impact model in which diverse organizations in our change ecosystem remain aligned and motivated on purpose, and serious about tangible results at the program and population levels.

Actions we will take to ensure sustainability and impact of this initiative include:

1. Retain an eye on the key metrics named throughout Regional Plan Part 1 and in this document. Ensure that our community of practice is paying attention to both program measures and population level effects, and hold ourselves accountable to moving the needle particularly for priority communities.

2. Continue to work with the Collaborative to explore sustainability of the initiative, and define a long term business model for RISE beyond September 2026 (after the Implementation Phase concludes.

3. Grow and evolve outreach and engagement methods. Deepen investments in youth leadership and grow the capacity of participating individuals and organizations to take on advocacy and policy work necessary to support RISE's vision.

Our diverse coalition of over 150 organizations provides the collective expertise and resources needed for successful execution. Through ongoing engagement and adaptive management, we will ensure continued community buy-in and responsiveness to evolving needs. Together, we are building a future where economic growth, environmental stewardship, and social equity go hand in hand, creating a model for regional development that can inspire and inform similar efforts across California and beyond. As we have moved from planning to implementation, Redwood Region RISE is poised to drive meaningful, equitable, and sustainable economic development. This plan is not just a roadmap, but a commitment to our communities. By fostering collaboration, leveraging our unique assets, and centering the needs of all residents, we will create a resilient, inclusive, and sustainable economy that benefits generations to come.

Appendix A: Report Contributors

Contributors to the Target Sector Strategies met consistently from January through June 2024 to analyze their sector and formulate the strategies in this report. RRRISE thanks:

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Humboldt County Comprehensive Economic Development Strategy 2025 - 2030

June 17, 2025

TPMA

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EXECUTIVE SUMMARY

About the CEDS

This Comprehensive Economic Development Strategy is a document for Humboldt County, California, that charts a course for the county's future. It allows partners throughout the county and region to align around shared priorities. This alignment positions our county to leverage investment from local, state and federal governments. The strategy identifies local needs, actions necessary to address those needs and organizations with the ability to lead those actions.

In developing this CEDS, Humboldt County has considered relevant planning documents and conducted quantitative data analysis. Qualitative data were solicited from a broad stakeholder base, including elected officials, government staff, economic developers, organizations, educational institutions and the general public. Humboldt County conducted a public survey, hosted a workshop for key stakeholders and held a strategy session with the CEDS Committee.

Economic Resiliency

Each strategy within Humboldt County's plan is developed to maximize the community's resilience to potential economic shocks. The strategic action plan outlines ways in which Humboldt County can build capacity to respond to disruptions that may arise due to: events or downturns in the national or global economies that impact consumer spending and demand for local goods and services; downturns in a region's major industries; disasters – natural or man-made – extreme weather events, critical infrastructure disruptions or loss of a major employer; and/or other external shocks.

Strategic Action Plan

The Strategic Action Plan provides the framework for Humboldt County's forward movement toward fulfilling the community's vision for the future. The following vision was created with broad community support through various virtual and in-person engagements:

> *"Humboldt County aspires to be a model of economic vitality and resilience, where a diverse economy thrives alongside our commitment to foster sustainable economic development, enhance community wellbeing and build climate-resilient infrastructure to support future generations."*

Within the CEDS, the following strategies are described in more detail, including: reasoning behind each focus area, quantitative and qualitative data that support it, the ways in which it impacts the community, our approach to building resiliency and alignment with existing initiatives and priorities.

1. **Industry Elevation and Diversification**
   - 1.1 Advance efforts to cultivate favorable conditions for Humboldt County's legacy industries to thrive.
   - 1.2 Catalyze growth for Humboldt County's emerging industries.
   - 1.3 Foster an effective and valuable small business ecosystem.
   - 1.4 Revise regulations, policies and incentives to boost local industries and drive future investment.

2. **Collaboration**
   - 2.1 Continue Redwood Region Rise collaboration (beyond CA Jobs First) and actively participate in implementation.
   - 2.2 Set a unified brand and marketing strategy for Humboldt County.
   - 2.3 Develop marketing strategies to attract and retain business.
   - 2.4 Leverage partnerships and marketing to attract and retain residents and workforce.
   - 2.5 Invest in a wide variety of targeted marketing campaigns to draw visitors to the county and region.

3. **Natural Assets and Disaster Response**
   - 3.1 Prepare for natural disasters.

3.2 Balance increases in use and development with the protection of natural assets.

4. Fundamental Community Needs

4.1 Catalyze the growth of the healthcare industry to expand opportunities and support local demand.

4.2 Enhance housing stock availability and quality at all income and market levels.

4.3 Provide avenues for growth in workforce initiatives, education and training to develop a relevant talent pool for employers and increase wages and promising career opportunities for workers.

5. Infrastructure

5.1. Develop and maintain transportation infrastructure that supports local industries and increases access for residents.

5.2. Increase reliability and resiliency of electric infrastructure.

5.3. Provide support and resources to expand broadband infrastructure.

5.4. Expand water, wastewater and solid waste infrastructure.

Evaluation Framework

The Evaluation Framework included in the CEDS outlines implementation of these strategies, including partners for collaboration in driving progress, key performance indicators, timelines for completion and checkpoints for evaluation and reporting. This is the roadmap for Humboldt County's increasing momentum for economic vitality.

Humboldt County encourages you to explore the full Comprehensive Economic Development Strategic Plan for a more in-depth understanding of the content described in this summary.

INTRODUCTION

About Humboldt County

History

Since time immemorial, Humboldt County has been the home of many indigenous peoples, including Big Lagoon Rancheria, Blue Lake Rancheria, Hoopa Valley Tribe, Bear River Band of the Rohnerville Rancheria, Trinidad Rancheria, Wiyot Tribe and the Yurok Tribe. The service area is also home to the Karuk Tribe, Pulikla Tribe of Yurok People and Tolowa Dee-ni' Nation (formerly the Smith River Rancheria) and the region touches the northwestern portion of the Wiyot ancestral territory.

European settlement came in waves. The area was first recorded in the late 18th century by the Spanish, with the "discovery" of Humboldt Bay in 1806. After that, Europeans came to the Humboldt Area to extract natural resources. In the early 1800s, Russian boats hunted sea otters, decimating the otter population. The California Gold Rush in the 1850s brought significant colonization, displacement and genocide, impacts that continue to be felt today. While Humboldt County was not a major source of gold, the area acted as a landing point and supply hub.[1,2]

Attention soon shifted to other abundant natural resources in the region, particularly its redwood forests, referred to as "red gold." Shipbuilding and fishing became major industries, with Eureka, Shelter Cove and Trinidad supporting sizeable fishing fleets. These industries were soon joined by the agriculture industry, thanks to the region's rich soils.[3,4] With the rise of the automobile and the connection of Humboldt County to San Francisco with passenger rail in the early 20th century, tourism was added to the industry mix.[56]

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[1] A Brief History of Humboldt County" Pamela Service. Humboldt County Historical Society. https://www.humboldthistory.org/

[2] "Humboldt County: A Briefest of Histories." Susie Van Kirk. Cal Poly Humboldt Library Special Collections & Archives. https://specialcollections.humboldt.edu/humboldt-county-briefest-histories

[3] Humboldt County Historical Society.

[4] Cal Poly Humboldt

[5] Humboldt County Historical Society.

[6] "Trains Into Humboldt." Humboldt County Historical Society. https://www.humboldthistory.org/history-nuggets/2022/6/17/trains-into-humboldt

However, by the late 20th century, the timber and fishing industries declined. In timber production, this was due to decades of overharvesting and a new-found emphasis on conserving the old-growth redwoods that remained.[7] Fishing suffered from overharvesting as well, along with the results of dam and water management practices that caused anadromous fish populations--these are fish such as salmon that hatch in freshwater, migrate to the ocean and then at some point return to freshwater to spawn--once incredibly valuable resources. The 1960s brought underground alternative agriculture to the region, which became a major economic driver for the region. Legalization brought new regulations, competition and corporate interests to the market, leading to price drops and economic challenges for legacy growers.[8]

[7] "Regional Plan Part 1." Redwood Region RISE. https://ccrp.humboldt.edu/sites/default/files/pages_from_regional_plan_part_1-redwood_region_overview.pdf

[8] Redwood Region RISE.

Humboldt County Today

Humboldt County today has a population of just under 134,000. While the county remains largely Caucasian, it is becoming more diverse over time. Important to the region's economy, culture and current management of natural resources, the original peoples who came to the area thousands of years ago still live here and represent a much higher-than-average percentage of the population.

The county's remoteness represents a distinguishing factor and a mixed blessing. Though greatly altered, the area appears in many ways to be naturally pristine. This draws tourists and motivates talented people to want to make a living here. But remoteness comes with infrastructure challenges, health care challenges, cost challenges and others. Building on the county's strengths and addressing weaknesses is one of the themes of this document.

While logging, fishing and alternative agriculture all continue to contribute economically, their employment is substantially smaller than it was. The area has experienced repeated boom and bust cycles and is currently in a bust. There is a clear need for additional industries that provide good jobs. Ideally, these jobs would be multi-generational and the industry mix would be more diversified.

Residents of the county generally recognize that it's not for everyone, but for those who appreciate the complexity and culture that is Humboldt, there may be no better place. They hope for a bright economic future that allows them and their children to build productive lives.

Humboldt County Vision

The following vision was created with broad community support through various virtual and in-person engagements:

> *"Humboldt County aspires to be a model of economic vitality and resilience, where a diverse economy thrives alongside our commitment to foster sustainable economic development, enhance community wellbeing and build climate-resilient infrastructure to support future generations."*

About the CEDS

This Comprehensive Economic Development Strategy is a document for Humboldt County, California, updated every five years, that charts a course for the county's future. It allows partners throughout the county and region to align around shared priorities. This alignment positions our county to leverage investment from local, state and federal governments. The strategy identifies local needs, actions necessary to address those needs and organizations with the ability to lead those actions.

How will the CEDS be used?

***Educate*—**The plan will engage elected officials, staff, partner organizations, business leaders and the community to help amplify the vision and intent of strategic actions.

***Invest*—**The plan will leverage greater investment in Humboldt County priorities by providing data and rationale for obtaining public and private funding and resources for implementation and for aligning with local, regional and state legislative agendas to collaboratively solicit further investment.

Collaborate - The work will engage organizations and departments within Humboldt County to break down silos and leverage resources to the greatest extent possible to elevate one another's work.

Guiding Documents and Alignment

The state of California, the Redwood Region and localities within Humboldt County have provided a strong base from which to build the next steps for economic resiliency.

In developing this CEDS, Humboldt County considers many relevant planning documents, linked throughout. These include, but are not limited to:

- 2009-2019 Humboldt Industry Sector Report
- 2009-2019 Targets of Opportunity Report
- 2018-2023 Comprehensive Development Strategy
- 2022 Regional Transportation Improvement Program
- 2025-2028 Local and Regional Workforce Development Plans
- California Transportation Plan 2050
- County of Humboldt Strategic Framework
- Humboldt County Community Resource List
- Humboldt County General Plan
- Humboldt Regional Climate Action Plan
- Humboldt Rising Community Outreach Report
- Port Readiness Plan
- Economic Development Recovery and Resiliency Playbook
- Redwood Region RISE Regional Roadmap
- VROOM 2022-2042 Variety in Rural Options of Mobility Plan
- Project Rebound

Data-informed Strategies

To ensure the strategies outlined in this report are well-suited to the unique conditions in Humboldt County, a lengthy quantitative data analysis was undertaken at the outset of the project. Data from a variety of public – local, state, federal – and private sources were collected and analyzed. In many cases, demographic- and community-related data have been sourced through the U.S. Census or the American Community Survey (ACS); as of the writing of this report, data from the 2020 Census and 2023 ACS 1-Year Estimates are the most recent. Much of the industry and occupation data has been provided by Lightcast, a labor market analytics company that provides historical and projected data for industries and occupations at various levels of specificity. To promote transparency in our process, data sources are provided in captions for every table and graph in the report.

The project team worked in close collaboration with Humboldt County to confirm that the findings of the data analysis were accurate and reflective of the local experience. While these data make up a critical part of the report, they are not intended to stand alone. In developing the strategic framework for this report, findings of the quantitative analysis were measured against those of other local and regional reports and paired with feedback collected through stakeholder engagement to provide a thorough evaluation of the local economy.

Stakeholder Engagement

In developing this CEDS, Humboldt County has had ongoing engagement with a diverse set of local and regional stakeholders, including elected officials, government staff, economic developers, business organizations, educational institutions, healthcare facilities, other community partners and the general public.

A community survey was built upon previous engagements and focused on gathering input on a shared vision and perspectives related to local industries, infrastructure, community needs and the impact on residents and workers. The survey resulted in more than 800 responses from residents, workers, and business owners.

An on-site workshop was conducted—a fast-paced and active session focused on pinpointing what is holding Humboldt County back from economic advancement, catalysts that are already propelling the county forward, identifying key themes and goals, building on opportunities and finding potential approaches to mitigate the county's challenges. Using compiled data and results of engagement feedback as a solid foundation, the CEDS Committee strategy session mapped a framework for success with desired outcomes, specific tactics, projected timelines, metrics for success, partners and available and needed resources. Follow-up conversations and resource sharing set the stage for the strategic action plan. The strategy development engagements involved 30 different individuals and organizations.

ECONOMIC RESILIENCY

Each strategy within Humboldt County's plan is developed to maximize the community's resilience to potential economic shocks. The process requires the ability to anticipate what risks exist, evaluate potential risk impacts and proactively mitigate those risks. The strategic action plan also outlines ways in which Humboldt County can build capacity to respond to disruptions that may arise due to:

- Events or downturns in the national or global economies that impact consumer spending and demand for local goods and services;
- Downturns in a region's major industries;
- Disasters – natural or man-made – extreme weather events, critical infrastructure disruptions or loss of a major employer; or
- Other external shocks.

Measuring economic resiliency is complex, as many factors impact a region's ability to anticipate, evaluate and respond to shocks. The Hazard and Vulnerability Research Institute at the University of South Carolina has developed the Baseline Resilience Indicators for Communities (BRIC) as a quantitative measure of community resiliency. The BRIC is comprised of 49 indicators across six sub-indices: social, economic, housing/infrastructure, institutional, community capacity and environmental. The sub-indices are scales from 0 to 1, creating a total measure for the county ranging from zero to six, with zero being less resilient and six being more resilient.[9]

When compared to the rest of the nation, Humboldt County has a moderate level of economic resilience, ranking in the 58th percentile, meaning that 42% of counties in the U.S. have a higher community resilience. Compared to other counties in California, Humboldt County ranks in the 64th percentile, with 36% of counties having a higher community resilience rating.

[9] https://www.sc.edu/study/colleges_schools/artsandsciences/centers_and_institutes/hvri/data_and_resources/bric/index.php

Table 1: Baseline Resilience Indicators for Communities. Source: USC Hazards Vulnerability & Resilience Institute.[10]

County	Social	Economic	Housing/ Infrastructure	Community Capital	Institutional	Environmental	Total
Humboldt	0.64	0.45	0.28	0.36	0.33	0.57	2.63
Siskiyou	0.63	0.42	0.25	0.35	0.36	0.55	2.56
Del Norte	0.61	0.45	0.22	0.31	0.34	0.56	2.49
Trinity	0.59	0.39	0.20	0.34	0.43	0.58	2.54
Mendocino	0.63	0.44	0.25	0.33	0.36	0.57	2.57

To bolster its economic resilience, Humboldt County has undertaken risk assessments and resiliency planning. Current ongoing initiatives include:

- Project Rebound
- Humboldt Community Organizations Active in Disaster (COAD)
- Humboldt County Operational Area Hazard Mitigation Plan
- Humboldt County Emergency Operations Plan

The intentionality of alignment with local and regional planning aims to increase capacity, durability and agility in Humboldt County's economy. Each of the following strategies outlines how the approach aligns with current plans and initiatives. The deliberate efforts this CEDS makes to incorporate more comprehensive approaches will provide a solid base for future project planning to ensure increased accessibility and economic stability.

10 https://www.sc.edu/study/colleges_schools/artsandsciences/centers_and_institutes/hvri/data_and_resources/bric/index.php

STRATEGIC ACTION PLAN

The Strategic Action Plan provides the framework for Humboldt County's forward movement toward fulfilling the community's vision for the future. The following vision was created with broad community support through various virtual and in-person engagements:

> *"Humboldt County aspires to be a model of economic vitality and resilience, where a diverse economy thrives alongside our commitment to foster sustainable economic development, enhance community wellbeing and build climate-resilient infrastructure to support future generations."*

Each strategic focus area includes an introduction with a rationale, links to quantitative and qualitative data that supports it, a description of impacts to the community, our approach to building resiliency and alignment of existing initiatives and priorities.

The state, region, county, localities within Humboldt County and partner organizations have provided a strong base from which to build on that alignment. In lieu of duplicating the details of the existing specialized plans, the CEDS seeks to create synergy at a broader level with a holistic view of economic development. The micro-level actions not specified in this Strategic Action Plan will follow existing plans and initiatives or they will be developed through an additional collaborative process where applicable. This allows partners already progressing the aligned initiatives to continue their momentum without conflict. The intent is to engage organizations and departments within Humboldt County to break down silos and leverage resources to the greatest extent possible to elevate one another's work and position the county to seek additional investment.

1. Industry Elevation and Diversification

Reason

Humboldt County has endured economic shifts in agriculture, forest products and fisheries. Additionally, the community is currently facing significant price drops, which are critical to the local alternative agriculture industry and causing extreme losses in what was previously the highest-producing region in the country. Limited processing facilities and the absence of cold storage options significantly impact profitability and competitiveness in these legacy industries. Humboldt County's target industries also face some of the highest regulatory costs in the nation.

The Data:

Follow the links for more context, quantitative data, qualitative data and analysis: SWOT Analysis, Summary Background and Appendix A

The Impact

The ripple effects of this decline are extensive, impacting jobs, local businesses and county revenue. Widespread business closures and reduced profitability for small-scale cultivators have occurred. The increasing costs for food producers hinder growth and negatively impact food security.

Our Approach

Resiliency: Humboldt County's economy is heavily influenced by external factors. This dependence limits local control over economic outcomes and hampers long-term planning. Without state-level regulatory reform, improved market access, expanded infrastructure and economic diversification, Humboldt County may continue to face significant economic challenges from this instability. Humboldt County is taking a multi-faceted approach to resiliency. The recent completion of Project Rebound provides insights into target clusters for diversification and the growth of its legacy industries and small businesses. Industry diversification has been shown to reduce risk and create a more stable economy with an increased ability to adapt to fluctuations and disruptions. Elevating existing legacy industries is likely to help preserve local culture and expand job opportunities.

Alignment: This strategy aligns with Humboldt County's recently completed Project Rebound, which identified target clusters to diversify the local economy. The strategy also aligns with Redwood Region Rise (RRRISE) and California's Natural and Working Lands Climate Smart Strategy.

Evaluation Framework

Evaluation Framework for Industry Elevation and Diversification: outlines implementation of the following strategic actions, including partners, key performance indicators, checkpoints and timelines.

Strategic Actions

1.1 Advance efforts to cultivate favorable conditions for Humboldt County's legacy industries to thrive.

1.1.1 Strengthen legacy industries with innovative technologies, regenerative approaches and modernization of facilities.

1.1.2 Encourage food hubs, cooperatives and collaborations for collective purchasing, distribution, project bidding and marketing.

1.1.3 Prioritize investment in cold storage, supply chain efficiencies and streamlined distribution to support food resiliency.

1.1.4 Create, support and expand regional trade shows, farmers markets, fish markets and industry fairs to connect buyers and sellers/wholesalers.

1.2 Catalyze growth for Humboldt County's emerging industries.

1.2.1 Collaborate on the development of incentive programs to attract emerging industries.
1.2.2 Increase attraction and recruitment efforts, especially among target industries such as construction, financial services, renewable energy, education and training, healthcare and niche manufacturing.
1.2.3 Increase access to innovative technologies that appeal to emerging industries.

1.3 Foster an effective and valuable small business ecosystem.

1.3.1 Incentivize tourism-related business development.
1.3.2 Build upon existing professional development and leadership programs for business owners.
1.3.3 Capitalize a low-interest revolving loan fund for small and medium-sized businesses to invest in modernization and technology.
1.3.4 Collaborate with partners to expand small business mentorship programs.
1.3.5 Expand assistance for small business succession programs and assistance with scaling or transitions.

1.4 Revise regulations, policies and incentives to boost local industries and drive future investment.

1.4.1 Encourage the use of local preferences in procurement.
1.4.2 Continue evaluation of potential incentive programs.
1.4.3 Streamline permitting and policies where applicable and provide technical assistance for businesses to navigate requirements and processes.
1.4.4 Increase competitiveness in global markets and avenues for foreign and direct investments.

2. Collaboration

The Reason

Economic development-related initiatives in Humboldt County are currently fragmented, with duplicative initiatives, sometimes accompanied by a territorial mindset. Roles and responsibilities are not clearly defined. Combined efforts are critical to conducting core

economic development operations like small business and entrepreneurship support, workforce development, infrastructure development, tourism marketing, business retention and expansion and business attraction.

There is momentum for collaboration following Redwood Region RISE (RRRISE) and the county's economic development practitioners, some of whom remain in the field, previously collaborated at a higher level through the Prosperity Network. Humboldt County has a broad network of organizations and stakeholders dedicated to promoting and leveraging the region's assets to attract businesses, residents, workers and tourists. However, there is presently no cohesive plan or consistent messaging.

The Data:

Follow the links for more context, quantitative data, qualitative data and analysis: SWOT Analysis, Summary Background and Appendix A

The Impact

Conflicts and unnecessary duplication of efforts often lead to confusion and ineffective service delivery to businesses, residents, workers and even tourists. Lack of communication between partner organizations can hinder planning and perpetuate capacity challenges.

Our Approach

Resiliency: Successful collaborations set common goals resulting in decreased territorialism, increased communication, streamlined service delivery and more effective resource acquisition, distribution and utilization. This coordination also paves the way for preparedness and response to disruptions. **Alignment:** Redwood Region RISE

Evaluation Framework

Evaluation Framework for Collaboration: outlines implementation of the following strategic actions, including partners, key performance indicators, checkpoints and timelines.

Strategic Actions

2.1 Continue Redwood Region Rise collaboration (beyond CA Jobs First) and actively participate in implementation.

- 2.1.1 Explore reorganization of economic development roles and responsibilities (e.g. county economic development commission).
- 2.1.2 Support collaborative asset mapping of facilities, services and initiatives related to target industries, fundamental community needs and other collaborative efforts related to economic and community development.
  - 2.1.2.1 Identify redundancies and gaps in missions and activities within the asset map.
  - 2.1.2.2 Identify critical assets within the map—assets that, if they experience significant disruption or failure, would create a domino effect on the system or key services.
  - 2.1.2.3 Plan for organizational continuity (e.g., contingency planning for critical assets, key employee turnover, succession planning, etc.)
  - 2.1.2.4 Streamline communications and processes.
  - 2.1.2.5 Clarify the action plan to address gaps and eliminate unnecessary redundancy.

2.2 Set a unified brand and marketing strategy for Humboldt County.

- 2.2.1 Establish formal relationships and partnership structures (e.g., tourism advisory board) to streamline efforts among various organizations within the regional marketing framework.

2.2.2 Identify best practices for effective destination marketing organizations.
2.2.3 Determine a core message.
2.2.4 Integrate indigenous cultural literacy into the brand.
2.2.5 Develop and utilize shared technology.
2.2.6 Create a work plan to build a brand around triple-bottom lines.

2.3 Develop marketing strategies to attract and retain businesses.

2.3.1 Prepare marketing materials and strategies for target industries, suppliers and site selectors.
2.3.2 Develop and deliver a prospectus for identified priority properties and development districts within the county.
2.3.3 Leverage networks of existing industry leaders and community members for business outreach.
2.3.4 Create a campaign to attract and retain tourism-related businesses – retail, restaurants, lodging, personal services, recreation, agritourism, etc.—and include local business support resources.
2.3.5 Invest in “buy local” campaigns.

2.4 Leverage partnerships and marketing to attract and retain residents and workforce.

2.4.1 Collaborate with local organizations to work with employers on an initiative to better attract and retain talent.
2.4.2 Promote Humboldt County’s opportunities, assets, and quality of life.
2.4.3 Develop marketing specifically to attract the workforce for target industries.
2.4.4 Create a welcoming and homecoming community initiative.
2.4.5 Collaborate with educational institutions on recruitment efforts.

2.5 Invest in a wide variety of targeted marketing campaigns to draw visitors to the county and region.

2.5.1 Preserve and promote Humboldt County’s natural, cultural, and built environments.
2.5.2 Preserve and promote the vibrancy of Humboldt County’s culture of art, history, and adventurous spirit.
2.5.3 Highlight the resiliency and influences of the Indigenous peoples of Humboldt County.

2.5.4 Continue to improve campaigns to advertise public and private tourism attractions and activities.
2.5.5 Engage media influencers to visit and post content about Humboldt County.

3. Natural Assets and Disaster Preparedness

The Reason

Protecting Humboldt County's natural assets is essential for continued economic growth. However, the area is facing a multifaceted and substantial threat. Humboldt County is susceptible to rising sea levels, earthquakes and increasingly severe weather events like flooding, landslides, drought and wildfires. Rising temperatures, pest infestation, warming waters and ocean acidification have also created challenges.

Natural assets draw tourists, attract businesses, sustain legacy industries and inspire people to love living, working and learning in Humboldt County. This is foundational to economic development, but human activities can cause pollution, contamination, resource depletion, habitat destruction and biodiversity loss.

The Data:

Follow the links for more context, quantitative data, qualitative data and analysis: SWOT Analysis and Summary Background

The Impact

Humboldt County's legacy industries—agriculture, tourism, aquaculture, fisheries, forestry—are particularly reliant on the health of the area's natural assets in order to thrive. Much of the county's population and institutional infrastructure is located near coastal zones. Even modest sea level rise and extreme weather events can disrupt access to services, displace residents and require costly mitigation. Pollution and other human impacts on natural assets can lead to significant health and safety issues.

Our Approach

Resiliency: This strategy is fundamental to economic resiliency. Proactive planning is a critical part of managing risks—such as those posed by extreme weather events—and can provide a clear framework for disaster

response. Preventing overuse of natural assets and mitigating the effects of human activities can preserve these assets for sustainable economic progress.

Alignment: Humboldt County Hazard Mitigation Plan (update in progress), Regional Climate Action Plan

Evaluation Framework

Evaluation Framework for Natural Assets and Disaster Preparedness: outlines implementation of the following strategic actions, including partners, key performance indicators, checkpoints and timelines.

Strategic Actions

3.1 Prepare for natural disasters.

3.1.1 Update Humboldt County's Hazard Mitigation Plan and other disaster response plans, including those for local organizations, businesses and the community.

3.1.1.1 Ensure all relevant staff are familiar with hazard mitigation and disaster response plans.

3.1.1.2 Encourage local businesses and organizations to create or update business resiliency plans.

3.1.1.3 Educate the community about how residents can prepare for and respond to natural disasters.

3.1.2 Collaborate on the implementation of the Regional Climate Action Plan.

3.1.2.1 Create a campaign to effectively disseminate information to the public about the plan and its importance.

3.1.2.2 Assist with funding and resource acquisition to implement the plan.

3.1.2.3 Advocate for new regulations and zoning where appropriate.

3.2 Balance increases in use and development with the protection of natural assets.

3.2.1 Mitigate of contaminants on potential development properties; discourage development in hazardous/sensitive areas.

3.2.1.1 Conduct a brownfield analysis.

3.2.2 Support provisions and appropriate maintenance of natural assets and green spaces.

3.2.3 Research and utilize best practices in sustainable tourism.

4. Fundamental Community Needs

The Reason

Humboldt County struggles with persistent challenges related to fundamental community needs like healthcare, housing and education. The county's population is aging and there has been an accelerating population loss in recent years, largely due to out-migration. Industry leaders across sectors consistently report challenges in recruiting and retaining talent. Critical industries such as healthcare are particularly

strained, with long-standing job vacancies and reduced access to quality and specialized services. In addition, housing development has slowed over the past two decades. While education and workforce training are strengths in Humboldt County, there are continued concerns about skills gaps, declining student enrollment, staffing shortages and funding uncertainty.

The Data

Follow the links for more context, quantitative data, qualitative data and analysis: SWOT Analysis, Summary Background and Appendix A

The Impact

The decline in Humboldt County's population reduces overall consumer demand, intensifies workforce shortages across key industries and dampens investor confidence. As businesses struggle with these realities, the quality of life for residents is also negatively impacted. The strain on education, lack of healthcare access, limited housing options and rising costs disproportionately impact residents who are already disadvantaged.

Our Approach

Resiliency: Humboldt County's ability to attract, retain and train workers is key to economic resiliency. Fundamental community needs like housing, healthcare and education and training opportunities are critical to this effort. Encouraging infill housing and higher-density development helps meet the housing demand while protecting natural landscapes. Strengthening local education and training systems builds a pipeline of skilled talent prepared to meet the needs of a changing economy, while expanding access to healthcare helps ensure a healthy community.

Alignment: 2025-2028 Local and Regional Workforce Development Plans, Redwood Region RISE, Humboldt County General Plan Housing Element, McKinleyville Community Plan, Arcata Gateway Plan, City of Eureka General Plan Housing Element

Evaluation Framework

Evaluation Framework for Fundamental Community Needs: outlines implementation of the following strategic actions, including partners, key performance indicators, checkpoints and timelines.

Strategic Actions

4.1 Catalyze the growth of the healthcare industry to expand opportunities and support local demand.

4.1.1 Support local and regional workforce assessments that focus on priority occupations in healthcare.
4.1.2 Strengthen county-wide emergency response, including continuity with disaster response plans.
4.1.3 Explore the development of regional healthcare hubs.[11]
4.1.4 Encourage expansion of telehealth solutions for local and regional healthcare providers.
4.1.5 Expand mobile health services (dental, general practitioner, etc.) and access to medical transportation.
4.1.6 Increase public awareness of health and wellness programs, including preventative care and familiarity with telehealth service use.
4.1.7 Invest in culturally-responsive approaches to health and wellness by intentionally engaging communities with inequitable health outcomes.
4.1.8 Conduct environmental health evaluation of impacts on the public health from pollution, air quality and other environmental hazards.

4.2 Enhance housing stock availability and quality at all income and market levels.

4.2.1 Support regional efforts to conduct a current situational assessment and strategic plan for housing that considers the impact on current residents and priority industries.
4.2.2 Encourage the development of a range of housing types suitable for a range of income levels, including market rate, moderate income, low income, mixed income, single-family, multi-family, ADUs and mixed-use housing.
4.2.3 Support sustainable growth in the forestry and construction target industries to increase the supply of alternative and

[11] The hub model organizes health care services around a central facility that coordinates with smaller, connected satellite campuses. This structure helps streamline patient care and resource management across the network.

regenerative building materials and increase skilled talent for housing development.

4.2.4 Collaborate on the expansion and elevated impacts of the first-time home buyer program and tribal housing programs.

4.2.5 Reduce barriers to housing development through a multi-faceted approach to include potential nontraditional opportunities and streamlined permitting and zoning.

4.2.6 Advance initiatives to provide assistance for the unhoused population.

4.2.7 Explore approaches to address dilapidated housing and long-term vacancies.

4.2.8 Evaluate the potential for dedicated housing or housing incentives to attract workers for target industries.

4.3 Provide avenues for growth in workforce initiatives, education and training to develop a relevant talent pool for employers and increase wages and promising career opportunities for workers.

4.3.1 Support the development of local training centers for trades.

4.3.2 Expand apprenticeships programs and paid internship experiences in emerging and target industries.

4.3.3 Enhance local university education through public investment in K-16.

4.3.4 Explore incentives for local residents to stay in Humboldt County, (e.g., housing stipends, longevity bonus, loan repayment assistance).

4.3.5 Support the development of entrepreneurship programs in local schools.

4.3.6 Encourage more dual enrollment options, STEAM education for students and higher education sustainability initiatives.

4.3.7 Contribute resources to the development of childcare initiatives that increase the accessibility and affordability of childcare options; encourage training and incentive programs for childcare workers.

4.3.8 Build strong pathways to postsecondary education and careers.

4.3.9 Support regional and local efforts to invest in workforce data and scholarship/incentive opportunities.

4.3.10 Engage with businesses to provide information and context around wages, workforce programs, best practices and opportunities.

5. Infrastructure

The Reason

Humboldt County is geographically isolated, approximately 250 miles from the nearest major metropolitan area and reliant on a single north-south transportation corridor. Humboldt County has a lack of access to rail, limited commercial air service and aging infrastructure from roads and bridges to water and wastewater.

As the endpoint of a single high-voltage transmission line, the county's energy grid is underpowered, restricting its capacity to import and export electricity. This presents a particular challenge as Humboldt looks to expand its renewable energy sector, limiting the ability to transmit clean energy to larger markets and slowing potential growth.

The Data

Follow the links for more context, quantitative data, qualitative data and analysis: SWOT Analysis, Summary Background

The Impact

These infrastructure challenges impact public safety and quality of life, with significant strains on emergency response, healthcare access, education access and workforce mobility. Infrastructure challenges impact tourism, workforce recruitment and enrolment in higher education. There are major constraints on the county's target industries, business operations and investment attraction. Industries that rely heavily on transportation and specialized facilities, such as forestry, aquaculture and fisheries, are particularly vulnerable to Humboldt's infrastructure deficits. Transporting goods to and from Humboldt involves navigating mountainous terrain and long travel distances, which can delay shipments, raise expenses and reduce competitiveness in broader markets. Additionally, the smaller local consumer base limits economies of scale, while supply chain inefficiencies can discourage outside investment.

Our Approach

Resiliency: Infrastructure is a critical factor in improving economic resilience for Humboldt County. It provides the essential transportation and utilities that residents and businesses need to thrive.

Alignment: Humboldt County General Plan, Variety in Rural Options of Mobility (VROOM) 2022-2024, California Transportation Plan 2050

Evaluation Framework

Evaluation Framework for Infrastructure: outlines implementation of the following strategic actions, including partners, key performance indicators, checkpoints, and timelines.

Strategic Actions

5.1 Develop and maintain transportation infrastructure that supports local industries and increases access for residents.

5.1.1 Strengthen the fragile road transportation infrastructure connecting Humboldt County to the rest of California.

5.1.2 Invest in infrastructure and urban design improvements that promote multi-modal transportation—such as expanded sidewalks, pedestrian-only zones, safe crossings, and mixed-use development—to reduce car dependency and encourage foot traffic in commercial areas.

5.1.3 Expand access, capacity, and ridership of public transportation.

5.1.4 Support airport improvements and enhance marketing efforts.

5.1.5 Leverage existing harbor assets, development, and modernization of additional port facilities (e.g., heavy marine terminal).

5.1.6 Assess opportunities for potential rail access.

5.1.7 Continue and expand the deployment of transportation that uses renewable energy and new technology.

5.2 Increase reliability and resiliency of electric infrastructure.

5.2.1 Modernize and build capacity of the grid for resiliency, reliability, and increased integration of renewable energy.

5.2.2 Increase energy generation by exploring opportunities, including waste-to-energy and bioenergy, solar, ocean, hydrogen, and wind.

5.2.3 Support innovation in energy production and train energy workers to utilize automation and robotics to enhance quality and efficiency.

5.2.4 Plan for continuity of energy services, including clean backup power systems for essential facilities and services (e.g., hospitals, emergency response, shelters).

5.2.5 Create a renewable energy overlay district.

5.2.6 Enhance programs that promote energy efficiency, provide energy assistance for low-income households, and encourage reduced usage and decreased reliance on traditional power grids.

5.2.7 Support worker-owned, Tribal, and standalone clean energy enterprises, including solar-plus storage systems and small-scale wind energy installations.

5.2.8 Support efforts to establish “Clean Energy Hubs.”

5.3 Provide support and resources to expand broadband infrastructure.

5.3.1 Increase broadband expansion into rural areas.
5.3.2 Encourage completion of broadband infrastructure from existing operators.

5.4 Expand water, wastewater, and solid waste infrastructure.

5.4.1 Expand efforts to train and retain operators.
5.4.2 Modernize and build capacity for both central and independent wastewater treatment.
5.4.3 Provide education on water conservation, nature-based solutions (e.g., wastewater reuse for wildlife/fisheries), closed-loop systems, low-flow fixtures, and expand deployment of similar systems.
5.4.4 Expand integration into county or municipal systems where possible.
5.4.5 Expand utilization of the RMDZ program to provide businesses with technical assistance and other resources.

EVALUATION FRAMEWORK

The Evaluation Framework outlines the implementation of the actions identified in the Strategic Action Plan. This includes key performance indicators and timelines for completion. In addition, the strategies are accompanied by potential partners to advance the efforts, resources—such as funding, information or technical assistance—and catalyst actions that build momentum and set the stage for implementation.

This comprehensive and holistic plan accounts for current, ongoing, and planned initiatives. Some actions will be coordinated and implemented by partners. It is important to note that timelines are estimated and that medium- and long-term timelines may require actions that start within the 0-1 year timeframe. The CEDS Committee may adapt the plan based on internal or external changes.

1. Industry Elevation and Diversification

1.1 Advance efforts to cultivate favorable conditions for Humboldt County's legacy industries to thrive.

Action	*KPIs*	*Timeline*
1.1.1 Strengthen legacy industries with innovative technologies, regenerative approaches and modernization of facilities.	Summary of activities, notable advancements, gross regional product (GRP), job creation, business expansion, # of new business	Long-term 4-5 years
1.1.2 Encourage food hubs, cooperatives and collaborations for collective purchasing, distribution, project bidding and marketing.	Summary of activities, projects completed, utilization	Medium-term 2-3 years
1.1.3 Prioritize investment in cold storage, supply chain efficiencies and streamlined distribution to support food resiliency.	Cold storage facility development progress, legacy industry leader survey	Medium-term 2-3 years
1.1.4 Create, support and expand regional trade shows, farmers markets, fish markets and industry fairs to connect buyers and sellers/wholesalers	Summary of activities, new initiatives and participation	Medium-term 2-3 years

Partners: *State And Local Governments, Tribes, Developers, Planners, Legacy Industry Leaders, Chambers Of Commerce, Community Services Districts, The Alliance CDFI, Redwood Region Economic Development Commission, North Edge, Humboldt Area Foundation, Cal Poly Humboldt, College Of The Redwoods, The Redwood Coast Energy Authority And The Humboldt Bay Municipal Water District, UC Davis Extension*

Resources: *USDA, American Ag Credit, North Coast SBDC, Headwaters Fund, Apex, WIOA, Buy Indian Act, Private Capital, Land, Humboldt County Workforce Development Board*

Catalysts: *Humboldt Bay Port Development And Heavy Lift Terminal, Dockside Market, Nordic Aquafarms, Tribal Enterprise Career Pathway, North Coast Growers Association Food Hub*

1.2 Catalyze growth for Humboldt County's emerging industries.

Action	*KPIs*	*Timeline*
1.2.1 Collaborate on the development of incentive programs to attract emerging industries.	Summary of activities, changes in incentives and resource acquisition	Medium-term 2-3 years
1.2.2 Increase attraction and recruitment efforts, especially among target industries such as construction, financial services, renewable energy, education and training, healthcare and niche manufacturing.	Summary of attraction and recruitment activities, GRP, job creation, business expansion, # of new business	Medium-term 2-3 years
1.2.3 Increase access to innovative technologies that appeal to emerging industries.	Summary of activities, notable advancements	Long-term 4-5 years

Partners: *State And Local Governments, Tribes, Developers, Planners, Legacy Industry Leaders, Chambers Of Commerce, Community Services Districts, The Alliance CDFI, Redwood Region Economic Development Commission (RREDC), North Edge, Humboldt Area Foundation, Cal Poly Humboldt, College Of The Redwoods, The Redwood Coast Energy Authority And The Humboldt Bay Municipal Water District*

Resources: *North Coast SBDC, APEX, Headwaters Fund, Buy Indian Act, Private Capital, Land, WindLink, Humboldt County Workforce Development Board*

Catalysts*: Humboldt Bay Port Development And Heavy Lift Terminal, Tribal Enterprise Career Pathway, North Coast Growers Association Food Hub*

1.3 Foster an effective and valuable small business ecosystem.

Action	*KPIs*	*Timeline*
1.3.1 Incentivize tourism-related business development.	Summary of activities, changes in incentives and resource acquisition, jobs	Medium-term 2-3 years
1.3.2 Build upon existing professional development and leadership programs for business owners.	Summary of activities, # of participants	Short-term 0-1 year
1.3.3 Capitalize a low-interest revolving loan fund for small and medium-sized businesses to invest in modernization and technology.	Resource acquisition, investments, allocations, notable accomplishments	Medium-term 2-3 years
1.3.4 Collaborate with partners to expand small business mentorship programs.	Summary of activities, list of programs, new initiatives, # of participants	Medium-term 2-3 years
1.3.5 Expand assistance for small business success programs and assistance with scaling or other transitions.	Summary of activities, list of programs, new initiatives, # of participants	Medium-term 2-3 years

Partners: *State And Local Governments, Tribes, The North Coast Small Business Development Center (SBDC), Chambers Of Commerce, Main Street Organizations, Tourism Partners, Business Owners, Lenders, The Alliance CDFI, The Redwood Region Economic Development Commission, North Edge, K-16 Schools, Lenders, APEX, WindLink*

Resources: *Revolving Loan Fund, Small Business Administration, Go Biz, HUD CDBG*

Catalysts: *North Coast SBDC Innovation Hub*

1.4 Revise regulations, policies and incentives to boost local industry growth and drive future investment.

Action	*KPIs*	*Timeline*
1.4.1 Encourage the use of local preferences in procurement.	Summary of outreach, planning and policy adoption	Short-term 0-1 year
1.4.2 Continue evaluation of potential incentive programs.	Summary of activities, list of incentives that have been created, revised, eliminated	Short-term 0-1 year
1.4.3 Streamline permitting and policies where applicable and provide technical assistance for businesses to navigate requirements and processes.	Description of actions and changes, number of businesses assisted.	Medium-term 2-3 years
1.4.4 Increase competitiveness in global markets and avenues for foreign direct investment	Summary of activities, exports	Long-term 4-5 years

Partners: *Municipalities, Economic Development Partners, Business And Industry Leaders*
Resources: *Best Practice Examples*

2. Collaboration

2.1 Continue Redwood Region RISE collaboration (beyond CA Jobs First) and actively participate in implementation.

Action	*KPIs*	*Timeline*
2.1.1 Explore reorganization of economic development roles and responsibilities (e.g. county economic development commission).	Summary of activities, outline of structure, partners, coordination plan	Short-term 0-1 year
2.1.2 Support collaborative asset mapping of facilities, services and initiatives related to target industries, fundamental community needs and other collaborative efforts related to economic and community development.	Asset map completed, gaps identified, summary of activities to strengthen assets and boost resiliency	Medium-term 2-3 years

Partners: *Redwood Region RISE Tables And Sector Coordinators, Economic Development Partners, Workforce Partners*
Resources: *Redwood Region RISE, Best Practice Examples*
Catalysts: *California Jobs First Initiative, Redwood Region RISE*

2.2 Set a unified brand and marketing strategy for Humboldt County.

Action	*KPIs*	*Timeline*
2.2.1 Establish formal relationships and partnership structures (e.g. tourism advisory board) to streamline efforts among various organizations within the regional marketing framework.	Structure determined, partner list, any applicable related documentation (e.g. by-laws, agreements)	Short-term 0-1 year
2.2.2 Identify best practices for effective destination marketing organizations..	List of criteria and practices identified	Short-term 0-1 year
2.2.3 Determine a core message.	Summary of activities, core message established	Medium-term 2-3 years
2.2.4 Integrate indigenous cultural literacy into the brand.	Summary of engagement and approach to integration	Medium-term 2-3 years
2.2.5 Develop and utilize shared technology.	Applicable research documentation, technology acquisition, implementation and user training	Long-term 4-5 years
2.2.6 Create a work plan to build a brand around triple-bottom lines.	Work plan developed	Medium-term 2-3 years

Partners: *Tourism Partners, Economic Development Partners, Tribes, Foundations*
Resources: *Transient Occupancy Tax, Community Input, Potential Marketing Consultant Or Service Provider*
Catalysts: *California Jobs First Initiative, Redwood Region RISE*

2.3 Develop marketing strategies to attract and retain businesses.

Action	*KPIs*	*Timeline*
2.3.1 Prepare marketing materials and strategies for target industries, suppliers and site selectors.	Target industry-specific marketing plan and materials developed, summary of outreach conducted	Short-term 0-1 year
2.3.2 Develop and deliver a prospectus for identified priority properties and development districts within the county.	Priority development areas identified, prospectus completed, summary of outreach conducted	Medium-term 2-3 years
2.3.3 Leverage networks of existing industry and community leaders for business outreach.	Description of outreach activities, any notable results or connections.	Medium-term 2-3 years
2.3.4 Create a campaign to attract and retain tourism-related businesses—retail, restaurants, lodging, personal services, recreation, agritourism, etc.—and include local business support resources.	Campaign created, description of outreach activities and results	Medium-term 2-3 years
2.3.5 Invest in "buy local" campaigns.	Campaign(s) created, description of activities and results	Short-term 0-1 year

Partners: *Economic Development Partners, Tourism Partners, Businesses, Community*
Resources: *Potential Marketing Consultant Or Service Provider, Best Practice Examples*
Catalysts: *California Jobs First Initiative, Redwood Region RISE, Project Rebound*

2.4 Leverage partnerships and marketing to attract and retain residents and workforce**.**

Action	*KPIs*	*Timeline*
2.4.1 Collaborate with local organizations and employers initiatives to attract and retain talent.	Summary of collaborative activity, employee attraction and retention data	Long-term 4-5 years
2.4.2 Promote Humboldt County's opportunities, assets and quality of life.	Summary of collaborative activities and results data	Short-term 0-1 year
2.4.3 Develop marketing specifically to attract workforce for target industries.	Marketing developed, summary of outreach efforts and results data	Medium-term 2-3 years
2.4.4 Create a welcoming and homecoming community initiative.	Initiative created, summary of collaborative activities, participation data	Medium-term 2-3 years
2.4.5 Collaborate with educational institutions on recruitment efforts.	Summary of collaborative activities, enrollment data	Medium-term 2-3 years

Partners: *Workforce Partners, Economic Development Partners, Educational Institutions, Local Businesses*
Resources: *Foundations, Best Practice Examples, Humboldt County Workforce Development Board*
Catalysts: *Redwood Region RISE, Project Rebound, Workforce Local and Regional Plan*

2.5 Invest in a wide variety of targeted marketing campaigns to draw visitors to the county and region.

Action	*KPIs*	*Timeline*
2.5.1 Preserve and promote Humboldt County's natural, cultural and built environments.	Summary of preservation and promotion efforts, resource allocation, tourism data—TOT, reach data, etc.	Short-term 0-1 year
2.5.2 Preserve and promote the vibrancy of Humboldt County's culture of art, history and adventurous spirit.	Summary of preservation and promotion efforts, resource allocation and results	Medium-term 2-3 years
2.5.3 Highlight the resiliency and influences of the Indigenous peoples of Humboldt County.	Summary of promotion efforts, resource allocation and results	Medium-term 2-3 years
2.5.4 Continue to improve campaigns to advertise public and private tourism attractions and activities.	Summary of improvements and promotion efforts, resource allocation, campaign results data	Long-term 4-5 years
2.5.5 Engage media influencers to visit and post content about Humboldt County.	Media influencers engaged, documented posts, tourism data—TOT, reach data, etc.	Medium-term 2-3 years

Partners: *Tourism Partners, Economic Development Partners, Tribes, EPIC*
Resources: *Transient Occupancy Tax, Foundations, Best Practice Examples*

Catalysts: *California Jobs First Initiative, Redwood Region RISE, Regional Climate Action Plan, Tourism Asset Inventory and Strategy Analysis*

3. Natural Assets and Disaster Preparedness

3.1 Prepare for natural disasters.

Action	KPIs	Timeline
3.1.1 Update Humboldt County's Hazard Mitigation Plan and other disaster response plans, including those for local organizations, businesses and the community.	Completed plans, summary of planning efforts—any relevant information sessions, training, workshops, or community outreach	Medium-term 2-3 years
3.1.2 Collaborate on the implementation of the Regional Climate Action Plan.	Plan adoption progress updates, summary of implementation efforts	Long-term 4-5 years

Partners: *State And Local Governments, Tribes, Humboldt Area Foundation, Humboldt Cert Coalition, Emergency Response Services, Healthcare Sector, Business And Industry Leaders, Utility Providers, Environmental Groups, EPIC, RCEA, Education Partners, Tourism Partners, Residents*

Resources: *CalEPA, Cal OES, FEMA, CALTRANS, Best Practice Examples*

Catalysts: *2025 Hazard Mitigation Plan Update Process, Regional Climate Action Plan*

3.2 Balance increases in use and development with the protection of natural assets.

Action	KPIs	Timeline
3.2.1 Mitigate contaminants on potential development properties; discourage development in hazardous or sensitive areas..	Identification of properties/areas, contaminant assessments, report of mitigation efforts	Long-term 4-5 years
3.2.2 Conduct a brownfield analysis.	Analysis conducted, results report and relevant actions	Medium-term 2-3 years
3.2.3 Support provisions and appropriate maintenance of natural assets and green spaces.	Summary of support and resources allocated, actions taken, relevant results	Medium-term 2-3 years
3.2.4 Research and utilize best practices in sustainable tourism.	List and description of best practice examples	Short-term 0-1 year

Partners: *State And Local Governments, Tribes, Economic Development Partners, Business And Industry Leaders, EPIC, Educational Partners*

Resources: *US EPA, Calepa, California Department Of Toxic Substance Control (DTSC), California State Water Resources Control Board (SWRCB), California Association For Local Economic Development (CALED), USDA*

Catalysts: *2025 Humboldt County Hazard Mitigation Plan Update, California Land Reuse And Revitalization Act (CLRRA), Gatto Act*

4. Fundamental Community Needs

4.1 Catalyze the growth of the healthcare industry to expand opportunities and support local demand.

Action	*KPIs*	*Timeline*
4.1.1 Support local and regional assessments that focus on healthcare provider gaps and priority occupations in healthcare.	Summary of activities, gaps identified, assessment completed	Medium-term 2-3 years
4.1.2 Strengthen county-wide emergency response, including continuity with disaster response plans.	Response times, response outcomes, plans completed	Medium-term 2-3 years
4.1.3 Explore the development of regional healthcare hubs.	Summary of exploratory efforts, determination and any projected actions	Short-term 0-1 year
4.1.4 Encourage expansion of telehealth solutions for local and regional healthcare providers.	# of telehealth users	Medium-term 2-3 years
4.1.5 Expand mobile health services (dental, general practitioner, etc.) and access to medical transportation.	# of mobile health units, population served, utilization, provider/patient ratios	Long-term 4-5 years
4.1.6 Increase public awareness of health and wellness programs, including preventative care and familiarity with telehealth service use.	Outreach metrics (e.g. website traffic, # of sessions held, # of ads placed	Short-term 0-1 year
4.1.7 Invest in culturally-responsive approaches to health and wellness by intentionally engaging communities with inequitable health outcomes.	Summary of activities, socio-demographic health outcomes	Medium-term 2-3 years
4.1.8 Conduct environmental health evaluation of impacts on the public from pollution, air quality and other environmental hazards.	Funding secured, consultant hired, evaluation conducted	Long-term 4-5 years

Partners: *K-16 Educators, Healthcare Administrators, Unions, Universities, Local Government, Tribes, North Coast Health Improvement Information Network Referral System, Providence, Open Door, HIS Indian Health Service, SHCHD Southern Humboldt, Kimaw Medical, North Coast Air Quality Control District*

Resources: *California Center For Rural Policy At Cal Poly*

Catalysts*: 2025-2028 Local And Regional Workforce Development Plans*

4.2 Enhance housing stock availability and quality at all income and market levels.

Action	KPIs	Timeline
4.2.1 Support regional efforts to conduct a current situational assessment and strategic plan for housing that considers the impact on current residents and priority industries.	Summary of activities, resources contributed, assessment completed	Short-term 0-1 year
4.2.2 Encourage the development of a range of housing types suitable for a range of income levels, including market rate, moderate income, low income, mixed income, single-family, multi-family, ADUs and mixed-use housing.	Units developed by type and AMI range, units preserved, projects planned	Long-term 4-5 years
4.2.3 Support sustainable growth in the forestry and construction target industries to increase the supply of alternative and regenerative building materials and increase skilled talent for housing development.	Jobs, GRP, Imports and Exports, construction program enrollment and completion	Long-term 4-5 years
4.2.4 Collaborate on the expansion and elevated impacts of the first-time home buyer program and tribal housing programs,	Summary of activities, resource allocation, utilization	Medium-term 2-3 years
4.2.5 Reduce barriers to housing development through a multi-faceted approach to include potential nontraditional opportunities and streamlined permitting and zoning.	Opportunities considered, planned or utilized, description of permitting and zoning changes	Short-term 0-1 year
4.2.6 Advance initiatives to provide assistance for the unhoused population.	Resources contributed, # of individuals served	Medium-term 2-3 years
4.2.7 Explore approaches to address dilapidated housing and long-term vacancies.	Summary of exploration and actions taken	Short-term 0-1 year
4.2.8 Evaluate the potential for dedicated housing or housing incentives to attract workers for target industries.	Summary of evaluation and any resulting projects	Long-term 2-3 years

Partners: *Municipalities, Tribes, Housing Authority Of The City Of Eureka And County Of Humboldt, Housing Humboldt, Humboldt County Office Of Education, Humboldt Housing And Homelessness Coalition (HHHC), UPLIFT Eureka, Habitat For Humanity, Betty Chinn Fund, Eureka Rescue Mission, Humboldt Association Of Realtors, Workforce Partners, Education Partners, Planners, Lenders, Property Owners And Managers, Forestry And Construction Industry Leaders, Building Supply Manufacturers And Retailers*

Resources: *Available Land, HAF, California Department Of Housing And Community Development (HCD), US Department Of Housing And Urban Development (HUD), California Housing Partnership*

Catalysts: *2025 Humboldt County Affordable Housing Needs Report, Local Mills Developing New Products, Redwood Region RISE*

4.3 Provide avenues for growth in workforce initiatives, education and training to develop a relevant talent pool for employers and increase wages and promising career opportunities for workers.

Action	KPIs	Timeline
4.3.1 Support the development of local training centers for trades.	Summary of activities, development steps taken	Long-term 4-5 years
4.3.2 Expand apprenticeship programs and paid internship experiences in emerging and target industries.	Number of new/expanded apprenticeship programs and interns by industry	Long-term 4-5 years
4.3.3 Enhance local university education through public investment in K-16.	Amount of public funding and resources allocated	Long-term 4-5 years
4.3.4 Explore incentives for local residents to stay in Humboldt County (e.g. housing stipends, longevity bonus, loan repayment assistance)	Summary of research efforts, prioritization of options and any relevant actions taken	Medium-term 2-3 years
4.3.5 Support the development of entrepreneurship programs in local schools.	Description of new/expanded programs, participation data, resources allocated	Short-term 0-1 years
4.3.6 Encourage more dual enrollment options, STEAM education for students and higher education sustainability initiatives.	Description of new or expanded offerings for dual enrollment, STEAM, etc.	Medium-term 2-3 years
4.3.7 Contribute resources to the development of childcare initiatives that increase the accessibility and affordability of childcare options; encourage training and incentive programs for childcare workers.	Resources allocated, summary of progress, relevant data such as new facilities, enrollment, certifications, participation	Medium-term 2-3 years
4.3.8 Build strong pathways to postsecondary education and careers.	Summary of pathway improvements and results	Long-term 4-5 years
4.3.9 Support regional and local efforts to invest in workforce data and scholarship/incentive opportunities.	Summary of activities, identification of sources, scholarship/incentive growth and allocation	Long-term 4-5 years
4.3.10 Engage with businesses to provide information and context around wages, workforce programs, best practices and opportunities.	Summary of engagement activities, materials, number of participants, reach data	Short-term 0-1 year

Partners: *Workforce Development Partners, Economic Development Partners, Education Partners, Business And Industry Leaders*
Resources: *Local Foundations, California Workforce Development Board (CWDB) Workforce Accelerator Fund, California Employment Training Panel, US Department Of Labor ETA Workforce Data Hub, Division Of Apprenticeship Standards (DAS), American Job Center, Grow Apprenticeship California, U.S. Department Of Education, Rural Education Achievement Program (REAP), Employment Development Department*
Catalysts: *Redwood Region RISE, 2025-2028 Local And Regional Workforce Development Plans*

5. Infrastructure

5.1 Develop and maintain transportation infrastructure that supports local industries and increases access for residents.

Action	KPIs	Timeline
5.1.1 Strengthen the fragile road transportation infrastructure connecting Humboldt County to the rest of California.	Summary of planned and completed transportation projects.	Long-term 4-5 years
5.1.2 Invest in infrastructure and urban design improvements that promote multi-modal transportation—such as expanded sidewalks, pedestrian-only zones, safe crossings, and mixed-use development—to reduce car dependency and encourage foot traffic in commercial areas.	Summary of activities, resources allocated, and results achieved	Medium-term 2-3 years
5.1.3 Expand access, capacity, and ridership of public transportation.	Expanded routes, number of opportunities available, and number of users	Medium-term 2-3 years
5.1.4 Support airport improvements and enhance marketing efforts.	Summary of activities, improvements made, marketing reach data	Medium-term 2-3 years
5.1.5 Leverage existing harbor assets, development, and modernization of additional port facilities (e.g., heavy marine terminal).	Summary of activities, project progress updates	Long-term 4-5 years
5.1.6 Assess opportunities for potential rail access.	Assessment completed	Medium-term 2-3 years
5.1.7 Continue and expand the deployment of transportation that uses renewable energy and new technology.	Projects started and completed, including upgrades	Long-term 4-5 years

Partners: *Municipalities, Caltrans, Humboldt County Public Works Department, Utility Providers, Humboldt County Association Of Governments, Humboldt Transit Authority*

Resources: *Humboldt Bay Harbor Recreation and Conservation District, Samoa Peninsula Enhanced Infrastructure Financing District (EIFD)*

Catalysts: *Project SOAR, Humboldt County Regional Transportation Plan, Humboldt County Regional Bicycle Plan*

5.2 Increase reliability and resiliency of electric infrastructure.

Action	KPIs	Timeline
5.2.1 Modernize and build capacity for grid resiliency, reliability, and increased integration of renewable energy.	Project progress updates, energy generation	Long-term 4-5 years
5.2.2 Increase energy generation by exploring opportunities, including waste-to-energy and bioenergy, solar, ocean, hydrogen, and wind.	Summary of research and activities, project progress updates, and energy generation	Long-term 4-5 years
5.2.3 Support innovation in energy production and train energy workers to utilize automation and robotics to enhance quality and efficiency.	Training completions, new innovations planned or implemented	Long-term 4-5 years
5.2.4 Plan for continuity of energy services, including clean backup power systems for essential facilities and services (e.g., hospitals, emergency response, shelters).	Planning process updates, summary of coordination with disaster preparedness efforts, plan completion	Medium-term 2-3 years
5.2.5 Create a renewable energy overlay district.	District plan draft, district designation complete	Medium-term 2-3 years
5.2.6 Enhance programs that promote energy efficiency, provide energy assistance for low-income households and encourage reduced usage and decreased reliance on traditional power grids.	Summary of program progress, participation in programs, usage rates	Short-term 0-1 year
5.2.7 Support worker-owned, Tribal and standalone clean energy enterprises, including solar-plus storage systems and small-scale wind energy installations.	Summary of support activities, projects and resources allocated	Medium-term 2-3 years
5.2.9 Support efforts to establish “Clean Energy Hubs.”	Summary of support activities, resources allocated, progress updates	Long-term 4-5 years

Partners: *Municipalities, Tribes, Economic Development Partners, Education Partners, Business And Industry Leaders, POWER CA, Redwood Coast Energy Authority (RCEA), Vineyard Offshore, RWE Offshore Wind*

Resources: *Bureau Of Ocean Energy Management, Humboldt Wind Energy Area, Grid Resilience And Innovative Partnerships (GRIP), Schatz Energy Research Center*

Catalysts: *Cal Poly Humboldt Schatz Energy Research + Sustainability Center, Pacific Offshore Wind Consortium, Redwood Region RISE, Tribal Energy Resilience And Sovereignty (TERAS), Sandrini Solar Park, North Coast Hwy 36 Solar, Regional Climate Action Plan*

5.3 Provide support and resources to expand broadband infrastructure.

Action	KPIs	Timeline
5.3.1 Increase broadband expansion into rural areas.	Summary of support, description of new rural expansion projects planned and completed, service data	Long-term 4-5 years
5.3.2 Encourage completion of broadband infrastructure from existing operators.	Summary of support, activities, service data, projects completed	Medium-term 2-3 years

Partners: *Municipalities, Tribes, economic development partners, service providers*

Resources: *California Public Utilities Commission, Vero Heroes Program, Lifeline*

Catalysts: *Environmental and Social Justice (ESJ) Action Plan, Vero Fiber Networks Project, Karuk Tribe Fiber-To-The-Home Project, AT&T Project, Fairhaven model Innovation Challenge, Tribal Broadband Connectivity Program*

5.4 Expand water, wastewater and solid waste infrastructure

Action	KPIs	Timeline
5.4.1 Expand efforts to train and retain operators.	Training completions, employee retention	Long-term 4-5 years
5.4.2 Modernize and build capacity for both central and independent wastewater treatment.	Planned, active, completed projects and capacity results	Long-term 4-5 years
5.4.3 Provide education on water conservation, nature-based solutions (e.g., wastewater reuse for wildlife/fisheries), closed-loop systems, low-flow fixtures and expand deployment of similar systems.	Summary of activities (such as sessions conducted, participants, outreach), relevant deployment results	Medium-term 2-3 years
5.4.4 Expand integration into county or municipal systems where possible.	List of potential, active and completed projects, investment amount	Long-term 4-5 years
5.4.5 Expand utilization of the RMDZ program to provide businesses with technical assistance and other resources.	Summary of activities and outreach efforts, results	Short-term 0-1 year

Partners: *Municipalities, Economic Development Partners, Tribes, Utility Service Providers, Education Partners, Workforce Partners, Community Partners*

Resources: *USDA, California State Water Resources Control Board, California Department Of Water Resources (DWR), California Water Association, Samoa Peninsula Enhanced Infrastructure Financing District (EIFD), US Environmental Protection Agency, Recycling Market Development Zone (RMDZ), Department Of Resources Recycling And Recovery*
Catalysts: *Samoa Wastewater Planning Project, Sustainable Groundwater Management Act*

SWOT ANALYSIS

Strengths	Weaknesses
• Natural Environment • Education and Workforce Training Assets • Indigenous Community • Economic, Environmental and Community Resiliency • Strong Legacy Industries	• Geographic Isolation • Infrastructure Limitations • Healthcare Access • Housing Availability, Affordability and Quality • Dependence on External Factors • Limited Processing Infrastructure • Decline of the Alternative Agriculture Industry
Opportunities	**Threats**
• Diversification of Legacy Industries • Developing a Consistent Community Marketing Strategy • Expansion and Diversification of Local Construction Industry • Maximize the Potential of the California Redwood Coast-Humboldt County Airport	• Declining Resident Population • Workforce Shortages • Regulatory Burdens on Key Industries • Climate Change • Funding Uncertainty

1. Strengths

Natural Environment

The county's natural landscape, from the coast to the forest, is one of its greatest strengths and central to Humboldt County's identity. The diverse landscape and outdoor recreation activities attract tourists to the area, while the county's natural resources, whether agricultural lands, timber resources, or the ocean, provide a base for numerous industries. An abundance of natural resources strengthens local economic development by supporting key industries, creating jobs and generating revenue that can be reinvested in long-term growth. While an asset, sustainable management of these natural resources must remain a priority for community leaders to avoid an overreliance on environmental degradation.

Education and Workforce Training Assets

Humboldt County features a diverse range of workforce development and training resources. Educational institutions such as the Humboldt County Office of Education, College of the Redwoods, Cal Poly Humboldt and several adult education and trade schools provide the training backbone. The Humboldt County Office of Education offers Career Technical Education (CTE) programs that provide secondary students with hands-on learning and clear pathways to both post-secondary education and direct-to-career opportunities. Notably, the College of the Redwoods maintains articulation agreements with the Academy of the Redwoods, enabling high school students to earn college credit and participate in advanced coursework. Serving as key academic and research resources for the region, local higher education institutions, Cal Poly Humboldt and the College of the Redwoods offer degree and certificate programs in target industries, such as aquaculture, healthcare and education.

Similarly, the workforce system includes participant programs and support from the Humboldt County Workforce Development Board, the California Department of Rehabilitation, the Northern California Indian Development Council and the Humboldt County Department of Health and Human Services, amongst other partners. These workforce entities provide general workforce development in the form of soft skills

training, supportive services, paid work experience and subsidized education in high-demand industries. In addition, workforce system partners provide industry and/or population focused programs. Examples of current programs focused on the county's target industries include healthcare, aquaculture, construction and renewable energy.

It is important to note that while unions are present and active in Humboldt, the majority of training and apprenticeship programs are available out of the area. This includes training offered by the members of the Building and Construction Trades Council of Humboldt and Del Norte County, which includes, but is not limited to, the International Brotherhood of Electrical Workers Local 551, Laborers International Union North America Local 324and the Operating Engineers Local 3.

In addition, many local tribes have workforce development programs and have made significant investments toward trainings and facilities. Examples include Blue Lake Rancheria's soon to be open Ta'm training facility and the Yurok tribe's workforce development center.

Indigenous Community

Cal Poly Humboldt identifies 11 federally recognized and unrecognized tribes, rancherias and sovereign tribal governments within its tri-county service area—Humboldt, Del Norte and Trinity Counties, eight of which are located within Humboldt County. These include the Big Lagoon Rancheria, Blue Lake Rancheria, Hoopa Valley Tribe, Bear River Band of the Rohnerville Rancheria, Trinidad Rancheria, Wiyot Tribe and the Yurok Tribe. The service area is also home to the Karuk Tribe, Pulikla Tribe of Yurok People and Tolowa Dee-ni' Nation (formerly the Smith River Rancheria) and the region touches the northwestern portion of the Wiyot accessorial territory.

Regional coordination is supported by the Northern California Indian Development Council (NCIDC), which provides workforce services, block grants and disaster planning. Several tribes, such as the Karuk, Hoopa Valley and Wiyot, have independently developed strategic plans, including federally supported Comprehensive Economic Development Strategies (CEDS).

The Karuk Tribe's CEDS outlines initiatives such as renewable energy development, broadband expansion, business incubation and

educational facilities. It also emphasizes sustainable land use, disaster resilience and regional economic integration. The Hoopa Valley Tribe's CEDS focuses on planning capacity, infrastructure development, workforce training, small business support and self-determination. Meanwhile, the Wiyot Tribe's strategic framework outlines six priorities: enhancing staff capacity, expanding community programs, improving financial conditions, safeguarding sovereignty, strengthening communication and protecting land resources. These planning efforts reflect a strong commitment to long-term economic growth rooted in cultural values and local needs.

The Blue Lake Rancheria has emerged as a national sustainability and climate resilience leader. This federally recognized tribe of Wiyot, Yurok and Hupa peoples operates on 76 acres near Blue Lake, California. It has developed an award-winning low-carbon strategy across five essential sectors: energy, water, food, communication/IT and transportation. Since initiating climate planning in 2008, the Tribe has reduced energy consumption by 40% from 2014 and committed to net-zero emissions by 2030. Their work has earned FEMA, DistribuTECH and PG&E recognition for integrating energy efficiency, distributed generation and community preparedness. These efforts highlight the Tribe's forward-looking approach to economic development, grounded in environmental stewardship and regional service.

Economic, Environmental and Community Resiliency

Humboldt County demonstrates a strong environmental and economic resiliency foundation, positioning itself to navigate market fluctuations and external disruptions effectively. By diversifying its economy—particularly through investments in emerging sectors like renewable energy—the county is reducing its reliance on historically dominant industries, including the alternative agriculture sector, which has experienced a significant boom-bust cycle in recent years. Workforce development initiatives and small business support further enhance the county's adaptability, ensuring residents and businesses have the tools to thrive in an evolving economic landscape.

This focus on resiliency extends beyond economic strategy to reflect the county's deep-rooted culture of community response. From natural

disasters and the COVID-19 pandemic to the closure of key healthcare facilities, Humboldt County has repeatedly demonstrated a collective ability to mobilize in times of crisis. These coordinated efforts, whether through mutual aid networks, emergency response partnerships, or nonprofit support, highlight the county's social infrastructure's strength and capacity to recover from disruption.

Humboldt's proactive economic planning and strong community cohesion create a comprehensive resiliency framework. The county's experience with the volatility of the alternative agriculture industry underscores the importance of diversifying its economic base and planning for long-term sustainability. Humboldt County is building a resilient future grounded in environmental stewardship and shared community strength by fostering innovation, supporting local enterprise and prioritizing inclusive recovery efforts.

Strong Legacy Industries

Humboldt County's economic foundation is rooted in its legacy agriculture, fishing, alternative agriculture and forestry industries—sectors that have long defined the region's identity and continue to generate significant economic value. The county's marine climate, abundant rainfall and fertile soils support approximately 35,000 acres of productive agricultural land in coastal alluvial plains[12]. This environment enables a diverse agricultural economy anchored by a historic dairy industry that once led the state in production. While the dairy sector has faced modern economic challenges, it remains vital to sustaining Humboldt's agricultural heritage.

Forestry has played a central role in Humboldt County's economy since the 1850s and continues to adapt amid evolving environmental regulations and sustainable land management practices. The industry generated a $102 million harvest in 2023[13], reflecting its resilience and ongoing relevance. With deep local expertise and infrastructure, the forestry sector is well positioned for future innovation in restoration

[12] https://humboldtgov.org/276/GIS-Data-Download

[13] https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=PropTaxTimberProductionStats

forestry, carbon sequestration, and providing for sustainable building materials.

Humboldt's fisheries and aquaculture sectors continue to benefit from the county's strategic coastal location, providing access to high-demand markets along the West Coast. The Pacific Ocean and local waterways support a variety of seafood industries, enhancing food security and export capacity.

In recent decades, the alternative agriculture industry has emerged as a major economic force in Humboldt County, drawing on the region's legacy of small-scale cultivation and rural innovation. However, the industry has experienced a pronounced boom-bust cycle, challenging its long-term stability and prompting the need for regulatory adaptation and diversification. Despite these challenges, alternative agriculture remains important to the county's economic landscape. Together with legacy agriculture, forestry and fishing sectors, alternative agriculture contributes to a multifaceted rural economy that, when supported by strategic planning and investment, offers a resilient and sustainable path forward for Humboldt County.

2. Weaknesses

Geographic Isolation

While part of its natural allure, Humboldt County's remote location presents notable logistical and economic challenges. Situated approximately 250 miles from the nearest major metropolitan area and reliant on a single north-south transportation corridor, the county faces significant barriers to connectivity. Limited commercial air service further compounds these challenges, restricting access for visitors, students and professionals and placing added strain on economic development efforts. Although general aviation airports serve certain needs, they do not offset the broader impacts of limited transit options, which affect everything from tourism and higher education to healthcare access and workforce mobility.

The county's isolation adds to operational costs and hinders market access for businesses and industries – especially agriculture, forestry and emerging sectors like renewable energy. Transporting goods to

and from Humboldt involves navigating mountainous terrain and long travel distances, which can delay shipments, raise expenses and reduce competitiveness in broader markets. Additionally, the smaller local consumer base limits economies of scale, while supply chain inefficiencies can discourage outside investment.

Infrastructure Limitations

Humboldt County faces significant infrastructure limitations that hinder both daily life and long-term economic development. As the endpoint of a single high-voltage transmission line, the county's energy grid is underpowered, restricting its capacity to import and export electricity. This presents a particular challenge as Humboldt looks to expand its renewable energy sector, limiting the ability to transmit clean energy to larger markets and slowing potential growth. The county's road and bridge infrastructure are also aging, with average conditions rated as "mediocre[14]." This impacts public safety and quality of life and constrains business operations, emergency response and investment attraction.

Industries that rely heavily on transportation and specialized facilities, such as forestry, aquaculture and fisheries, are particularly vulnerable to Humboldt's infrastructure deficits. Highway 101 is the county's main transportation artery, but its susceptibility to weather-related closures and natural disasters disrupts supply chains and increases costs. The absence of rail access further compounds logistical challenges, especially for heavy goods like timber. In the fisheries and agricultural sectors, limited processing facilities and the absence of local cold storage options significantly impact profitability and competitiveness. The recent closure of Pacific Seafood's processing operations in the county highlights the urgent need for infrastructure investment to support existing industries and ensure future economic resilience.

[14] https://infrastructurereportcard.org/humboldt-county-californias-transportation-report-card-released/

Healthcare Access

Humboldt County struggles with persistent challenges in accessing healthcare due to a shortage of medical professionals and the limited availability of specialized services. Many areas of the county are designated as Health Professional Shortage Areas (HPSAs) for primary care, dental health and mental health, with a significant portion of the population residing in medically underserved areas[15]. This shortage is further exacerbated by the closure of local medical facilities, which increases waitlists and creates barriers to timely care. The county's healthcare system faces significant strain, with reports of mental health providers having waitlists of over 500 individuals and long delays for specialty care. Moreover, the lack of healthcare professionals has led some providers to delay retirement due to inadequate replacement staff.

Access to specialized care is another major concern in Humboldt County. The limited number of specialized treatment facilities forces residents to travel long distances, often out of the county, to receive the necessary care. Families seeking pediatric specialty care are frequently required to go to San Francisco. At the same time, the closure of the labor and delivery unit at Mad River Community Hospital has left only one hospital with a birthing center in the county[16]. This impacts high-risk pregnancies, with families needing to relocate to access necessary services. The county's aging population further compounds these healthcare challenges, as older adults typically require more frequent and complex care. This demographic shift places added pressure on an already overburdened healthcare system and the economic barriers faced by many residents – such as low household incomes and high healthcare costs, exacerbating the difficulty in accessing care.

Housing Availability, Affordability and Quality

Housing availability, affordability and quality present a critical weakness for Humboldt County, impacting both quality of life and

[15] https://data.hrsa.gov/maps/map-tool/

[16] https://krcrtv.com/north-coast-news/eureka-local-news/providence-st-joseph-hospital-soon-to-have-humboldt-countys-only-birthing-center

economic development. With housing development slowing over the past two decades and vacancy rates falling below the “natural” market threshold for over 10 years, supply has not kept pace with demand. Single-family homes, with limited multi-family or medium-density options, dominate the county’s housing stock. Over half of the housing units were built before 1980 and a significant portion is considered substandard, limiting viable options for residents and deterring potential new workforce entrants. The lack of diverse, modern housing restricts mobility within the region and poses a major barrier to talent attraction and retention.

Rising housing costs further exacerbate the issue, with the median monthly housing expenses increasing by nearly 27% in just five years[17]. As of 2023, nearly 22,500 households were cost-burdened – spending over 30% of their income on housing – and renters were disproportionately affected, with over half of cost-burdened renters spending more than 50% of their income on housing[18]. This affordability crisis significantly strains low- and moderate-income households and limits discretionary spending, which affects local businesses.

Dependence on External Factors

Humboldt County’s economy is heavily influenced by external markets, exposing its core industries to significant volatility and uncertainty. Agriculture, timber, construction and aquaculture are particularly susceptible to factors outside local control, including global commodity prices, international trade conditions, interest rates and supply chain disruptions. Farmers experience large swings in crop prices due to climate variability and shifting consumer demand. Similarly, timber prices fluctuate in response to national construction trends and monetary policy, while the construction industry faces frequent delays and rising costs tied to global material shortages.

This dependence limits local control over economic outcomes and hampers long-term planning. In aquaculture and fisheries, producers

[17] Monthly Housing Costs. Source: ACS 1-Year Estimates
[18] Housing Cost Burden by Tenure. Source: ACS 2018/2023 1-Year Estimates

must navigate changing regulations and demand from distant markets, often without the benefit of local processing or distribution infrastructure. Large-scale projects in the renewable energy sector often rely on outside investment, which can delay progress and reduce community influence. Without greater local capacity to manage production, distribution and investment, Humboldt County remains vulnerable to external shocks that threaten the stability and profitability of its key industries.

Limited Processing Infrastructure

The county has limited seafood processing capacity and no US Department of Agriculture (USDA)-certified slaughterhouses, increasing costs and forcing producers to rely on facilities outside the community. Moreover, the county lacks large-scale cold storage facilities, limiting its ability to store large quantities of food and hindering the growth of the agriculture and aquaculture and fisheries industries. Through the CEDS engagement process, stakeholders identified achieving food sovereignty as an opportunity in the county.

Decline of the Alternative Agriculture Industry

The alternative agriculture industry has historically played a vital role in Humboldt County's economy, with a 2011 study estimating that it comprised roughly 25% of the local economic activity prior to legalization. However, the shift to a regulated market has significantly eroded the industry's economic viability. Falling wholesale prices, high regulatory compliance costs, limited access to capital and market oversaturation have led to widespread business closures and reduced profitability for small-scale cultivators, the backbone of Humboldt's alternative agriculture legacy. The ripple effects of this decline are extensive, impacting jobs, local businesses and county revenue. Reduced Measure S tax income has already constrained funding for vital community services such as mental health care, substance abuse prevention, public safety and environmental restoration.

As one of the three counties in California's famed Emerald Triangle, Humboldt was once synonymous with high-quality alternative agriculture cultivation. Today, however, the county is experiencing a sharp contraction in alternative agriculture activity. There has been a notable drop in the number of active cultivation permits and seasonal

harvest volumes continue to decline[19][20][21]. Many small operators, unable to compete with large-scale producers or navigate the burdens of regulation, are exiting the industry altogether. This downturn threatens the local economy and undermines community identity and long-standing agricultural traditions. Without state-level regulatory reform, improved market access and economic diversification, Humboldt County may continue to face significant economic and social challenges tied to the alternative agriculture industry's instability.

3. Opportunities

Diversification of Legacy Industries

Humboldt County's legacy industries – agriculture, aquaculture and forestry—provide a strong foundation for targeted innovation and industry diversification. Advances in technology, shifting consumer demand and environmental priorities have opened new doors for these traditional sectors. New technologies meant to reduce climate pollution present an economic opportunity for Humboldt County. For example, reducing reliance on natural gas could catalyze the sale of electric heaters, stoves, etc. In agriculture and aquaculture, there are growing opportunities for value-added products, such as artisanal foods and sustainable seafood, as well as for expanding local food systems through farmers' markets and farm-to-table programs. Green building materials can reduce the carbon emissions of new construction, and Humboldt County is well-positioned to support the growth of green building material industries. Innovations in forest management, including carbon sequestration and forest restoration, can be sustainable, address climate goals and create new jobs.

California Polytechnic institution supports these opportunities by aligning academic resources and research capacity with economic development goals. This opens the door to workforce development

[19] https://www.cdtfa.ca.gov/DataPortal/charts.htm?url=CannabisSalesByCounty
[20] https://cannabis.ca.gov/resources/data-dashboard/harvest-report/
[21] https://lostcoastoutpost.com/2024/apr/25/yesterday-supes/

programs, applied research and partnerships that bolster innovation in agriculture, renewable energy and other high-potential sectors. The region is also well positioned to support eco-friendly tourism and agritourism, which take advantage of Humboldt's natural beauty, rural character and strong environmental stewardship. These tourism sub-sectors generate revenue, support small businesses and promote local products and experiences.

Emerging industries like offshore wind development, port modernization and distributed energy resources like microgrids offer transformative potential for Humboldt County's economy. Investment in renewable energy infrastructure supports local energy resilience and creates long-term economic opportunities in engineering, construction, operations and maintenance. As the County works to implement the Climate Action Plan, it should also look for opportunities to invest in economic development opportunities supportive of that plan. These efforts, combined with the county's emphasis on sustainability, position Humboldt as a forward-thinking region capable of transitioning from economic dependence on declining industries – like alternative agriculture and traditional timber – toward a more resilient and diversified economic future.

Developing a Consistent Community Marketing Strategy

Humboldt County has a broad network of organizations and stakeholders dedicated to promoting the region's assets, including its natural beauty, sustainability efforts and unique quality of life. However, these efforts are often fragmented, lacking a cohesive vision or consistent messaging. By aligning these efforts under a unified community marketing strategy, Humboldt County can more effectively promote its identity and values, improving external perceptions and enhancing its competitiveness for tourism, talent attraction and investment.

Investing in Humboldt County's tourism infrastructure can create a more welcoming environment, strengthen community marketing and generate economic activity. Improved infrastructure supports tourism-related businesses and amenities such as welcome centers, restrooms,

signage, public art and attractions. Local investment alongside successful advocacy and collaboration with the state for expanded tourism infrastructure in gateway communities such as Orick, Garberville and Willow Creek could be transformational.

A consistent marketing strategy would allow the county to proactively tell its story – highlighting its environmental leadership, outdoor recreation, sustainable industries and vibrant culture. Such an approach could help change outdated or inaccurate perceptions of the region while increasing visibility in statewide and national conversations. Speaking with one voice, Humboldt can build a stronger brand that resonates with visitors, businesses and potential residents, creating momentum for economic development and community pride.

Expansion and Diversification of Local Construction Industry

Humboldt County's construction industry is well positioned for continued growth and diversification. The sector has already added over 500 jobs in the past decade and is projected to employ more than 3,000 workers by 2034[22]. The construction sector represents a strong economic asset with a high local business concentration – 26% more than the national average – and competitive wages averaging $80,600 annually[23]. An existing network of over 240 payrolled businesses provides a solid foundation on which to build. Local demand is growing steadily, driven by residential and commercial development, public sector investments and institutional expansions, including over $575 million in planned improvements at Cal Poly Humboldt and major projects at the College of the Redwoods[24][25].

In addition to traditional construction opportunities, emerging industries are creating new pathways for diversification. Offshore wind development will require significant investment in port infrastructure,

[22] *Lightcast 2024.4*
[23] Lightcast 2024.4
[24] https://www.humboldt.edu/about/polytechnic/infrastructure-projects
[25] [25] https://www.redwoods.edu/about/projects/index.php

transmission lines and wind farm facilities, offering long-term job creation and growth in specialized construction fields. Further, state and federal investments in infrastructure, such as over $80 million in local road improvements[26] and $35 million in broadband expansion[27], provide further momentum. With a strong project pipeline and increasing demand, Humboldt County's construction industry is well placed to expand its capacity, embrace new technologies and become a regional leader in sustainable and large-scale infrastructure development.

Maximize the Potential of the California Redwood Coast-Humboldt County Airport

Maximizing the potential of the California Redwood Coast–Humboldt County Airport is a critical opportunity for strengthening regional connectivity, supporting economic development and enhancing tourism. Currently, limited commercial flight options can deter both visitors and business travelers, constraining Humboldt County's ability to attract outside investment, talent and tourism dollars. Expanding direct air service to additional key markets—such as Seattle, Portland, or Sacramento – could reduce travel barriers, making the county more accessible to prospective visitors, students and professionals. Broader air service also supports local industries that depend on timely travel, such as healthcare, education and advanced manufacturing and could improve the movement of high-value goods and services in and out of the region.

In addition to expanding passenger service, the airport presents a significant opportunity for economic diversification by developing adjacent land for aviation-compatible business uses. This includes opportunities for aircraft maintenance and repair facilities, logistics hubs, flight training centers and other aerospace-related industries. Leveraging these assets would generate non-aeronautical revenue for the airport and support job creation and investment in high-wage sectors. Strategic partnerships with aviation and logistics firms,

[26] https://humboldtgov.org/2212/Projects
[27] https://lostcoastoutpost.com/2024/aug/26/humboldt-county-nabs-353-million-state-grants-expa/

combined with infrastructure upgrades and targeted marketing efforts, can help position the airport as a regional economic driver, strengthening Humboldt County's long-term resilience and connectivity.

4. Threats

Declining Resident Population

A declining population poses a significant barrier for Humboldt County, with population loss accelerating in recent years. Between 2020 and 2024, the county lost an estimated 4,087 residents and nearly 60% of that decline was attributed to out-migration[28]. This trend reduces overall consumer demand, intensifies workforce shortages across key industries and dampens investor confidence. As the population contracts, local businesses may struggle to maintain customer bases and government revenues tied to population-driven metrics may decline, limiting resources for public services and infrastructure investment. Without targeted intervention, continued population loss risks trigger a broader economic disinvestment and stagnation cycle.

Demographic shifts also create downstream effects on education and workforce development. From 2019 to 2023, the under-18 population declined by 3.8%, reducing the pipeline of local youth for future college enrollment and employment[29]. This trend threatens the sustainability of local education institutions and limits the county's ability to retain young talent. Industries such as financial services and housing are also vulnerable, as a shrinking population leads to reduced demand for banking, lending and real estate activity.

Workforce Shortages

A persistent workforce shortage threatens economic development in Humboldt County. Industry leaders across sectors consistently report challenges in recruiting and retaining qualified workers. These issues are exacerbated by the county's aging population and geographic isolation, which limits the available labor pool. As these demographic trends continue, businesses face growing difficulty in filling positions—impacting productivity, limiting expansion and reducing service

[28] Population Projections. Source: U.S. Census, 2020; American Community Survey, 2023; Esri, 2025; Lightcast, 2025; CA Department of Finance, 2025

[29] American Community Survey 1-Year Estimates

availability for residents. Critical public services such as education and healthcare are particularly strained, with long-standing vacancies in education and healthcare—particularly specialists—leading to reduced access and quality of care.

In the healthcare sector, the shortage of professionals has left many parts of the county designated as Health Professional Shortage Areas (HPSAs) for primary care, dental and mental health services[30]. Long waitlists—sometimes exceeding 500 individuals—are common and providers delay retirement due to the absence of replacements. Similarly, the education sector struggles to fill over 100 full-time equivalent roles for the 2024-2025 school year[31]. Financial services, agriculture and construction industries face similar constraints, with a limited local talent pool and increasing difficulty in attracting external candidates due to the county's rural location and housing challenges. In construction and timber, the aging workforce raises concerns about a growing skills gap as experienced workers retire without a pipeline of trained replacements. Other industries face similar challenges.

Wages in Humboldt County are often not competitive with the rest of the state, especially given the cost of living and there is a lack of access to childcare. These pose significant barriers to employee attraction and retention.

Regulatory Burdens on Key Industries

A complex and overlapping regulatory environment affects economic development across key industries in Humboldt County. While regulations play a vital role in protecting the environment, worker safety and public health, they also create high compliance costs—particularly for small and mid-sized businesses with limited administrative capacity. Sectors such as agriculture and forestry are especially affected. For instance, California farmers face some of the

[30] https://data.hrsa.gov/maps/map-tool/

[31] https://www.times-standard.com/2022/08/11/humboldt-county-schools-are-struggling-to-find-teachers/

highest regulatory costs in the nation, with small farms bearing a disproportionate burden.

The renewable energy and aquaculture sectors also face significant regulatory challenges. Permitting for renewable energy projects—such as wind and solar developments—requires complex and time-consuming environmental reviews that can stall progress and deter private investment. Similarly, Humboldt's aquaculture and commercial fishing industries must navigate a labyrinth of federal, state and local regulations, often cited by stakeholders as the single largest barrier to industry growth. Without streamlining and better coordination among agencies, the regulatory burden risks stifling innovation, discouraging new business formation and limiting the ability of existing businesses to expand.

Climate Change

Climate change poses a multifaceted threat to Humboldt County, with significant implications for public safety, infrastructure and essential services. Rising sea levels and increasingly severe weather events like flooding, landslides and wildfires jeopardize critical infrastructure, including roads, utilities and education facilities like the College of the Redwoods' Eureka campus[32]. With much of the county's population and institutional infrastructure located near vulnerable coastal zones, even modest sea level rise or intensified storms could disrupt access to services, displace residents and require costly mitigation. The region's unique seismic risk at the Triple Junction, compounded by climate-related hazards, further underscores the need for comprehensive planning and resilience investment.

Key industries across Humboldt County are also increasingly exposed to climate-related disruptions. Agriculture faces rising temperatures, drought risk and shifting precipitation patterns, which can reduce crop yields, increase pest pressures and strain already limited water supplies. Similarly, the forestry sector is threatened by more frequent and intense wildfires, as well as long-term forest health risks from drought

[32] https://www.humboldt.edu/sites/default/files/sustainable-campus/2024-07/cap20resilienceplan.pdf

and pest infestations. These factors threaten the productivity and long-term viability of the region's natural resource-based industries, reducing both economic output and employment opportunities.

The tourism, fisheries and aquaculture sectors are equally vulnerable. Coastal erosion, sea level rise and wildfire smoke events threaten the natural beauty and accessibility that underpin Humboldt's tourism economy. Ocean acidification and warming waters are already contributing to species migration and shellfish health challenges, increasing the likelihood of seasonal fishery closures and reduced harvests[33]. These risks not only impact current economic activity but also threaten future investment and diversification in these sectors. Without strategic climate adaptation and mitigation efforts, the cumulative effects of climate change could significantly undermine Humboldt County's long-term economic resilience and quality of life.

Funding Uncertainty

Uncertainty in federal and state funding substantially threatens Humboldt County's long-term economic stability and growth. Many critical economic development initiatives depend on sustained public investment, including workforce training, infrastructure expansion and education. As budget deficits at both the state and federal levels increase, the reliability of funding becomes more tenuous. This makes long-term planning and project implementation more difficult and risky, undermining the county's ability to move forward on key strategic initiatives and weakening confidence among public and private partners.

Education institutions, particularly Cal Poly Humboldt and the College of the Redwoods, face immediate impacts from reduced state funding. Budget reallocation policies tied to enrollment performance threaten the financial health of these schools, which play a central role in workforce development, innovation and the regional economy. Continued under-enrollment could lead to further funding cuts, diminishing academic offerings and services and limiting the

[33] https://e360.yale.edu/features/feeling-the-heat-warming-oceans-drive-fish-into-cooler-waters

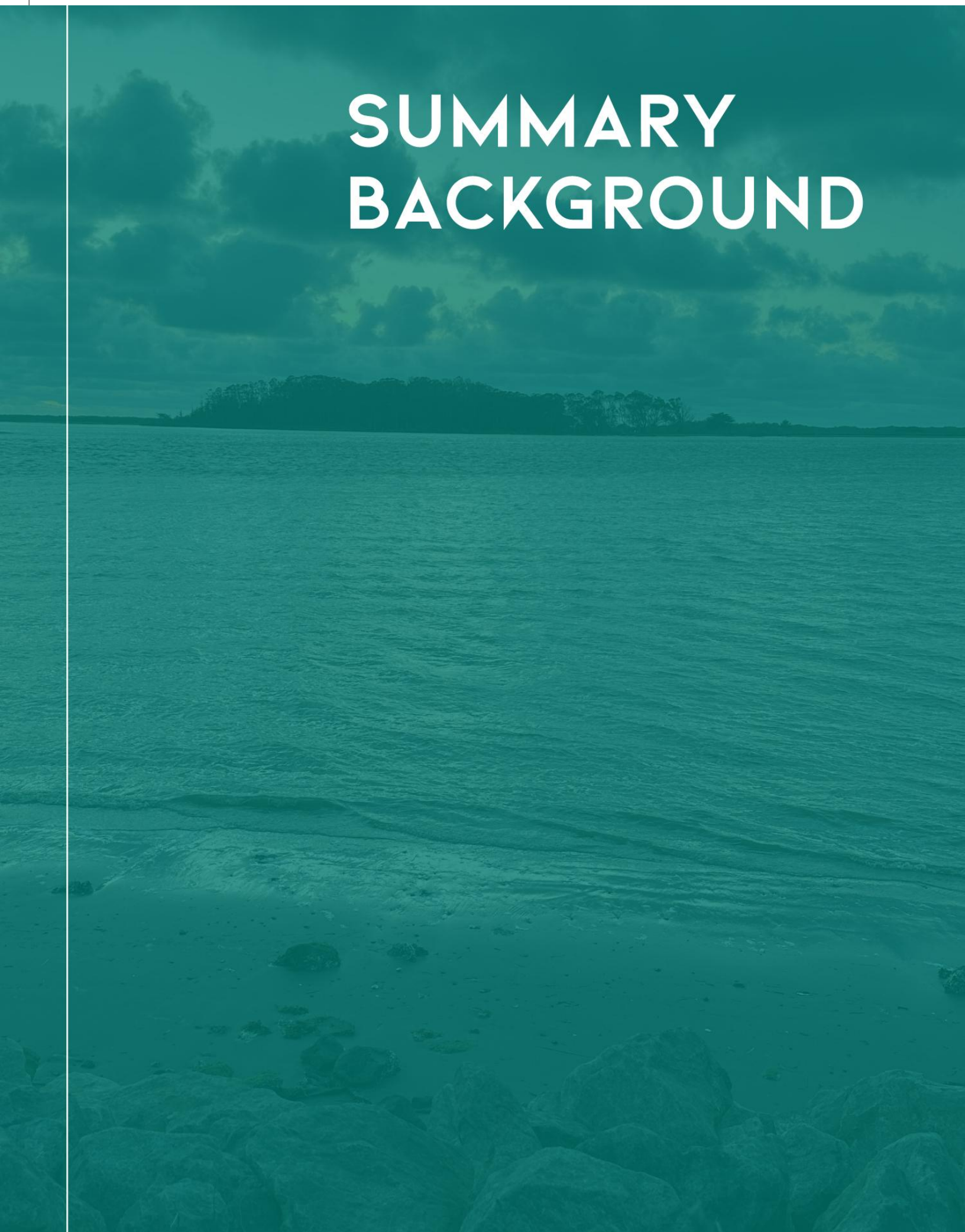
institutions' ability to support emerging industries. Programs that support the next generation of educators and healthcare professionals—such as the Golden State Teacher Grant—are also vulnerable to cuts[34], compounding workforce shortages in high-demand fields.

Other key sectors, including healthcare, agriculture, construction and the arts, are similarly exposed. Proposed changes to Medicaid and Medicare could reduce access to care and shift financial burdens to local systems. Agricultural producers, already grappling with rising labor costs, may face greater uncertainty if federal visa programs are altered. The construction industry, which relies heavily on public infrastructure funding, may see major projects delayed or canceled, weakening its growth trajectory. Meanwhile, significant cuts to state arts funding could jeopardize Humboldt County's vibrant cultural sector, forcing local organizations to rely more heavily on unstable private donations[35]. The cumulative effect of these uncertainties threatens the county's ability to build a resilient, inclusive and diversified economy.

[34] https://www.csac.ca.gov/sites/default/files/2024-08/gsa_2024-59.pdf

[35] https://www.caartsadvocates.org/news/advocacy-victory-final-california-budget-restores-75-of-arts-funding-cuts

SUMMARY BACKGROUND



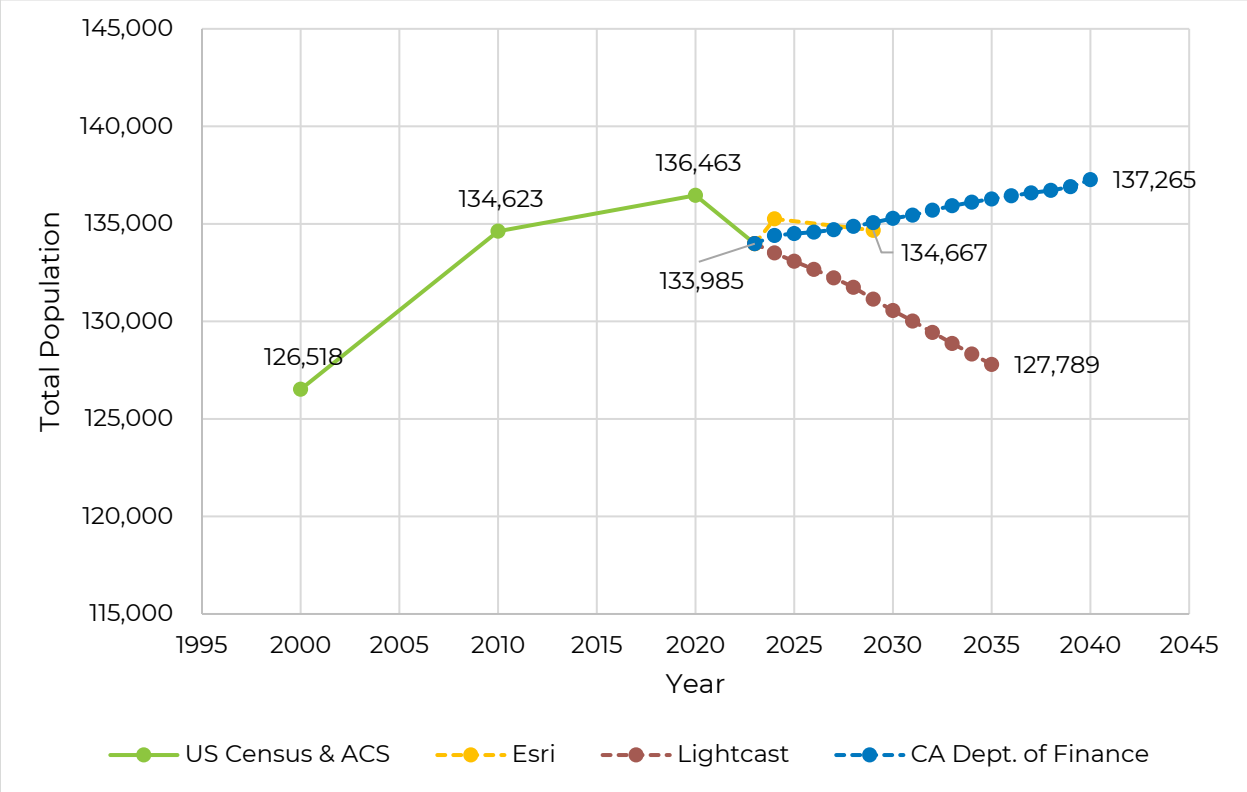
Demographic Overview

Population and Socioeconomic Analysis

Humboldt County's population grew considerably between 2000 and 2010. Over the 10-year period, the population increased by roughly 8,100 people, or 6.4%. In the next decade, growth slowed and the county grew by fewer than 2,000 people. The most recent American Community Survey (ACS) estimated that Humboldt County's population was 133,985 in 2023, down from the 2020 count of 136,463.

To estimate future population growth, several projective models are provided in Figure 1. Due to differences in methodology, these models vary slightly in their projections and some of them extend further into the future than others. Lightcast, a private, third-party data modeling company, projects that the county's population will fall to about 127,789, or by about 4.6%, between 2023 and 2035. Environmental Systems Research Institute (Esri), another private company, projects that the population will remain relatively stable through 2029, increasing by only 682 people. Finally, the California Department of Finance projects that the county will grow by 3,280 people, or 2.4% between 2023 and 2040. Each of these models illustrates a different scenario; many factors will determine which trajectory is realized over the next several years and an economic development strategy can help the county achieve the desired growth.

Figure 1: Humboldt County Population, 2000 to 2040 (projected). Source: U.S. Census, 2020; American Community Survey, 2023; Esri, 2025; Lightcast, 2025; CA Department of Finance, 2025.



Population by Age

As of 2023, children under the age of 15 years made up about 15% of the population. Over the last 10 years, births and birth rates have fallen considerably in the county. In 2014, there were 1,474 births in Humboldt County; that figure fell steadily through 2023, which saw only 1,075 births in the county – about 27% fewer than in 2014.[36]

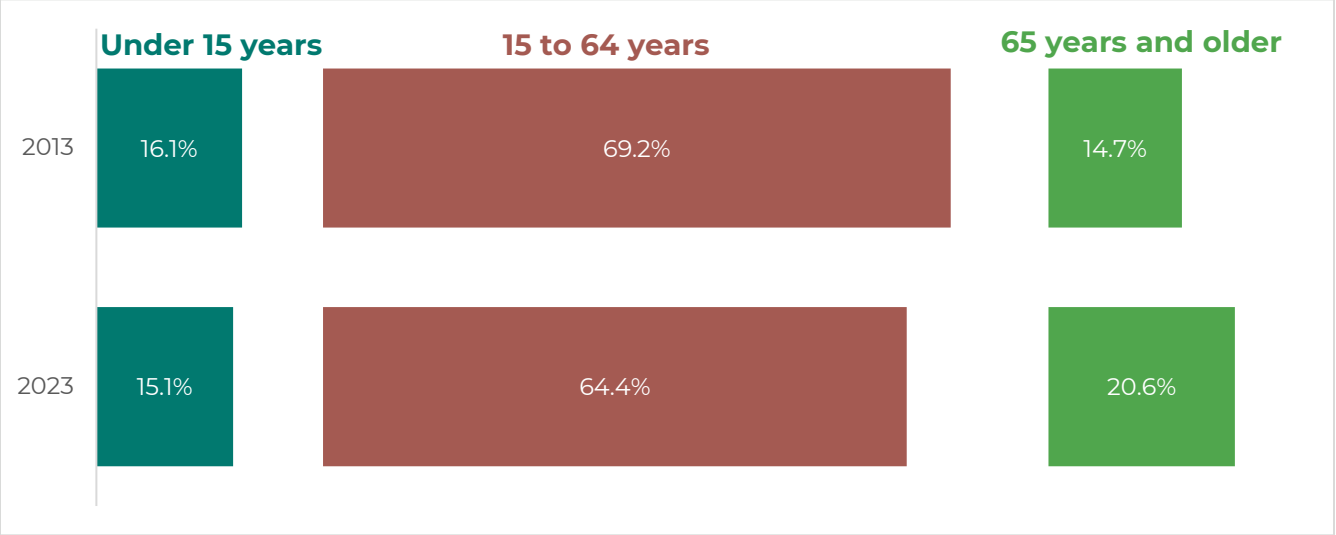
In the same year, 86,243 people – or 64.4% – were between the ages of 15 and 64. This age group is largely representative of the working-age population. As a percentage of the whole, the size of this group has decreased over the last 10 years; in 2013, it constituted 69.2% of the total

[36] California Department of Public Health, 1960-2023 Final Births by Month by County. https://data.chhs.ca.gov/dataset/live-birth-profiles-by-county/resource/d6c30e46-8618-407a-ba5a-bae308f86a1c?filters=County%3AHumboldt

population, or 93,094 people. A shrinking working-age population and low birth rates can indicate a challenge for economic development, as these populations strengthen the workforce and build local business.

Another important trend to consider is the shift in the percentage of the population over the age of 65 years. Between 2013 and 2023, this population grew by almost six percentage points, which is equal to an increase of approximately 7,800 people in this age bracket. Many communities throughout the country are experiencing growing populations of senior communities, which can impact the local economy in a variety of ways. An older population typically has specific housing preferences, greater healthcare needs and participates in the workforce at a much lower rate. To ensure that the local population continues to thrive, an economic development strategy should take into consideration the county's shifting demographic.

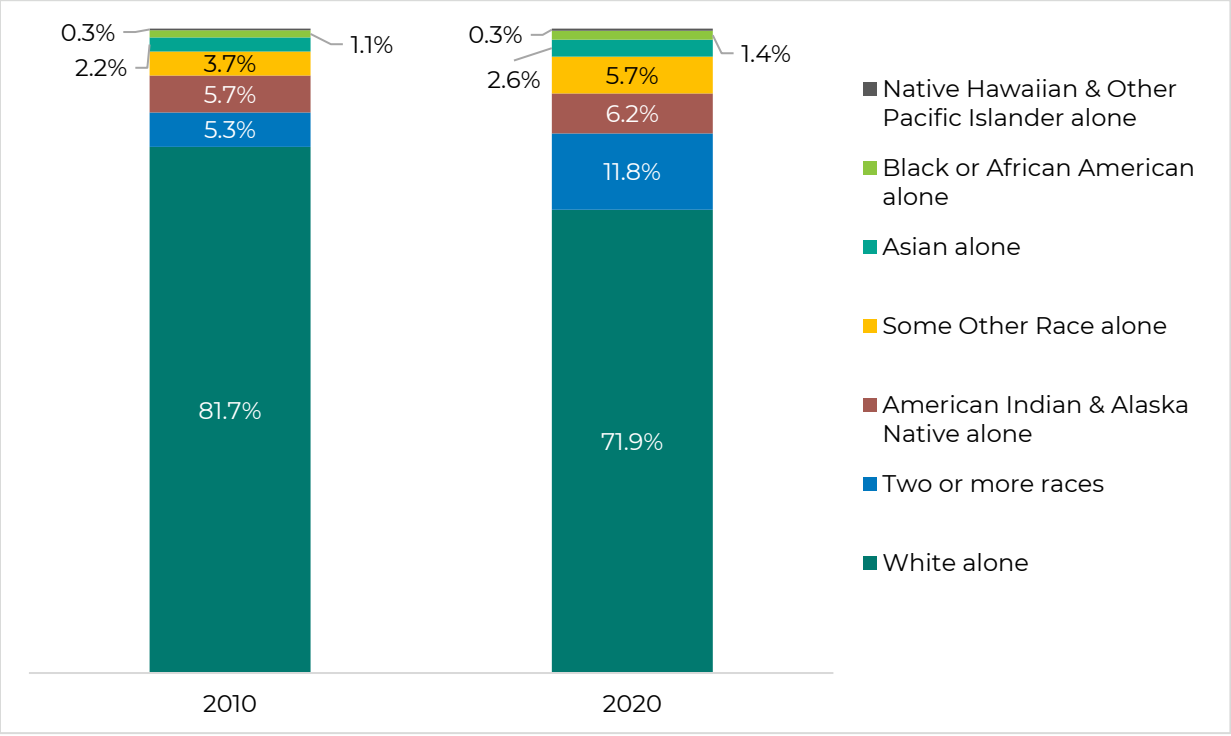
Figure 2: Humboldt County Age Distribution, 2013 and 2023. Source: ACS 2013 and 2023 1-Year Estimates.



Population by Race and Ethnicity

Between 2010 and 2020, Humboldt County's population increased in diversity.[37] Approximately 71.9% of Humboldt County residents identified as "White alone," a decrease of 11,825 people from 2010. The primary driver of the growing diversity in Humboldt has been the increase in multiracial residents, whose share of the population more than doubled from 5.3% in 2010 to 11.8% in 2020. Humboldt also saw an increase in the percent of residents identifying as American Indian and/or Alaska Native, Asian, Black or African American and "some other race." Among the Asian population, the Hmong community is substantial and rapidly growing, increasing by 48% between 2015 and 2021 to 1,702 people.

Figure 3: Humboldt County Population by Race, 2010 and 2020. Source: 2010 and 2020 U.S. Census.



[37] Decennial Census data used due to large margins of error for smaller racial groups in the American Community Survey.

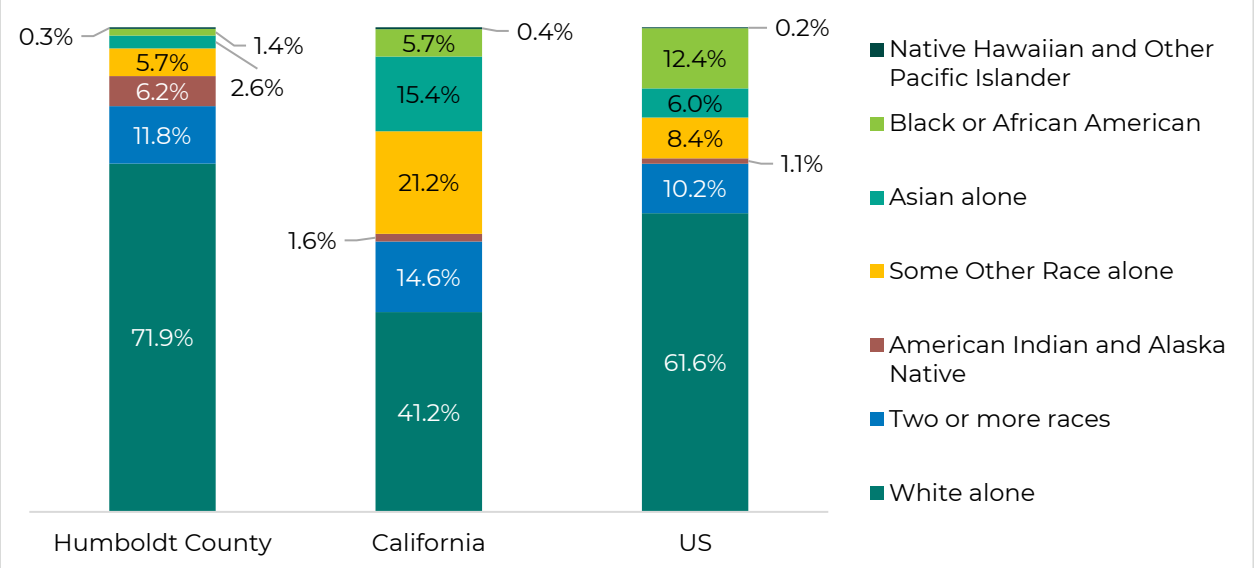
The Hispanic or Latino population – considered an ethnic group by the US Census – increased from 9.8% of residents in 2010 to 13.6% in 2020, reflecting Humboldt's increasing diversity. Because the Census defines Hispanic or Latino as an ethnicity rather than a race, individuals of any race can identify as Hispanic or Latino. As a result, this population is not shown in the race-specific graphs to avoid double-counting and to maintain clarity in racial breakdowns.

Table 2: Humboldt County by Ethnicity, 2010 and 2020. Source: 2010 and 2020 U.S. Census.

	Number of Hispanic or Latino Residents	Percent of Population
2010	13,211	9.8%
2020	18,535	13.6%

Compared to the state and national populations, Humboldt County's population is less racially diverse. However, a larger share of the local population, 6.2%, is comprised of members of the American Indian or Alaskan Native group than at the state or national levels, 1.6% and 1.1%, respectively.

Figure 4: Comparative Race Distribution, Humboldt County, Californiaand US. Source: 2020 US Census.



Similarly, in 2020, Hispanic or Latino residents represented a smaller portion of Humboldt County's population when compared to the state and the nation as a whole.

Table 3: Humboldt County, California and US by Ethnicity, 2020. Source: 2020 U.S. Census.

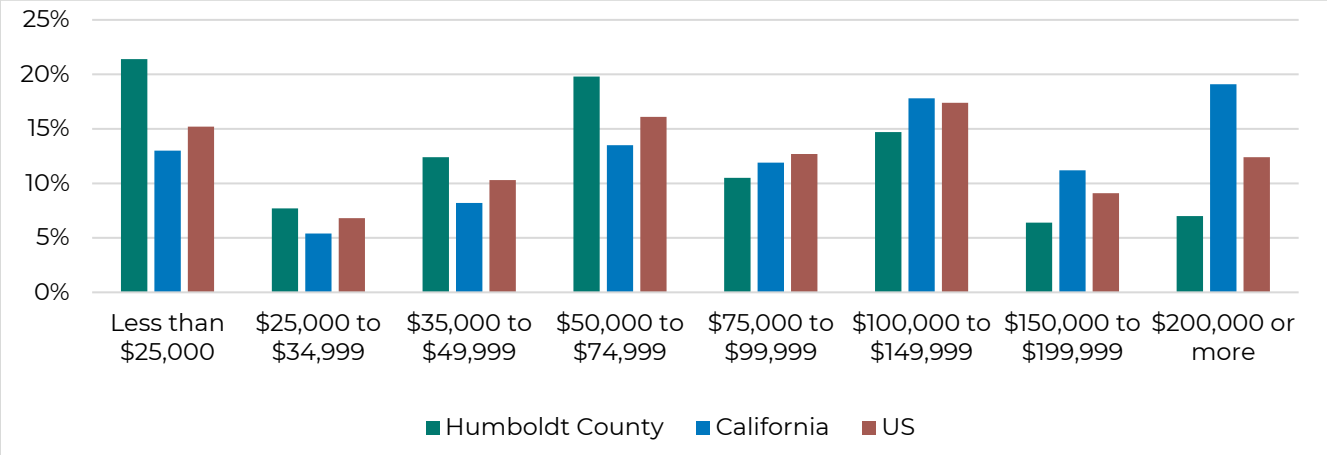
	Number of Hispanic or Latino Residents	Percent of Population
Humboldt County	18,535	9.8%
California	15,579,652	39.4%
US	62,080,044	18.7%

Income and Earnings

In 2023, the median household income in Humboldt County reached $61,621, a 46.4% increase since 2013. While this is an increase of nearly $20,000, income growth in Humboldt lags behind that seen in California (58.7%) and the US overall (48.7%).

In that year, more than one in five Humboldt households (21.4%) earned less than $25,000 per year, compared to 13.0% in the state and 15.2% nationwide. On the other end of the income spectrum, 28.1% of households earned more than $100,000 per year, with 7.0% earning more than $200,00 per year.

Figure 5: Household Income, Humboldt County, California and US. Source: ACS 2023 1-Year Estimates.



Living Wages

The living wage shown in the following table is the hourly rate that an individual in a household must earn to support themselves and/or their family, working full-time, or 2080 hours per year. This is compared to poverty wages, the Department of Health and Human Services' Poverty Guidelines for 2025. They have been converted from an annual value to an hourly wage for ease of comparison.

Living wage calculations are provided by the Massachusetts Institute of Technology (MIT) and are estimated using a variety of data related to the local cost of living. For all but a two-adult family with no children, the living wage required is higher than the state minimum wage of $16.50 and in some instances, is four times higher than the minimum wage.

Table 4: Living and Poverty Wage Calculations for a One Adult Family in Humboldt County. Source: MIT Living Wage Calculator, 2025.[38]

Number of Children	Living Wage	Poverty Wage
0 Children	$22.84	$7.52
1 Child	$41.93	$10.17
2 Children	$52.81	$12.81
3 Children	$66.28	$15.46

Table 5: Living and Poverty Wage Calculations for a Two Adult, One Income Family in Humboldt County. Source: MIT Living Wage Calculator, 2025.

Number of Children	Living Wage	Poverty Wage
0 Children	$32.40	$10.17
1 Child	$40.11	$12.81
2 Children	$44.38	$15.46
3 Children	$52.21	$18.10

[38] Massachusetts Institute of Technology (2023). Living Wage Calculator. Retrieved from https://livingwage.mit.edu/

Table 6: Living and Poverty Wage Calculations for a Two Adult, Two Income Family in Humboldt County. Source: MIT Living Wage Calculator, 2025.

Number of Children	Living Wage	Poverty Wage
0 Children	$16.20	$5.08
1 Child	$23.80	$6.41
2 Children	$29.13	$7.73
3 Children	$34.85	$9.05

Living wages in Humboldt County are slightly higher than in Del Norte and Trinity Counties, but lower than in Mendocino County. At the state level, the living wage is considerably higher.

Table 7: Living Wage for a One Adult Family, Humboldt County, Del Norte County, Mendocino County, Trinity County, California. Calculations. Source: MIT Living Wage Calculator, 2025.

Number of Children	Humboldt County	Del Norte County	Mendocino County	Trinity County	California
0 Children	$22.84	$21.03	$24.00	$21.21	$28.72
1 Child	$41.93	$37.86	$42.19	$37.90	$50.83
2 Children	$52.81	$46.29	$52.12	$46.65	$64.17
3 Children	$66.28	$57.01	$65.33	$57.21	$82.66

Table 8: Living Wage for a Two Adult, One Income Family, Humboldt County, Del Norte County, Mendocino County, Trinity County, California. Calculations. Source: MIT Living Wage Calculator, 2025

Number of Children	Humboldt County	Del Norte County	Mendocino County	Trinity County	California
0 Children	$32.40	$31.29	$33.26	$30.67	$38.53
1 Child	$40.11	$37.49	$41.26	$37.83	$46.95
2 Children	$44.38	$41.45	$45.46	$42.02	$51.15
3 Children	$52.21	$48.20	$53.59	$48.58	$60.47

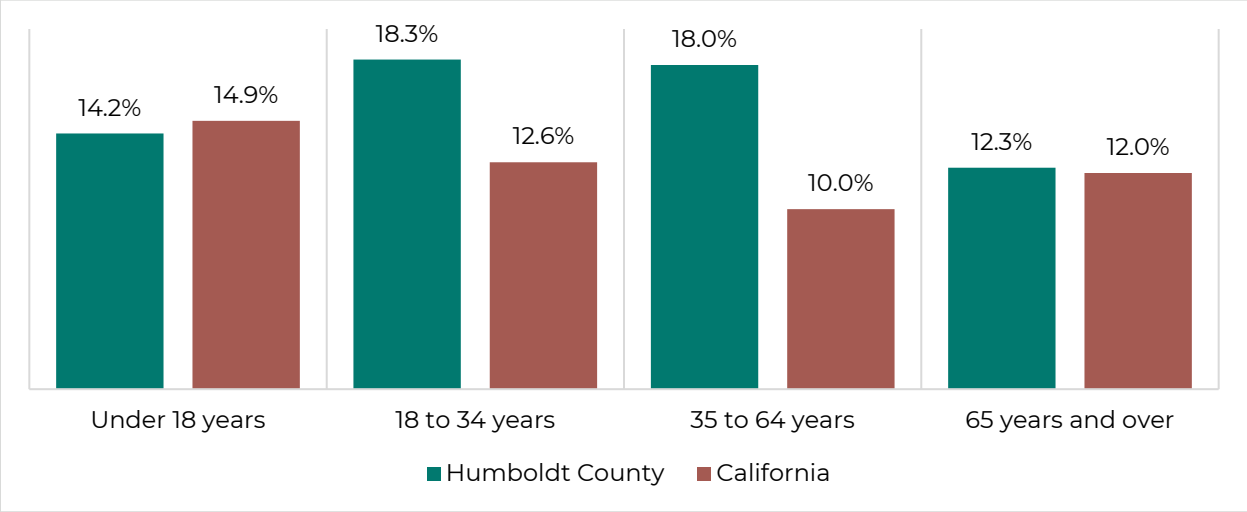
Table 9: Living Wage for a Two Adult, Two Income Family, Humboldt County, Del Norte County, Mendocino County, Trinity County, California. Calculations. Source: MIT Living Wage Calculator, 2025

Number of Children	Humboldt County	Del Norte County	Mendocino County	Trinity County	California
0 Children	$16.20	$15.65	$16.63	$15.33	$19.27
1 Child	$23.80	$21.59	$23.88	$21.76	$27.84
2 Children	$29.13	$25.97	$28.77	$26.26	$34.55
3 Children	$34.85	$30.26	$34.34	$30.46	$42.86

Poverty Rates

Poverty levels – which are set annually by the Census Bureau using a different methodology than that used by MIT to calculate poverty wage – vary depending on family size and composition. Using the Census Bureau's poverty thresholds, estimates for the number of individuals living below the poverty line are given for Humboldt County. In 2023, about 16.2% of the county's population fell below the poverty line. In Figure 6, poverty rates in Humboldt County are compared to those of California. In Humboldt County, the 18-34-year-old age group experienced the highest poverty rates in 2023 (18.3%), followed by the 35-64-year-old age group (18.0%). 14.2% of children under the age of 18 experienced poverty. The population over the age of 65 years experiences poverty at the lowest rate (12.3%). While the local poverty rates in the populations under the age of 18 years and above the age of 65 years are comparable to those of the state, poverty rates for the middle-aged population are significantly higher in Humboldt County.

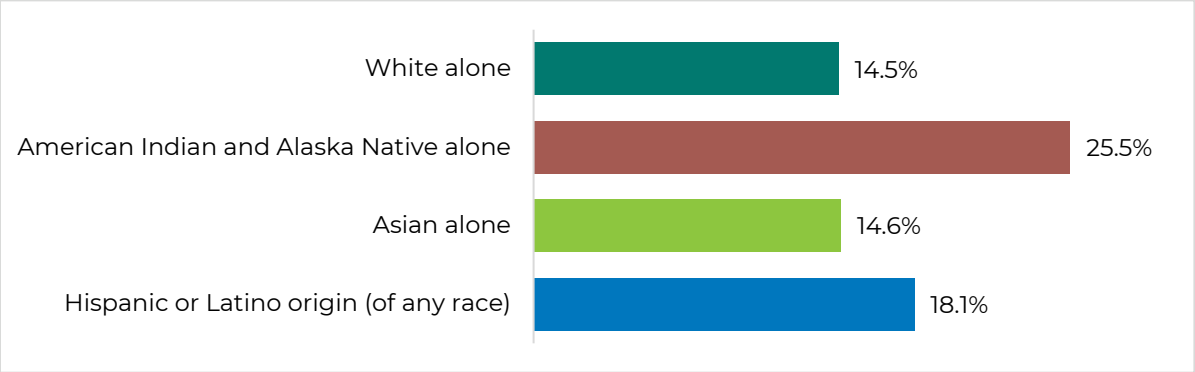
Figure 6: Poverty Rates by Age, Humboldt County and California. Source: ACS 2023 1-Year Estimates.



Because of the small population sizes of many racial and ethnic groups in Humboldt County, poverty data are only available for a handful of those groups. In Figure 7, available poverty data are provided by racial and ethnic group. As of 2023, about 14.5% of the "White alone" group fell below the poverty line. Poverty rates for the "Asian alone" group

were comparable to those of the “White alone” group. Members of the “Hispanic or Latino origin (of any race)” and “American Indian and Alaskan Native alone” groups experienced higher poverty rates of 18.1% and 25.5%, respectively.

Figure 7: Poverty Rates by Race or Ethnicity in Humboldt County. Source: ACS 2023 1-Year Estimates.

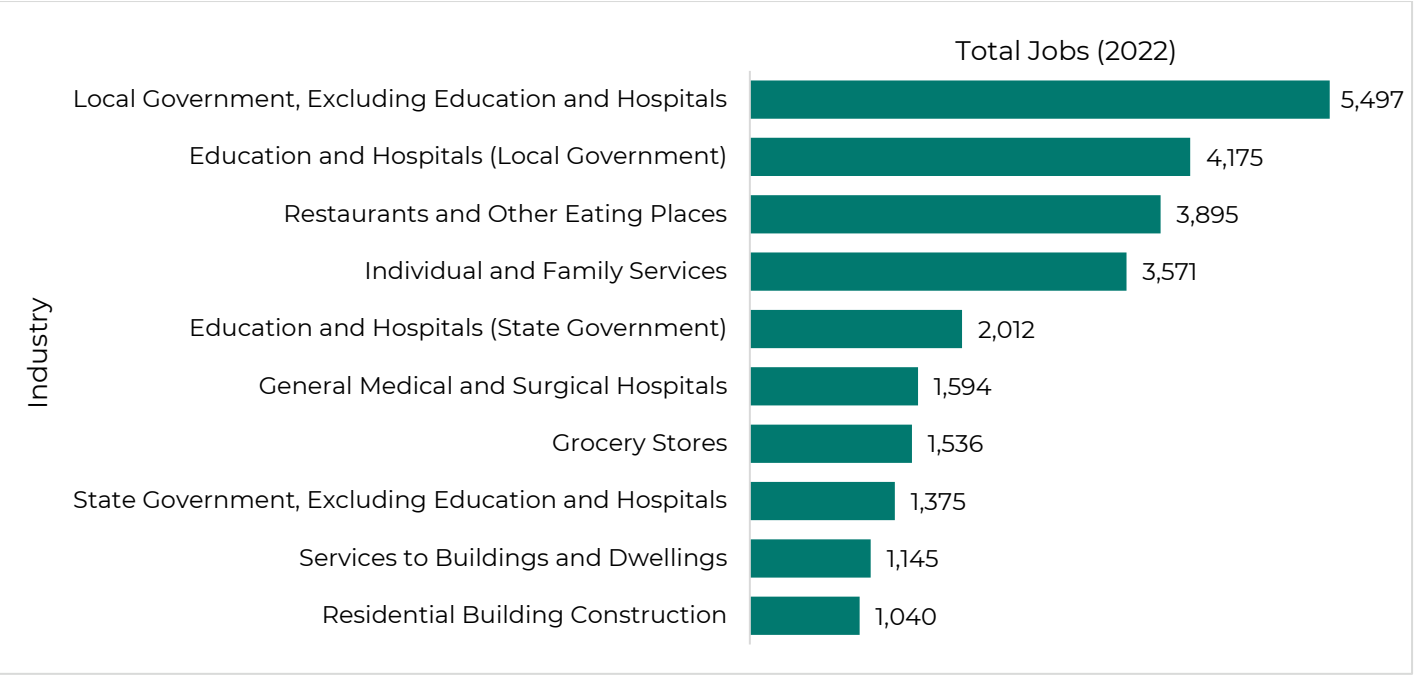


1. Industry Elevation and Diversification

Largest Industries

There were around 57,000 workers employed in Humboldt County in 2022. The top two largest industries are public: local government, excluding education and hospitals, followed by the public education and hospitals industry.[39] Together, these industries employ nearly 10,000 workers. Quality-of-life industries, like the restaurant industry and grocery stores are large employers in the county. In addition, some healthcare and development-related industries top the list as significant employers.

Figure 8: Largest Industries (4-Digit NAICS Code) by Number of Jobs in Humboldt County. Source: Lightcast 2024.



[39] For more information on the education and healthcare assets, see the Regional Profile.

Top Growing Industries

Many of the largest industries in the county are also expected to see significant growth over the next 10 years. The Individual and Family Services industry is expected to see the most growth. Businesses in this industry are primarily focused on providing social assistance services to children, seniors, individuals with disabilities, or other populations, such as adoption and foster care, adult day care centers and homecare services. The local government is expected to grow, as are some healthcare industries (Outpatient Care Centers and Hospitals). Overall, the county is projected to see net growth of more than 5,500 jobs between 2022 and 2032.

Table 10: Fastest-Growing Industries by Projected Change in Jobs by 4-Digit NAICS Code in Humboldt County. Source: Lightcast, 2024.

Industry	2022 Jobs	2032 Jobs (Projected)	Projected Change
Individual and Family Services	3,571	5,131	1,561
Local Government, Excluding Education and Hospitals	5,497	6,560	1,064
Education and Hospitals (Local Government)	4,175	5,135	961
Outpatient Care Centers	993	1,898	905
Education and Hospitals (State Government)	2,012	2,441	430
State Government, Excluding Education and Hospitals	1,375	1,784	409
Grantmaking and Giving Services	432	615	183
Special Food Services	321	492	171
Restaurants and Other Eating Places	3,895	4,048	154
Grocery Stores	1,536	1,663	127

Employment Concentration

Employment concentration is used to measure the concentration of employment within an industry relative to comparable geographies throughout the country. An average score is equal to 1; if an industry has an employment concentration score of 1, its employment count is equal to the national average for other geographies of comparable size.

Highly concentrated industries tend to play an outsized role in the local economy. These sectors often benefit from established supply chains, a skilled workforce and specialized infrastructure. They are also more likely to export goods or services outside the region, drawing in new revenue and supporting broader economic activity. In some cases, concentrated industries are legacy sectors tied to the region's history and natural resources; in others, they reflect emerging strengths and innovation clusters.

Table 11: Employment Concentrations and Jobs in Highly Concentrated Industries (4-Digit NAICS) in Humboldt County. Source: Lightcast, 2024.

Industry	Employment Concentration	2022 Jobs
Other Leather and Allied Product Manufacturing	19.6	87
Sawmills and Wood Preservation	18.9	602
Logging	18.0	414
Seafood Product Preparation and Packaging	15.7	155
Pesticide, Fertilizer and Other Agricultural Chemical Manufacturing	12.2	174
Support Activities for Forestry	11.4	91
Timber Tract Operations	11.2	14
Fishing	10.2	96
Grantmaking and Giving Services	8.8	432
Farm Product Raw Material Merchant Wholesalers	6.7	205

The most highly concentrated industry in Humboldt County is the Other Leather and Allied Product Manufacturing industry, which has an employment concentration of nearly 20 times the average. Processing and manufacturing jobs are highly concentrated in the county, with industries like Sawmills and Wood Preservation, Logging, Seafood Product Preparation and Packaging, Timber Tract Operations and Fishing industries all being very highly concentrated in the county.

Industry GRP

Gross Regional Product (GRP) measures the value created by industries within Humboldt County. GRP is similar to the Gross Domestic Product (GDP); the only difference is that the former measures only industries

within the county while the latter is applied on a national scale. In 2022, Humboldt County's GRP totaled $6.9 billion.[40]

Table 12: High-GRP Industries and Employment in Humboldt County by 4-Digit NAICS Code. Source: Lightcast 2024.

Industry	2022 GRP	2022 Jobs
Local Government (Excluding Education & Hospitals)	$488,164,181	5,497
Education and Hospitals (Local Government)	$277,257,666	4,175
General Medical and Surgical Hospitals	$222,867,219	1,594
State Government (Excluding Education & Hospitals)	$212,655,435	1,375
Natural Gas Distribution	$197,867,662	252
Restaurants and Other Eating Places	$189,291,549	3,895
Education and Hospitals (State Government)	$150,721,355	2,012
Sawmills and Wood Preservation	$140,236,288	602
Outpatient Care Centers	$127,997,496	993
Federal Government, Civilian	$117,404,774	794

Local government industries have the highest GRP in the county, followed by a healthcare industry: General Medical and Surgical Hospitals. The Natural Gas Distribution industry has not yet appeared in our analysis and it has the fifth-highest GRP in the county ($197 million). A mix of quality-of-place, healthcare and manufacturing industries are also high-value industries.

Businesses by Number of Employees

Humboldt County's business ecosystem is characterized by a higher percentage of small firms, with 87.5% of businesses employing less than 20 people. Only 3.2% of firms in the county have more than 50 employees, a smaller percentage than both the state and national share. Additionally, the county is home to 10,898 nonemployer establishments – businesses with no paid employees – further highlighting the importance of small businesses to the local economy.

[40] U.S. Bureau of Economic Analysis, "CAGDP2 Gross domestic product (GDP) by county and metropolitan area [1]"

Table 13: Comparison of Businesses by Number of Employees, Humboldt County, California, US, 2022. Source: Census County Business Patterns.

Number of Employees	Humboldt County	California	US
Less than 5 employees	51.0%	58.2%	55.7%
5 to 9 employees	21.6%	16.7%	17.6%
10 to 19 employees	14.9%	11.9%	12.4%
20 to 49 employees	9.2%	8.4%	8.9%
50 to 99 employees	2.0%	2.7%	2.9%
100 to 249 employees	1.0%	1.5%	1.6%
250 employees or more	0.2%	0.7%	0.7%

Imports and Exports

In a globalized economy, the management of imports and exports fosters local growth and job opportunities, as well as attracting investment. Humboldt County's largest imports center on a few major industries, including financial and insurance services, petroleum products and energy generation, professional scientific and technical services, automobile manufacturing and construction.

Table 14: Top imports in Humboldt County, 2024. Source: Lightcast 2025.1.[41]

Industry	Imports
Insurance Carriers	$193,682,033
Petroleum and Coal Products Manufacturing	$170,155,641
Computer Systems Design and Related Services	$166,419,269
Electric Power Generation, Transmission and Distribution	$148,132,047
Scientific Research and Development Services	$141,140,785
Depository Credit Intermediation	$136,867,282
Software Publishers	$130,476,026
Motor Vehicle Manufacturing	$128,603,548
Other Financial Investment Activities	$124,641,091
Building Equipment Contractors	$120,292,192

The top exported commodities are diverse, ranging from retail trade to manufacturing, showcasing the range of strengths in the County. Forestry and agriculture feature prominently in the top exports, highlighting the importance of these industries to the county.

[41] Excludes imports from government services.

Table 15: Top exports in Humboldt County, 2024. Source: Lightcast 2025.1.[42]

Industry	Exports
Sawmills and Wood Preservation	$359,364,747
Natural Gas Distribution	$233,854,993
Crop Production	$176,463,827
Outpatient Care Centers	$149,732,635
Animal Production	$145,857,729
Grocery Stores	$145,709,991
Individual and Family Services	$124,187,555
Building Material and Supplies Dealers	$88,951,866
Pesticide, Fertilizer and Other Agricultural Chemical Manufacturing	$85,511,307
Dairy Product Manufacturing	$81,990,752

[42] Excludes imports from government services.

Available Commercial Space

Humboldt County has a range of different commercial sites available for local businesses. The highest square footage of vacant commercial space is suitable for retail operations, while flex spaces, those that are suitable for multiple uses, have the highest vacancy rate. Throughout the county, office, industrial and retail spaces have low vacancy rates, which could be indicative of demand for additional commercial space.

Table 16: Commercial Space by Type and Vacancy Rate in Humboldt County. Source: CoStar.

Commercial Space Type	Total Inventory (sq. ft.)	Vacant Square Feet	Vacancy Rate
Office	2,266,129	43,775	1.9%
Industrial	4,206,742	84,212	2.0%
Retail	6,649,648	133,242	2.0%
Flex	418,438	36,911	8.8%

Target Industries

Project Rebound is a targeted industry analysis that identifies and prioritizes industry sectors with the greatest potential for growth, resilience and alignment with Humboldt County's assets. The following industry clusters were identified as the most promising for Humboldt County's future: Education and Training; Healthcare; Financial Services; Agriculture; Arts, Hospitality and Tourism; Construction; Renewable Energy; Forestry and Logging; and Aquaculture and Fisheries.

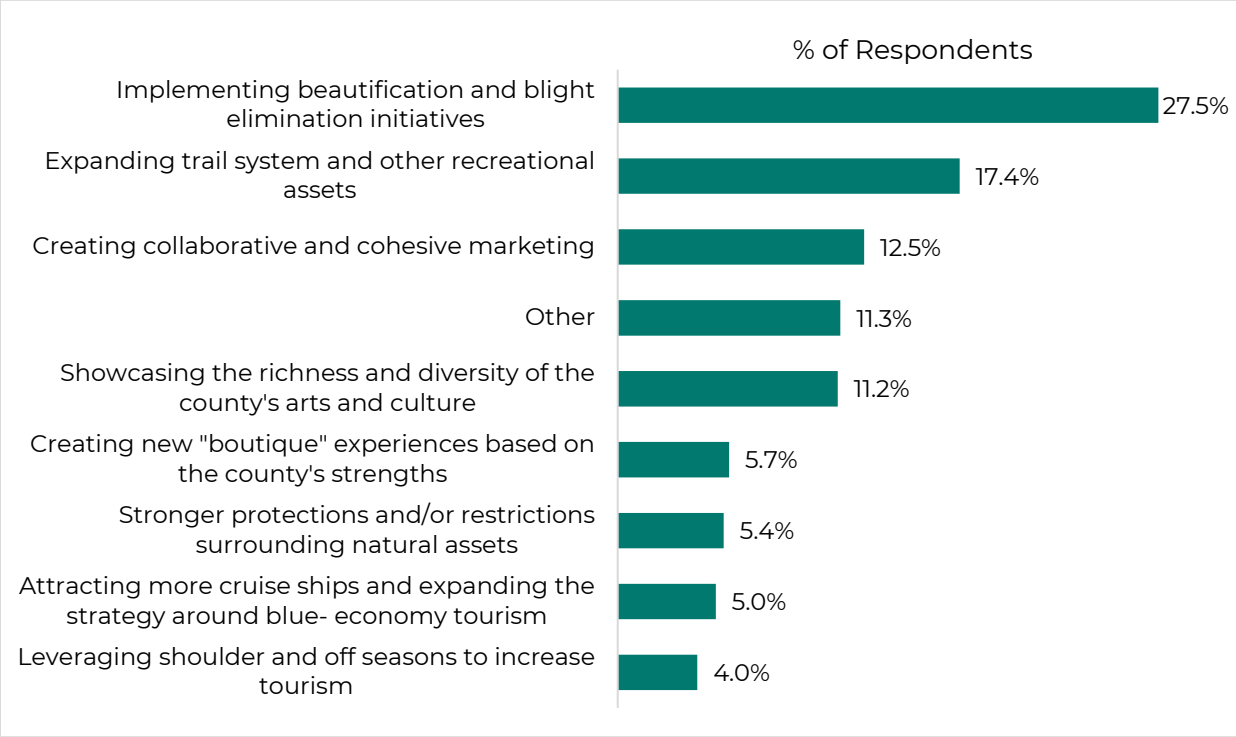
Within the recent public survey, a series of questions were asked about supporting target industry-specific growth in the county. Survey results related to Healthcare, Education and Training and Construction can be found in the Fundamental Community Needs section of this document. Survey results related to the Renewable Energy sector can be found in the Infrastructure section of this document. Results for the other five target industries follows:

Tourism, Arts and Culture Survey Results

Survey respondents expressed the most support for 'Implementing beautification and blight elimination initiatives' (27.5% of respondents),

illuminating a strong interest in improving the visual appeal and cleanliness of the community to support tourism and local pride. 'Expanding the trail system and other recreational assets' was the second-most selected option (17.4%), reflecting interest in outdoor tourism and healthier lifestyles. 'Creating collaborative and cohesive marketing' (12.5%) also received substantial support, suggesting a need for unified promotion of the county's attractions. Of the 11.3% respondents who selected the 'Other' option, many highlighted a need to address homelessness challenges and improve public infrastructure.

Figure 9: Support for Tourism, Arts and Culture Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[43]



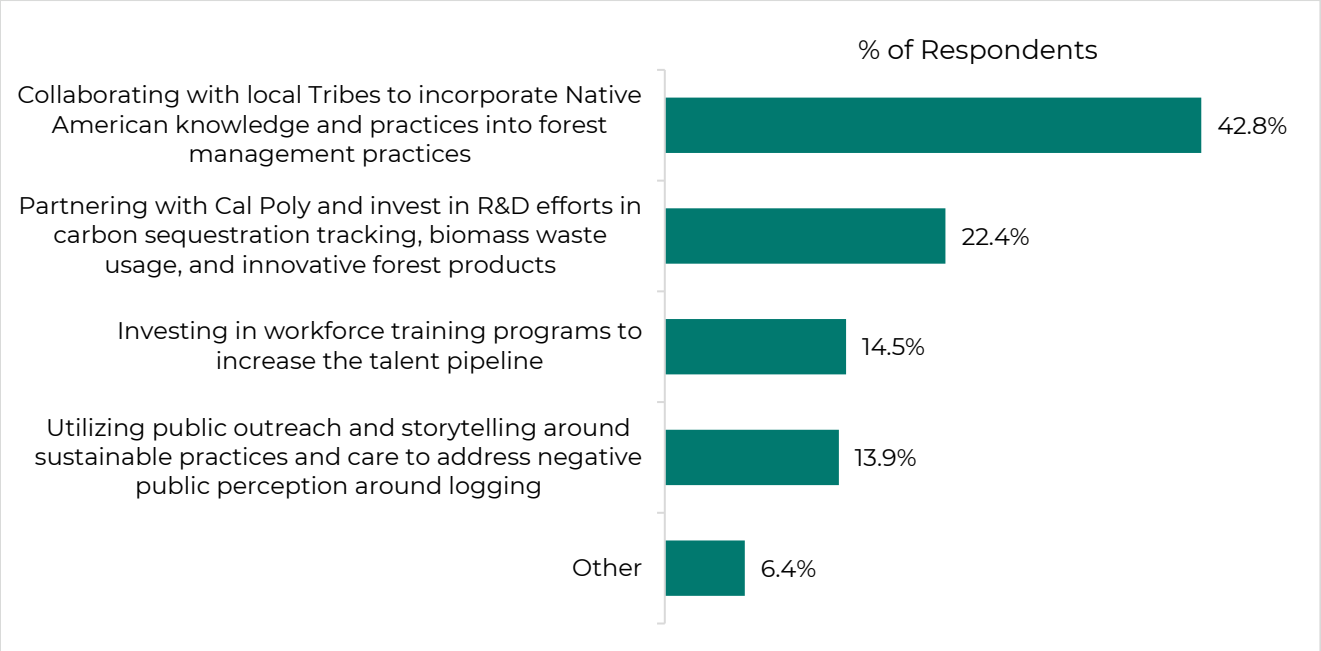
Forest Products Survey Results

The most supported strategy, by a significant margin, was 'Collaborating with local Tribes to incorporate Native American knowledge and practices into forest management practices,' with

[43] Excludes respondents who selected "I don't know."

42.8% of respondents selecting this option. This reflects strong community interest in traditional ecological knowledge and culturally-informed sustainability. Following this, partnering with Cal Poly and investing in R&D (22.4%) suggests a desire for innovation in areas like carbon sequestration and biomass utilization. Moderate support was given to workforce training programs (14.5%) and public outreach to improve perceptions of logging (13.9%), indicating recognition of both economic development needs and the importance of shaping public narrative. Of the respondents who selected 'other,' (6.4%), some called for deregulation of the industry and many others expressed dissent for the support of the industry.

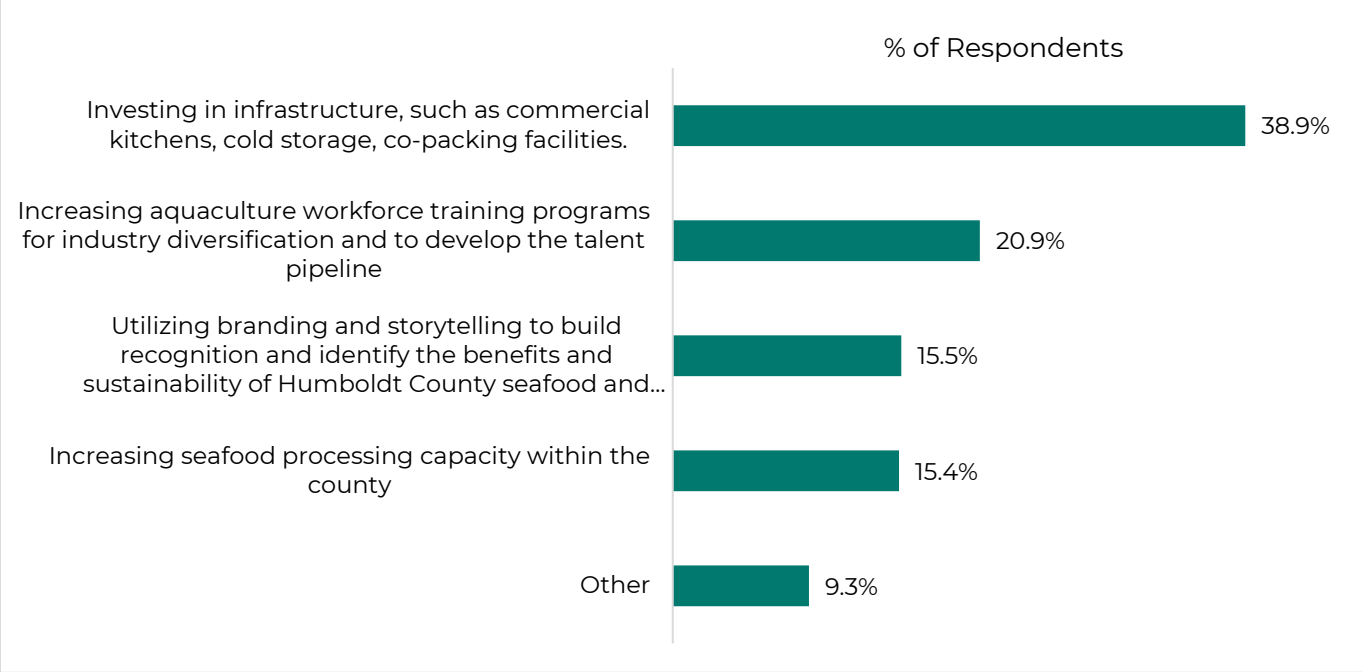
Figure 10: Support for Forest Products Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Blue Economy and Agriculture Survey Results

The top priority selected by respondents was 'Investing in infrastructure, such as commercial kitchens, cold storage and co-packing facilities,' indicating strong support for practical, foundational upgrades to enhance local food systems and value-added production. The second-highest priority, identified by 20.9% of respondents, was 'Increasing aquaculture workforce training programs for industry diversification and to develop the talent pipeline,' showing interest in building skilled labor and diversifying the industry. Use of branding and storytelling (15.5%) and increasing seafood processing capacity (15.4%) followed closely. Of the 9.3% of respondents who selected 'Other,' many underlined a need for ecological restoration and suggested that local partnerships (with Cal Poly Humboldt, for example) could benefit the industry cluster.

Figure 11: Support for Blue Economy and Agriculture Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[44]

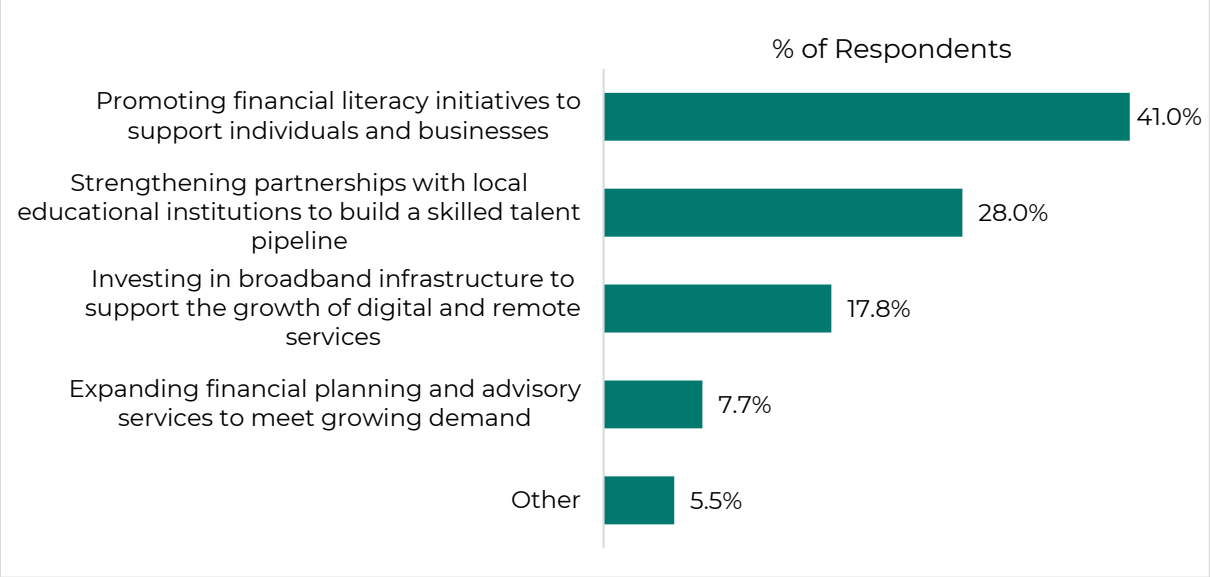


[44] Excludes respondents who selected "I don't know."

Financial Services Survey Results

When asked which support services would best encourage the growth of financial services industries in Humboldt County, the most selected option was 'Promoting financial literacy initiatives to support individuals and businesses,' identified by 41.0% of respondents. Partnerships with local educational institutions were acknowledged to be important for building a skilled talent pipeline and broadband infrastructure was confirmed as an important industry support. Only 5.5% respondents selected 'Other,' with some underscoring the importance of developing a talented workforce to support the cluster.

Figure 12: Support for Financial Services Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[45]



[45] Excludes respondents who selected "I don't know."

2. Collaboration

Collaboration is essential to advancing core economic development functions such as small business and entrepreneurship support, workforce development, infrastructure investment, tourism marketing, business retention and expansion, and business attraction. In Humboldt County, a wide array of committed organizations and stakeholders are working toward these goals. However, despite this strong foundation, efforts remain fragmented; there is currently no cohesive plan or consistent messaging to guide and align these initiatives.

During on-site engagement sessions with 30 Humboldt County stakeholders, participants emphasized the importance of strengthening collaboration—not just for implementing the CEDS, but more broadly across the region's economic development landscape. They expressed that while partnerships are essential for the CEDS, a broader and more sustained level of coordination and collaboration among entities is needed.

The CEDS Committee identified collaboration as one of its three strategic focus areas, citing barriers such as siloed information and initiatives, territorial approaches, and insufficient coordination among

local, county, state, and tribal entities. These concerns were echoed by the broader group of stakeholders.

Despite these challenges, stakeholders also highlighted successful examples of regional collaboration already underway—most notably the momentum sparked by Redwood Region RISE (RRRISE). Through the California Jobs First initiative, the RRRISE coalition has developed a 10-year Regional Roadmap. This effort has brought together over 150 organizations and engaged more than 1,000 residents across the region, serving as a powerful example of what coordinated action can achieve.

Looking ahead, stakeholders are calling for a more intentional and structured approach to economic development to increase alignment, efficiency, and impact. While not an exhaustive list, the following partners have been identified for collaboration.

Communities

- City of Arcata
- City of Blue Lake
- City of Eureka
- City of Ferndale
- City of Fortuna
- City of Rio Dell
- City of Trinidad
- Unincorporated communities throughout the county

Economic Development Organizations

- North Edge (formerly Arcata Economic Development Corporation)
- Northern California Indian Development Council
- California Center for Rural Policy
- Redwood Region Economic Development Commission
- Humboldt County Economic Development Division
- City of Arcata Economic Development Division
- City of Blue Lake Economic Development Department
- City of Eureka Economic Development Division

Chambers of Commerce

- Arcata Chamber of Commerce

- Blue Lake Chamber of Commerce
- Ferndale Chamber of Commerce
- Fortuna Chamber of Commerce
- Greater Eureka Chamber of Commerce
- Greater Trinidad Chamber of Commerce
- Loleta Chamber of Commerce
- McKinleyville Chamber of Commerce
- Orick Chamber of Commerce
- Rio Dell-Scotia Chamber of Commerce
- Southern Humboldt Chamber of Commerce & Visitors Center
- Willow Creek Chamber of Commerce

Downtown Organizations

- Arcata Main Street
- Eureka Main Street Program
- Fortuna Downtown Business Association

Small Business Resource Partners

- North Coast Small Business Development Center
- Blue Lake Rancheria Toma Resilience Campus & Business Incubator
- The Headwaters Fund (grants and revolving loan fund)
- Redwood Region EDC Revolving Loan Fund
- North Edge Revolving Loan Fund
- Affiliated Tribes of Northwest Indians EDC Revolving Loan Fund
- California Infrastructure and Economic Development Bank
- Lost Coast Ventures
- Humboldt County Farm Bureau
- Humboldt County Growers Alliance
- North Coast Growers' Foundation
- University of California Cooperative Extension (UCCE) Humboldt-Del Norte Counties
- Hoopa Development Fund
- APEX Accelerator

Workforce Partners

- Big Brothers, Big Sisters
- California Jobs First

- Cal Poly Humboldt
- Changing Tides Family Services
- College of the Redwoods
- Department of Health and Human Services
- Department of Rehabilitation
- Employment Development Department
- Humboldt County Office of Education
- Humboldt County Workforce Development Board
- Humboldt Workforce Coalition
- The Job Market, America's Job Center of California
- Northern California Indian Development Council
- Redwood Community Action Agency
- Redwood Region RISE
- Westside Community Improvement Association
- Youth Ability

Local Foundations

- Humboldt Area Foundation
- Humboldt Health Foundation
- Native Cultures Fund
- Humboldt County Community Foundation
- McLean Foundation
- Smullin Foundation

Marketing and Tourism Organizations

- Chambers of Commerce
- Tourism-related businesses
- Visit Eureka
- Southern Humboldt Business and Visitors Bureau
- Humboldt Del Norte Film Commission
- Humboldt Made
- Humboldt County Visitors Bureau
- Humboldt Lodging Alliance
- People Center for the Arts

Workshop participants emphasized leveraging partnerships to create a unified brand and message for Humboldt County. In doing so, they stressed the importance of thoughtfully incorporating the community's cultural assets as they work to attract businesses, residents, workers, and tourists.

Culturally Sensitive Areas

Humboldt County contains over 32,000 acres of culturally sensitive areas, places that hold deep historical, spiritual and cultural significance for Indigenous communities. These areas exist on public and private land and tend to be concentrated along the Lower Klamath, Lower Trinity, the lower end and North Fork of the Mad River, the Van Duzen River and the eastern shore of Humboldt Bay. While some locations are publicly identified, others remain confidential to protect them from disturbance. Safeguarding culturally sensitive areas is critical to honoring tribal sovereignty and respecting the connections between Tribal communities and the land. For more information about the Indigenous Tribes in Humboldt County, see Appendix A.

Cultural Amenities

Humboldt County's rich history and artistic spirit make it a vibrant cultural destination. The Victorian architecture in Ferndale and Eureka reflects the county's storied past, while a range of museums, including the Clarke Historical Museum, Blue Lake Museum, Hoopa Tribal Museum and Humboldt Bay Maritime Museum, preserve the diverse heritage of the region. These institutions, along with numerous historical landmarks, offer engaging opportunities for education, tourism and local pride.

The county is also home to a high concentration of visual artists, musicians and performers, fostering a thriving creative community. In 2023, cultural tourism generated over $52 million in visitor spending, fueled by popular events and venues like the Morris Graves Museum of Art, the Redwood Coast Music Festival and the Arkley Center for the Performing Arts.

Historic Sites and Landmarks

Historic sites in Humboldt County include locations recognized as California Historical Landmarks or listed on the National Register of Historic Places. These sites preserve the region's cultural, architectural and industrial heritage, offering a window into the people and events that shaped the county's past. Within Humboldt County, there are 13 sites that are California Historical Landmarks.

There are 59 places in Humboldt County that are on the National Register of Historic Places, the "official list of the Nation's historic places worthy of preservation."[46] Locations listed on the Register are diverse, ranging from architecturally significant buildings to historic and cultural districts to areas of importance to Indigenous communities. This existing Register should not be viewed as complete and protection efforts are ongoing; the most recent addition in Humboldt County occurred in July of 2024.

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[46] "National Register Database and Research." National Park Service. https://www.nps.gov/subjects/nationalregister/database-research.htm

Table 17: State Historical Landmarks in Humboldt County. Source: California Office of Historic Preservation, California Historical Landmarks.

Site	Location	Description
Trinidad Head	Trinidad, west of Highway 101	Site where Spanish explorers erected a cross in 1775 to claim the land for Spain.
Fort Humboldt	3431 Fort Ave, Eureka	Military post established in 1853 during settler-native conflicts; operated until 1866.
The Old Arrow Tree	Korbel, east of Korbel County Highway	Site of Indigenous peace treaty
Centerville Beach Cross	Centerville Road, west of Ferndale	Memorial for the 1860 shipwreck of the Northerner.
Camp Curtis	L.K. Wood Blvd, Arcata	Civil War-era military outpost and Mountain Battalion headquarters from 1862 to 1865.
Town of Trinidad	Edwards St. and Hector St., Trinidad	Oldest town on the North Coast
City of Eureka	3rd St. and East St., Eureka	Major port of entry
California's First Drilled Oil Wells	Mattole Rd. and Front St., Petrolia	Site of California's earliest commercial oil production
Jacoby Building	Eight and H, Arcata	Principal supply point for the Klamath-Trinity mining camp trade
Old Indian Village of Tsurai	Ocean St. and Edwards St., Trinidad	Site of Yurok village, occupied until 1916
Arcata and Mad River Rail Road Company	330 Railroad Ave, Blue Lake	Oldest rail line on the North Coast
Humboldt Harbor Historical District	Harold Larsen Vista Pt, Eureka	Early settlements on Humboldt Bay, later a hub for logging and shipbuilding.
Ferndale	Ferndale City Hall Park, Ferndale	Pioneer agricultural and dairy community

3. Natural Assets and Disaster Preparedness

Geography

Located on the rugged northern coast of California, Humboldt County is characterized by its varied geography. To the west, 110 miles of coastline along the Pacific Ocean offer access to a rich marine environment. The natural benefits of the coastline are tremendous and the economy benefits from access to maritime transportation routes. Humboldt County is home to 40% of remaining old-growth redwood forest, most of which are protected and conserved within dozens of national, state and local forests and parks, totaling approximately 680,000 acres.

The Coast Ranges run through the county, attracting nature-loving tourists and supporting timber-rich forests that are processed by forestry and logging industries. Several rivers extend across the county, including the Eel River and the Klamath River; both supply water for residential and commercial operations. Most popular are the old-growth Redwood Forests, which call countless visitors to the county every year.

Climate

Humboldt County has a temperate maritime climate, due to its proximity to the Pacific Ocean. Generally, the county experiences mild, wet winters and cool, dry summers. Heavy fog is common and rain falls most abundantly in the winter. Extreme temperatures are rarely experienced, making agricultural yields consistent and reliable. Humboldt County contains a remarkably high number of microclimates due to its diverse topography and rich biodiversity. Elevation changes from sea level to over 6,000 feet, along with complex coastal, forest and inland ecosystems, contribute to significant variations in temperature, precipitation and humidity across short distances, allowing for a wide range of natural habitats.

Natural Resources

Natural resources in Humboldt County are both abundant and diverse. Timber forests extend throughout the county, making the forestry and logging industries strong drivers of economic activity. The coastline

provides access to the ocean's resources and salmon and shellfish fisheries are particularly valuable assets. The county has long been known for the climate's unique suitability for alternative agriculture cultivation and many alternative agriculture farms are scattered throughout it. Other agricultural products, such as dairy products, berries, vegetables and cut flowers are well supported by the climate and natural resources in the county. In recent years, the renewable energy industry has proven to have high potential in Humboldt County. Solar energy is harvested locally and the offshore wind industry is slated to grow rapidly over the next several years.

Environmental Risks

Humboldt County faces several environmental threats due to both natural and human-induced factors. Some of these include:

- **Coastal Erosion and Rising Sea Levels:** Humboldt Bay is experiencing the fastest rate of sea level rise in California and portions of Humboldt County are already being flooded during king tides.[47] As sea levels continue to rise and coastal erosion accelerates, the region will face growing threats to critical infrastructure, more frequent and severe coastal flooding and the potential loss of vital habitats for marine and coastal species.

- **Earthquakes:** Humboldt County lies near several active fault lines, including the Cascadia Subduction Zone and the San Andreas Fault, making it highly susceptible to earthquakes. A major earthquake could have severe consequences, including ground shaking, landslides and damage to infrastructure. And, as mentioned in the next section, large earthquakes in the region could trigger tsunamis, further compounding the risks to coastal areas.

[47] "Sea level rise vulnerability assessment for State wildlife areas surrounding Humboldt Bay, northern California." Robert M. Sullivan, Laird A., Powell, B. and Anderson, J. K. https://journal.wildlife.ca.gov/2022/11/22/sea-level-rise-vulnerability-assessment-for-state-wildlife-areas-surrounding-humboldt-bay-northern-california/

- **Tsunamis:** Humboldt County is located on the Pacific Coast and is vulnerable to tsunamis, particularly after undersea earthquakes. The region has experienced tsunamis in the past and the potential for future events remains a concern, especially with seismic activity off the coast. Tsunamis can cause significant damage to coastal infrastructure, flooding and loss of life, especially in low-lying areas such as Humboldt Bay.

- **Water Pollution and Habitat Degradation:** Agriculture and industrial activities in the region have contributed to water pollution. Runoff from fertilizers, pesticides and sedimentation can contaminate rivers, streams and groundwater, threatening aquatic life and the health of local communities.

- **Wildfires:** Humboldt County, like much of California, is increasingly vulnerable to wildfires. Rising temperatures, prolonged droughts and changing climate patterns have made the area more susceptible to large-scale wildfires. These fires can devastate forests, habitats and communities, as well as contribute to air pollution and carbon emissions.

When considering the impacts on human life, buildings and agriculture, these environmental risks are estimated to result in an average economic loss of $118 million annually in Humboldt County, a higher expected annual loss than 96% of counties in the United States.[48] This estimate does not include financial costs due to disasters outside of the region, such as wildfires in Los Angeles, which increase insurance premiums within Humboldt County, impacting residents, businesses and government. Efforts to mitigate and adapt to these risks are ongoing, but continued attention and preparation are necessary to ensure the safety and sustainability of the region.

[48] "Expected Annual Loss." Federal Emergency Management Agency. https://hazards.fema.gov/nri/expected-annual-loss

Table 18: Expected Annual Loss for Natural Hazards in Humboldt County. Source: National Risk Index.[49]

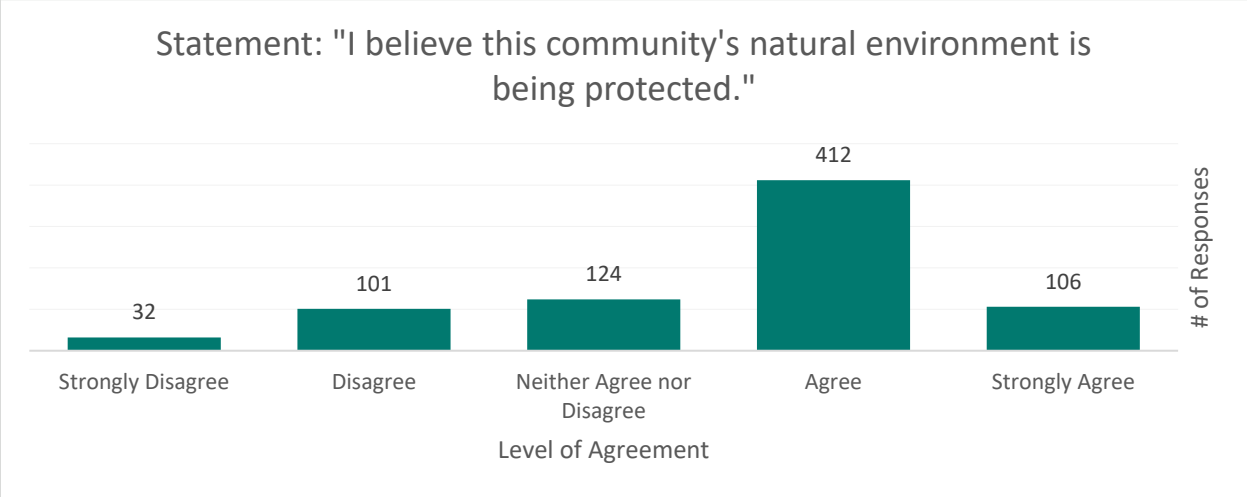
Hazard Type	Expected Annual Loss Rating	EAL Value
Coastal Flooding	Relatively Moderate	$4,308,641
Cold Wave	No Expected Annual Losses	$0
Drought	Relatively Moderate	$2,162,758
Earthquake	Relatively High	$103,489,516
Hail	Very Low	$5,062
Heat Wave	Very Low	$2,364
Landslide	Relatively High	$558,842
Lightning	Very Low	$9,585
Riverine Flooding	Relatively Moderate	$4,020,398
Strong Wind	Very Low	$6,033
Tornado	Very Low	$28,945
Tsunami	Relatively Moderate	$114,717
Volcanic Activity	No Expected Annual Losses	$0
Wildfire	Relatively Moderate	$3,301,582
Winter Weather	Very Low	$7,423
Total	Relatively High	$118,015,866

[49] "National Risk Index." Federal Emergency Management Agency. https://hazards.fema.gov/nri/report/viewer?dataLOD=Counties&dataIDs=C06023#SectionExpectedAnnualLoss

Natural Assets and Disaster Preparedness Survey Findings

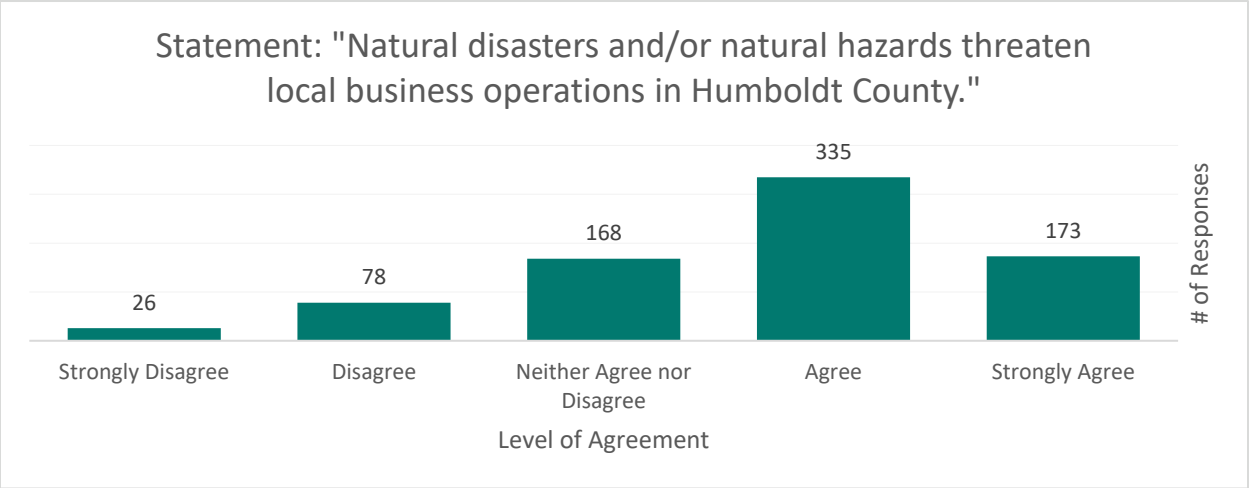
In order to evaluate the community's sentiment regarding the protection of the natural environment and the county's preparedness for natural disasters or hazards, survey respondents were asked to rate their level of agreement with three related statements. When responding to the statement, "I believe this community's natural environment is being protected," 518 respondents, or 65.3%, agreed or strongly agreed. 124 respondents did not agree nor disagree and 133 (16.8%) disagreed or strongly disagreed. The majority of respondents, then, believe that the natural environment in Humboldt County is being protected.

Figure 13: Protection of the Natural Environment in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



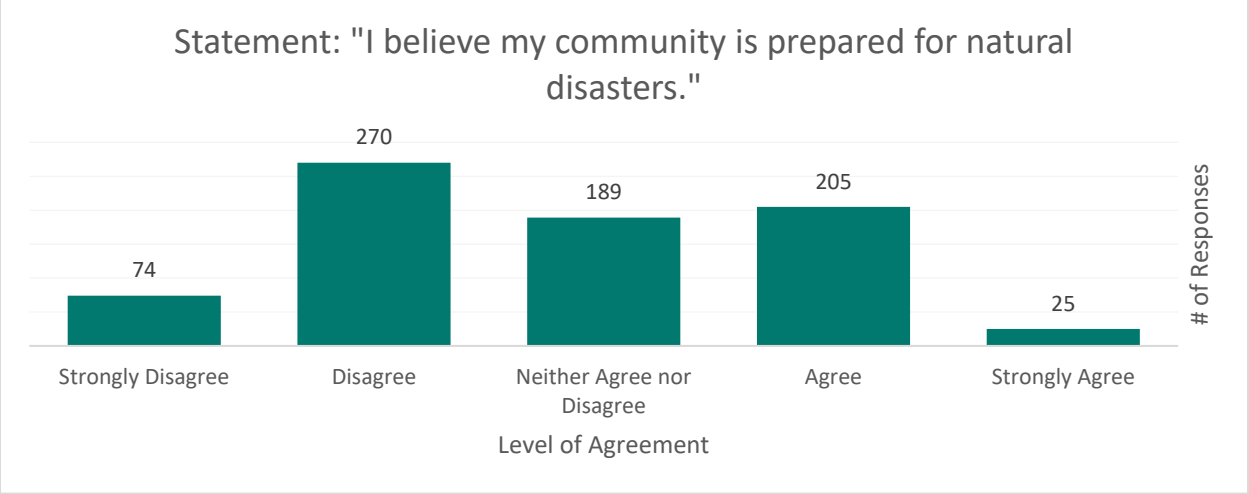
Next, when responding to the statement, "Natural disasters and/or natural hazards threaten local business operations in Humboldt County," 508 respondents, or 65.1%, indicated that they agreed or strongly agreed. 168 respondents neither agreed nor disagreed and 103 respondents (13.3%) disagreed or strongly disagreed. The majority of respondents, then, agree that natural disasters or hazards threaten local business operations in the county.

Figure 14: Threat of Natural Disasters and Hazards to Local Business in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Finally, respondents were asked to rate their level of agreement with the statement, “I believe my community is prepared for natural disasters." Responses to this statement were more mixed; 230 respondents, or 30.1%, agreed or strongly agreed. 344 respondents, or 45.1%, disagreed or strongly disagreed. 189 respondents neither agreed nor disagreed. While some of the community feels prepared to handle natural disasters, a larger share believe that efforts could be made to improve the county’s preparedness.

Figure 15: Natural Disaster Preparedness in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



4. Fundamental Community Needs

Healthcare

Healthcare Access

Humboldt County faces significant healthcare access challenges. Provider shortages, coupled with geographic isolation and transportation limitations, have resulted in a lack of access to quality care, particularly in primary and mental health care.

Regional Medical Centers in Humboldt County:

- Providence Medical Centers (acute and comprehensive care)
    - St. Joseph Hospital
    - Redwood Memorial
- Southern Humboldt Community Healthcare District: (acute, specialized and comprehensive care)
    - Five medical centers in Southern Humboldt
- Mad river Community Hospital (acute care)
- Non-profit community focused healthcare providers
    - Open Door Community Health Centers
    - WeCare Community Health Centers

These facilities are not currently meeting the access needs of the county's residents for primary or specialized health care. Many residents are forced to travel outside the county to receive treatment. Contributing to this lack is the county's ongoing shortage of healthcare professionals, with many areas in the county being designated as a health professional shortage area (HPSA) for primary care, dental health and mental health, in addition to many medically underserved areas[50]. Access is limited further for residents who rely on public health

[50] St. Joseph & Redwood Memorial Hospital. (2023). Community Health Report. Retrieved from https://www.providence.org/-/media/project/psjh/providence/socal/files/about/community-benefit/pdfs/2023/2023-chna-redwoodmemorialhospital.pdf?rev=a65f0d1d768b4ba29f415670ba69c0ed&hash=966850E555C6D09F6D876EF58235F6F3

insurance coverage like Medicare and Medicaid, a group that makes up more than half of the county's residents.[51]

Since 2021, two of the three obstetrics providers in the county have ended their services, leaving St. Joseph Hospital's birthing center the only provider in about 4,000 square miles. Rehabilitation and elder care providers are also scarce and shrinking, with hospitals ending rehab services and several local nursing homes closing.

Behavioral health services are a significant need in the county. The Southern Humboldt Community Healthcare District (SoHum Health), Community Health Needs Assessment (CHNA) and the St. Joseph Hospital and Redwood Memorial Hospital CHNA all identify behavior and mental health as top health priorities.[44,45]

Health Metrics

In Table 19, a variety of other health metrics are provided for Humboldt County, the State of California and the United States. A healthy population is both a driver and a result of economic growth; when residents are physically and mentally well, they are better able to participate in the workforce and contribute to the local economy. At the same time, economic growth can improve health outcomes by increasing access to jobs, education, housing and healthcare. Investments in community health are therefore key to fostering a resilient and prosperous economy in Humboldt County.

[51] U.S. Census Bureau. (2023). Selected Characteristics of Health Insurance Coverage in the United States, American Community Survey 2023 5-Year Estimates. Retrieved from https://data.census.gov/table/ACSST5Y2023.S2701?g=050XX00US06023

Table 19: Health Metric Comparison, Humboldt County, California, United States. Source: County Health Rankings and Roadmaps, 2021

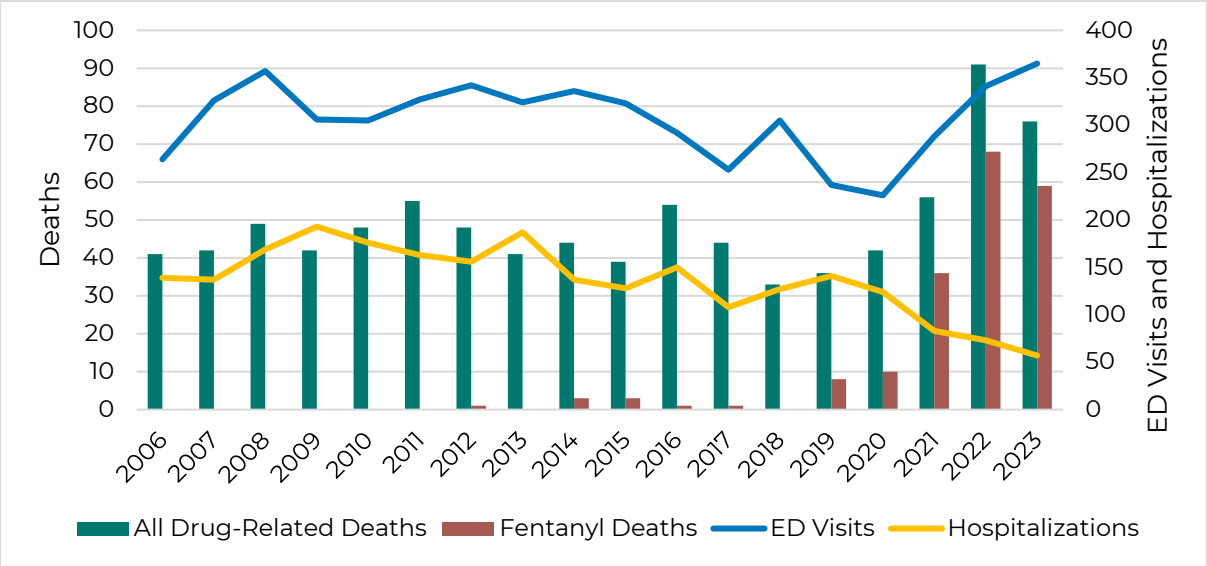
Health Metric	Humboldt County	California	United States
Life Expectancy (years)	75.8	79.4	77.1
% of Population Identified in Poor or Fair Health	20%	18%	14%
Adult Obesity	33%	28%	34%
Diabetes Prevalence	10%	11%	10%
Current Cigarette Smokers	16%	9%	15%
Sexually Transmitted Infections (per 100,000 people)	350.7	488.2	495.5
Uninsured	7%	8%	10%

Substance Use Disorder Trends

Substance use disorder (SUD) is a serious and growing public health challenge across the country, impacting the local community in Humboldt. Between 2018 and 2023, drug poising and SUD resulted in 334 deaths, 1,762 emergency department (ED) visits and 605 inpatient hospitalizations in Humboldt County.[52] While substance abuse disorder has long been a public health concern for the county, drug overdose deaths have increased significantly in recent years, due to the rise in Fentanyl. By 2023, Fentanyl became the leading cause of drug-related deaths, representing 77.6% of drug-related deaths.

[52] California Overdose Surveillance Dashboard. Prepared by California Department of Public Health (CDPH - Substance and Addiction Prevention Branch (SAPB). Accessed on 04/16/25. Retrieved from https://skylab.cdph.ca.gov/ODdash/

Figure 16: Drug-Related Deaths, ED Visits and Hospitalizations in Humboldt County. Source: California Overdose Surveillance Dashboard

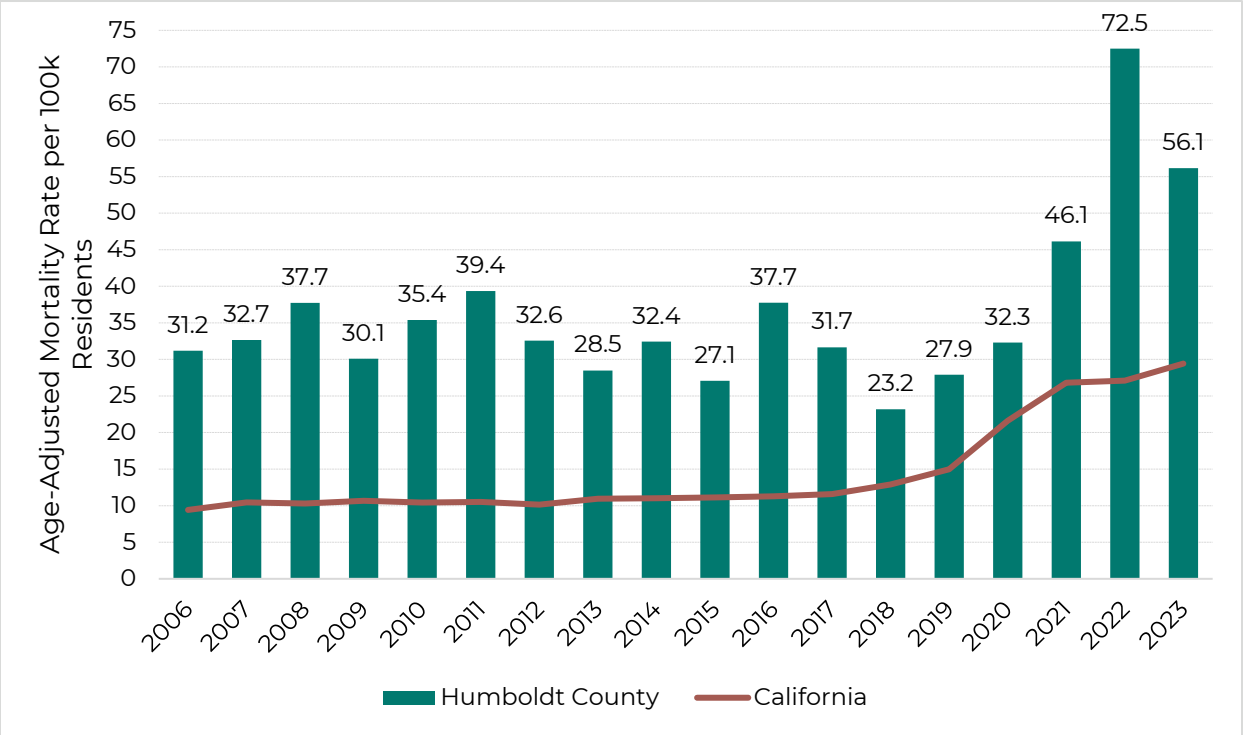


Humboldt County has consistently experienced higher mortality rates due to drug overdoses compared to the state as a whole California average and the gap has only grown in recent years. When compared to the state as a whole, the mortality rate (per 100,000 people) in Humboldt County is much higher, in some instances more than double. One contributing factor may be the high prevalence of Adverse Childhood Experiences (ACEs) - traumatic childhood experiences - among the county's population. Seventy-six percent of adults in Humboldt County report having at least one ACE, higher than the California average of 63.5%.[53] Research shows that individuals exposed to ACEs are at an increased risk of developing mood, anxiety and substance use disorders.[54]

[53] Let's Get Healthy California. Adverse Childhood Experiences. https://letsgethealthy.ca.gov/goals/healthy-beginnings/adverse-childhood-experiences/

[54] Penn Medicine News. (2024). Stopping a spreading fire: identifying connections between adverse childhood events and substance use disorders. Retrieved from https://www.pennmedicine.org/news/news-blog/2024/june/how-adverse-childhood-events-can-exacerbate-substance-use

Figure 17: Age-adjusted drug overdose death rate per 100,000 residents in Humboldt County. Source: California Overdose Surveillance Dashboard



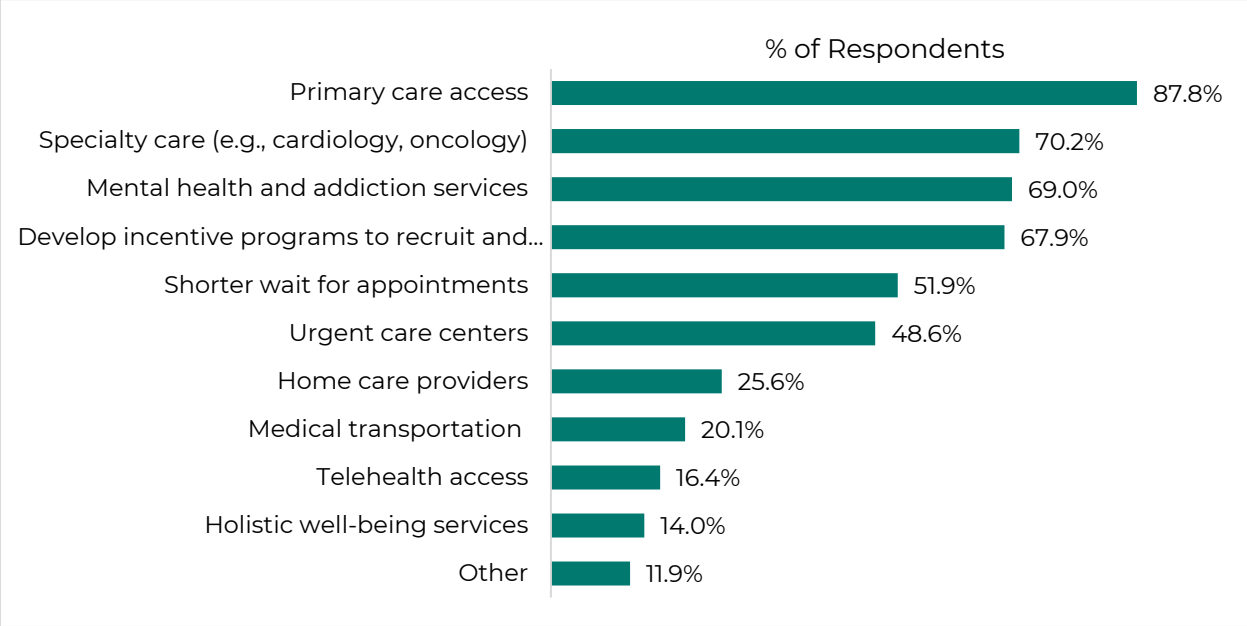
Widespread substance use can present public health and safety challenges and those challenges can affect various parts of the local economy. The prevalence of the issue in Humboldt County must be taken into consideration in a strategic plan and a proactive approach can be taken to ensure resources are available for individuals struggling with substance use.

Healthcare Survey Results

Respondents identified 'Primary care access' as the most pressing healthcare need in the community, selected by 87.8% of respondents, indicating a significant concern about the availability of general health services. 'Specialty care (e.g., cardiology, oncology)' followed, identified by 70.2% of respondents, reflecting the need for more advanced and focused medical services. Close behind were 'Mental health and addiction services' (69.0%) and the development of 'Incentive programs to recruit and retain healthcare professionals' (67.9%), highlighting challenges with behavioral health and provider shortages. The 'Other' category was selected by 11.9% of participants. Many of those who selected this option expressed a need for a higher quality of healthcare

service, generally and several called for more healthcare facilities without any religious affiliation.

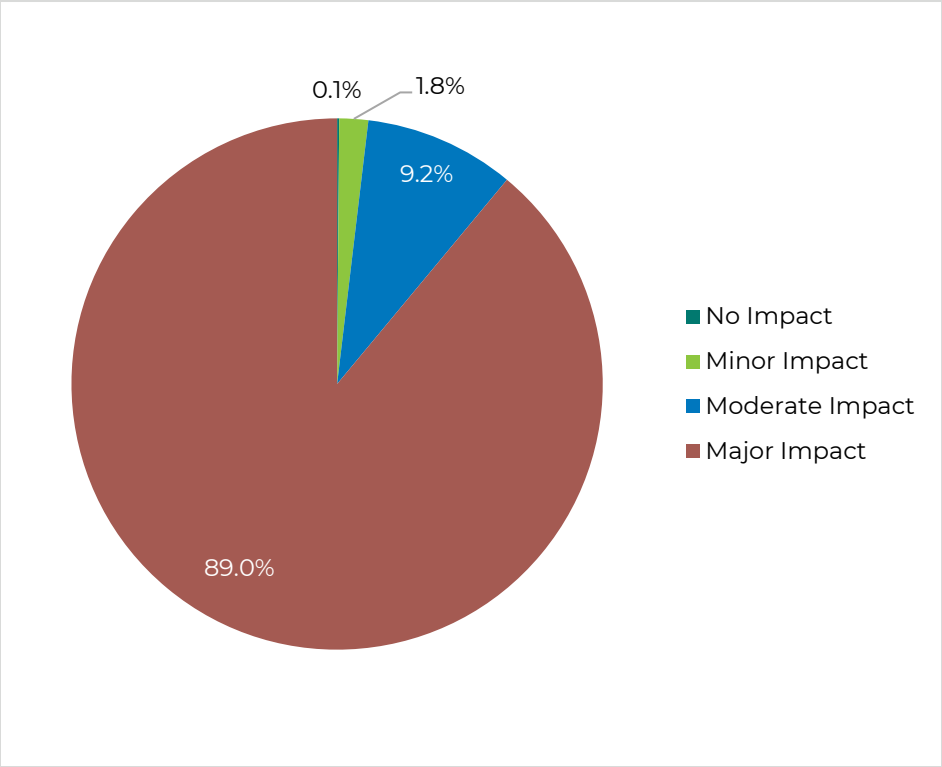
Figure 18: Greatest Healthcare Need in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[55]



When asked whether lack of healthcare access had an impact on Humboldt County residents, the overwhelming majority of respondents (709 respondents, or 89.0%) indicated that it had a major impact. Another 73 respondents, or 9.2%, believed its impact to be moderate. Only 15 respondents, or 2%, believed the impact to be minor or nonexistent. This indicates the community's awareness of the pressing need to expand healthcare services throughout the county and increase the overall accessibility of those services.

[55] Excludes respondents who selected "I don't know."

Figure 19: Impact of Lack of Healthcare Access in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



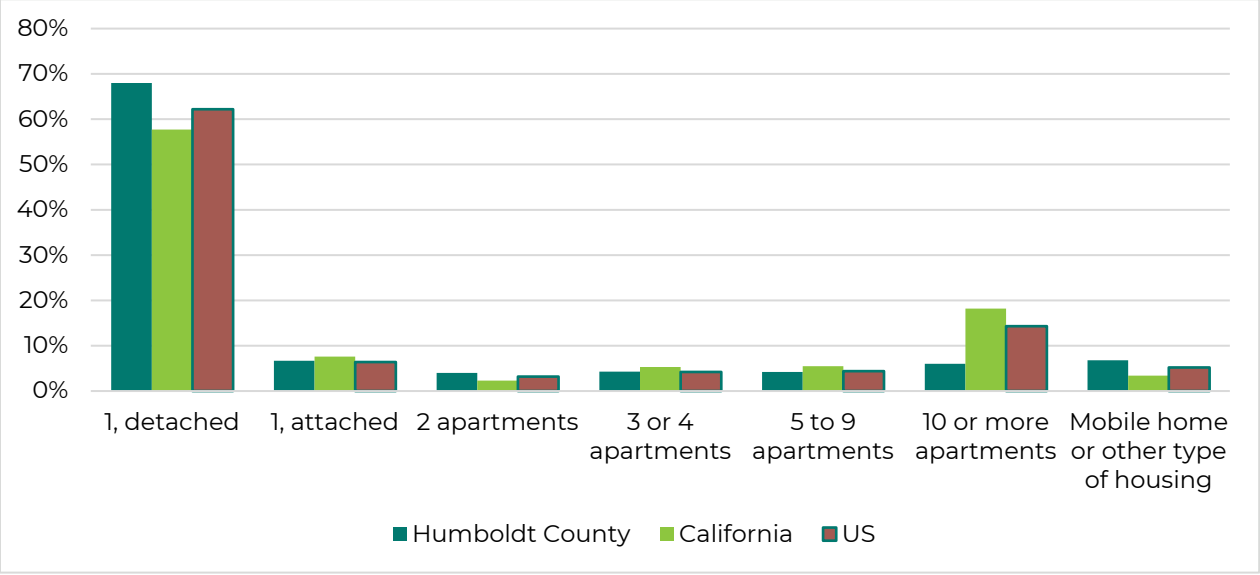
Housing

Ensuring an adequate supply of affordable, accessible and high-quality housing is essential for residents to thrive and for the county's economic prosperity. In recent years, housing development has slowed, while vacancies have declined, resulting in rising costs. In alignment with the Housing Element of the Humboldt County General Plan, meeting the needs of the community and supporting economic growth will require increased housing production—including affordable and workforce housing, diverse housing options and housing for special populations.

Housing by Type

The housing mix in Humboldt County is predominantly single-family, detached homes, representing 68% of units in the county. An additional 6.7% are single-unit, attached homes, such as townhomes, while 12.5% are in medium-density multifamily developments, such as duplexes, or small apartment buildings. Only 6.0% of units are located in large multi-family structures of 10 or more units. Around 7% of units are mobile homes or some other type of uncategorized unit.

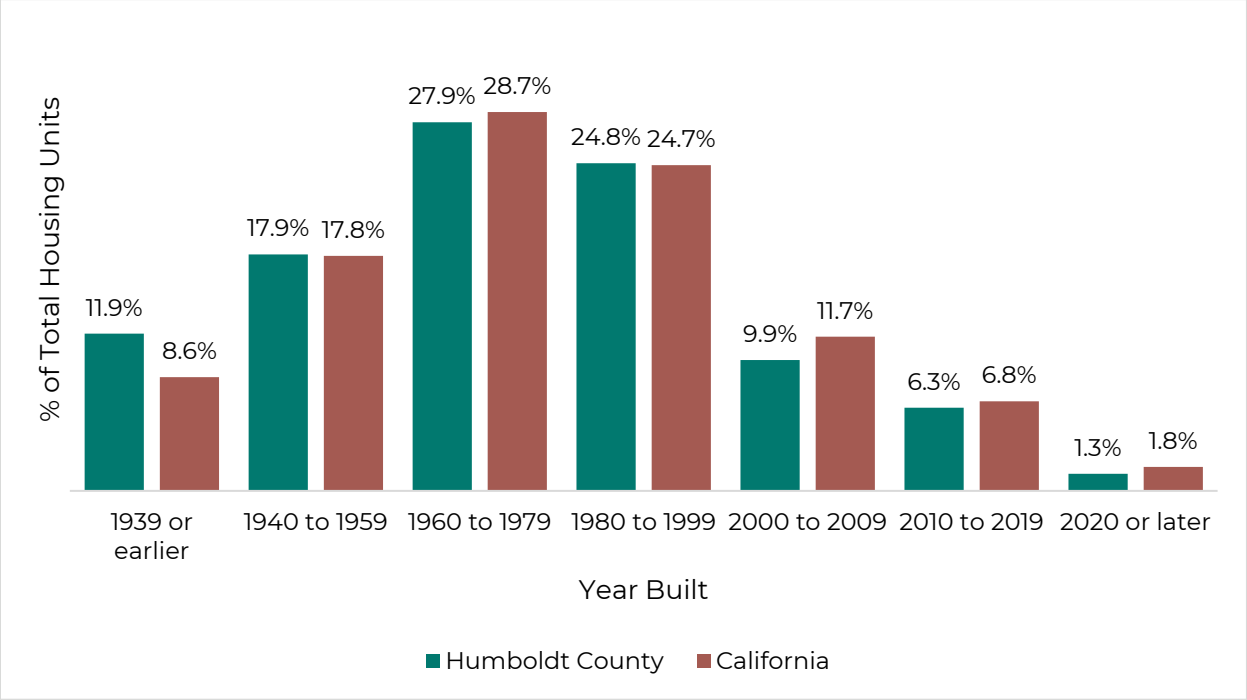
Figure 20: Housing by Type in Humboldt County. Source: ACS 2023 1-Year Estimates



Housing by Age of Structure

The age of the existing housing stock can be useful for understanding the overall quality of housing stock in the county. It is often the case that older homes are more difficult to maintain and their upkeep can raise total housing costs. However, well maintained, older homes can add a lot of character to a region, which can boost its appeal for prospective residents. In Humboldt County, 57.7% of the housing stock was built before 1980and about 12% was built before 1940. This is a slightly higher share than the statewide average in California, where 8.6% of housing units were built before 1940. Development in the county has slowed in the last two decades and only around 17.5% of all housing units were developed after 2000.

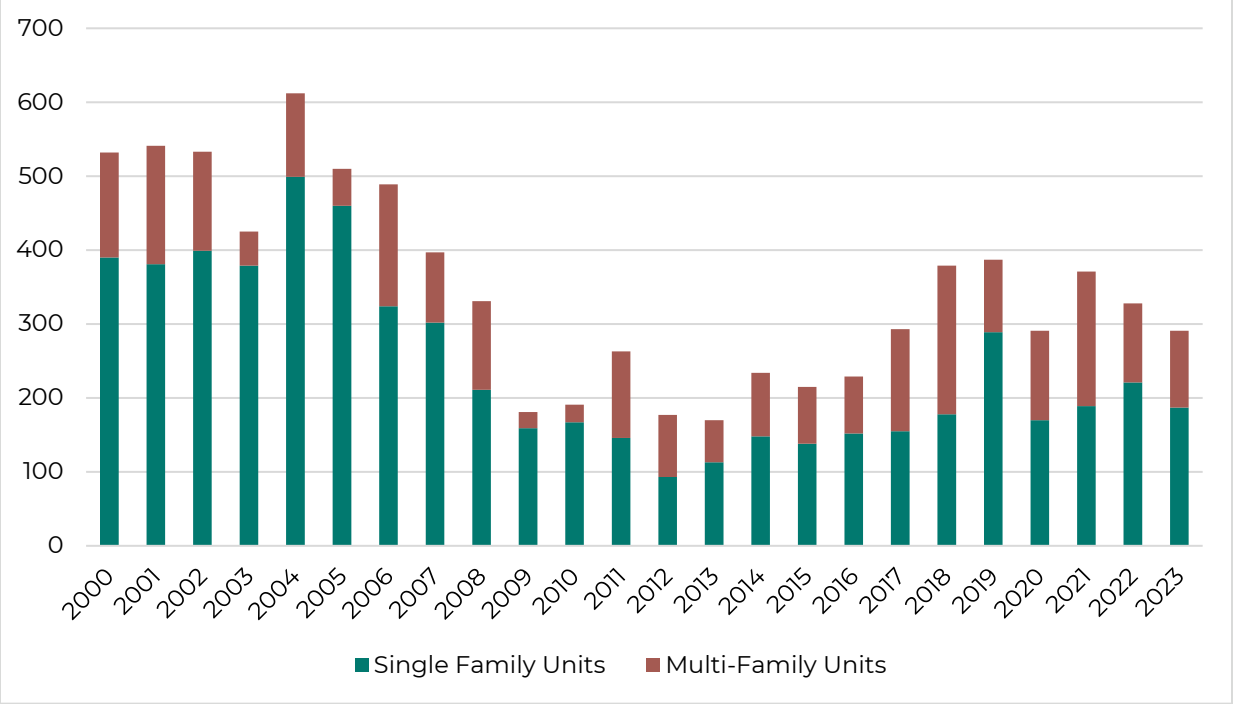
Figure 21: Housing by Age of Structure in Humboldt County and California. Source: ACS 2023 1-Year Estimates



Building Permits

Looking at residential building permit data from 2000 to 2023, permits peaked in the early 2000s, followed by a steep decline during and after the Great Recession. Permit activity stayed relatively flat, until beginning to increase in the late 2010s. However, permitting activity decreased in recent years, following the COVID-19 pandemic. While the majority of permits are issued for single-family homes, following the Great Recession, there has been an increase in the percentage of permits allocated to multifamily units, signaling some diversification in the housing mix.

Figure 22: Building Permits by Housing Type, 2000 to 2023, Humboldt County. Source: US Census Bureau Building Permits Survey.[56]



[56] Contains imputed data.

Housing Tenure

There is an even mix of renters and homeowners in Humboldt County. A little over half (54.7%) of housing units are owned and the rest (45.3%) are rented, similar to the state as a whole.

Table 20: Housing Tenure, Humboldt County and California. Source: ACS 2023 1-Year Estimates

Tenure	Humboldt County	California
Owner-Occupied Units	54.6%	55.9%
Renter-Occupied Units	45.4%	44.1%

While the majority of single-family, detached units are owner-occupied, renters occupy a more than a quarter of those units, or 28.4%. Renters occupy the vast majority of single-family, attached units and apartments in Humboldt.

Housing Costs

Low vacancy rates, long vacancy duration and low housing production all constrain the housing supply in Humboldt County, resulting in rising housing costs.[57] As a result, the median monthly housing cost has risen from $992 to $1,259, an increase of 26.9%, comparable o the change seen in the state as a whole. In 2018, 27,749 households, or 51.6% of households, spent less than $1,000 a month on housing costs. In 2023, that number had decreased by nearly 8,000 households, to 18,805, or 38.8% of households.

[57] Housing costs include mortgage and rent payment, real estate taxes, insurance, utilities, land rent and mobile home park fees.

Table 21: Monthly Housing Costs, 2018 and 2023, Humboldt County. Source: ACS 1-Year Estimates.

Monthly Housing Costs	2018	2023
Less than $500	17.0%	10.2%
$500 to $999	34.6%	28.5%
$1,000 to $1,499	22.4%	27.1%
$2,000 to $2,499	16.3%	17.4%
$2,500 to $2,999	6.8%	9.0%
$3,000 or more	2.9%	7.7%

Housing Cost Burden by Tenure

The Department of Housing and Urban Development (HUD) defines a cost-burdened household as any household which spends more than 30% of its income on housing costs. An extremely cost-burdened household spends 50% or more of its income on housing costs. As a result of spending a significant portion of their monthly income on housing, cost burdened households may be unable to afford other basic necessities, such as healthcare and groceries.

In 2023, about 22,500 households were cost burdened in Humboldt County. Approximately 32% of owner-occupied households were cost burdened; 17.8% spent between 30% and 49.9% of their income on housing costs and 14.1% spent more 50% or more of their income on housing costs. For renters, cost burden is much more common. In the same year, one in two renter households were cost burdened; more than half were extremely cost burdened and spent more than 50% of their income on housing costs.

On the whole, the incidence of housing cost burden has declined in Humboldt County since 2018. Rates of cost-burdened owner-occupied households increased slightly between 2018 and 2023, while rates decreased for renter-occupied households over the same period. However, the disparity in the incidence of cost burden between owner-occupied and renter-occupied households persists.

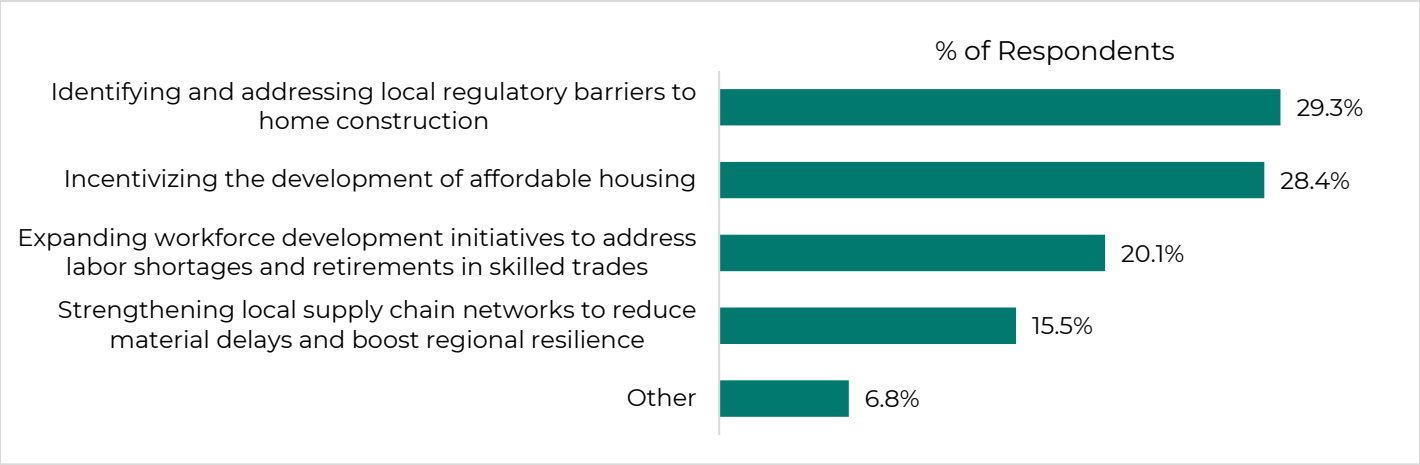
Table 22: Housing Cost Burden by Tenure, 2018 and 2023. Source: ACS 2018/2023 1-Year Estimates

	All Households 2018	All Households 2023	Owner-Occupied 2018	Owner-Occupied 2023	Renter-Occupied 2018	Renter-Occupied 2023
Cost Burdened (30%-49.9%)	22.9%	19.8%	20.6%	17.8%	25.5%	22.1%
Extremely Cost Burdened (50%+)	21.4%	20.3%	9.5%	14.1%	35.0%	27.9%
Total Cost Burdened	**44.2%**	**40.1%**	**30.1%**	**31.9%**	**60.4%**	**49.9%**

Housing and Construction Industry Survey Results

Respondents indicated that the best support for construction industries in Humboldt County could come in the form of 'Identifying and addressing local regulatory barriers to home construction,' with 29.3% of respondents. This was followed closely by 'Incentivizing the development of affordable housing,' identified by 28.4% of respondents, highlighting a clear focus on increasing housing availability through both policy reform and financial incentives. Workforce concerns are also a major priority, evidenced by 20.1% of respondents selecting 'Expanding workforce development initiatives to address labor shortages and retirements in skilled trades.' Supply chain resilience is a somewhat lesser concern but still notable, with 15.5% of respondents selecting 'Strengthening local supply chain networks to reduce material delays and boost regional resilience.' Lastly, 6.8% of respondents selected 'Other,' with many respondents making additional comments about adjustments to the regulatory process and workforce training pipelines.

Figure 23: Support for Construction Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[58]

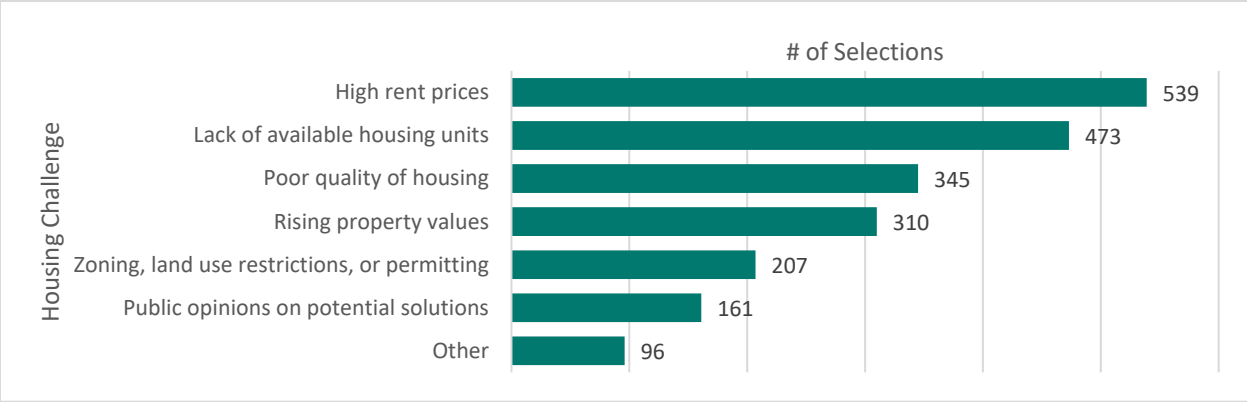


When asked whether the current housing situation has an impact in Humboldt County, 66.1% of respondents indicated that its impact was major. An additional 26.6% of respondents believe that the housing situation has a moderate impact on the county. Only 7.3% of respondents believe that the housing situation has a minor impact or none at all.

The top housing challenge identified by survey respondents was high rent prices, with 539 selections, indicating a widespread concern about affordability in the rental market. This was closely followed by the lack of available housing units (473), suggesting that supply constraints are also a significant issue. Other notable concerns include the poor quality of housing (345) and rising property values (310), which may contribute to affordability and displacement pressures. Regulatory factors such as zoning, land use restrictions, or permitting (207) and public opinions on potential solutions (161) also appear, though to a lesser extent. Of those who selected the 'Other' option, rising insurance costs and disproportionate increases in housing costs relative to income were commonly cited as challenges.

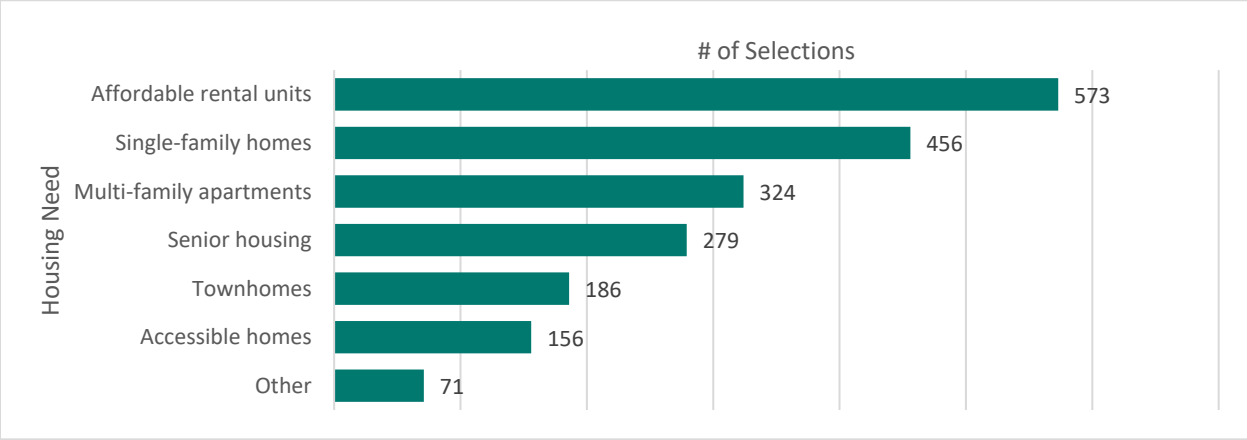
[58] Excludes respondents who selected "I don't know."

Figure 24: Greatest Housing Challenges in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



In alignment with the findings of the previous question, respondents expressed that the greatest housing need is for affordable rental units, with 573 respondents selecting this option. The next greatest needs are for single-family homes (456), multi-family apartments (324)and senior housing (279). This indicates high demand for a variety of housing options that provide for households with different financial ability, density preferencesand age-specific requirements. Townhomes (186) and accessible homes (156) were less commonly selected, but demand does exist for these housing types. Of the respondents who selected the 'Other' option, many expressed interest in tiny home communities and expanded temprorary housing options for those experiencing homelessness.

Figure 25: Greatest Housing Needs in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Workforce and Education

Education in Humboldt County

Humboldt County is home to a network of educational institutions, serving learners from early childhood to post-secondary education. The Humboldt County Office of Education (COE) serves 17,000 students across 32 school districts and 88 schools.[59,60] Humboldt County provides learners with a wide range of career and technical education (CTE) offerings, enrolling more than 3,400 students countywide.[61] In addition to a robust public school system, Humboldt County is home to 12 private schools, serving about 650 learners.[62,63]

For those seeking post-secondary education, the county has well established institutions, including Cal Poly Humboldt. With 58 major programs, 15 graduate programs and additional minor and credential programs, the University served 5,726 students in the 2023-2024 academic year, awarding more than 1,500 degrees.[64,65] The University serves as a resource hub and economic driver, with annual activity—including $317 million in direct expenditures and student spending—supporting nearly 4,900 jobs, $459 million in industry output, $150 million in labor income and $32 million in state and local tax revenue in the North Coast.[66] Alumni activity in the region support an additional 2,343 jobs, $109 million in labor income, $351 in industry activity and $27 million in state and local taxes (includes corporate, household income

[59] Includes elementary schools, middle schools, comprehensive high schools, alternative schools, charter schools and special education schools.
[60] https://hcoe.org/fast-facts/
[61] https://hcoe.org/wp-content/uploads/CTE-Infographic-Partcipation-23-24.pdf
[62] California Department of Education Private School Data. https://www.cde.ca.gov/ds/si/ps/
[63] National Center for Education Statistics, Private School Universe Survey (PSS). https://nces.ed.gov/surveys/pss/
[64] Cal Poly Humboldt Institutional Research, Analytics and Reporting, Historical Enrollment and FTES. https://www.humboldt.edu/irar/hsu-historical-hc-fte
[65] Cal Poly Humboldt Institutional Research, Analytics and Reporting, Degrees Awarded. https://www.humboldt.edu/irar/got-data/grad-reten
[66] Includes direct, indirect and induced impacts.

and other business taxes).[67] However, amidst state budget cuts and declining enrollment, the University faces reductions in staffing and academic programs, as well as deferring capital improvement and maintenance projects.

In addition to Cal Poly Humboldt, the county is home to the College of the Redwoods, an accredited two-year institution offering degrees and certifications in over 30 areas of study. The college also offers a variety of adult education and training programs, supporting local and regional employers. Additionally, for students seeking a four-year degree, the College of the Redwoods has articulation agreements with the California State University and the University of California systems, in-state independent universities and out-of-state college and universities, creating more options for students and building pathways to a bachelor's degree.[68] Of the 1,836 students who left the College of the Redwoods in the 2020 to 2021 school year, 365 enrolled in a four-year institution in the 2021 to 2022 school year, or 20% of all exits with 12 credits or more.[69] Many of these students attend Cal Poly Humboldt, which strengthens the local talent pipeline and supports regional economic growth through building a skilled and educated workforce.

[67] California State University, "The Impact of the California State University." https://www.calstate.edu/impact/Documents/Economic-Impact-Report-2021.pdf
[68] https://www.redwoods.edu/services/counseling/transfer.php
[69] https://public.tableau.com/app/profile/joseph.hays./viz/TransferstoFour-YearInstitutions/TransferRatesandDisproportionateImpact

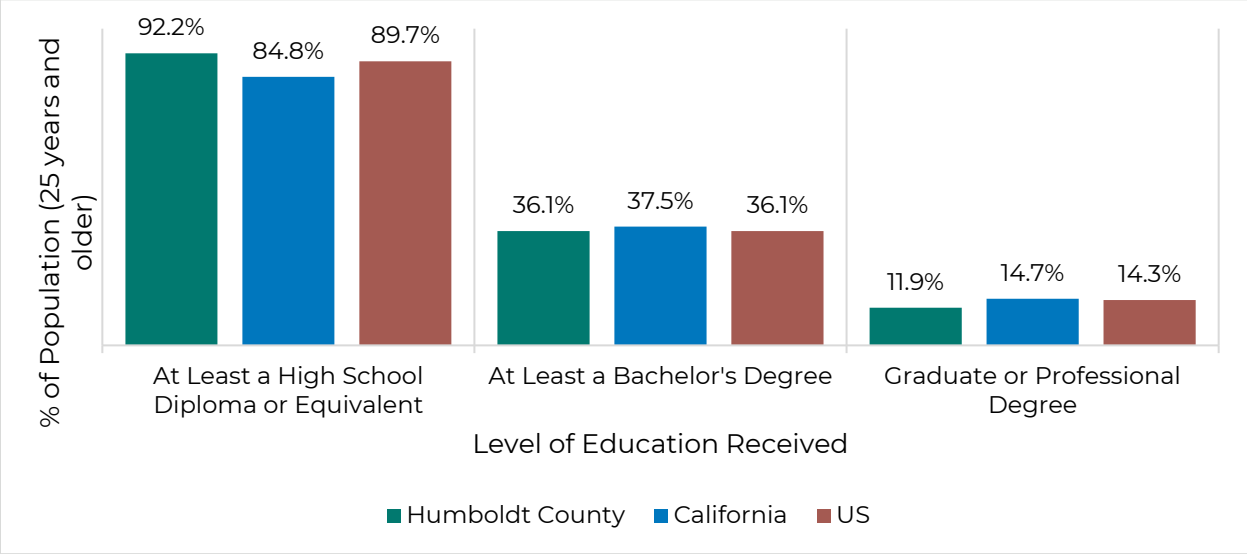
Educational Attainment

Humboldt County has a rich educational ecosystem, including California State Polytechnic University, Humboldt (Cal Poly Humboldt) and College of the Redwoods. These assets provide valuable opportunities for higher education and workforce training.

Approximately 92.2% of Humboldt County residents aged 25 and over hold a high school diploma or equivalent certificate. More than one-third of the population aged 25 years and over have earned a bachelor's degree and 11.9% hold a graduate or professional degree.

Humboldt County residents have higher high school completion rates than both the state and the nation. At the state level, a larger share of the population has attained a graduate or professional degree. This is likely a result of both a lack of local options for attaining such a degree, as well as a lack of local jobs that require one for employment.

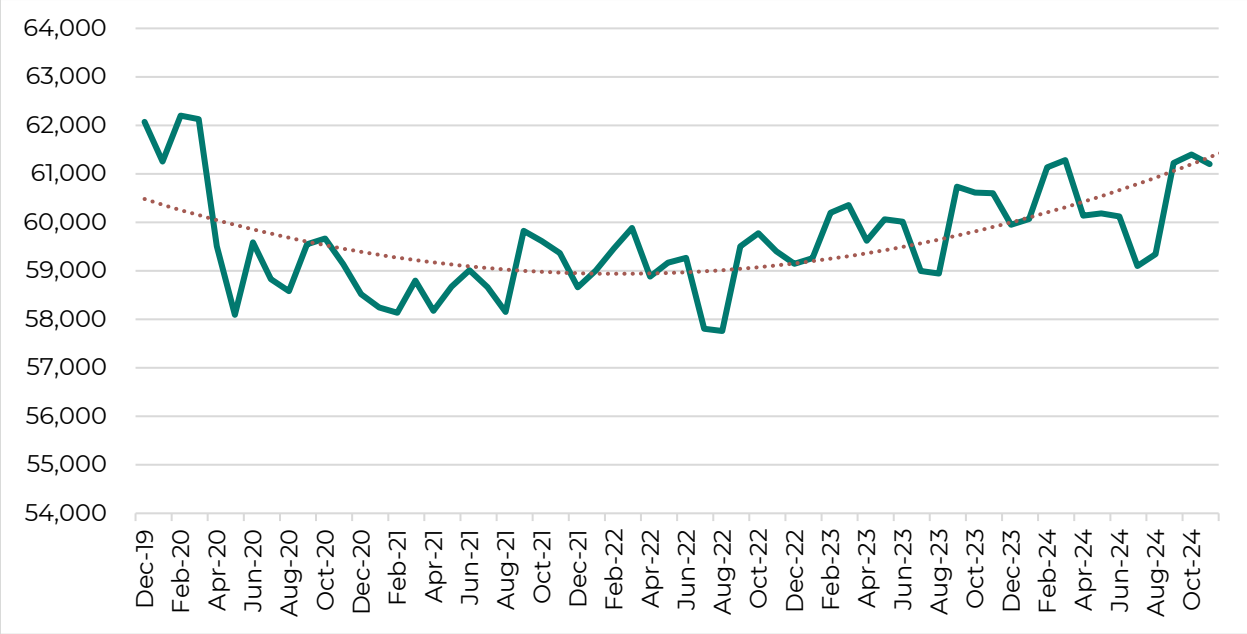
Figure 26: Educational Attainment for Population Older than 25 Years, Humboldt County, California and US. Source: ACS 2023 1-Year Estimates



Civilian Labor Force

As of November 2024, the civilian labor force in Humboldt County comprised 61,200 workers. This civilian labor force includes all people in the county who are over the age of 16 year and are classified as either “employed” or “unemployed”. In other words, these individuals are either employed or actively seeking employment. At the outset of the COVID-19 pandemic, the county saw its labor force fall by about 4,000 workers. In the three years since, the labor force has grown steadily and is gradually returning to pre-pandemic levels. In 2023, the county’s labor force participation rate was 57.4%, reflecting the share of the population engaged in or actively looking for work.

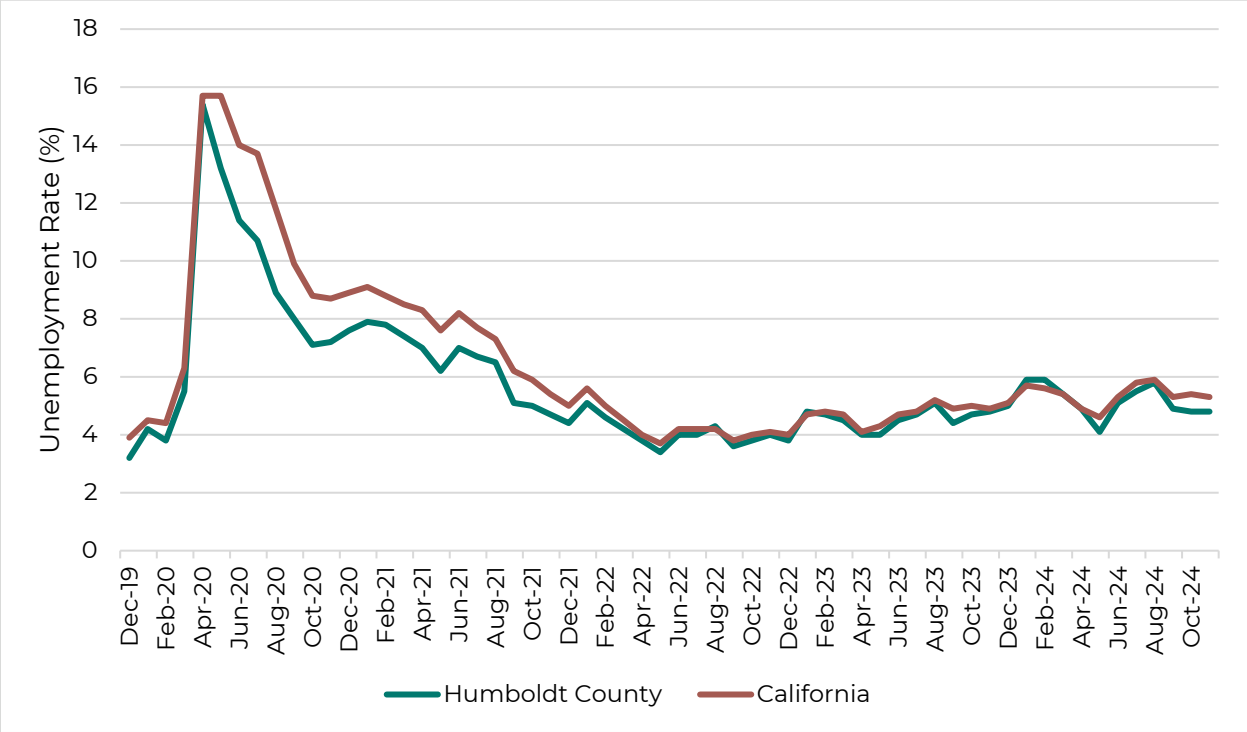
Figure 27: Civilian Labor Force (Not Seasonally Adjusted), December 2019 to November 2024, Humboldt County. Source: St. Louis Federal Reserve, 2025



Unemployment Rates

Unemployment rates, like the civilian labor force level, changed dramatically in the spring of 2020. Between February and April of that year, the unemployment rate in the county jumped from 3.8% to 15.5%. Unemployment has fallen again as the economy has restabilized. The unemployment rate hovered between 4% and 6% throughout 2024. Trends in the local unemployment rate have mostly aligned with those observed at the state level.

Figure 28: Unemployment Rate, December 2019 to November 2024, Humboldt County. Source: St. Louis Federal Reserve, 2025



Top Occupations

A breakdown of the county's top occupations provides a different look into the economy than an industry breakdown. Some industries might employ workers with vastly different responsibilities and skillsets; therefore, industry data doesn't necessarily provide information about the workers themselves. Occupational data can be helpful for understanding the local workforce. The top occupations, by number of jobs, in Humboldt County are Home Health and Personal Care Aides and Nursing Assistants, Orderlies and Psychiatric Aides. These occupations comprise about 3,800 local jobs. Retail workers, construction trades workers and processing or distribution workers are among the next most common occupations in the county.

Figure 29: Top Occupations in Humboldt County by 3-Digit SOC Code. Source: Lightcast, 2024

Fastest-Growing Occupations

Home health and personal care aide; and nursing assistants, orderlies and psychiatric aides, the largest occupation in Humboldt County, is also the occupation that is projected to grow the most between 2022 and 2032. Other occupations which are projected to grow are counselors, social workers, teachers and various healthcare practitioners.

Table 23: Current and Projected Employment Levels in Fastest-Growing Occupations in Humboldt County by 3-Digit SOC Code. Source: Lightcast, 2024

Occupation	2022 Jobs	2032 Jobs (Projected)	Projected Change
Home Health and Personal Care Aides; and Nursing Assistants, Orderlies and Psychiatric Aides	3,789	5,112	1,323
Counselors, Social Workers and Other Community and Social Service Specialists	1,609	2,045	437
Postsecondary Teachers	1,163	1,586	423
Preschool, Elementary, Middle, Secondary and Special Education Teachers	1,583	1,902	319
Business Operations Specialists	1,854	2,128	275
Healthcare Diagnosing or Treating Practitioners	1,783	2,019	236
Law Enforcement Workers	793	966	172
Other Educational Instruction and Library Occupations	806	968	163
Food and Beverage Serving Workers	2,269	2,419	151
Health Technologists and Technicians	779	921	142

Highly Demanded Occupations

To measure occupational demand, the average annual job openings are calculated for all occupations in the county. The Home Health and Personal Care Aides occupational group has the highest number of annual openings, which means there is high demand for workers of this occupation in the county. Retail, distribution, service and construction workers are also highly demanded.

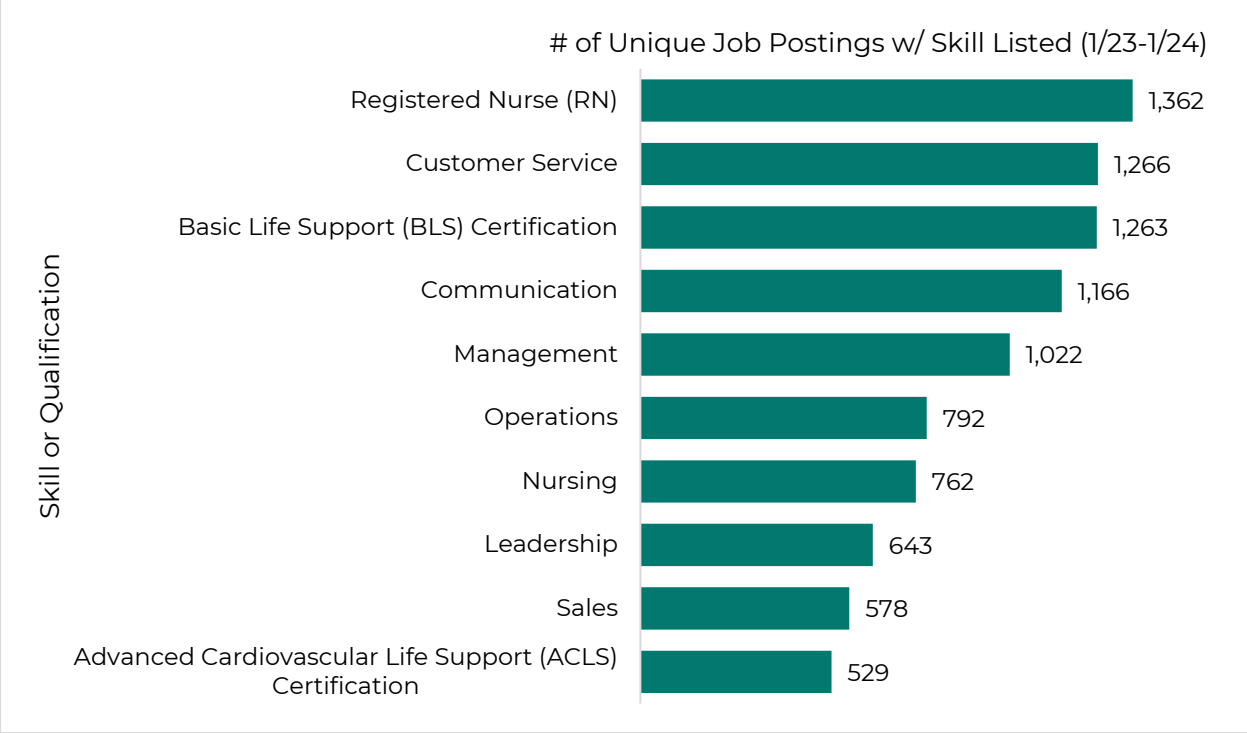
Table 24: Highly Demanded Occupations (3-Digit SOC Code) by Average Annual Openings and Employment Levels in Humboldt County. Source: Lightcast, 2024

Description	Average Annual Openings	2022 Jobs	Openings per Job
Home Health and Personal Care Aides; and Nursing Assistants, Orderlies and Psychiatric Aides	784	3,789	0.21
Retail Sales Workers	533	3,325	0.16
Food and Beverage Serving Workers	517	2,269	0.23
Material Moving Workers	293	1,968	0.15
Cooks and Food Preparation Workers	247	1,419	0.17
Construction Trades Workers	232	2,538	0.09
Building Cleaning and Pest Control Workers	218	1,448	0.15
Information and Record Clerks	203	1,493	0.14
Other Management Occupations	197	2,133	0.09
Counselors, Social Workers and Other Community and Social Service Specialists	197	1,609	0.12

Highly Demanded Skills and Qualifications

Job posting data can provide information about the skills or qualifications most highly demanded by employers in the county. Between January 2023 and January 2024, the most commonly listed qualification in job postings was a Registered Nurse certification. Other healthcare related skills are listed, such as Basic Life Support certification, nursing and Advanced Cardiovascular Life Support certification. In addition, many skills related to management and customer service are highly demanded and frequently listed in job postings.

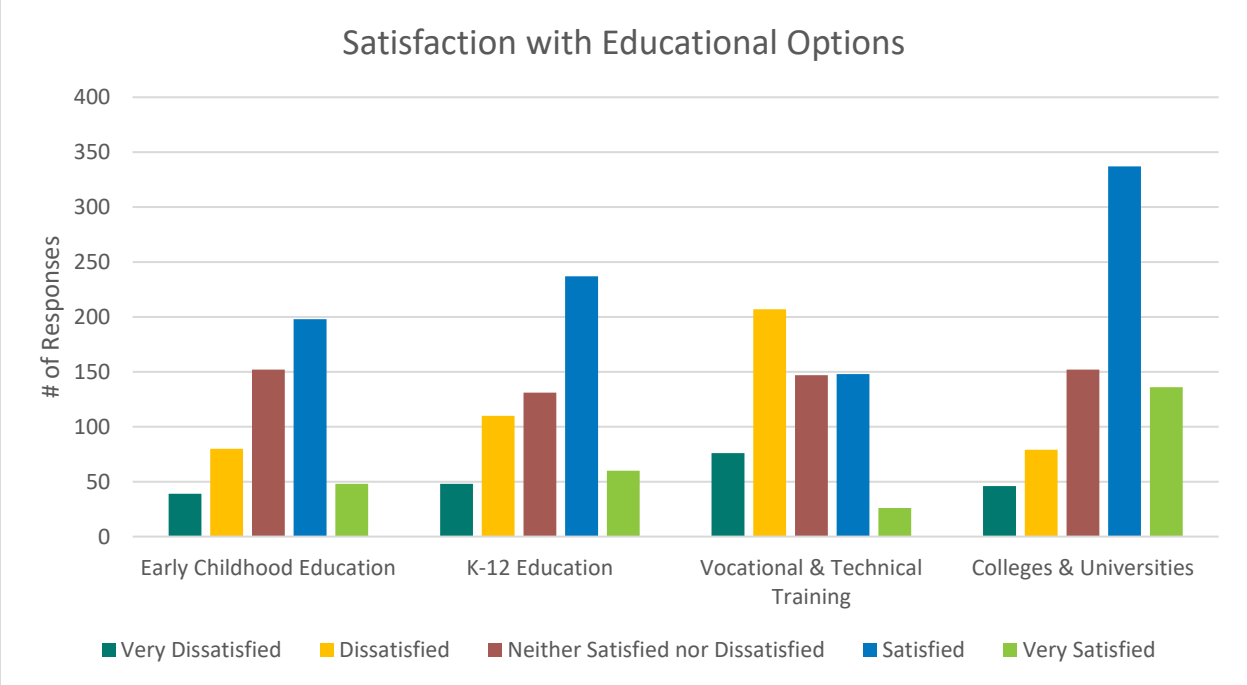
Figure 30: Highly Demanded Skills and Qualifications in Humboldt County. Source: Lightcast, 2024



Education and Workforce Survey Results

Respondents were asked to rate their satisfaction with four categories of educational options in the county: Early Childhood Education; K-12 Education; Vocational & Technical Training; and Colleges & Universities. Respondents generally were most satisfied with the colleges and universities in the county; 473 respondents, or 63.0%, were either satisfied or very satisfied with the quality of educational options in that category. Respondents seemed to be most dissatisfied with vocational and technical training options in the county; 283, or 46.9% of respondents indicated being either dissatisfied or very dissatisfied with the quality of educational options in that category. Sentiment about the quality of early childhood and K-12 educational options was generally neutral-to-favorable, but some respondents did express dissatisfaction with the quality of options in those categories.

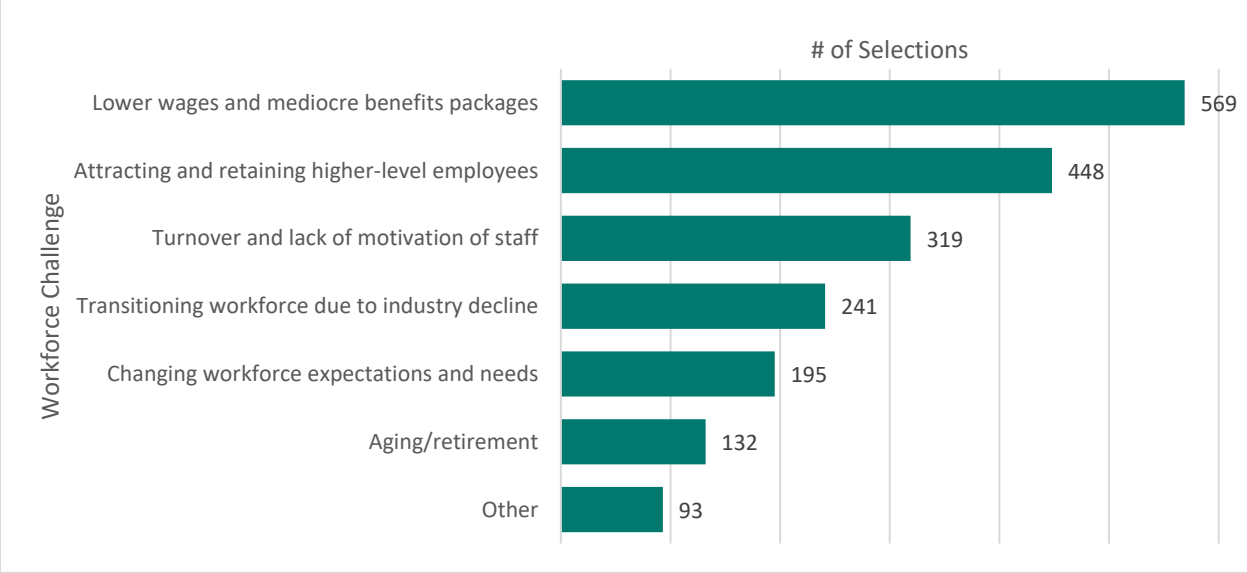
Figure 31: Satisfaction with Educational Options in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Workforce Survey Results

When asked to select up to three of the greatest workforce-related challenges faced by the county, the 'Lower wages and mediocre benefits packages' challenge was the most selected, with 569 respondents identifying it as a significant challenge. 'Attracting and retaining higher-level employees' (448) and 'Turnover and lack of motivation of staff' (319) were the next most common selections. Of the 93 respondents who selected 'Other', many cited a lack of high-quality local jobs and limited healthcare access as barriers to workforce development.

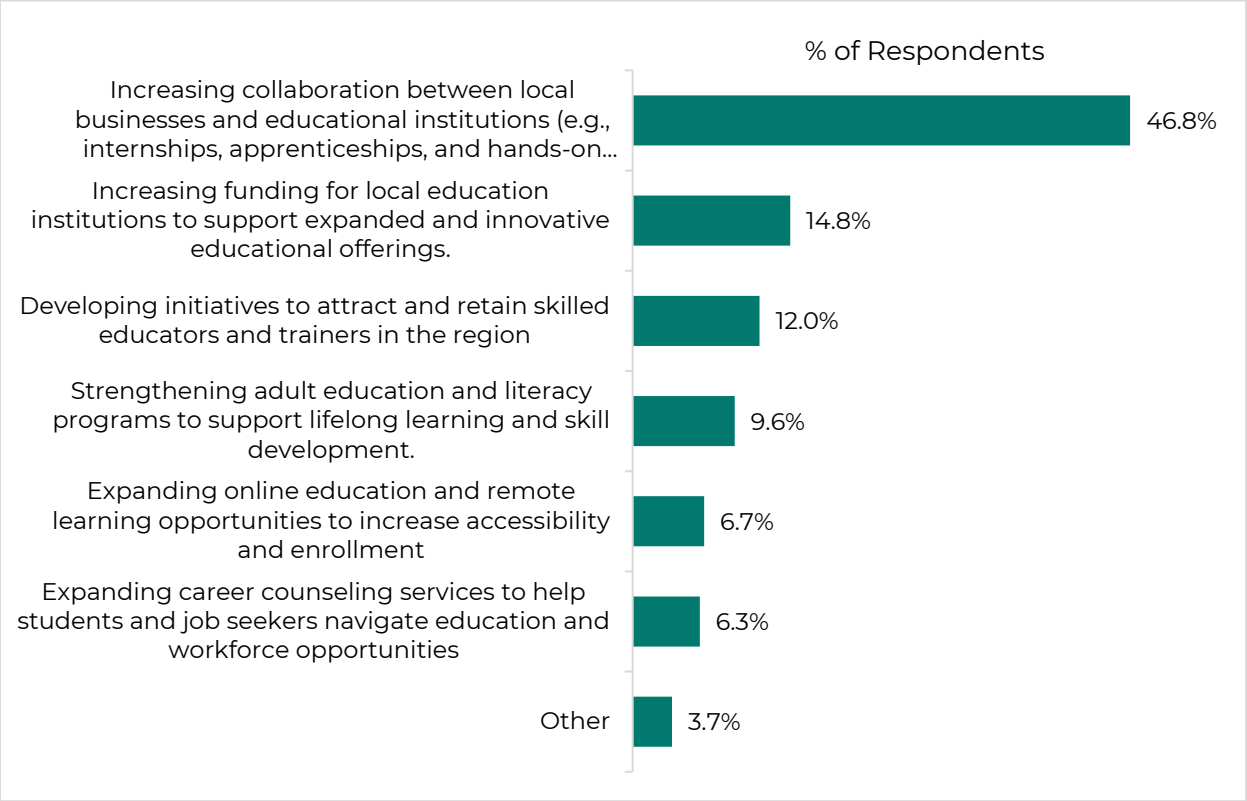
Figure 32: Greatest Workforce-Related Challenges in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Respondents overwhelmingly supported the building of stronger ties between businesses and educational institutions, with 46.8% of respondents selecting 'Increasing collaboration between local businesses and educational institutions (e.g., internships, apprenticeships and hands-on training programs).' This finding reflects a clear preference for experiential learning and work-based training opportunities as a key workforce development strategy. Secondary priorities include 'Increasing funding for local education institutions' (14.8% of respondents) and 'Developing initiatives to attract and retain skilled educators and trainers' (12.0% of respondents' selections), pointing to an interest in expanding educational capacity and ensuring instructional quality. Adult education and literacy (9.6% of respondents)

online and remote learning expansion (6.7% of respondents) and career counseling services (6.3% of respondents) received more modest support. Many respondents who selected 'Other' suggested a variety of methods for improving educational resources for children, young college students and adult workers alike.

Figure 33: Support for Education and Training Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[70]



[70] Excludes respondents who selected "I don't know."

5. Infrastructure

Transportation Infrastructure

US Route 101 serves as the major north-to-south route throughout the region, providing access to the rest of California, as well as Oregon and Washington. State Route 299 is the major east to west connector, linking to I-5 to the east of the County. These roadways are the only principal arterials in the county, critical for the flow of people and commerce. However, roadways throughout the region are vulnerable to disruption, facing frequent closures due to landslides, mudslides and slipouts.

Table 25: Major roadways in Humboldt County.

State Highways	US Routes
SR 254	US 101
SR 36	
SR 299	
SR 96	
SR 255	
SR 211	
SR 200	
SR 169	

The length of SR 299 within Humboldt is open to trucks conforming to the Surface Transportation Assistance Act (STAA) requirements the industry standard; the majority of US 101 is also open to STAA trucks.[71,72] However, due to roadway restrictions within Richardson Grove, STAA trucks are prohibited, creating a 1.1 mile gap that is inaccessible to

[71] "CA Truck Network." California Department of Transportation. https://dot.ca.gov/programs/traffic-operations/legal-truck-access/truck-network-map

[72] "Truck Networks on California State Highways." California Department of Transportation. https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/trucks/truckmap-d01-a11y.pdf

industry-standard trucks.[73] With the exception of SR 299, all other state routes within Humboldt are limited to California legal trucks (not STAA) and many have kingpin-to-rear-axle (KPRA) advisories, limiting the recommended KPRA distance to 30 feet or less.

Airports

Humboldt County has nine airports within the county, six of which are owned by the County. County-owned airports include the California Redwood Coast-Humboldt County Airport (Arcata Airport, ACV), Dinsmore Airport, Garberville Airport, Kneeland Airport, Murray Field Airport and Rohnerville Airport. Other airports in the region include the Hoopa Airport, maintained by the Hoopa Valley Tribe, the Shelter Cove Airport, maintained by the Resort Improvement District and the Samoa Field Airport, maintained by the City of Eureka.[74]

The California Redwood Coast-Humboldt County Airport is the sole commercial passenger service provider, with direct flights to San Francisco, Denver, Los Angeles and Burbank. Also located on the property is the US Coast Guard Humboldt Bay Air Station. All other airports are general aviation facilities, with Murray Field also providing freight services.[75]

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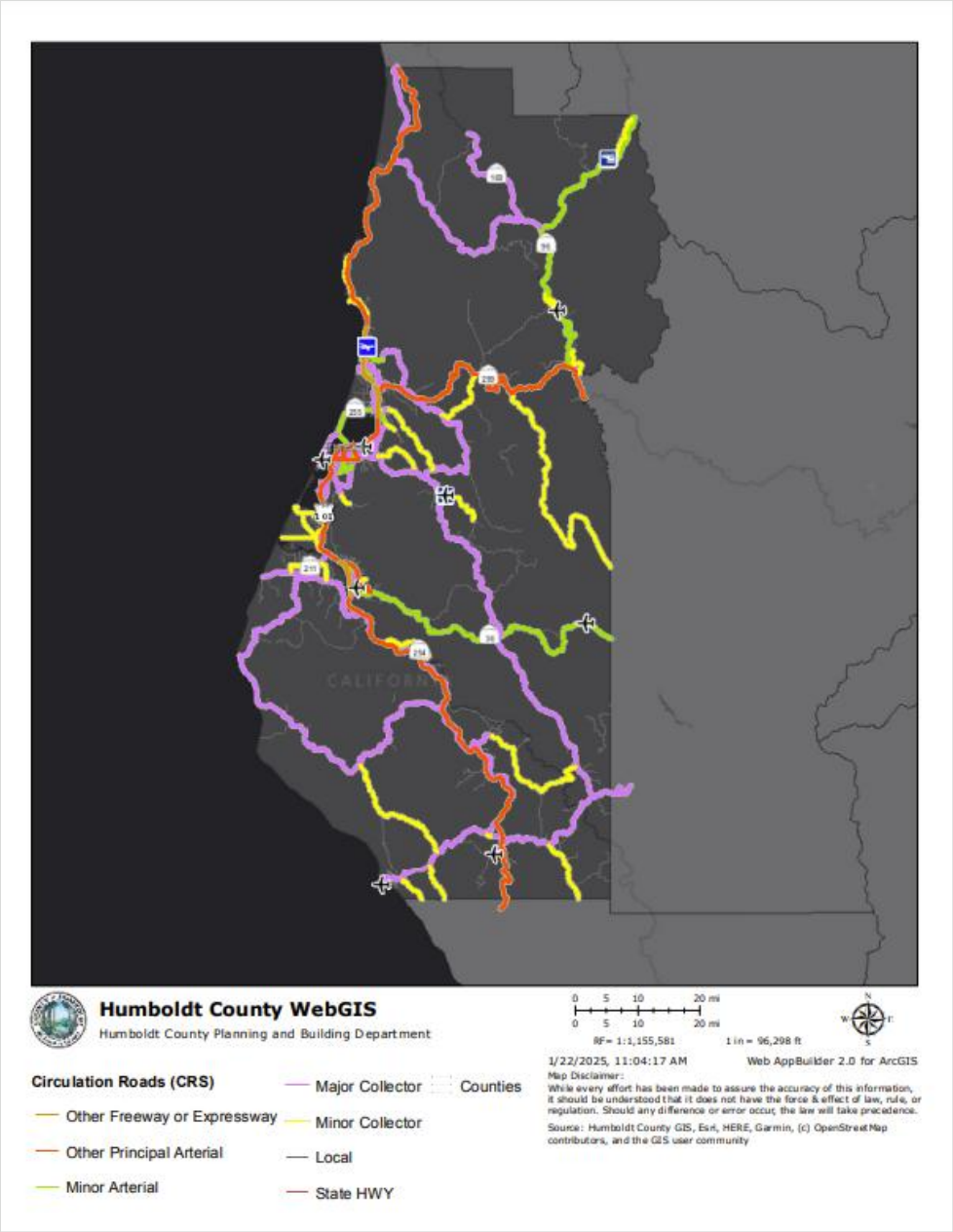
[73] "Richardson Grove Improvement Project." California Department of Transportation. https://dot.ca.gov/caltrans-near-me/district-1/d1-projects/d1-richardson-grove-improvement-project

[74] "Humboldt County Airport Land Use Compatibility Plan." Humboldt County Land Use Commission. https://humboldtgov.org/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB

[75] General aviation airports are public-use airports without scheduled service or less than 2,500 annual passenger boardings.

Figure 34: Major Roadways and Airports in Humboldt County. Source: Humboldt County WebGIS



Public Transportation

Public transit provides critical linkages to social networks, employment, healthcare, education and recreation. Public transit within the County is administered jointly between Humboldt County and the cities of Arcata, Eureka, Fortuna, Rio Dell and Trinidad, providing fixed route and dial-a-ride transit options. Riders can travel south from Trinidad to

Benbow, via SR 101 and from Arcata to Willow Creek, via Trinity Highway. Service is provided from Trinidad to Benbow (north/south) and from Arcata to Willow Creek (east/west).

Figure 35: Humboldt Transit Authority System map. Source: Humboldt Transit Authority.

Railroads

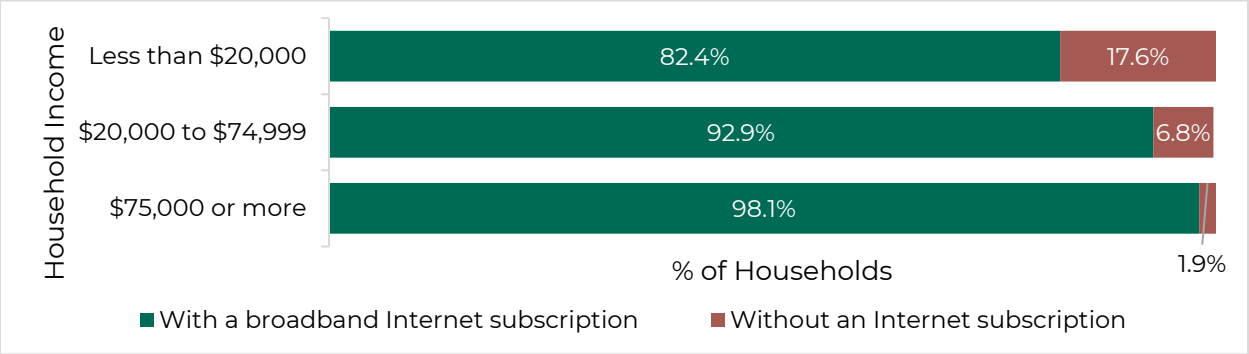
While there has been interest in reviving existing rail lines or establishing new ones, including a 2013 feasibility study, to date there is

no rail service in the County.[76] In recent years, there has been a focus on reactivating former rail corridors as public use trails. In 2018, state legislation was passed to formally dissolve the North Coast Railroad Authority and initiate the transfer of its property and rights-of-way to a new entity tasked with developing the Great Redwood Trail, a long-distance path for hiking, biking and horseback riding that would span Northern California.

Broadband

Reliable high-speed internet is necessary for much of daily life. Having access to broadband benefits economic development, education, health and public safety and provides social connections. In Humboldt County, about 93% of households report having some type of internet subscription. Internet access is not equal across income brackets, with a larger percentage of low-income households having no internet subscription.

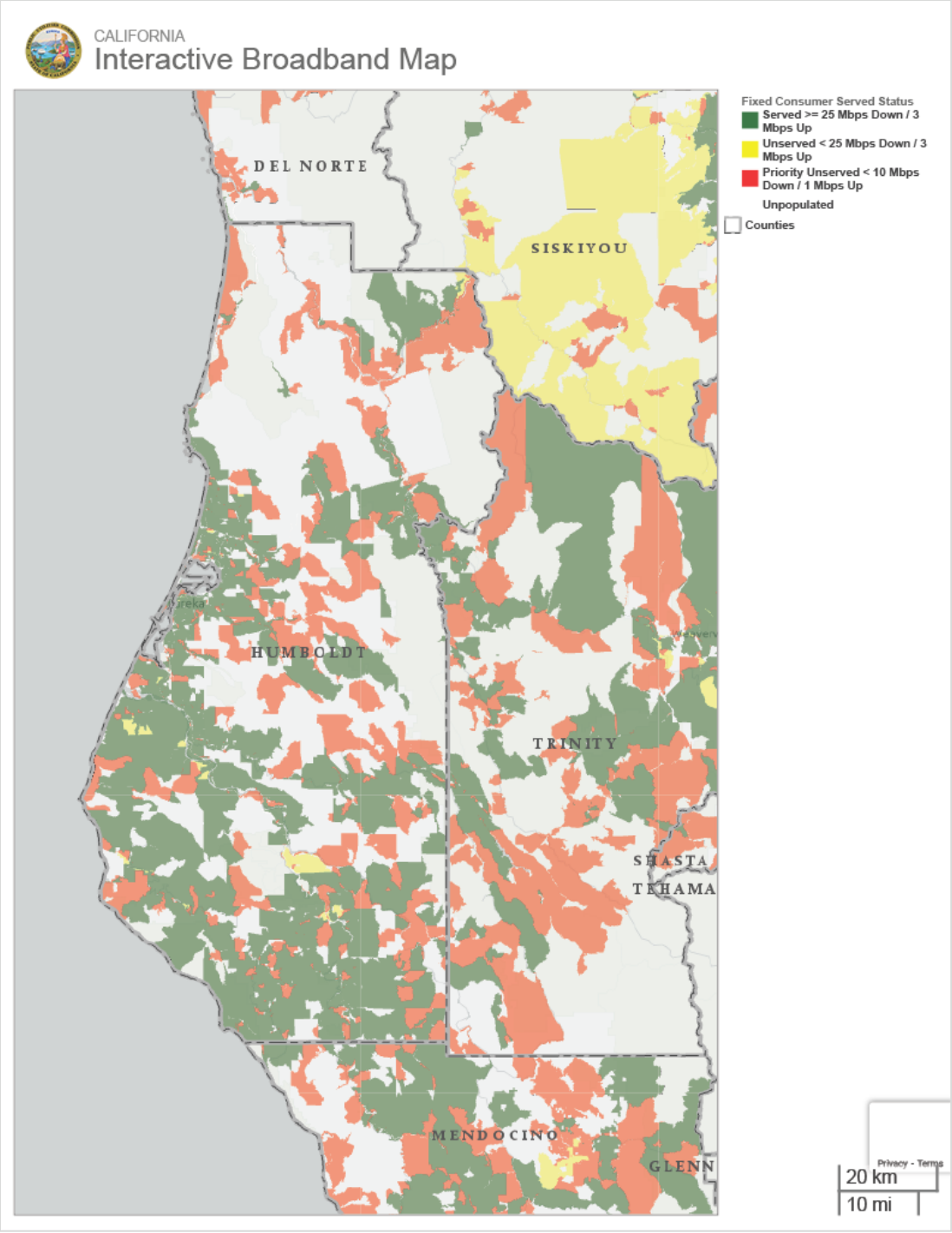
Figure 36: Broadband Internet Access in Humboldt County by Household Income. Source: 2023 American Community Survey 1-Year Estimates.



Moreover, service varies throughout the County, with significant areas being unserved (speeds less than 25 Mbps down and 3 Mbps up) or priority unserved (speeds less than 10 Mbps down and 1 Mbps up).

[76] "Humboldt Bay Alternative Rail Corridor Concept Level Construction Cost and Revenue Analysis." Humboldt Bay Harbor, Recreationand Conservation District. https://humboldtgov.org/DocumentCenter/View/61425/Humboldt-Bay-Alt-Rail-Corridor-Concept-Level-Construction-Cost--Revenue-Analysis-2013-PDF

Figure 37: Fixed internet service by speed in Humboldt County. Source: California Interactive Broadband Map.



Ongoing efforts are being made to improve service and access, much of them led by Tribal governments. Through the National Telecommunications and Information Administration (NTIA)'s Tribal Broadband Connectivity Program, Tribes in Humboldt County were awarded over $128 million for broadband planning, design and deployment. In 2024, the California Public Utilities Commission awarded $33.1 million to broadband infrastructure projects in Humboldt County, plus an additional $19.6 million to fund a multicounty project, which would include $14.6 million for broadband infrastructure in Humboldt County.

Table 26: Tribal Broadband Connectivity Program award recipients in Humboldt County. Source: National Telecommunications and Information Administration Tribal Connectivity Program.[77]

Applicant	Project Purpose	Unserved Households	Unserved Tribal businesses	Unserved Tribal Community Anchor Institutions	Awarded Amount
Blue Lake Rancheria	Broadband planning, design and stage 1 deployment	45	8	15	$493,400
Hoopa Valley Tribe	Broadband infrastructure deployment	1,045	64	19	$65,140,408
Karuk Tribe	Broadband planning study	N/A	N/A	N/A	$500,000
Wiyot Tribe	Broadband use and adoption	-	-	3	$499,997
Yurok Telecommunications Corp	Broadband infrastructure deployment	921	110	18	$61,661,366

[77] National Telecommunications and Information Administration. Round One Award Recipients. Retrieved from https://broadbandusa.ntia.doc.gov/funding-programs/tribal-broadband-connectivity/award-recipients

Table 27: Last Mile Federal Funding Grants in Humboldt County, 2024. Source: California PUC Federal Funding Account Recommendations and Awards.[78]

Recipient	Project Name	Estimated Unserved Population	Estimated Benefitting Population	Awarded Amount
Karuk Tribe	Karuk Tribe Fiber-To-The-Home	736	767	$27,445,463
Vero Fiber Networks	Arcata Bay	629	1,921	$4,396,296
AT&T	Humboldt – 1B	301	317	$775,000
AT&T	Humboldt - 1	611	570	$531,021
Yurok Telecommunications Corporation (Del Norte and Humboldt Counties)	YTEL FTTH Project	2,299	2,491	$14,111,494 (Humboldt) $5,490,542 (Del Norte)

[78] California Public Utilities Commission. (2025). Federal Funding Account Recommendations and Awards. Retrieved from https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/last-mile-federal-funding-account/federal-funding-account-awards

Energy

Humboldt County faces unique challenges when it comes to the provision of energy. It is located at the end of electricity and natural gas transmission lines, which do not have enough capacity to import all of the County's energy. To meet its energy needs, the County produces much of its own electricity, as well as some of its own natural gas. As discussed in the Humboldt County General Plan, there is strong support for energy independence, including utilizing the county's rich energy resources, such as wind, wave, biomass, hydroelectric and solar power.

Electricity

In 2022, Humboldt County used approximately 775 gigawatt-hours (GWh) of electricity, a figure that has steadily decreased over the past 10 years.[79] About 46% was for residential, with the remaining 54% being for non-residential use.

The County is connected to the broader electrical grid through three transmission lines: two 60 kilovolt (kV) and one 115 kV, all operated by PG&E. Upgrades to the existing electrical service are planned, with expected in-service dates of 2034.[80] Power is also generated locally at six power plants using biomass, natural gas and hydropower.

Humboldt County also has two microgrids. The Redwood Coast Airport Microgrid has two photovoltaic, one 2.2 megawatt (MW) array with a 2.3 MW battery storage system and a smaller 300 kilowatt (KW) array. The Blue Lake Rancheria Microgrid has a 420 kW array and a 1,150 kW battery storage system. Blue Lake Rancheria has been recognized multiple times for their microgrid, first in 2017 by the Federal Emergency Management Agency as a recipient of the John D. Solomon

[79] With vehicle electrification and building decarbonization, it is likely that electricity usage will increase in future years.

[80] "2023-2024 Transmission Plan." California ISO. https://www.caiso.com/documents/iso-board-approved-2023-2024-transmission-plan.pdf

Whole Community Preparedness Award and, secondly, in 2018 as a DistribuTECH Project of the Year.

Building from the success of these microgrids, there are additional microgrids in development in Humboldt. PG&E has announced its intent to award up to $43 million to nine community microgrids, through their Microgrid Incentive Program, four of which are in Humboldt County.[81] Additionally, Redwood Coast Energy Authority, in partnership with the Hoopa, Yurok, Karuk and Blue Lake Rancheria Tribes, received a conditional award for $88 million from the Department of Energy's Grid Resilience and Innovative Partnerships program to build four nested microgrids, a project anticipate to result in a 90% reduction in outage hours and develop over 20 MW in clean energy.[82,83]

[81] "PG&E Advancing $43 Million for Nine New Community Microgrids in Northern California." PG&E Corporation. https://investor.pgecorp.com/news-events/press-releases/press-release-details/2025/PGE-Advancing-43-Million-for-Nine-New-Community-Microgrids-in-Northern-California/default.aspx

[82] "DOE funding enables a transformative energy solution for rural Northern California tribes." Schatz Energy Research Center. https://schatzcenter.org/2024/08/teras/

[83] Project is currently undergoing a programmatic review.

Figure 38: Humboldt County Electricity. Source: California Energy Commission; mapping by TPMA.

Renewable Energy

There is considerable interest in the County to increase local renewable energy use. The Humboldt Regional Climate Action Plan calls for greenhouse gas emissions being 40% below 1990 levels by 2030, with carbon neutrality by 2045. Redwood Coast Energy Authority, a local energy provider, has plans to have 100% renewable and carbon-free energy by 2026. Further, they have set a target to meet 100% of the County's electricity needs with local renewable energy sources by 2030.

In addition to planned solar projects like North Coast Highway Solar and Hatchery Road Solar, Humboldt County is poised to become a leader in offshore wind energy. The Bureau of Ocean Energy Management (BOEM) has designated the Humboldt Wind Energy Area (WEA), located approximately 20 miles offshore, encompassing about 206 square miles, an area with the potential to generate up to 1.6 gigawatts of clean energy, enough to power approximately 560,000 homes.[84]

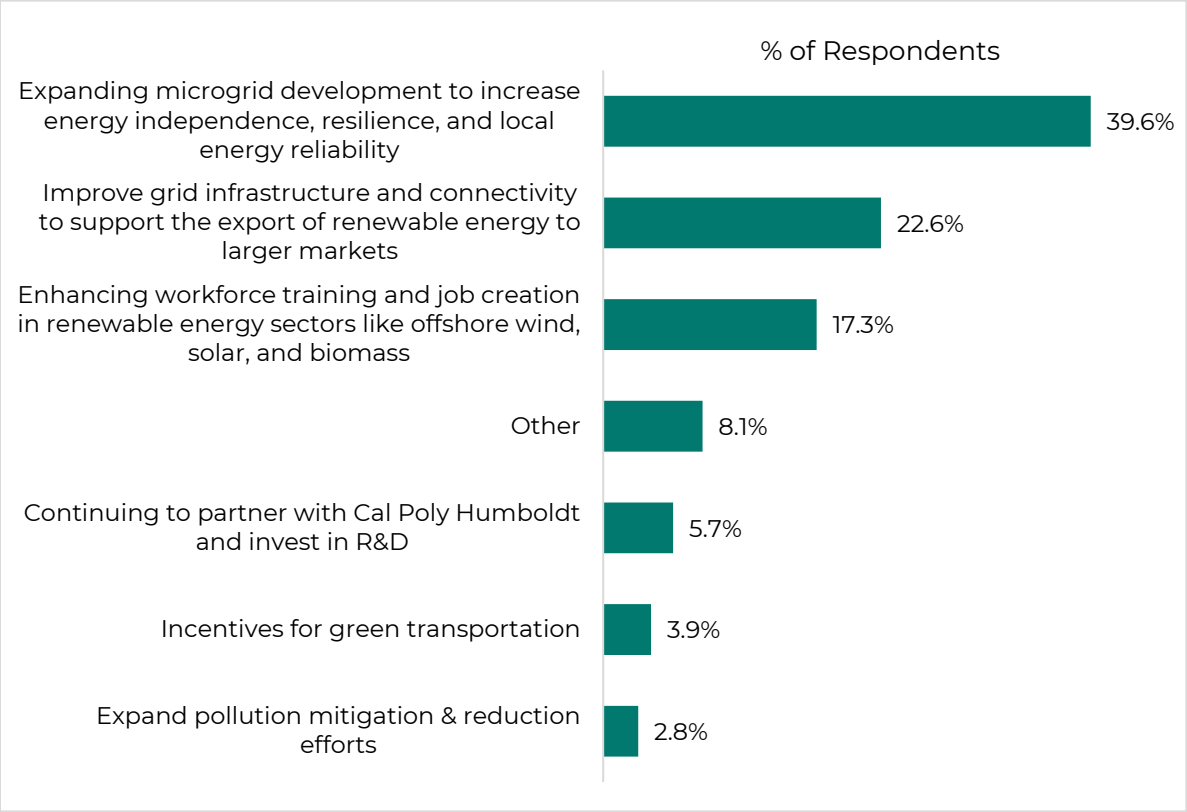
Renewable Energy Survey Results

Respondents indicated that one of the best ways to support renewable energy industries would include infrastructure and resilience improvements, with the 'Expanding microgrid development to increase energy independence, resilience and local energy reliability' option receiving the highest number of selections (39.6%); this suggests strong public and stakeholder interest in decentralized, reliable energy systems. Next, 22.6% of respondents selected 'Improve grid infrastructure and connectivity to support the export of renewable energy to larger markets,' highlighting the need for better integration with external energy systems. Workforce development was also noted to be an important tool for support, with 17.3% of respondents selecting 'Enhancing workforce training and job creation in renewable energy sectors like offshore wind, solar and biomass.' Of the respondents who selected 'Other,' many suggested various methods for improving public

[84] "BOEM Completes Environmental Review of Offshore Wind Leasing in Northern California." Bureau of Ocean Energy Management. https://www.boem.gov/newsroom/press-releases/boem-completes-environmental-review-offshore-wind-leasing-northern?utm_source=chatgpt.com

access to renewable energy resources. Other forms of support such as continued academic partnerships (5.7% of respondents), incentives for green transportation (3.9% of respondents) and pollution mitigation efforts (2.8%) received relatively lower levels of support, suggesting that while they are important, they are seen as secondary to foundational infrastructure and workforce priorities.

Figure 39: Support for Renewable Energy Industries in Humboldt County. Source: Humboldt County Community Survey Findings, 2025[85]



[85] Excludes respondents who selected "I don't know."

Natural Gas

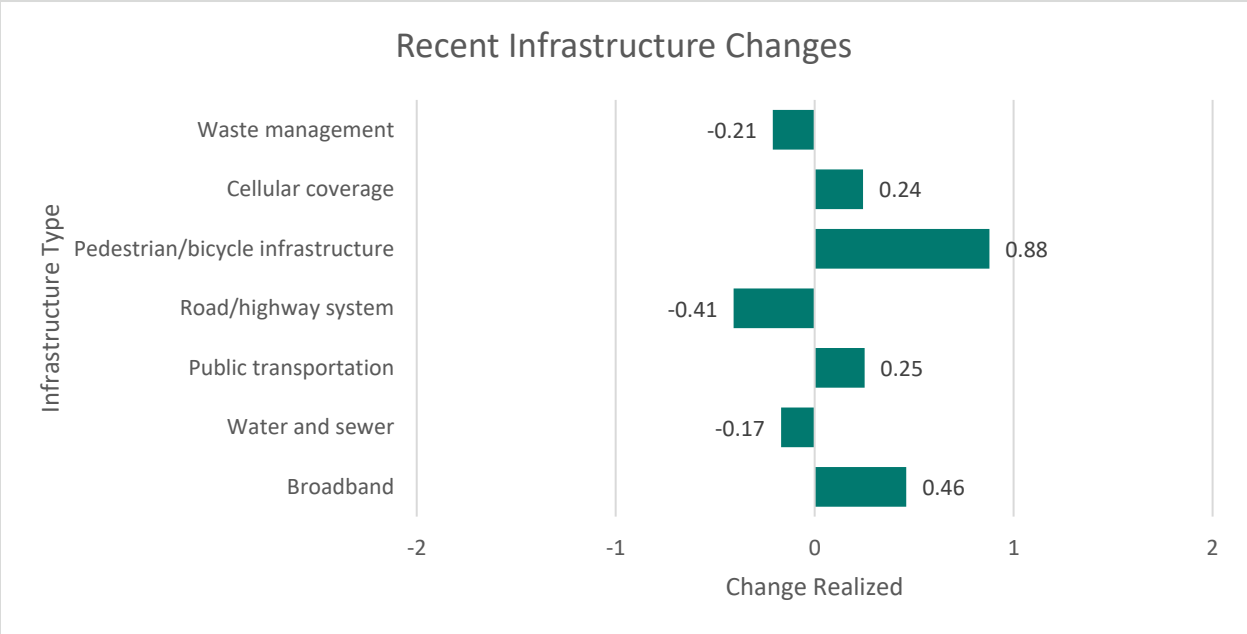
In 2022, Humboldt County consumed 30 million therms of natural gas, with 64% being for residential use. Natural gas is used to generate electricity at the Humboldt Bay Generating Station, a 163 MW facility, in addition to being used as the primary heating source for 54% of Humboldt County homes.

Infrastructure Survey Findings

Infrastructure plays a critical role in local economic development. To understand the community's perception of recent infrastructure changes, survey respondents were asked to describe how each type of infrastructure has changed over the last three years. A score of '-2' indicates that the infrastructure has significantly declined; a score of '2' indicates that the infrastructure has significantly improved. A score of '0' indicates that the infrastructure has neither improved nor declined.

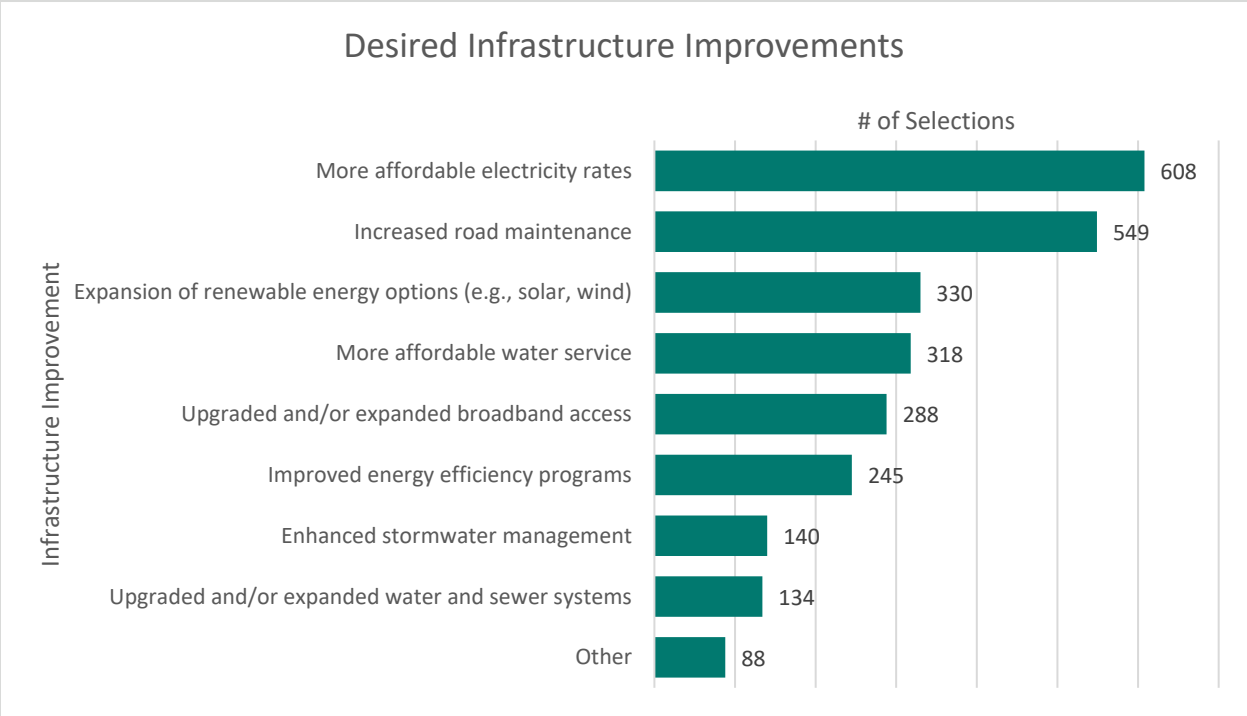
All infrastructure types were only perceived to have changed modestly over the last three years. Pedestrian/bicycle infrastructure was believed to have changed the most and for the better. Respondents also noted positive changes in the county's cellular coverage, public transportation and broadband infrastructure. Waste management, road/highway system and water and sewer infrastructure were perceived to have declined over the last three years.

Figure 40: Recent Infrastructure Changes in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Then, to help prioritize future infrastructure development, respondents were asked to select the improvements they'd most like to see in the county. The most selected infrastructure improvement was 'More affordable electricity rates,' which was selected 608 times. The next most desired infrastructure improvement was 'Increased road maintenance,' which was selected 549 times. 'Expansion of renewable energy options,' 'More affordable water service,' and 'Upgraded and/or expanded broadband access' were the next most desired improvements. Of the 88 respondents who selected 'Other,' many expressed a desire for expanded pedestrian/bicycle infrastructure and more affordable natural gas.

Figure 41: Desired Infrastructure Improvements in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Appendix A

Industry Elevation and Diversification

Major Employers

A mix of public- and private-sector businesses employ a significant share of the regional workforce. California State Polytechnic University, Humboldt (Cal Poly Humboldt) is, by far, the largest public-sector employer in the county; the California State Controller estimated that the university employed 3,387 workers in 2023. 2,469 workers were employed by the county in the same year and the Redwoods Community College District employed 877 workers. A mixture of cities, K-12 school systems and a healthcare district, are also among the largest public-sector employers in the county.

Table 28: Major Public-Sector Employers in Humboldt County. Source: California State Controller, 2023

Employer	Employment Estimate
California State Polytech University, Humboldt	3,387
Humboldt County	2,469
Redwoods Community College District	877
Humboldt County Office of Education	721
Eureka	442
Fortuna Elementary	312
Arcata	262
Southern Humboldt Community Healthcare District	146
Fortuna	143
Blue Lake Union Elementary	106

Data on private-sector employment in the county come from a different source: the State of California Employment Development Department. Although exact employment counts are not available, a range of estimated employment is provided for some of the largest companies in the county. In 2024, Providence St. Joseph Hospital was, by far, the largest private-sector employer in the county. A mixture of transportation, accommodation, financial and healthcare industries,

among others, find representation in major businesses in Humboldt County.

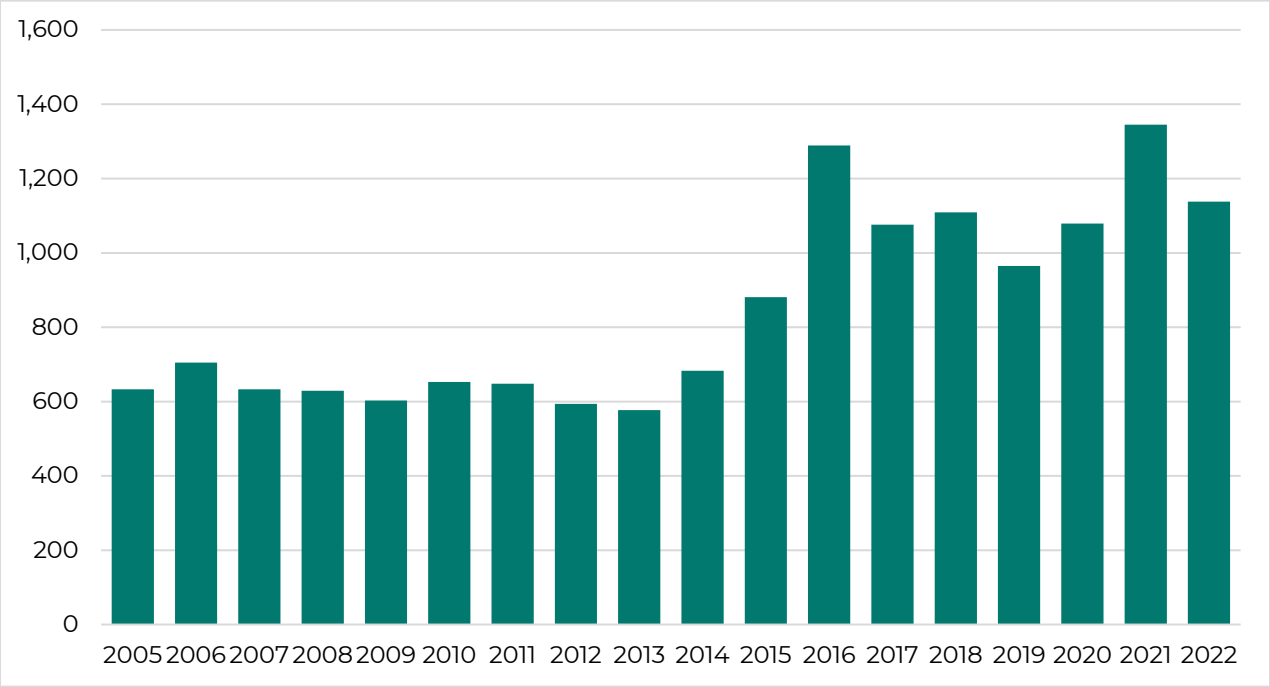
Table 29: Major Private-Sector Employers in Humboldt County. Source: State of California Employment Development Division, 2024

Employer	**Employment Estimate**
Providence St. Joseph Hospital	1,000-4,999
Bettendorf Trucking	250-499
Blue Lake Casino & Hotel	250-499
Green Diamond Resource Co	250-499
Mad River Community Hospital	250-499
Newmarket International Inc	250-499
Umpqua Bank	250-499
Costco Wholesale	100-249
Danco Group	100-249
North Coast Co-Op	100-249
Pacific Seafood Co	100-249
Redwood Memorial Hospital	100-249
Schmidbauer Lumber Inc	100-249
Security National Svc Co	100-249
Target	100-249
Winco Foods	100-249

Business Applications by Year[86]

The number of business formations gives insight into the level of entrepreneurial and business initiation activity. Since 2014, Humboldt County has seen a significant upswing in the number of business applications, with annual business applications exceeding 1,000 per year in recent years.

Figure 42: Business applications in Humboldt County by year. Source: U.S. Census Bureau Business Formation Statistics.



[86] For more information on the economic development ecosystem in Humboldt County, please see Economic Development Assets.

Economic Development Assets

Humboldt County has a robust network of economic development assets to support business growth and entrepreneurship and workforce development.

Key Investments and Economic Development Wins

- Airport runway and electrical rehabilitation and parking lot rehabilitation
- Establishment of the Samoa Peninsula EIFD to revitalize commercial development in the region
- Investment into Life Plan Humboldt retirement community
- Brought American Job Center of California in house along with all programs
- Established WindLink to support the collaborative development of local supply chain around Offshore Wind
- Heavy Marine Terminal Project under development to modernize the port infrastructure
- Expansion of internet connectivity and service providers heavily influenced by the work of the Tribes
- Nordic Aquafarms project on the Peninsula is moving forward with permitting and environmental impact study
- Expansion Project at K'ima:w Medical Center
- Development of new hospital facility in southern Humboldt
- Development of solar array and Micro Grid at ACV
- Redevelopment of Orick by the Yurok tribe including a welcome center
- Opening of North Coast SBDC Startup Humboldt Innovation Hub
- Construction under way of the Blue Lake Rancheria T'am Resilience Center

Business Improvement Districts and Enhanced Infrastructure Financing Districts

- Humboldt Tourism Business Improvement District
- Samoa Peninsula Enhanced Infrastructure Financing District

Economic Development Organizations

- North Edge (formerly Arcata Economic Development Corporation)

- Northern California Indian Development Council
- California Center for Rural Policy
- Redwood Region Economic Development Commission
- Humboldt County Economic Development Division
- City of Arcata Economic Development Division
- City of Blue Lake Economic Development Department
- City of Eureka Economic Development Division

Chambers of Commerce

- Arcata Chamber of Commerce
- Blue Lake Chamber of Commerce
- Ferndale Chamber of Commerce
- Fortuna Chamber of Commerce
- Greater Eureka Chamber of Commerce
- Greater Trinidad Chamber of Commerce
- Loleta Chamber of Commerce
- McKinleyville Chamber of Commerce
- Orick Chamber of Commerce
- Rio Dell-Scotia Chamber of Commerce
- Southern Humboldt Chamber of Commerce & Visitors Center
- Willow Creek Chamber of Commerce

Downtown Organizations

- Arcata Main Street
- Eureka Main Street Program
- Fortuna Downtown Business Association

Small Business Resource Partners

- North Coast Small Business Development Center
- Blue Lake Rancheria Toma Resilience Campus
    - Blue Lake Rancheria Resilience Business Incubator
- The Headwaters Fund (grants and revolving loan fund)
- Redwood Region EDC Revolving Loan Fund
- North Edge Revolving Loan Fund
- Affiliated Tribes of Northwest Indians EDC Revolving Loan Fund
- California Infrastructure and Economic Development Bank
- Lost Coast Ventures
- Humboldt County Farm Bureau
- Humboldt County Growers Alliance
- North Coast Growers' Foundation
- University of California Cooperative Extension (UCCE) Humboldt-Del Norte Counties
- Hoopa Development Fund
- APEX Accelerator

Opportunity Zones

Qualified opportunity zones (QOZ) are economically distressed communities, defined by individual census tracts, where certain investments are encouraged through the provision of tax incentives. Humboldt County has seven opportunity zones, located in the northeast part of the county and to the west in the Eureka/Arcata/McKinleyville area.

Investments in these zones, including those in commercial and industrial real estate, housing, infrastructure and existing or start-up businesses, may qualify for tax benefits. Within these areas, investors within the opportunity zone are eligible for capital gains tax deferral, tax reduction, or elimination of taxes on future gains.[87]

About Humboldt County's QOZs:

- All are located in a qualified HUBZone.[88]
- The closest EDA University Center is California State University, Chico.
- There are three EDA-funded revolving loan funds: the Redwood Region Economic Development Commission, the Affiliated Tribes of Northwest Indians Economic Development Corporation and North Edge (formerly the Arcata Economic Development Corporation).[89]

Three of the seven QOZs are also HUD 2025 Low-Income Housing Tax Credit Qualified Census Tracts.[90]

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[87] "Opportunity Zones." *GoHumCo Economic Development*. https://www.gohumco.com/358/Opportunity-Zones

[88] https://maps.certify.sba.gov/hubzone/map#center=44.722800,-103.249700&zoom=4

[89] https://www.eda.gov/grant-resources/economic-development-directory/ca

[90] https://www.huduser.gov/portal/datasets/qct.html

Figure 43: Opportunity Zones in Humboldt County. Mapping by TPMA; data from the State of California Department of Finance.

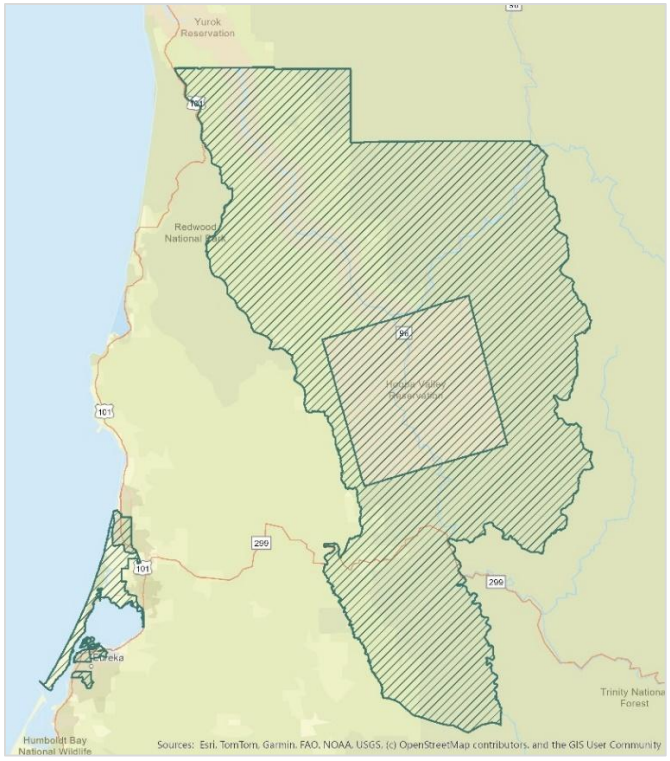


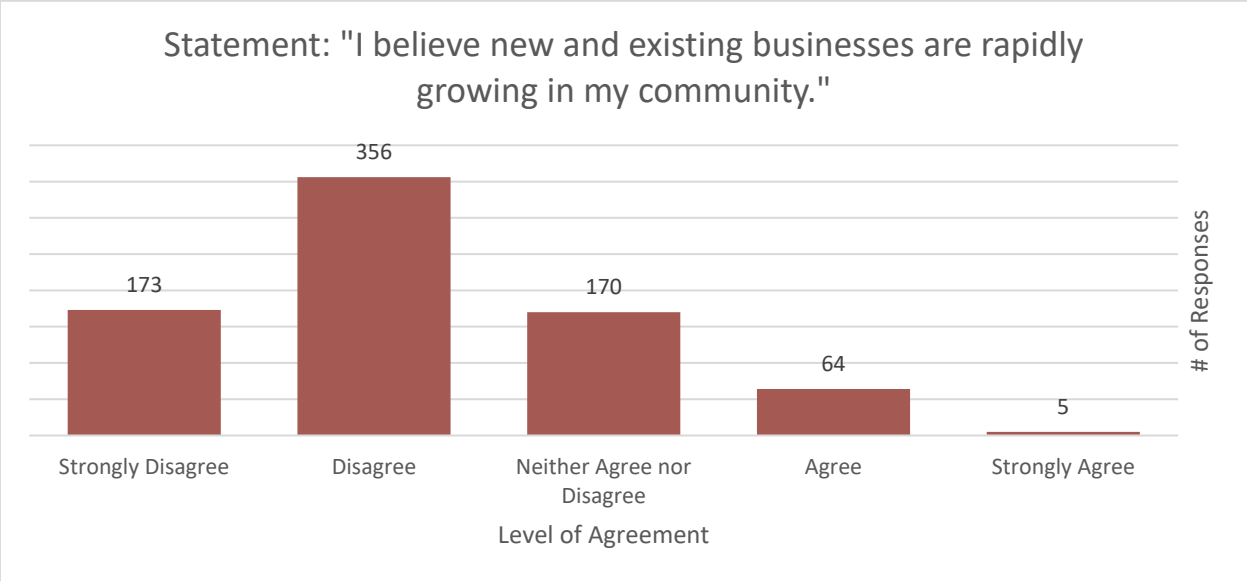
Table 30: Opportunity Zone Data Overview in Humboldt County. Source: ACS 5-Year Estimates

Geographic Area	Median Household Income	Below Poverty Line	Median Home Value	High School Education	Median Age
Humboldt County[91]	$61,135	18.9%	$418,000	91.5%	39.6
Census Tract 1	$37,985	29.4%	$365,300	92.7%	36.1
Census Tract 3	$70,457	11.3%	$345,300	87.7%	37.2
Census Tract 5	$42,122	25.1%	$371,000	91.3%	44.4
Census Tract 13	$59,818	10.2%	$409,100	89.9%	43.6
Census Tract 101.02	$46,935	16.0%	$328,500	91.1%	54
Census Tract 105.01	-	-	-	-	-
Census Tract 9400	$54,306	28.1%	$250,000	90.0%	

Business Support & Attraction Survey Results

To measure the community's perception of local business activity, respondents were presented with a series of related statements and asked to rate their level of agreement with each. The first statement was, "I believe new and existing businesses are rapidly growing in my community." Of 768 respondents, only 69 (9.0%) agreed or strongly agreed with the statement. The majority of respondents (529, or 68.9%) disagreed or strongly disagreed with the statement.

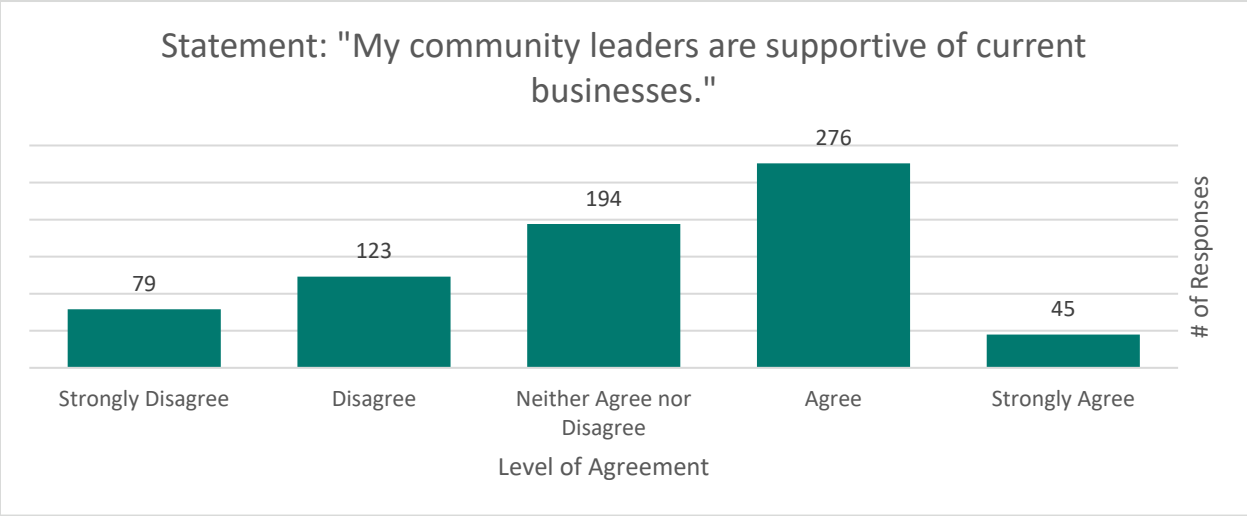
Figure 44: Local Business Growth in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Despite the perception that local businesses are not growing, many respondents felt that community support for local businesses exists. When presented with the statement, "My community leaders are supportive of current businesses," 321 respondents, or 44.8%, agreed or strongly agreed. A smaller share of respondents (202, or 28.2%) disagreed or strongly disagreed with the statement.

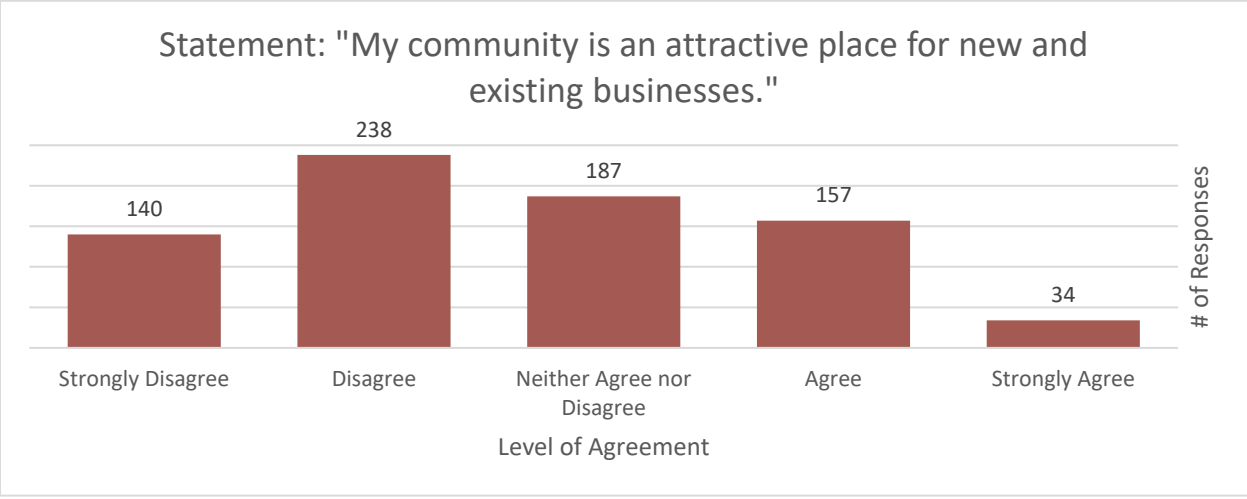
[91] This table uses 5-year estimates, therefore, there may be differences in county-level data between this data and other figures in this report.

Figure 45: Local Business Support in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



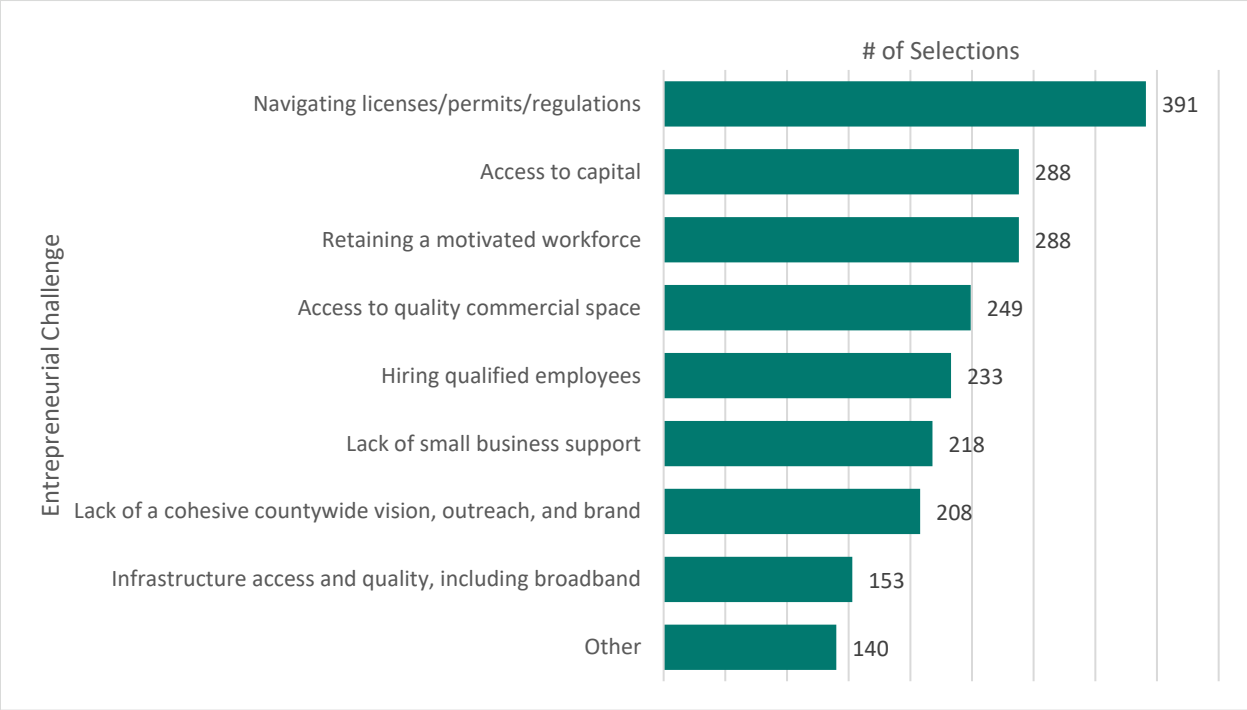
Then, respondents were asked to rate their agreement with the statement, “My community is an attractive place for new and existing businesses.” As can be seen in the graph, agreement with this statement skewed negative. Of 756 respondents, 191 (25.3%) agreed or strongly agreed with the statement; 378, or 50%, disagreed or strongly disagreed. This indicates a need to improve the county’s image as an attractive place for business development and relocation.

Figure 46: Business Attraction in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



To identify challenges faced by entrepreneurs in the county, respondents were asked to select the options that presented the greatest barrier to growth. Respondents could select up to three options. The top challenge identified by respondents was 'Navigating licenses/permits/regulations,' which was selected 391 times. 'Access to capital' and 'Retaining a motivated workforce' were each selected 288 times and were the next most commonly identified challenges. 140 respondents selected the 'Other' option and many listed high costs of commercial space, the prevalence of homelessness in the community, limited access to healthcare and a small local consumer base as barriers to starting and supporting a business.

Figure 47: Greatest Entrepreneurial Challenges in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Indigenous Tribes in Humboldt County

Humboldt County and the greater Northwest California region is home to many sovereign Tribal governments. These include: the Bear River Band of the Rohnerville Rancheria, the Big Lagoon Rancheria, the Blue Lake Rancheria, the Hoopa Valley Tribe, the Karuk Tribe, the Pulikla Tribe of Yurok People, the Tolowa Dee-ni' Nation, Trinidad Rancheria, the Wiyot Tribe and the Yurok Tribe.

Bear River Band of the Rohnerville Rancheria

The Bear River Band of the Rohnerville Rancheria was established in 1910, as a "home for homeless, landless Native American Indians." After having their federal recognition revoked in 1958, the Tribe regained federal recognition in 1983, but was not compensated for lost land, resources, culture and rights.[92] The Bear River Band of the Rohnerville Rancheria is based in Loleta with over 600 Tribal members, primarily from the Mattole and Wiyot Tribes; other Tribes, such as Hoopa, Yurok and Tolowa are included through marriage or interrelations.[93,94]

The Bear River Band of the Rohnerville Rancheria has invested in economic development to support Tribal sovereignty and community wellbeing. The Tribe opened the Bear River Casino in 2005, followed by the Bear River Hotel in 2012, generating jobs and revenue for Tribal services. In 2014, the Tribe developed its first Comprehensive Economic Development Strategy (CEDS) to guide long-term growth.

This commitment to community-focused development continued with the opening of the Bear River Recreation Center in 2016 and the Bear River Family Entertainment Center in 2019.[95] In addition, the Tribe owns

[92] Bear River Band of the Rohnerville Rancheria. Our Story. Retrieved from https://www.bearriverrancheria.org/our-story

[93] Bear River Casino & Resort. Bear River Band of Rohnerville Rancheria. Retrieved from https://bearrivercasino.com/bear-river-band-of-rohnerville-rancheria/

[94] Bear River Band of the Rohnerville Rancheria. Bear River Band of Rohnerville Rancheria Comprehensive Economic Development Strategy. Retrieved from https://www.bearriverrancheria.org/_files/ugd/c3beb0_aea67550251542f28d69ce117a363f38.pdf

[95] Bear River Band of the Rohnerville Rancheria CEDS

and operates the Bear River Pump & Play Gas Station and Bear River Tobacco Traders.[96] The Bear River Band of the Rohnerville Rancheria completed a second CEDS in 2024 and is actively developing a new plans to guide the next phase of its development.[97]

Big Lagoon Rancheria

The Big Lagoon Rancheria is a federally recognized Tribe comprised of Yurok and Tolowa people. Federally recognized since 1918, the Tribe has a small membership of approximately 20 individuals. The reservation, located on 20 acres adjacent to the Big Lagoon in Northern Humboldt, has its headquarters in Arcata. The tribe has pursued casino development since 1994 but has not been able to proceed because of legal battles that have continued into 2025.

Blue Lake Rancheria

The Blue Lake Rancheria is a federally recognized Tribe, with about 100 members. The base for the Blue Lake Rancheria is comprised of about 100 acres near Arcata and Eureka on the ancestral homelands of the Wiyot people. The Tribe was established in 1908 under the Rancheria Act and had their federal recognition revoked in 1958. In 1983, the Tribe regained recognition but was only granted access to a portion of its former land.[98]

The Blue Lake Rancheria has made significant investments in economic development and climate resilience. The Tribe owns and operates several successful enterprises, including the Blue Lake Casino Hotel, Powers Creek Brewery and Alice's Restaurant, supporting local employment. The Tribe is also building the Ta'm Resilience Campus, a 15,000 square foot facility designed to serve as centralized hub for resilience, economic development and disaster preparedness. The campus will include a business incubator, workforce training center

[96] Bear River Band of the Rohnerville Rancheria. Enterprises. Retrieved from https://www.bearriverrancheria.org/enterprises

[97] Bear River Band of the Rohnerville Rancheria CEDS

[98] Blue Lake Rancheria. Blue Lake Rancheria Wetland Program Plan. Retrieved from https://www.epa.gov/sites/default/files/2016-06/documents/blr_wpp_final.pdf

and a commercial kitchen, in addition to hosting networking opportunities. The Tribe is also actively engaged in sustainability initiatives, such as the development of the Blue Lake Rancheria Microgrid, as well as its $11.5 million carbon sequestration project.

Hoopa Valley Tribe

The Hoopa Valley Tribe is a federally recognized tribe with over 3,500 enrolled members.[99] The Tribe has been federally recognized since 1864, following the signing of a treaty giving the Hoopa people rights to a a 141-square mile area, less than a third of their less than a third of their ancestral lands. The Tribe has worked to regain parts of that area over time, most recently purchasing 10,395 acres of land on the western boundary of the Tribe's Reservation.[100]

The Hoopa Valley Tribe operates a number of Tribal enterprises, such as the Hoopa Valley Public Utilities District (HVPUD), Lucky Bear Casino, Hoopa Shopping Center, Hoopa Forest Industries and the K'ima:w Medical Center. To further economic development, the Tribe has established the Hoopa Development Fund and a Native Community Development Financial Institution (CDFI) to provide financial services and promote entrepreneurship in the community. The Hoopa Valley Tribe is one of a small group, estimated to be 10% nationwide, of Tribes with their own Tribal Business Codes.[101]

Karuk Tribe

The Karuk Tribe has been recognized as a sovereign government since 1851, when the Karuk Tribe signed Treaty R, one of the unratified California Indian Treaties of 1851-1852. Because the treaties were not

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[99] Judicial Branch of California. Hoopa Valley Tribal Court. Retrieved from https://courts.ca.gov/programs-initiatives/tribalstate-programs/tribal-justice-systems/california-tribal-courts-0

[100] "Hoopa Valley Tribe Regains Major Tract of Ancestral Land." https://www.conservationfund.org/our-impact/news-insights/hoopa-valley-tribe-regains-major-tract-of-ancestral-land/

[101] Hoopa Valley Tribe Comprehensive Economic Development Strategy (CEDS) 2016-2020. https://www.hoopa-nsn.gov/wp-content/uploads/2016/09/Hoopa-Valley-Tribe_CEDS_Draft_v5_FINAL-APPROVED.pdf

ratified, the Tribe was not granted a reservation in 1851. The Tribe reestablished government-to-government communications in 1979, when its federal recognition was reaffirmed; however, no land was granted to the Tribe at that time. The Tribe has worked to acquire land and now has 914 acres of land held in trust by the federal government and 822 acres owned by the Tribe, located throughout Orleans, Happy Camp and Yreka.[102,103] The Tribe has over 3,500 enrolled members.

In 2021, the Tribe released its latest Comprehensive Economic Development Strategy (CEDS), building upon previous plans and prioritizing five pillars: infrastructure, innovation, resilience, adaptation and capacity. The Karuk Community Development Corporation (KCDC) leads many of the Tribe's economic initiatives, supporting a diversified economy. The Tribe owns and operates Rain Rock Casino, which is currently undergoing an expansion that will provide further employment opportunities. To increase digital access and equity, in 2015 the Tribe launched its own internet service Provider (ISP), Áan Chúuphan. The Tribe has consistently worked to increase and improve internet service, including a recent partnership with the California Department of Technology (CDT) for the construction of 46 miles of open-access, middle-mile broadband infrastructure.[104]

Pulikla Tribe of Yurok People

The Pulikla Tribe of Yurok People is a federally recognized Tribe of Yurok Origin. In 1851, 18 treaties were negotiated in California, including with the "Pohlik or Lower Klamath River Tribe." However, none of these treaties were ratified by the federal government and in 1855, the Pulikla

[102] "Tribal Government Profile and Summary, 2020." Karuk Tribe. https://www.karuk.us/images/docs/hr-files/Karuk-Tribal_Government_Fact_Sheet_2020.final.pdf

[103] "Benefits of Trust Land Acquisition." US Department of the Interior, Indian Affairs. https://www.bia.gov/service/trust-land-acquisition/benefits-trust-land-acquisition

[104] California Department of Technology. California Department of Technology and Karuk Tribe Partner to Close the Digital Divide. Retrieved from https://cdt.ca.gov/newsroom/2024/12/california-department-of-technology-and-karuk-tribe-partner-to-close-the-digital-divide/

Tribe was part of the Klamath River Reservation.[105] In 1938, the US government purchased 228 acres of land on the lower Klamath River, which became the Resighini Rancheia in 1939.[106] Today, the Tribe owns over 450 acres of land and has 152 Tribal citizens.[107]

The Tribe operates the Cher'ere Campground & RV Park at the Klamath River estuary, generating tourism and revenue.[108] In 2023, the Tribe signed a historic General Agreement with the National Park Service and California State Parks to co-manage projects in Redwood National and State Parks, ensuring the protection of Yurok cultural resources and opening pathways for cooperative economic development and education programs.[109]

Tolowa Dee-ni' Nation

The Tolowa Dee-ni' Nation is a federally recognized Tribe based in Smith River, California, with ancestral homelands that span from Wilson Creek and Smith River in California to the Sixes River in Oregon. Before sustained contact with settlers, the Tolowa were devastated by epidemics introduced indirectly through Spanish and Russian intermediaries. The California Gold Rush led to the state-sponsored massacre of the Tolowa people, resulting in the decimation of the California Indian population. In 1862, the 17,000-acre Smith River Reservation was established. However, this was rescinded in 1868. In 1908, the 160-acre Smith River Rancheria was established, but this was

[105] Pulikla Tribe of Yurok People. Who We Are. Retrieved from https://puliklatribe.gov/who-we-are/

[106] Native News Online. Resighini Rancheria Becomes Pulikla Tribe of Yurok People, Honoring Ancestral Lands and Cultural Heritage. Retrieved from https://nativenewsonline.net/sovereignty/resighini-rancheria-becomes-pulikla-tribe-of-yurok-people-honoring-ancestral-lands-and-cultural-heritage

[107] Pulikla Tribe of Yurok People. Enrollment & Elections. Retrieved from https://puliklatribe.gov/enrollment/

[108] Pulikla Tribe of Yurok People. Cher'ere Campground & RV Park. Retrieved from https://puliklatribe.gov/campground/

[109] Redheaded Blackbelt. Redwood National Park and State Parks and Resighini Rancheria Sign Historic General Agreement. Retrieved from https://kymkemp.com/2023/05/08/redwood-national-park-and-state-parks-and-resighini-rancheria-sign-historic-general-agreement/

followed by the federal termination of rancheria governments in 1960, resulting in the loss of all but a few acres of land. In 1983, recognition was restored.[110] Today, the Tolowa Dee-ni' Nation has over 950 acres of tribal-owned land and over 1,900 Tribal citizens.[111]

The Tolowa Dee-ni' Nation owns and operates several Tribal enterprises that support its economic independence and provide vital services to members. These include the Lucky 7 Casino & Hotel, Howonquet Village & Resort and the Rowdy Creek Fish Hatchery.[112] In addition to generating revenue, these businesses support jobs and contribute to Tribal services such as education, housing, healthcare and social programs. The Tribe has also made significant investments into community development, such as the 27-unit Dat-naa-svt Village Project (with five more homes being built in 2026) and the expansion of the Xaa-wan'-k'wvt Head Start facility.[113,114]

Trinidad Rancheria

The Trinidad Rancheria, with ancestral ties to the Yurok, Wiyot and Tolowa peoples, was established in 1906 to house homeless California Indians. In 1908, 60 acres were purchased to accommodate the Tribe and federal recognition was granted in 1917.[115] The Tribe has expanded

[110] Tolowa Dee-ni' Nation. About Us. Retrieved from https://www.tolowa-nsn.gov/35/About-Us

[111] Tolowa Dee-ni' Nation. Our Lands. Retrieved from https://www.tolowa-nsn.gov/246/OUR-LANDS

[112] Tolowa Dee-ni' Nation. Enterprises. Retrieved from https://www.tolowa-nsn.gov/101/Enterprises

[113] Tolowa Dee-ni' Nation. Daat-naa-svt Village Project. Retrieved from https://www.tolowa-nsn.gov/170/Dat-naa-svt-Village-Project

[114] Tolowa Dee-ni' Nation. May 2025 Tribal Government Newsletter. Retrieved from https://issuu.com/tolowadeeni/docs/may_2025_newsletter

[115] Cher-Ae Heights Indian Community of the Trinidad Rancheria. About Trinidad Ranceria. Retrieved from https://trinidad-rancheria.org/about/

its land holdings and the Rancheria now includes 108 parcels across five properties. As of 2011, the Tribe had 206 members.[116]

The Tribe owns and operates the Heights Casino, Seascape Restaurant and Seascape Home Rental. It also owns and manages the Trinidad Pier and Harbor through the Trinidad Tribal Harbor District, which was recently put into Trust for the Trinidad Rancheria. To guide development, the Harbor District completed a strategic planning process, creating a roadmap for Tribal Harbor District that honors traditional ways of life and brings economic prosperity to the Tribe.[117]

Wiyot Tribe

The Wiyot Tribe, with about 600 members, is a federally recognized tribe with ancestral ties to the Humboldt Bay region, including present-day Eureka and Arcata. In 1860, during the Tribe's annual World Renewal Ceremony, settlers carried out the Tuluwat Massacre, killing an estimated 80 to 250 Wiyot people. Survivors were displaced across the region until the early 1900s, when a church group purchased 20 acres in the Eel River estuary that became a federally recognized reservation in 1908. The Tribe's federal recognition was revoked in 1961 but reinstated in 1981 following a legal challenge. After a lawsuit over contaminated drinking water, the federal government purchased new land and the Tribe relocated to the 88-acre Table Bluff Reservation, while the original 20 acres remain privately owned by families. In recent years, the City of Eureka returned Tuluwat to the Wiyot Tribe, putting the Tribe's sacred site back in rightful hands for the first time in about 160 years.

A five-year strategic plan guides the Wiyot Tribe's economic development efforts. A key initiative is the Dishgamu Humboldt Community Land Trust (CLT), established to return ancestral lands to

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[116] Cher-Ae Heights Indian Community of the Trinidad Rancheria. Comprehensive Community-Based Plan. Retrieved from https://trinidad-rancheria.org/wp-content/uploads/2021/05/TR_Comprehensive_Plan_Final-Dec2011.pdf

[117] Strategic Earth Consulting. Project Wrap Up: Trinidad Rancheria Tribal Harbor District. Retrieved from https://strategicearth.com/project-wrap-up-trinidad-rancheria-tribal-harbor-district/

Wiyot stewardship and promote affordable housing, workforce development and environmental and cultural restoration. The CLT has completed the Jaroujiji' Youth Housing project, for youth who are homeless or at risk of homelessness. In partnership with the City of Eureka, Dishgamu Humboldt has also been selected to develop affordable housing on two city-owned parking lots, which will result in 93 new units of housing.

Yurok Tribe

The Yurok Tribe signed a "Treaty of Peace and Friendship" in 1851, one of the unratified California Indian Treaties.[118] In 1855, the government created the 55,000 Yurok Indian Reservation and confined the Yurok people to it, an area much small than their ancestral territory.[119] The Tribe suffered further land losses through the General Allotment Act, which allotted less than 30,000 acres to Tribal members; the Tribe has focused on expansion efforts and the current Yurok Reservation is about 56,000 acres.[120] With 6,500 enrolled members, the Yurok Tribe is currently the largest Tribe in California and employs more than 480 people to provide services and membership to the community.[121]

Through the Yurok Economic Development Corporation (YEDC), the Tribe manages a diverse portfolio of enterprises, including the Redwood Hotel Casino, Klamath Jet Boat Tours, Bluff Creek Resort and Redwood RV Park. In 2023, YEDC secured a $6 million grant from the U.S. Economic Development Administration to construct a new Shoreline Market in Orick, featuring a fuel station, laundromat, convenience store and tribal government offices designed in the style of a traditional Yurok home. The Tribe has also expanded into the technology sector with the launch of Condor Aviation, an aerial surveying enterprise established with a $5 million federal grant. Additionally, the Yurok Telecommunications Corporation was created to improve broadband access across Tribal lands, aiming to bridge the digital divide in rural communities.

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[118] Yurok Tribe. Tribe Constitution. Retrieved from https://yurok.tribal.codes/Constitution/Preamble

[119] Yurok Tribe. Formation of Reservations. Retrieved from https://www.yuroktribe.org/formation-of-reservations

[120] Per-Geesh Construction. The Yurok Tribe. Retrieved from https://www.per-geeshconstruction.com/

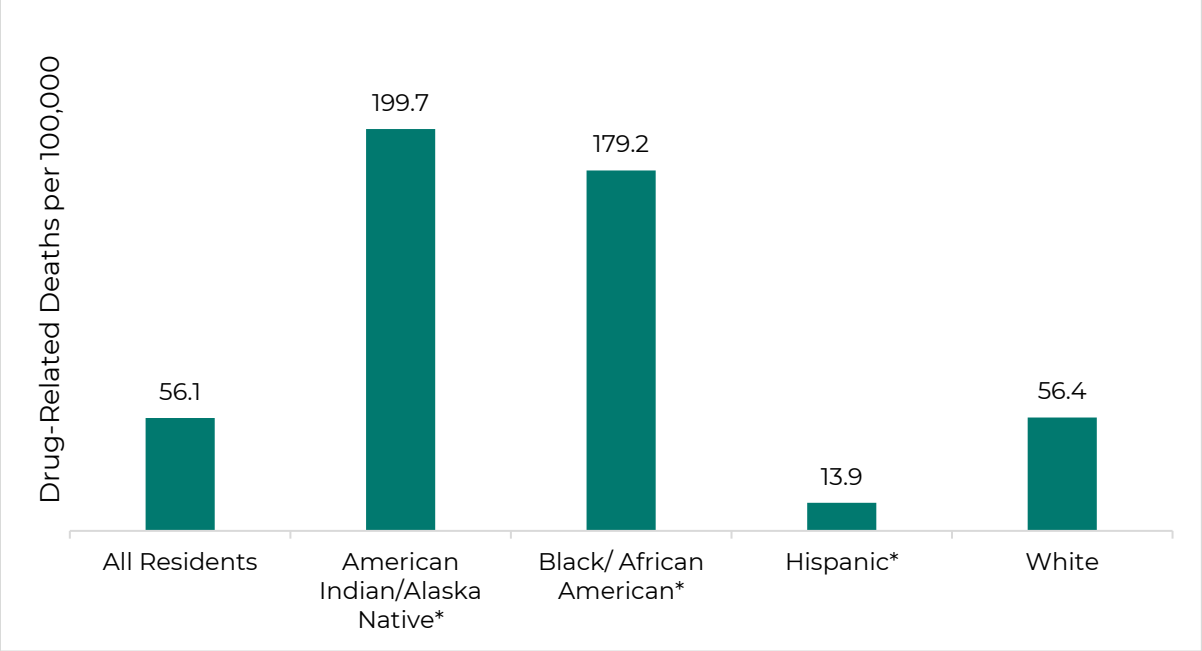
[121] Visit Yurok Country. The Yurok Tribe. Retrieved from https://www.visityurokcountry.com/about

Fundamental Community Needs

Healthcare

Drug poisoning and SUD deaths do not occur equally within racial and ethnic groups. The incidence of drug poisoning/SUD deaths for the American Indian/Alaskan Native group is nearly twice as high as in other racial and ethnic groups in Humboldt County.

Figure 48: Age-Adjusted Drug-Related Death by Race and Ethnicity in Humboldt County, 2023.[122] Source: California Overdose Surveillance Dashboard.

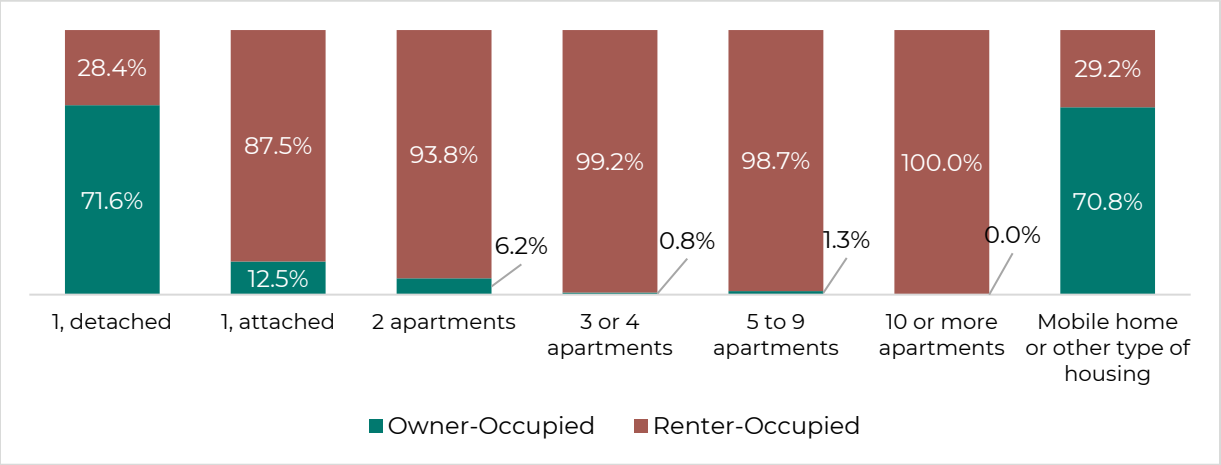


[122] Data for race and ethnicities marked with a star should be interpreted with caution due to large margins of error.

Housing

Tenure

Figure 49: Tenure by Unit Type in Humboldt County. Source: ACS 2023 1-Year Estimates.



Vacancy Rate & Duration

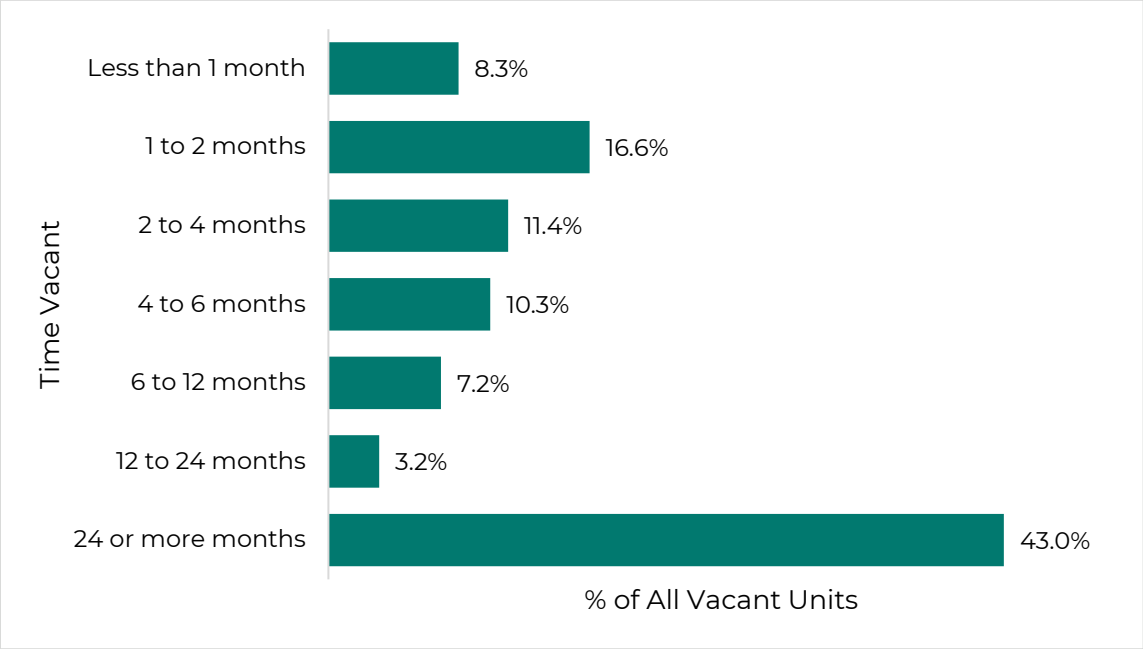
In real estate, the “natural” vacancy rate is the vacancy rate that would persist if the housing supply and demand were in balance, resulting in prices remaining steady. If the vacancy rate falls below this number, housing demand outpaces the supply, resulting in rising prices. Conversely, if the vacancy rate rises about this number, the housing supply is greater than demand and should result in decreasing prices. The “natural” vacancy rate in a housing market is estimated to be about seven to eight percent. In Humboldt County, vacancy rates have remained below this level for more than 10 years and have continued to decline, indicating an increasingly competitive housing market. To bring the vacancy rate up to 7%, the county would need an estimated additional 1,300 rental units and 1,700 owner-occupied units, which represents nearly 7% of the current housing stock.

Table 31: Vacancy Rates by Tenure in Humboldt County, 2013, 2018 and 2023. Source: ACS 1-Year Estimates

Tenure	2013	2018	2023
Homeowner	3.4%	1.6%	1.4%
Renter	4.5%	2.4%	2.0%

Figure 50 categorizes all vacant units in the county by the duration of their vacancy. About 43% of vacant units (3,073 units) have been empty for more than two years. Approximately one quarter of units have been vacant for less than two months, which could mean that they're actively being turned over from resident to resident. Units which have been vacant for short periods of time represent a part of the housing stock which is always in transition; units which have been vacant for longer periods of time could be dilapidated or uninhabitable and their rehabilitation could provide extra housing supply within the county.

Figure 50: Housing Vacancy Duration in Humboldt County. Source: ACS 2023 1-Year Estimates



Housing Cost Burden by Income

Cost burden occurs at different rates across various income groups. Households with incomes less than $50,000 per year experience a high level of cost burden, with 74.1% of households being cost burdened. While there was a slight improvement in the level of cost burden for households with incomes less than $35,000 per year, the high incidence highlights the need for affordable housing options. As income levels increase, the incidence of cost burden decreases, with about 11% of households earning more than $75,000 per year experiencing cost burden, compared to 84.7% of households earning less than $20,000 per year.

Table 32: Housing Cost Burden by Income in Humboldt County. Source: ACS 2018 and 2023 1-Year Estimates

Household Income	2018	2023
Less than $20,000	87.9%	84.7%
$20,000 to $34,999	76.5%	71.9%
$35,000 to $49,999	51.6%	67.1%
$50,000 to $74,999	33.1%	41.3%
$75,000 or more	7.7%	11.4%

Housing Cost Burden by Age

In Humboldt County, the incidence of cost burden varies by the age of the householder and is likely highly correlated with income.[123] The highest incidence of cost burden can be among the youngest households, nearly 80% in 2023, an increase of more than 20 percentage points between 2018 and 2023. Cost burden generally decreases with age, with those aged 35 to 64 experiencing the lowest rate at 28.6%. However, those 65+ had a higher level of cost burden than the previous income bracket, the percentage of which increased from

[123] A householder, as defined by the Census Bureau, is, “The person, or one of the people, in whose name the home is owned, being bought, or rented.”

2018 to 2023, suggesting increasing financial pressure on seniors, many of whom may be on fixed incomes.

Table 33: Housing Cost Burden by Age of Householder in Humboldt County. Source: ACS 2018 and 2023 1-Year Estimates

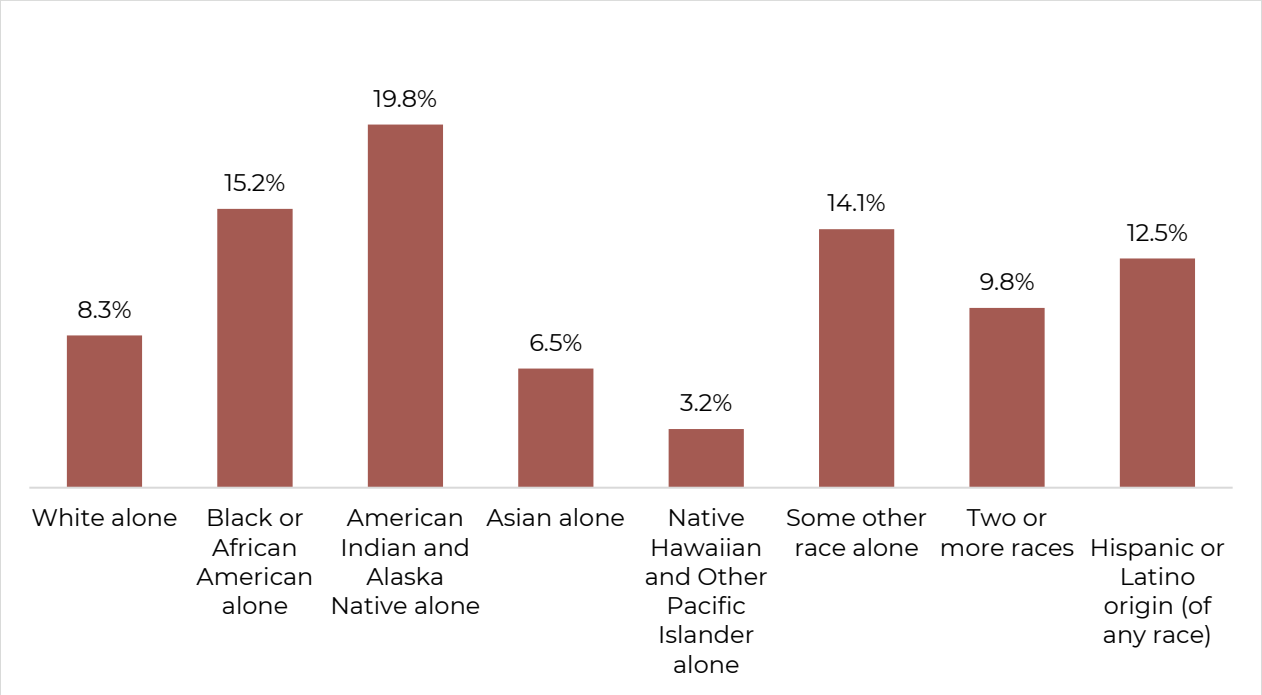
Age	2018	2023
15 to 24	56.2%	79.5%
25 to 34	52.0%	35.2%
35 to 64	32.3%	28.6%
65 years and over	22.4%	34.2%

Workforce and Education

Unemployment Rates

Unemployment within the County varies by race, from 5.8% to 17.8%, depending on the racial group.[124] Native Hawaiian and other Pacific Islanders have the lowest unemployment rate, while the American Indian and Alaska Native community face the highest unemployment rate. This variability in unemployment rate highlights the disparities in employment opportunities faced by different racial groups in Humboldt County.

Figure 51: Unemployment Rate by Race in Humboldt County. Source: 2018-2023 American Community Survey 5-Year Estimates.



[124] It is important to note that the margin of error (indicated by the capped error bar) for many of these estimates – especially those which represent groups with small population sizes in Humboldt County – is very high.

Highly Concentrated Occupations

As with industry employment concentration, the occupation concentration metric used in Table 34 compares the densities of specific occupations in Humboldt County to those of other comparable geographies. With high concentrations of specific workers, the county can more easily attract certain industries or businesses.

The most highly concentrated occupation group in the county includes Forest, Conservation and Logging Workers. Other fishing, hunting and farming occupations are highly concentrated within Humboldt County, as are a variety of healthcare and educational occupations.

Table 34: Highly Concentrated Occupations (3-Digit SOC Code) by Occupation Concentration and Employment in Humboldt County. Source: Lightcast, 2024

Description	Occupation Concentration	2022 Jobs
Forest, Conservation and Logging Workers	16.78	432
Fishing and Hunting Workers	6.99	76
Supervisors of Farming, Fishing and Forestry Workers	4.52	93
Firefighting and Prevention Workers	3.45	411
Woodworkers	2.54	218
Life, Physical and Social Science Technicians	2.14	294
Home Health and Personal Care Aides; and Nursing Assistants, Orderlies and Psychiatric Aides	2.04	3,789
Postsecondary Teachers	1.99	1,163
Social Scientists and Related Workers	1.97	233
Counselors, Social Workers and Other Community and Social Service Specialists	1.95	1,609

Highest-Earning Industries

Average earnings per job are measured by dividing the total annual earnings of an industry by the total number of jobs within the county. The Natural Gas Distribution industry had the highest average annual earnings in 2022, equal to roughly $245,000. A mixture of financial, healthcare and construction industries follow on the list and all provide average annual earnings of over $100,000.

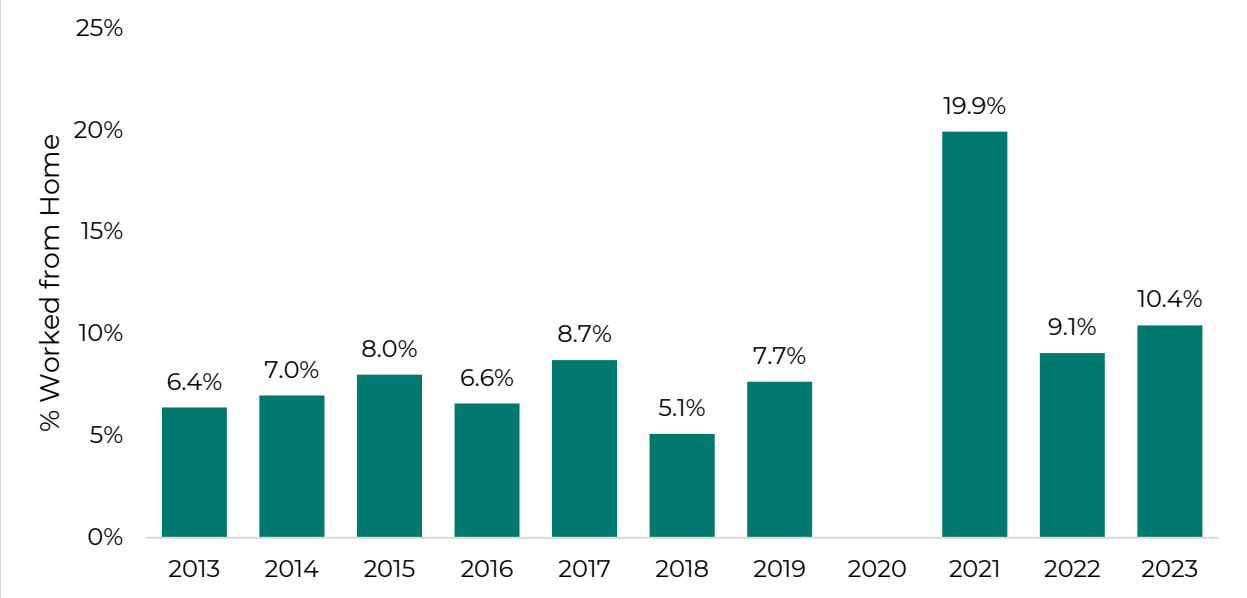
Table 35: Highest-Earning Industries and Employment Levels (4-Digit NAICS Code) in Humboldt County. Source: Lightcast, 2024

Industry	Average Annual Earnings	2022 Jobs
Natural Gas Distribution	$244,686	252
Securities and Commodity Contracts Intermediation and Brokerage	$226,911	53
Offices of Physicians	$200,601	456
Nondepository Credit Intermediation	$147,504	74
Highway, Street and Bridge Construction	$141,241	268
Scheduled Air Transportation	$125,293	39
State Government, Excluding Education and Hospitals	$117,597	1,375
General Medical and Surgical Hospitals	$116,584	1,594
Wired and Wireless Telecommunications (except Satellite)	$107,949	92
Federal Government, Civilian	$107,376	794

Remote Work Trends

Prior to the Covid-19 pandemic, the percentage of workers who worked from home was stable, ranging from 5.1% to 8.7%. In 2020, ACS 1-Year estimates were not released due to the impacts of the pandemic on data collection. By 2021, however, the percentage of workers who worked from home jumped to nearly 20%, likely a result of the pandemic. In 2022, this percentage decreased significantly, to 9.1%. In 2023, the share of remote workers increased by about 1.4 percentage points, to 10.5%. It remains to be seen whether the share of remote workers will fall back to pre-pandemic levels, or if they will remain elevated.

Figure 52: Percent of Workers 16 Years and Over that Worked at Home in Humboldt County. Source: 2013-2023 American Community Survey 1-Year Estimates

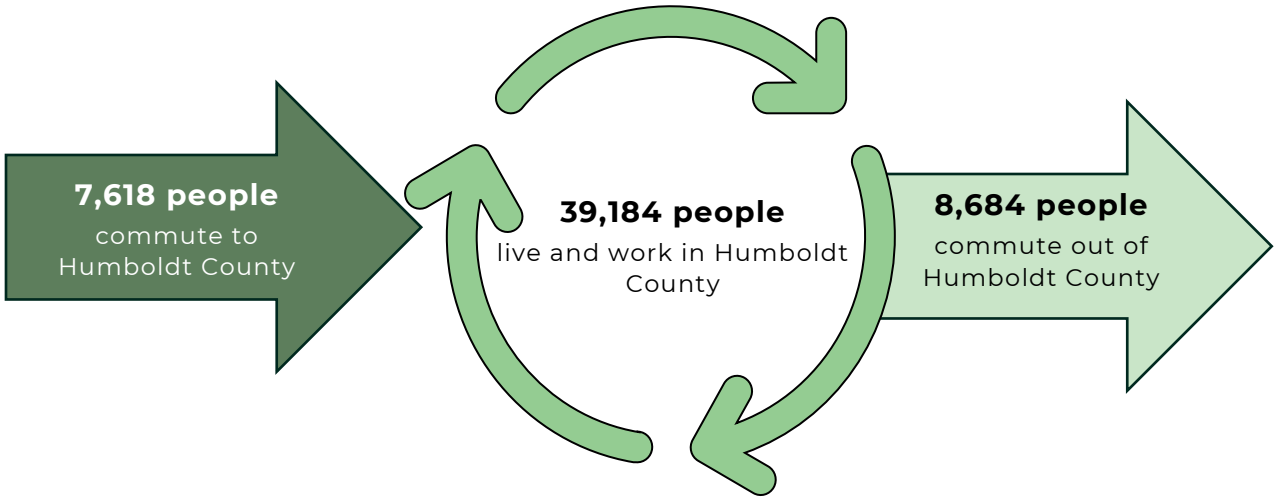


Infrastructure

Commuting and Traffic Patterns

In Humboldt County, inbound and outbound commuter levels are similar. Around 7,600 workers live outside of the county but travel into for work; roughly 8,700 residents of the county travel outside of the county for work. Approximately 39,800 people both live and work within county borders.

Figure 53: Commuting Patterns in Humboldt County. Source: US Census OnTheMap, 2022



Appendix B

Humboldt County Community Survey

Humboldt County Community Survey

Thank you for taking the time to take our **community survey**! The Comprehensive Economic Development Strategy (CEDS) is Humboldt County's framework to grow a diverse and thriving economy, outline a plan for regional resilience and improve the quality of life for everyone who lives in Humboldt. The collaborative process to update the CEDS is a unique opportunity for the community to come together and discuss the key issues we are facing and to design a roadmap toward our mutual thriving.

The Humboldt Rising Community Outreach Report details the results of extensive public outreach conducted by Humboldt County in 2022 for the development of the CEDS. Through this process, the county committed to listening to the community's perspectives and has continued to offer ways for residents, businesses and organizations to share their insights. As an extension of that effort, you are invited to complete this important survey as we work to finalize and submit the Humboldt County CEDS.

Please return completed surveys to:

Humboldt County Administrative Office
825 5th Street, Eureka

1. What is the zip code of your primary residence? _____

2. How would you describe yourself? **(Please select all that apply.)**

- ☐ I live in Humboldt County.
- ☐ I work in Humboldt County.
- ☐ I own a business in Humboldt County.
- ☐ I am an elected official in Humboldt County
- ☐ I am a community leader in Humboldt County.
- ☐ I am a member of a Tribe.
- ☐ I am a leader of a Tribe.
- ☐ I own property in Humboldt County, but my main address is outside of the county.

3. What subjects do you have professional expertise or experience in? **(Please select all that apply.)**

- ☐ Agriculture
- ☐ Aquaculture & fisheries
- ☐ Arts, hospitality and tourism
- ☐ Construction
- ☐ Economic development
- ☐ Education
- ☐ Environment and Natural Resources
- ☐ Financial services
- ☐ Forestry & logging
- ☐ Healthcare
- ☐ Housing
- ☐ Renewable energy
- ☐ I do not have professional expertise or experience in any of the above subjects.

4. What should be our top priorities as a community to support economic development efforts and improve quality of life? Please rank from **highest importance (1)** to **lowest importance (7)**.

___ Community Support (education, housing, childcare, healthcare, workforce programs, etc.)
___ Climate Resiliency and Disaster Recovery (green practices, programs and industries; mitigating the impacts of climate change; fire, drought and sea level rise.)
___ Equitable Economic Development (addressing inequities and ensuring every member of our community is able to share in and benefit from economic growth.)
___ Leading Industries (arts/culture, tourism, agriculture, forest products, food and beverage, etc.)
___ Physical Infrastructure (transportation, broadband, public utilities)
___ Emerging Industries (offshore wind, solar, aquaculture, tech)
___ Other: _____

5. Of the following vision statements for this Comprehensive Economic Development Strategy (CEDS), which best resonates with you? **(Please select 1).**

☐ Humboldt County envisions a diverse and thriving economy that fosters resilience, enhances the quality of life for all residents and promotes sustainable economic development.

☐ Our vision is to cultivate a vibrant and sustainable economy in Humboldt County, characterized by equitable economic development, resilient communities and high quality of life.

☐ Humboldt County aspires to be a model of economic vitality and resilience, where a diverse economy thrives alongside our commitment to foster sustainable economic development, enhance community well-being and build climate-resilient infrastructure to support future generations.

☐ Humboldt County celebrates what makes us different, collaborates around what we have in common and cultivates a diverse, sustainable and resilient economic environment in which everyone can prosper.

☐ Other: _____

6. What do you think will be the most significant challenges, from an economic development perspective, that the county will face in the next 5 years? **(Please select up to 3)**

- ☐ Availability of attainable housing for employees
- ☐ Attracting a qualified workforce
- ☐ Retaining workers
- ☐ Cost of doing business (labor costs))
- ☐ Cost of doing business (non-labor costs, e.g. overhead, materials)
- ☐ Supply chain issues
- ☐ Energy infrastructure
- ☐ Transportation infrastructure
- ☐ Water infrastructure
- ☐ Air/Water quality
- ☐ Communications infrastructure (including broadband)
- ☐ Limited economic incentives (e.g. tax rebates, subsidies, etc.)
- ☐ Access to capital for businesses
- ☐ Lack of public funding
- ☐ Public safety
- ☐ Other: _____

7. To what degree does the current housing situation impact Humboldt County?

- ☐ No Impact
- ☐ Minor Impact
- ☐ Moderate Impact
- ☐ Major Impact
- ☐ I do not know

8. What is the most significant challenge for housing in your area? **(Please select all that apply.)**

- ☐ High rent prices
- ☐ Rising property values
- ☐ Lack of available housing units
- ☐ Poor quality of housing
- ☐ Zoning, land use restrictions or permitting
- ☐ Public opinions on potential solutions
- ☐ Other: _____

9. What types of housing are most needed in your community? **(Please select all that apply.)**

- ☐ Single-family homes
- ☐ Multi-family apartments
- ☐ Townhomes
- ☐ Senior housing
- ☐ Affordable rental units
- ☐ Accessible homes
- ☐ Other: _____

10. To what degree does the lack of healthcare access impact Humboldt County?

- ☐ No Impact
- ☐ Minor Impact
- ☐ Moderate Impact
- ☐ Major Impact
- ☐ I do not know

11. How satisfied are you with the quality of the following educational options in Humboldt County:

	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied	I don't know
Early Childhood Education	1	2	3	4	5	X
K-12 Education	1	2	3	4	5	X
Vocational and technical training	1	2	3	4	5	X
Colleges and universities	1	2	3	4	5	X

12. What are the most significant challenges related to the local workforce? **(Please select up to 3)**

- ☐ Attracting and retaining higher-level employees
- ☐ Turnover and lack of motivation of staff
- ☐ Transitioning workforce due to industry decline
- ☐ Aging/retirement
- ☐ Lower wages and mediocre benefits packages
- ☐ Changing workforce expectations and needs
- ☐ Other (please specify)

13. I believe this community's natural environment is being protected

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly Agree
- ☐ I do not know

14. Natural disasters and/or natural hazards threaten local business operations in Humboldt County.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly Agree
- ☐ I do not know

15. I believe my community is prepared for natural disasters.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly Agree
- ☐ I do not know

16. How have the following types of infrastructure changed over the past three years?

	Significantly declined	Somewhat declined	Neither improved nor declined	Somewhat improved	Significantly improved	I don't know
Broadband	1	2	3	4	5	X
Water and sewer	1	2	3	4	5	X
Public transit	1	2	3	4	5	X
Road/highway system	1	2	3	4	5	X
Pedestrian/ bicycle infrastructure	1	2	3	4	5	X
Cellular coverage	1	2	3	4	5	X
Waste management	1	2	3	4	5	X

17. What improvements would you most like to see in the infrastructure in Humboldt County? **(Please select all that apply.)**

- ☐ Upgraded and/or expanded water and sewer systems
- ☐ More affordable electricity rates
- ☐ More affordable water service
- ☐ Enhanced stormwater management
- ☐ Improved energy efficiency programs
- ☐ Expansion of renewable energy options (e.g., solar, wind)
- ☐ Upgraded and/or expanded broadband access
- ☐ Increased road maintenance
- ☐ Other: _____

18. I believe new and existing businesses are rapidly growing in my community.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree
- ☐ I don’t know

19. My community leaders are supportive of current businesses.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree
- ☐ I don’t know

20. My community is an attractive place for new and existing businesses.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree
- ☐ I don't know

21. What challenges prevent local entrepreneurs from growing and thriving? **(Please select up to 3)**

- ☐ Access to capital
- ☐ Navigating licenses/permits/regulations
- ☐ Hiring qualified employees
- ☐ Retaining a motivated workforce
- ☐ Infrastructure access and quality, including broadband
- ☐ Access to quality commercial space
- ☐ Lack of a cohesive countywide vision, outreachand brand
- ☐ Lack of small business support
- ☐ Other (please specify)

22. What is most needed for **healthcare** in Humboldt County? (Please select all that apply)

- ☐ Primary care access
- ☐ Telehealth access
- ☐ Holistic well-being services
- ☐ Mental health and addiction services
- ☐ Specialty care (e.g., cardiology, oncology)
- ☐ Urgent care centers
- ☐ Home care providers
- ☐ Long-term care facilities (such as nursing homes, assisted living, etc.)
- ☐ Medical transportation
- ☐ Shorter wait for appointments
- ☐ Develop incentive programs to recruit and retain healthcare professionals
- ☐ Other

23. Which of the following would best support the county's **tourism, artsand culture** industry? (Select one)

- ☐ I don't know
- ☐ Creating collaborative and cohesive marketing
- ☐ Leveraging shoulder and off seasons to increase tourism
- ☐ Creating new "boutique" experiences based on the county's strengths
- ☐ Attracting more cruise ships and expanding the strategy around blue-economy tourism
- ☐ Showcasing the richness and diversity of the county's arts and culture
- ☐ Expanding trail system and other recreational assets
- ☐ Implementing beautification and blight elimination initiatives
- ☐ Stronger protections and/or restrictions surrounding natural assets
- ☐ Other: _____

24. Which of the following would best support the "legacy industry" of **forest products**? (Select one)

- ☐ I don't know
- ☐ Utilizing public outreach and storytelling around sustainable practices and care to address negative public perception around logging
- ☐ Partnering with Cal Poly and invest in R&D efforts in carbon sequestration tracking, biomass waste usage and innovative forest products
- ☐ Collaborating with local Tribes to incorporate Native American knowledge and practices into forest management practices
- ☐ Investing in workforce training programs to increase the talent pipeline
- ☐ Other: _____

25. Which of the following would best support the county's **blue economy** (i.e. aquaculture and fisheries) and **agriculture** industries? (Select one)

- ☐ I don't know
- ☐ Increasing aquaculture workforce training programs for industry diversification and to develop the talent pipeline
- ☐ Utilizing branding and storytelling to build recognition and identify the benefits and sustainability of Humboldt County seafood and agriculture.
- ☐ Investing in infrastructure, such as commercial kitchens, cold storage and co-packing facilities
- ☐ Increasing access to capital resources
- ☐ Increasing seafood processing capacity within the county
- ☐ Other: _____

26. Which of the following would best support the county's **financial services** industry? (Select one)

- ☐ I don't know
- ☐ Expanding financial planning and advisory services to meet growing demand
- ☐ Strengthening partnerships with local educational institutions to build a skilled talent pipeline
- ☐ Investing in broadband infrastructure to support the growth of digital and remote services
- ☐ Promoting financial literacy initiatives to support individuals and businesses
- ☐ Other: _____

27. Which of the following would best support the county's **construction industry**? (Select one)

- ☐ I don't know
- ☐ Identifying and addressing local regulatory barriers to home construction
- ☐ Incentivizing the development of affordable housing
- ☐ Expanding workforce development initiatives to address labor shortages and retirements in skilled trades
- ☐ Strengthening local supply chain networks to reduce material delays and boost regional resilience
- ☐ Other: _____

28. Which of the following would best support the county's **renewable energy** industry? (Select one)

- ☐ I don't know
- ☐ Expanding microgrid development to increase energy independence, resilience and local energy reliability
- ☐ Continuing to partner with Cal Poly Humboldt and invest in R&D
- ☐ Improve grid infrastructure and connectivity to support the export of renewable energy to larger markets
- ☐ Enhancing workforce training and job creation in renewable energy sectors like offshore wind, solar and biomass
- ☐ Expanded pollution mitigation & reduction efforts
- ☐ Incentives for green transportation
- ☐ Other: _____

29. Which of the following would best support the county's **education and training** industry? (Select one)

- ☐ I don't know
- ☐ Increasing collaboration between local businesses and educational institutions (e.g., internships, apprenticeships and hands-on training programs)
- ☐ Developing initiatives to attract and retain skilled educators and trainers in the region

- ☐ Expanding online education and remote learning opportunities to increase accessibility and enrollment
- ☐ Increasing funding for local education institutions to support expanded and innovative educational offerings.
- ☐ Expanding career counseling services to help students and job seekers navigate education and workforce opportunities
- ☐ Strengthening adult education and literacy programs to support lifelong learning and skill development.
- ☐ Other: _____

The following questions are for research purposes only. This survey is completely anonymous.

30. Do you have children living in your household?

- ☐ Yes, only **under** 18 years old
- ☐ Yes, only **over** 18 years old
- ☐ Yes, both over and under 18 years old
- ☐ No

31. How many people, **including yourself**, live in your household? _____

32. Which of the following ranges includes your age?

- ☐ Younger than 18
- ☐ 18 to 24
- ☐ 25 to 34
- ☐ 44 to 54
- ☐ 55 to 64
- ☐ 65 to 74
- ☐ 75 years or more

33. Which of the following best describes your gender?

- ☐ Man
- ☐ Woman
- ☐ Non-binary
- ☐ Prefer to self describe: _____

34. Do you identify as a person with a disability?

- ☐ Yes
- ☐ No

35. Which of the following ranges includes your annual household income?Less than $25,000

- ☐ $25,000 to $34,999
- ☐ $35,000 to $49,999
- ☐ $50,000 to $74,999
- ☐ $75,000 to $99,999
- ☐ $100,000 to $149,999
- ☐ $150,000 to $199,999
- ☐ $200,000 or more

36. Which of the following best describe you? (Check all that apply)

- ☐ American Indian or Alaska Native or Indigenous or First Nations
- ☐ Arab or Middle Eastern or Northern African
- ☐ Asian or Asian American
- ☐ Black or African American
- ☐ Hispanic or Latino/Latina/Latinx or Spanish origin
- ☐ Native Hawaiian or Pacific Islander
- ☐ White or Caucasian or European American
- ☐ I prefer to self-identify:_____

37. Do you have anything else you would like to tell us relating to community and economic development in Humboldt County?

_____
_____
_____
_____
_____

General Community Survey Findings

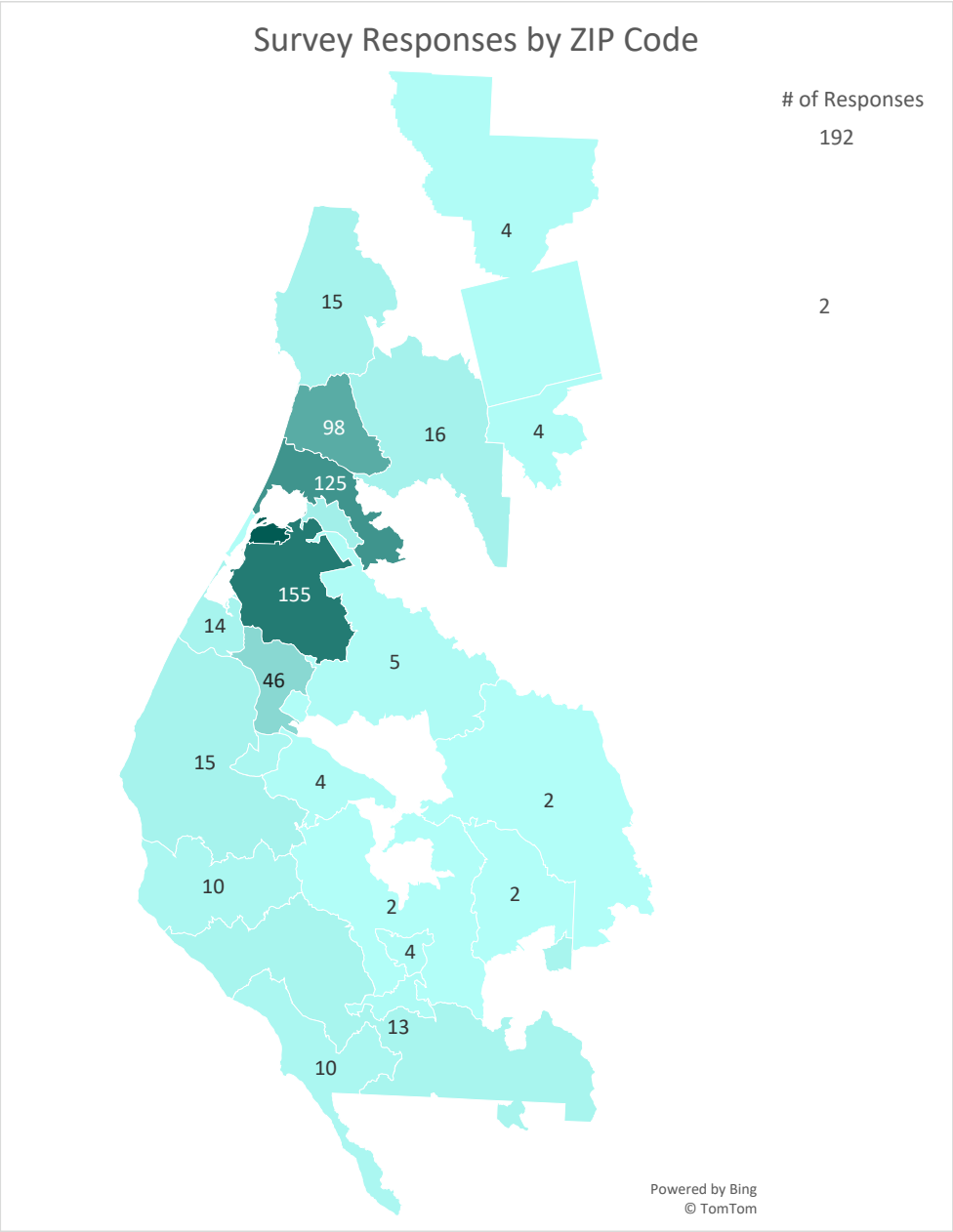
The public opinion survey was published on March 6th, 2025 and, after remaining open for approximately 3 weeks, closed on March 23rd. Over that period, 801 survey responses were collected. All responses were anonymous and data were evaluated in the aggregate. In total, the survey posed 37 questions. In addition to the English version of the survey, it was provided with a wide range of translations available including Spanish and Hmong. All versions could be accessed through the county's website and paper copies were distributed, as well.

Some of the questions were designed to collect information about the demographics of survey respondents; the remainder focused on a variety of topics related to local economic development. Respondents were asked to evaluate current conditions within the county, identify challenges faced by the community and prioritize general economic development initiatives to be advanced. In addition, respondents could indicate how the county might best support specific targeted industry clusters. After the survey was closed, an analysis of survey findings was undertaken. The key findings of the survey (that have not already been included in the Summary Background) are summarized in this section.

Respondent Representation

Place of residence was self-reported by survey respondents and any ZIP code which was represented by at least 2 respondents is included in Figure 54: Survey Responses by ZIP Code. Source: Humboldt County Community Survey Findings, 2025. While many areas of the county were represented, the majority of responses came from people living around Eureka, Arcata, or McKinleyville. The highest concentration of responses (192) came from the 95501 ZIP code in Eureka.

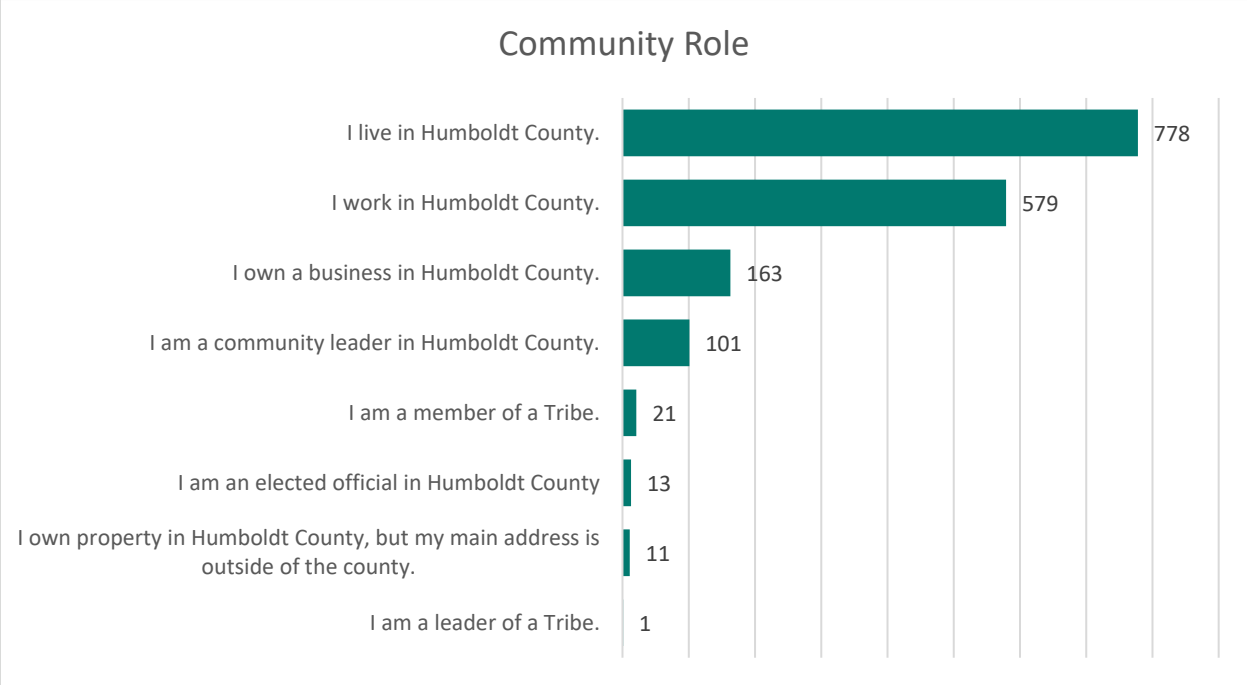
Figure 54: Survey Responses by ZIP Code. Source: Humboldt County Community Survey Findings, 2025



To understand their role in the local community, survey respondents were asked to select from a list of statements those which described them. Respondents could select as many descriptors as applied. Over 97% of respondents (778) lived in the county at the time of survey completion. 579 worked in the county and 163 reported owning a

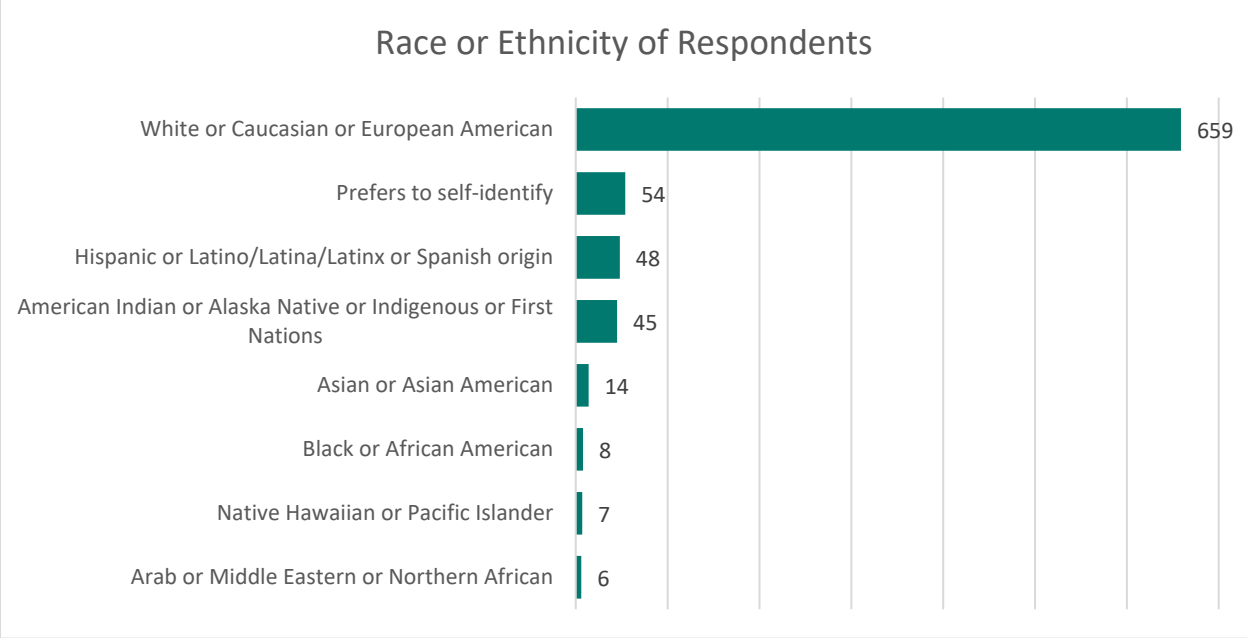
business in the county. 101 respondents identified themselves as community leaders and 13 elected officials completed the survey. 21 survey respondents identified themselves as members of a tribe, one of whom was a tribal leader. 11 respondents indicated that they own property in the county but primarily live outside of it.

Figure 55: Community Role of Respondents. Source: Humboldt County Community Survey Findings, 2025



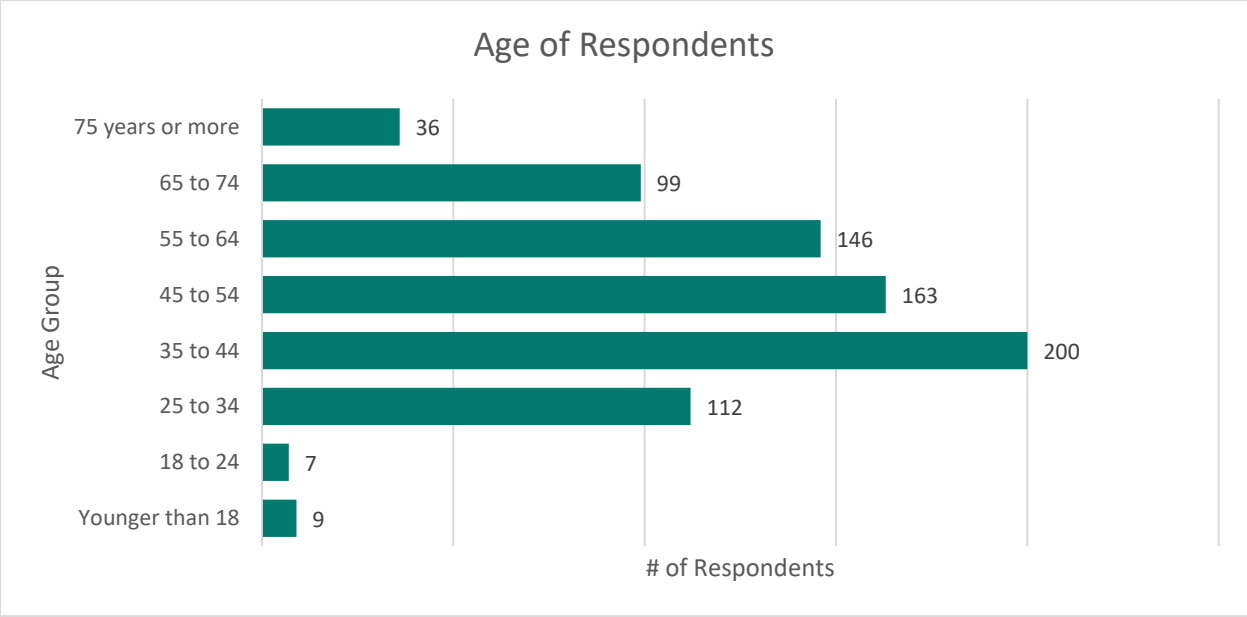
The majority of respondents (659), or about 82.3%, identified as 'White or Caucasian or European American'. 48 individuals identifying as 'Hispanic or Latino/Latina/Latinx or Spanish origin' completed the survey, along with 45 individuals identifying as 'American Indian or Alaska Native or Indigenous or First Nations'. Other racial or ethnic groups participated in the survey at relatively low rates.

Figure 56: Race or Ethnicity of Respondents. Source: Humboldt County Community Survey Findings, 2025



The majority of survey respondents were women, providing 469 of the responses. 276 respondents identified as men. In Humboldt County, 49.5% of the population is male; that only 34.5% of survey respondents were men indicates an underrepresentation of males. 21 respondents identified as non-binary and 24 preferred to self-describe. 114 respondents, or about 14.6%, reported having a disability.

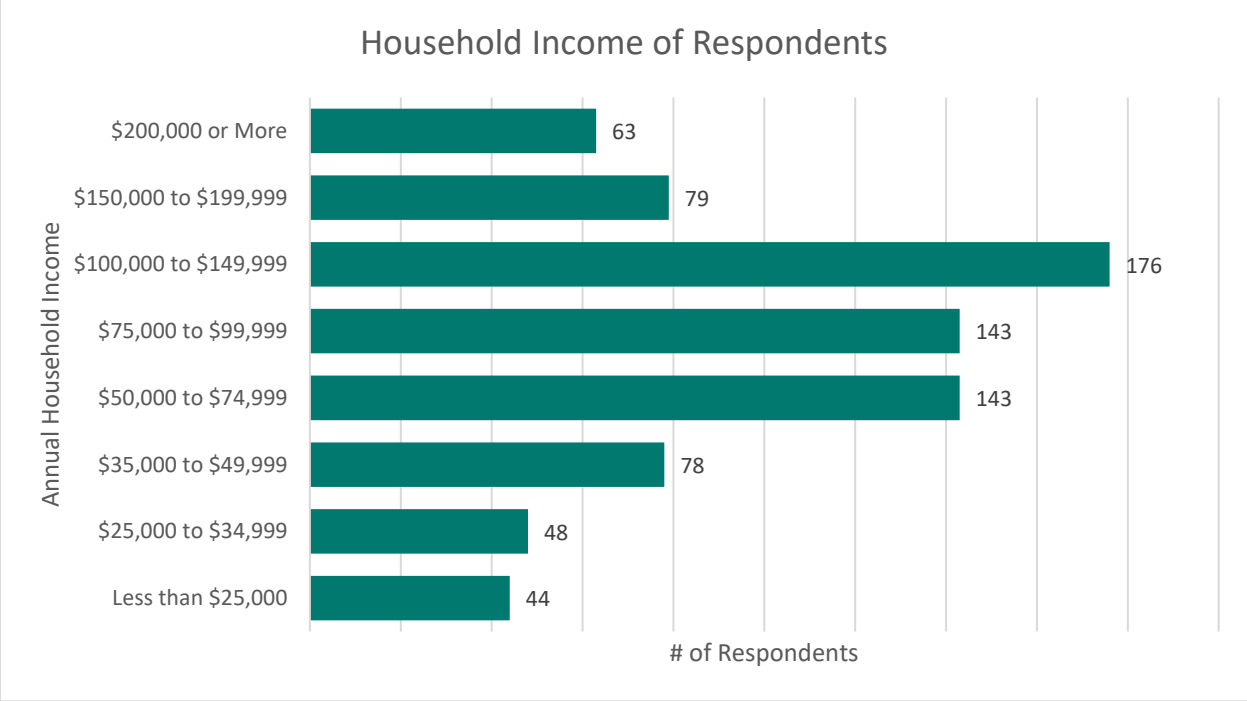
Figure 57: Age of Respondents. Source: Humboldt County Community Survey Findings, 2025



Households of varying financial ability were represented in the survey. The average household size reported by respondents was 2.48 people, with one respondent reporting 9 people living in their household. 502 respondents indicated that there were no children living in their household. 291 indicated that children did live in the household; in most cases, all or some of the children were under the age of 18 years.

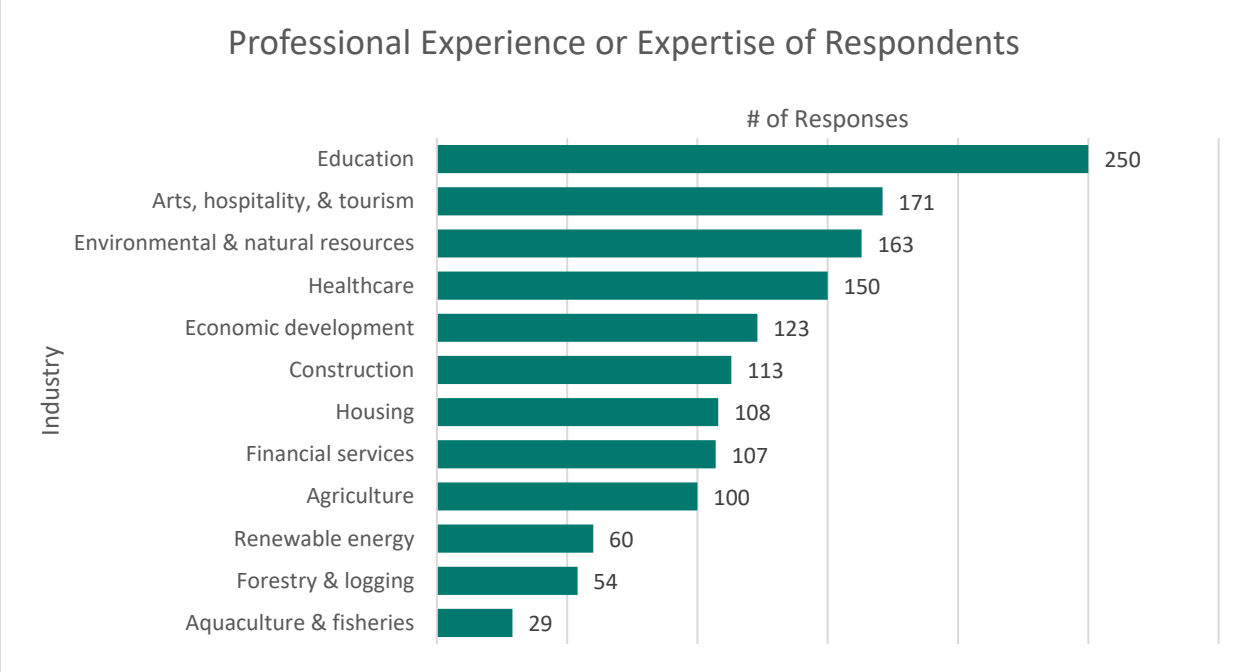
The majority of respondents reported living in households that earned between $50,000 and $150,000, annually. 63 respondents reported living in households that earned more than $200,000and 44 respondents reported living in households that earned less than $25,000. Individuals of varying financial ability are likely to differ in their perspectives on the local community and a diversity of perspectives enriches the survey results.

Figure 58: Household Income of Respondents. Source: Humboldt County Community Survey Findings, 2025



When asked to select fields in which they had professional expertise or experience, respondents most commonly selected the 'Education' field. The next most common area of expertise or experience was in the 'Arts, hospitality, & tourism' and 'Environmental & natural resources' fields. Overall, survey respondents indicated having experience across a wide variety of professional fields, each of which contributes meaningfully to Humboldt County's local economy.

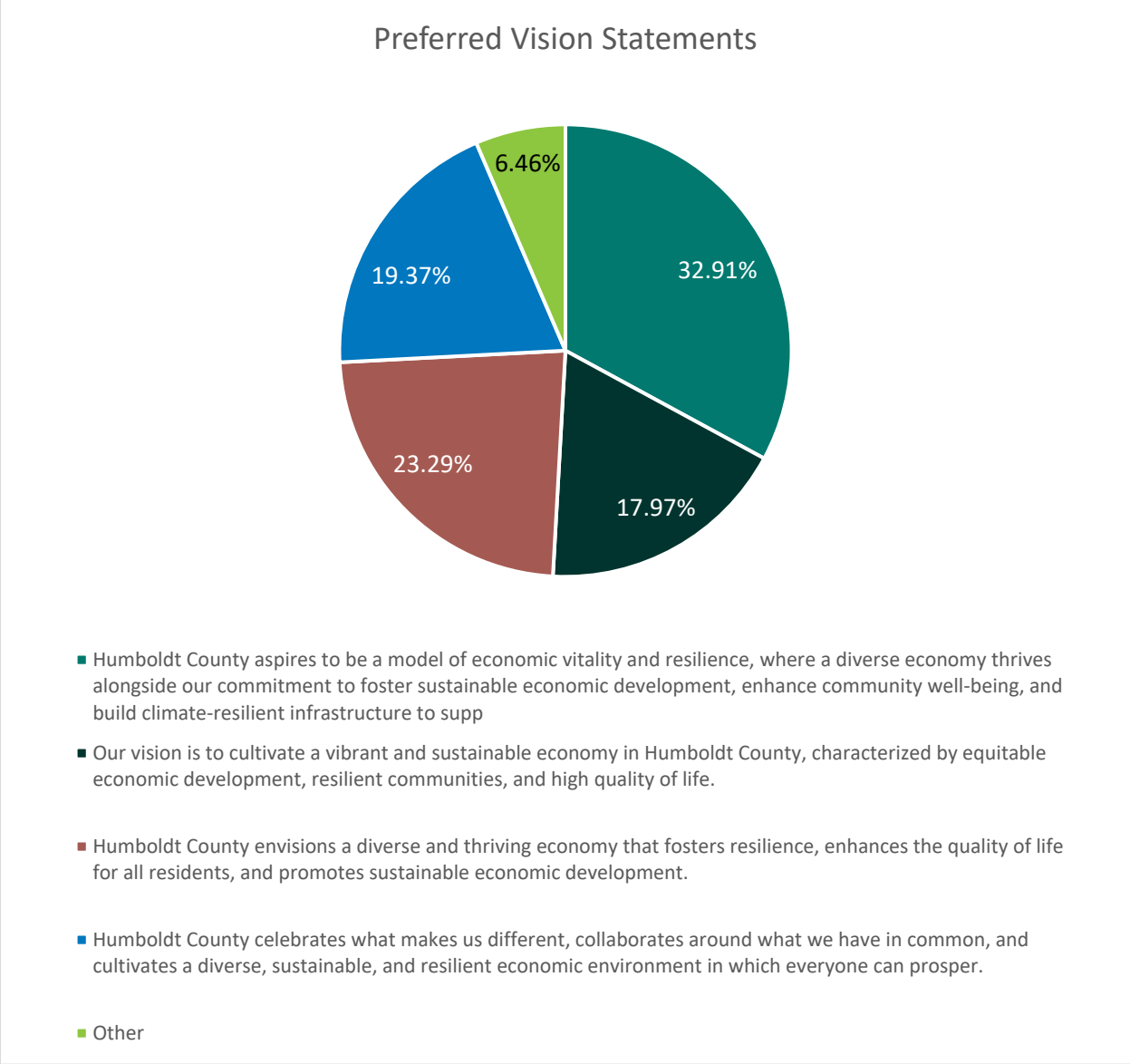
Figure 59: Professional Experience or Expertise of Respondents. Source: Humboldt County Community Survey Findings, 2025



Community Vision & Challenges

Vision statements can be useful for forming the goals of an economic development strategy and respondents were asked to select one of four statements that most aligned with their vision of Humboldt County's future (if none of the statements were appealing, they had an option to select 'Other'). The most popular vision statement, which received the vote of nearly one third of survey respondents, was the following: "Humboldt County aspires to be a model of economic vitality and resilience, where a diverse economy thrives alongside our commitment to foster sustainable economic development, enhance community well-being and build climate-resilient infrastructure to support future generations." The next most popular vision statement, "Humboldt County envisions a diverse and thriving economy that fosters resilience, enhances the quality of life for all residents and promotes sustainable economic development," received 23.3% of votes.

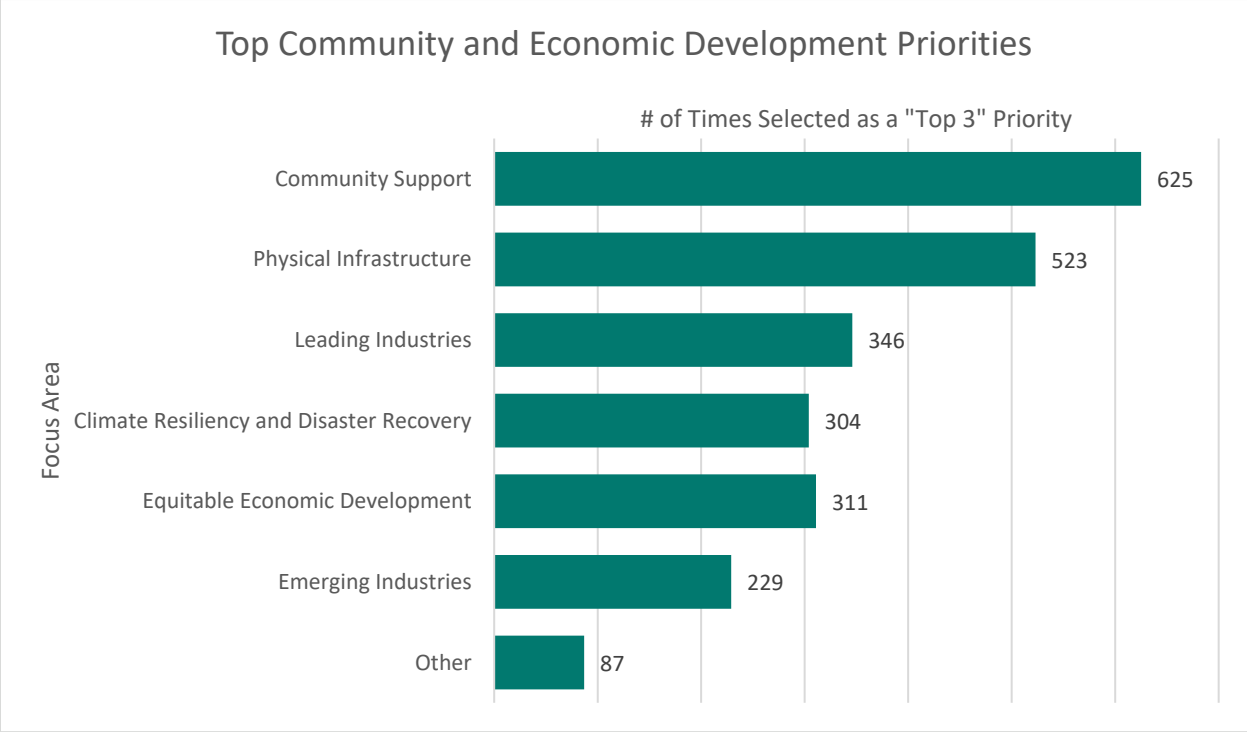
Figure 60: Preferred Vision Statements for Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Respondents were provided with a list of economic and community development focus areas and they were asked to rank them in in order of priority. Figure 61 illustrates the number of times each focus area was ranked as a “Top 3” priority. The top three most prioritized focus areas were ‘Community Support’ (education, housing, childcare, healthcare, workforce programs, etc.), ‘Physical Infrastructure’ (transportation, broadband, public utilities)and ‘Leading Industries’ (arts/culture,

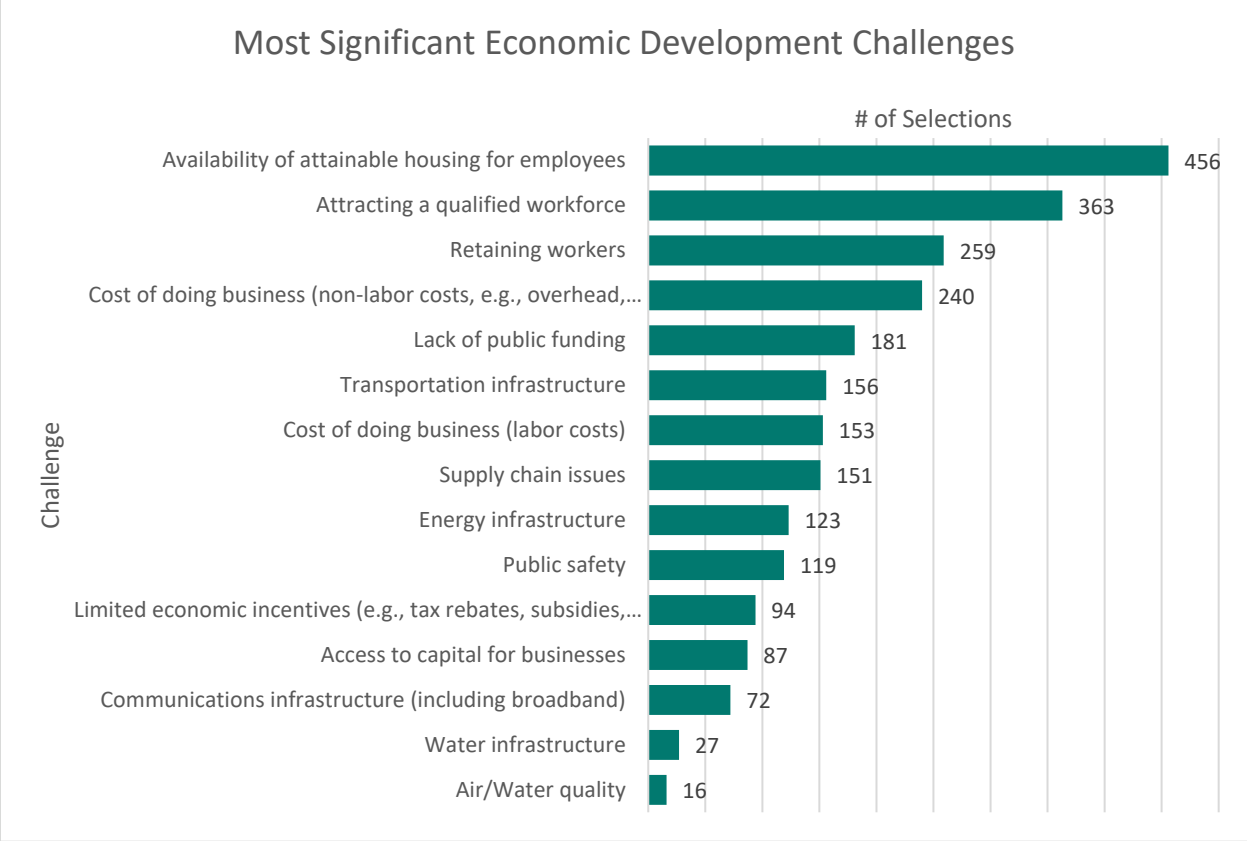
tourism, agriculture, forest products, food and beverage, etc.). 87 respondents included 'Other' in their "Top 3," many of whom listed priorities such as expansion of healthcare resources, greater resource provision for homeless individuals, or protection of the natural environment and recreational spaces.

Figure 61: Top Community & Economic Development Priorities in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



When asked to select up to three of the most significant challenges faced by Humboldt County in terms of economic development, the 'Availability of attainable housing for employees' challenge was the most commonly selected. Attracting and retaining a qualified workforce was identified as a significant challenge, as well as the costs of doing business in the county. A variety of other challenges related to funding, infrastructure and other resources were also acknowledged to be significant challenges, albeit to a lesser degree.

Figure 62: Most Significant Economic Development Priorities in Humboldt County. Source: Humboldt County Community Survey Findings, 2025



Appendix C

Project List

Jurisdiction	Project	Completed	In-Process	Planning
Arcata	Happy Valley Business Park	-	X	-
Arcata	Behavioral Health Crisis Triage Center	-	-	X
Arcata	Community Life Wellness Campus	-	-	X
Arcata	Samoa Blvd Business Redevelopment Project	-	X	-
Arcata	Aldergrove Industrial Condominium Project	-	X	-
Arcata	Fiber Installation Project	X	-	-
Arcata	2018 Sanitary Sewer Infiltration Project	-	X	-
Arcata	Little Lake Redevelopment	-	-	X
Arcata	Strategic Infill Plan – Samoa to Alliance Corridor	-	-	X
Arcata	Foodworks – Phase II	-	-	X
Arcata	Digital 299/Data Center	-	-	X
Arcata	Heinden Rd Senior & Family Affordable Housing	-	-	X
Arcata	Bright and Green Reusable Program, Bright and Green Waste Reduction Management	-	-	X
Arcata	Redwood Coast Clayworks	-	-	X
Arcata	Rejuvinate Arcata	-	-	X
Arcata	Woodlab Designs & CPR Aquatics Inc.	-	-	X
Arcata	The Innovation Fund	-	-	X
Arcata	Humboldt Cardboard Shredders	-	-	X
Arcata	CR/Cal Poly Humboldt Health Education Hub	-	-	X
Arcata	Cal Poly Humboldt Transition from HSU	-	-	X
Arcata	Storage Tank 1C Project	-	X	-
Arcata	Isaacson Sustainable Transportation Infrastructure Project	X	-	-
Arcata	Phase One of the Arcata Wastewater Treatment Facility Improvement Project	-	X	-
Arcata	Old Arcata Road Improvements	X		-
Arcata	Arcata Ball Park Improvement Project	-	X	-
Arcata	Arcata Library Improvement Project	X	-	-
Blue Lake	Industrial Pretreatment	-	-	X
Blue Lake	Powers Creek Mixed Use Redevelopment	-	-	X
Blue Lake	RV Park and Campground	-	-	X

Jurisdiction	Project	Completed	In-Process	Planning
Blue Lake	Mixed Use Affordable Housing Development	-	-	X
Blue Lake	Blue Lake Rancheria Hula Health and Wellness Clinic	-	-	X
Blue Lake	Carving a Legacy: Tribal Traditions, Woodworking, and Workforce Development	-	-	X
Eureka	Food/Beverage Bottling Line	-	-	X
Eureka	Commercial Street Fuel Facility & Dock Upgrade	-	-	X
Eureka	Ice & Cold Storage Facility	-	-	X
Eureka	Dock B Reconstruction	-	-	X
Eureka	Marina Way Market	-	X	-
Eureka	Municipal Auditorium Renovation	-	X	-
Eureka	C2F Development	-	X	-
Eureka	Redwood Canopy Walk	-	X	-
Eureka	Humboldt Fisherman's Dockside Market	-	-	X
Eureka	Expand Capacity at Ida Emmerson Hospice House	-	-	X
Eureka	Liberated Futures Lab	-	-	X
Eureka	SeaForester	-	-	X
Eureka	Redwood Region Workforce Development Job Training	-	-	X
Eureka	Skyhorse International Hostel Hospitality, Lodging and Customer Service Training	-	-	X
Eureka	Rehab Center - Providence/ St Joseph	-	-	X
Eureka	Humboldt County Health Lab	-	-	X
Eureka	Workforce Training Center	-	-	X
Ferndale	Downtown Revitalization	-	-	X
Ferndale	Tourism-Trail Enhancement	-	X	
Ferndale	Industrial Hemp to Revitalize the Redwood Empire	-	-	X
Fortuna	John Campbell Memorial Parkway	-	X	-
Fortuna	Mill District	-	X	-
Fortuna	Thelma Street/Hwy 36 Connection	-	X	-
Fortuna	Rotating Art Installation	-	X	-
Garberville	Garberville Hospital	-	-	X
Hoopa Valley Tribe	Grocery Store Project	X	-	-
HBHR&CD	Water Trails – Improved Access for Boaters	-	X	-
HBHR&CD	Samoa Industrial Waterfront Development	-	X	-
HBHR&CD	Fields Landing Marine/Industrial Development	-	-	X

Jurisdiction	Project	Completed	In-Process	Planning
HBHR&CD	Redwood Marine Terminal-II Innovation Center	-	-	X
HBHR&CD	Offshore Wind Energy Upland Assembly & Multipurpose Dock	-	-	X
HBHR&CD	Sea Level Rise Material Beneficial Reuse Site	-	-	X
HBHR&CD	Hi-tech Center	-	-	X
HBHR&CD	Mariculture Upland Pre-Permitting	-	-	X
HBHR&CD	Mariculture Facility	-	-	X
HBHR&CD	Samoa Industrial Waterfront Transportation Improvement Project	-	-	X
HBHR&CD	Harbor Dredging Support Equipment	-	-	X
HBHR&CD	Water Trails	-	-	X
HBHR&CD	Dredging	X	-	-
HBHR&CD	Shelter Cove Commercial Fish Processing Facility	-	-	X
HBMWD	Chlorine System Upgrade to Hypochlorite	-	-	X
HBMWD	Hydro-Electric Plant	-	-	X
HBMWD	12 kV Switchgear Relocation Project	-	X	-
HBMWD	Blue Lake Fieldbrook Pipeline Crossing	X	-	-
Humboldt County	Red Cap Road Shoulder Improvements	-	-	X
Humboldt County	Downtown Garberville Improvements	-	X	-
Humboldt County	Hoopa Corridor Improvement	-	X	-
Humboldt County	Hammond & Annie Mary Trail	-	X	-
Humboldt County	Arcata/Eureka Trail	-	X	-
Humboldt County	McKay Tract to Harris Connector	-	X	-
Humboldt County	Broadband Infrastructure	-	X	-
Humboldt County	Honeydew Bridge Replacement	-	-	X
Humboldt County	Americans with Disabilities Act (ADA) Related Projects	-	-	X
Humboldt County	Hoopa Downtown Project	X	-	-
Humboldt County	Orleans	-	-	X
Humboldt County	Fortuna connectivity to Highway 36	-	-	X
Humboldt County	County Airport Electrical Grid Study	-	-	X

Jurisdiction	Project	Completed	In-Process	Planning
Humboldt County	Community Garden/Learning Center	-	-	X
Humboldt County	Youth Protecting the Outdoors	-	-	X
Humboldt County	BH Black Leaders Fellowship Program	-	-	X
Humboldt County	Rooftop and parking lot solar array potential	-	-	X
Humboldt County	Redwood Coast HRTC Rural Grant Accelerator Program	-	-	X
Humboldt County	North Coast Care Connect- Community Information Exchange	-	-	X
Humboldt County	Forest and Watershed Health Project (FWHP)	-	-	X
Humboldt County	Economic Fuel Incubators	-	-	X
Humboldt County	Redwood Region Revolving Loan Fund	-	-	X
Humboldt County	North Coast Wood Network	-	-	X
Humboldt County	Identifying Housing Solutions	-	-	X
Humboldt County	Eliminate Single Use Plastic	-	-	X
Humboldt County	North Coast Resilient Food System Network	-	-	X
Humboldt County	EcoCultural TREX Program	-	-	X
Humboldt County	Inter-Tribal Workforce Development program (IWDP)	-	-	X
Humboldt County	EcoCultural Stewardship Training Center	-	-	X
Humboldt County	Cooperative Agriculture Network	-	-	X
Humboldt County	Professional Seed Collection and Propagation	-	-	X
Humboldt County	Efficient sawmilling for small-diameter trees	-	-	X
Humboldt County	Regional Health Information Exchange	-	-	X
Humboldt County	The NorCal BioCompetes Fund	-	-	X
Humboldt County	Regional Destination Research Study	-	-	X
Humboldt County	North Coast Cultural Tourism Fund	-	-	X

Jurisdiction	Project	Completed	In-Process	Planning
Humboldt County	Travel Data Investment	-	-	X
Humboldt County	The Forest Health Fund & Loan Program	-	-	X
Humboldt County	Free Marketing Workshop Series	-	-	X
Humboldt County	Wool Scour Processing Facility	-	-	X
Humboldt County	Regional Compost Facility	-	-	X
Humboldt County	windLINK	-	-	X
Humboldt County	Redwood Region Works!	-	-	X
Humboldt County	The North Coast Elderberry Industry Project	-	-	X
Humboldt County	CalForest WRX Alliance: Catalyzing Organizational Development & Expanded Capacity	-	-	X
Humboldt County	Art and Culture Hub	-	-	X
Humboldt County	MOXY Manufacturing Facility	-	-	X
Humboldt County	Mattole Resilience, Education, and Research Center	-	-	X
Humboldt County	Masa Coop	-	-	X
Humboldt County	Cultural Resource Protection Advocacy and Education	-	-	X
Humboldt County	Klamath River Rural Broadband Inititative	-	-	X
Humboldt County	Hoopa Broadband Fiber to the Premises	-	-	X
Humboldt County	Arcata Bay Area Fiber to the Premises Project	-	-	X
Humboldt County	Potter Valley Dam Removal	-	-	X
Humboldt County	Heavy Lift Terminal	-	-	X
Humboldt County	BLBS GRID Workforce Training Tiny Home Construction and Renewable Energy Systems	-	X	-
Humboldt County	Career Pathways: Fire, Forests, Fish & Facilities	-	-	X
Humboldt County	Connecting Local Mass Timber Production to Regional Housing and Building Needs	-	X	-

Jurisdiction	Project	Completed	In-Process	Planning
Humboldt County	Developing a Climate Forward Workforce and Innovation Pipeline for Forest and Community Resilience	-	X	-
Humboldt County	North Coast Food System Network	-	X	-
Loleta	Dairy Regeneration and Innovation Center	-	-	-
McKinleyville	Purchase of New Water Tank Property	-	-	X
McKinleyville	Design & Installation of Water Supply Tank	-	-	X
McKinleyville	Reformation of Central Avenue Open Space Maintenance Zone	-	X	-
McKinleyville	We Are Up	-	-	X
McKinleyville	Life Plan Humboldt - A Senior Living Community	-	-	X
McKinleyville	McKinleyville Incorporation - Initial Feasibility Assessment	-	-	X
Orick	Community Wastewater Treatment System	-	X	X
Orick	Water System Improvements	-	X	-
Orick	Telecommunications Project	-	X	-
Orick	Restoration Center of Excellence-Heavy Equipment Training Center	-	-	X
City of Rio Dell	Humboldt-Rio Dell Business Park	-	X	-
City of Rio Dell	Eel River Riparian Recreation Trail	-	-	X
City of Rio Dell	Rio Dell Community Center and Plaza	-	-	X
City of Rio Dell	Public Infrastructure	-	-	X
City of Rio Dell	Public Art Installations-Tourism	-	X	-
Redway Community Services District	Solar Power Installation	-	-	X
Redway Community Services District	Wastewater Treatment Plant Upgrades	-	-	X
Redway Community Services District	Water Availability Projects	-	-	X

Jurisdiction	Project	Completed	In-Process	Planning
Southern Humboldt Community Park (Non-Profit Organization)	Southern Humboldt Community Park	-	-	X
City of Trinidad	Local Coastal Program Update	-	X	-
Trinidad Rancheria	Diversified Business Enterprises	-	X	-
Weott	Well Development	-	-	X
Weott	Collection System Upgrade	-	-	X
Willow Creek	Downtown Wastewater System Project	-	X	-

Appendix D

Acknowledgments

CEDS Committee

- Greg Foster, Executive Director, Redwood Region Economic Development Commission
- Michael Keleman, Chief Executive of Providence St. Joseph Hospital and Providence Redwood Memorial Hospital
- Wil Franklin, Center Director for North Coast SBDC
- Linnea Jackson, General Manager, Hoopa Valley Public Utilities District
- Matthew Simmons, Climate Attorney, Environmental Protection Information Center (EPIC)
- Susan Seaman, Program Director, North Edge Financing and Community Development
- Deanna Franklin SVP Commercial Relationship Manager, Redwood Capital Bank
- Angela Shull, Executive Director, Redwood Coast K-16 Educational Collaborative

Key Stakeholder Strategy Session Development Participants

- Richard Engel, Director of Power Resources, Redwood Coast Energy Authority
- Meredith Matthews, Executive Director, Arcata Chamber of Commerce and City of Arcata City Council Member
- Joe Davis, Rapid Response Coordinator, Norther California Indian Development Council
- Rosa Dixon, Executive Director, Humboldt Made
- Walt Geist, Vice President, American Ag Credit, President of North Edge and Treasurer of Headwaters
- Thomas Stratton, CEO, Foggy Bottoms Boys

- Portia Bramble, Executive Director, North Coast Growers Association
- Chrissy Holliday, Vice President, Enrollment Management and Student Success, Cal Poly Humboldt
- Tanya Trump, Director, Career and College Resource Department, Humboldt County Office of Education
- Angela Shull, Executive Director, Redwood Coast K-16 Educational Collaborative, Cal Poly Humboldt
- Calder Johnson, Arts/Culture/Tourism Sector Investment Coordinator, Redwood Region RISE
- D'Vaughn, Executive Assistant, Humboldt NeuroHealth
- Ara Pachmayer, Associate Professor, Cal Poly Humboldt
- Swan Asbury, Economic Development Manager, City of Eureka, Workforce Development Board Member
- Mandy Marquez, Senior AVP, Manager Business Services, Coast Central Credit Union
- Nancy Olson, CEO, Greater Eureka Chamber of Commerce and Redwood Coast Chamber Foundation
- Scott Thompson, Senior Project Manager, Nordic Aquafarms
- Cassandra Hesseltine, Film Commissioner, Humboldt-Del Norte
- Ashley Vellis, Owner, Ashley's Seafood
- Dan Dixon, Certified Plan Fiduciary Advisor, Kingsview Partners
- Amy Jester, Director of Policy, Advocacy, & Civic Leadership, Humboldt Area Foundation and Redwood Region CORE Hub
- Kerry Venegas, Executive Director, Changing Tides

Appendix E

Public Comments

Humboldt County issued a press release and notified stakeholders of the 30-day comment period. A virtual presentation was made to stakeholders to raise awareness about the public comment period, and they were encouraged to both participate and share the opportunity with their local personal and professional networks. At the end of the 30-day comment period, the CEDS Committee reviewed and evaluated each submitted comment. The CEDS Committee provided a response to each comment, explaining one of three actions (accepted, considered, or declined) applied.

Action Codes

- **A – Accepted:** The CEDS Committee has accepted the comment and integrated the suggested change(s) into the document.
- **C – Considered:** The CEDS Committee has considered the comment and either integrated a portion or variation of the suggested change(s) or will consider integration in a future update.
- **D – Declined:** The CEDS Committee has declined to integrate the suggested change(s).

Submitted Comments

Comment	Action/Response
1. (Page 41) In the strengths section, it mentions the natural environment and specifically outdoor recreation (among other areas), and how it attracts investors. I would disagree with that last part. Yes, our natural resources attract people who are interested in outdoor recreation, but we have yet to see the type of investments that an area like ours could bring to support an economy driven by outdoor recreation. We are unfortunately missing out on the 1.2 trillion dollar and 5 million plus jobs that are tied to that industry. This is because while we have an amazing natural environment, our infrastructures near the "should be" gateway communities, like Orick, are almost non-existent. The county and the state have not made that a priority, so we are now playing catch up.	**A** The phrase "attracting investment" has been deleted from the 'Natural Environment' paragraph in the 'Strengths' section. In the SWOT Analysis Opportunities, language has been added under Developing a Consistent Community Marketing Strategy. It reads, "Investing in Humboldt County's tourism infrastructure can create a more welcoming environment, strengthen community marketing and generate economic activity. Improved infrastructure supports tourism-related businesses and amenities such as welcome centers, restrooms, signage, public art and attractions. Local investment alongside successful advocacy and collaboration with the state for expanded tourism infrastructure in gateway communities such as Orick, Garberville and Willow Creek could be transformational."
2. (page 190) While the project list is a great asset, it would be more valuable if it connected the projects to priorities of the plan, or even strengths that are being developed. This way, you can see what areas are underutilized.	**C** This suggestion would require considerable coordination, time and effort. It should be built over time through increased collaboration and included in future updates and/or reporting.
3. (page 83) Municipalities should include Orick and Garberville. They have both suffered tremendously and should be offered a seat at the table	**C** The referenced list includes incorporated areas of Humboldt County, however Orick and Garberville are unincorporated communities. To be inclusive, we have changed the heading on the list to "Communities" and added unincorporated communities throughout the county instead of specifically mentioning Orick and Garberville.

Comment	Action/Response
4. (page 32) I will make 2 comments here, and this may not be the exact page, but it was connected: 1) Focusing on marketing and a unified brand is one piece of the tourism/outdoor recreation economy, but it is not very valuable if we don't have the infrastructure to support the influx of tourists. And with social media, visitors share what worked and didn't work. For example, the county should support low low-impact camping area, as suggested by the recent bill AB 518. Focus on gateway communities that are primed for development, such as Orick. It is reprehensible that a town like Orick, located at the entrance of the prime outdoor recreation area has not been given more resources to develop its infrastructures. It could easily become like the entrance to Springdale, UT, Zion National Park, or Grand Lake, CO, entrance to the western side of the Rocky Mountain National Park. Both those towns are located far from metropolitan areas, but have developed their economy around the park. The presence of the tribes and their work in that area is fantastic and can be enhanced and supported by other projects that offer opportunities to non-tribal entities.	**C** In the SWOT Analysis Opportunities, language has been added under Developing a Consistent Community Marketing Strategy. It reads, "Investing in Humboldt County's tourism infrastructure can create a more welcoming environment, strengthen community marketing and generate economic activity. Improved infrastructure supports tourism-related businesses and amenities such as welcome centers, restrooms, signage, public art and attractions. Local investment alongside successful advocacy and collaboration with the state for expanded tourism infrastructure in gateway communities such as Orick, Garberville and Willow Creek could be transformational."
5. (page 194) After reviewing the Comprehensive Economic Development Strategy (CEDS), I believe the document does a commendable job of gathering and presenting data, and it clearly identifies key issues affecting economic development in Humboldt County. These insights, particularly the broad strokes of data and stakeholder input, are essential for informing strategic planning. However, while the CEDS lays a strong foundation, it falls short in providing a concrete, actionable strategy. The plan outlines what needs to be addressed and highlights extensive community engagement, but it lacks specificity in how we will move from vision to implementation. For true economic development to occur in Humboldt County, we must work closely with the developers and builders who will carry out much of this work. Given the level of engagement described, I had hoped to see more detailed proposals, such as clear incentives for housing construction or specific ideas on rezoning to support economic growth. Additionally, the mention of alternative building materials needs to be grounded in the reality that Humboldt County, like the rest of California, must adhere to state building codes. In summary, while the CEDS is strong in its data collection and framing of issues, it misses the mark on delivering a detailed and actionable strategy. More concrete steps are needed to translate this foundation into real, measurable economic progress.	**D** The compliments are appreciated. We have added a section at the beginning of the Strategic Action Plan that addresses your concern. Because this is a comprehensive economic development strategy, it should not be construed as a work plan for the Humboldt County Economic Development Department. The implementation of the strategies must be driven by a wide variety of community partners. The Humboldt County Economic Development Department will align work plans with the CEDS and collaborate with partners to develop the more concrete steps throughout the next 5 years. It is the intent that the implementation steps will streamline existing and future planning efforts related to the strategies.

Comment	Action/Response
6. (page 11) The Humboldt County CEDS must incorporate locally relevant data to accurately inform its economic strategies. Page 11 references the importance of data-informed planning, but the current draft relies heavily on federal data sources (e.g., NAICS, BEA, BLS) that either exclude or severely underrepresent cannabis, the County's largest agricultural sector by value. Two local data sets should be explicitly included in this section: Humboldt County Crop Report (2022 & 2023). According to the County's own Agriculture Commissioner, cannabis was valued at $278.6 million in 2023, exceeding all other commodities combined. Omitting this data obscures the economic reality of Humboldt's rural economy. Cal Poly Humboldt Cannabis Economic Impact Study (2023). This report, funded by the DCC and prepared in partnership with Dr. Robert Eyler and the Humboldt Institute for Interdisciplinary Marijuana Research, found that the North Coast region, including Humboldt, supports over 6,000 jobs and $263 million in labor income from the legal cannabis supply chain. In Humboldt, these jobs are concentrated in small-scale, sun-grown cultivation and manufacturing, aligning closely with the CEDS emphasis on rural entrepreneurship and regenerative industry. Recommendation: Page 11 should explicitly recognize the limitations of federal data when it comes to cannabis and cite the Humboldt County Crop Report and the Cal Poly Humboldt study as critical data sources that fill this gap. This would support more targeted, inclusive economic strategies and accurately reflect the County's leading role in California's legal cannabis economy.	**D** We recognize the significance of the cannabis industry on Humboldt County. The document discusses the impacts and trends of alternative agriculture. This document is prepared for consideration by a federal agency. Due to the limits of federal data for the cannabis industry and its current legal status at the federal level, more specific localized cannabis data will not be added at this time. This should not impede applications for funding projects related to the industry, should opportunities arise. We appreciate the mention of the additional resources, and we are including the corresponding letter in this appendix.
7. (page 16) To make this a truly effective strategic planning document, Humboldt County must clearly and emphatically articulate its housing needs and the barriers to meeting them. With the County currently falling short of its Regional Housing Needs Allocation, a bold and coordinated strategy is essential—one that recognizes that meaningful solutions across all sectors depend on a workforce that is adequately housed. Please consider the following adjustments: 1. Industry Elevation and Diversification, 1.2 Catalyze growth for Humboldt County's emerging industries (Page 16-17): Add (1.2.3) develop housing to attract and retain employees of emerging industries. Providing adequate housing opportunities is critical to supporting the growth and long-term sustainability of emerging industries in Humboldt County such as offshore wind and healthcare. Acknowledging this need within the strategy creates alignment and reinforces the interconnectedness of economic development and housing.	**D** The document dedicates narrative in the document to describing the relationship between housing and economic, community, and workforce development. Rationale and data around housing can be found within the Fundamental Community Needs focus area of the Strategic Action Plan. Strategic action 4.2 is "Enhance housing stock availability and quality at all income and market levels." The last sub-action (4.2.8) is to "Evaluate the potential for dedicated housing or housing incentives to attract workers for target industries." This includes both legacy and emerging industries.

Comment	Action/Response
8. (page 20) 2. Collaboration, 1.8 Leverage partnerships and marketing to attract and retain residents and workforce (Page 20): Add (1.8.7) collaborate with local organizations, tribes, developers, and public agencies to increase housing supply for growing workforce. Add (1.8.7.1) support tribal housing programs. 3. Natural Assets and Disaster Preparedness (Page 20-21): Consider adding to "The Reason" section that one of Humboldt County's greatest assets is its natural beauty, and it's important to be intentional about preserving it by avoiding unchecked sprawl.	**C** Strategic action 4.2 is focused on housing, including increasing housing supply. 4.2.8 says, "Evaluate the potential for dedicated housing or housing incentives to attract workers for target industries." Strategic action 4.2.4 was changed to "Collaborate on the expansion and elevated impacts of the first-time home buyer program and tribal housing programs." Language has been added to the approach to Fundamental Community Needs in the Strategic Action Plan.
9. (page 22) 1.10 Prepare for natural disasters (Page 22): Add (1.10.3) ensure housing and long term relocation for communities facing climate change displacement. Such communities include Fields Landing and King Salmon. 1.11 Balance increases in use and development with the protection of natural assets (Page 22-23): Add (1.11.4) encourage infill housing and dense, walkable communities to reduce urban sprawl and carbon emissions associated with vehicle travel. Supporting this will ensure that natural landscapes and wildlife are protected. These kinds of decisions are already encouraged in zoning and other regulations such as the Arcata Gateway Area Plan, Eureka General Plan, and proposed McKinleyville Town Center.	**C** Some language that addresses concerns in this comment have been added to the approach to Fundamental Community Needs in the Strategic Action Plan. Walkability is addressed in the Infrastructure section under Transportation. The plan references are appreciated. These have been added to the alignment section of Fundamental Community Needs.

Comment	Action/Response
10. (page 25) Humboldt County must be a leader in transitioning to a green economy, and this means a just transition to industries that do not further contribute to the climate crisis. It is commendable that the CEDS for acknowledges that climate change is the biggest long-term threat to the economy. However, much of the CEDS focuses on the need to increase legacy industries such as logging and agriculture. Increasing these industries, especially in sensitive biological areas, will only do more harm and will delay a needed transition to greener industries. In particular, logging at the levels we are currently logging at, with a focus on commercial logging, destroys carbon reserves and biodiversity and is not sustainable. Mature forests store significantly more carbon than those that have been logged. Moreover, logging is increasingly unsustainable, as climate change—along with its cascading impacts like rising pest infestations and disease—is already slowing forest regrowth. Assuming trees will regenerate quickly enough to justify higher logging rates is flawed. Any investments in Humboldt County's agricultural industry should focus on diversified, regenerative, climate-friendly agriculture. The County should not invest in expansion of high output industrial agriculture that consumes unsustainable amounts of water, and leads to degradation including air and water pollution, significant greenhouse gas emissions, soil depletion, and loss of biodiversity. It's wiser to invest in greener infrastructure and begin a gradual transition away from industries that contribute to costly climate impacts. This includes prioritizing truly sustainable building materials. Our focus should shift toward job creation in restoration forestry and carbon-sequestering industries—efforts that support a healthy, productive landscape for future generations. Furthermore, statutes such as the Endangered Species Act, Forest Practices Act, and California Environmental Quality Act and their counterpart regulations remain among the few safeguards for wildlife and forest ecosystems. The logging industry has already benefited from significant regulatory streamlining and does not require further rollbacks. For these reasons, please consider the following changes: 4. Fundamental Community Needs, 1.13 Enhance housing stock availability and quality at all income and market levels (Page 25): Revise 1.13.3 to "Support growth in the construction industry to increase supply of sustainable and alternative building materials and increase skilled workforce for housing development, especially infill multifamily housing development."	**C** The CEDS considers long-term shifts toward more environmentally sustainable and responsible practices. Strategic action 4.2.3 has been revised to "Support sustainable growth in the forestry and construction industries to increase the supply of alternative and regenerative building materials and increase skilled workforce for housing development."

Comment	Action/Response
11. (page 35) 4.2 Enhance housing stock availability and quality at all income and market levels (Page 35): Revise 4.2.3 to "Support growth in construction industry to increase supply of sustainable and alternative building materials and increase skilled talent for housing development."	**D** This comment is duplicative of the suggested changes in comment #10. The revision of Strategic Action 4.2.3 is described in the response to comment #10.
12. (page 44) Strong Legacy Industries (Page 44-45): Revise last sentence in second paragraph to "With deep local expertise and infrastructure, the forestry sector is well positioned for future innovation in restoration forestry, carbon sequestration, and providing for sustainable building materials.	**A** This suggested revision has been completed.
13. (page 50) 3. Opportunities, Diversification of Legacy Industries (Page 50): Revise last sentence in first paragraph to "Similarly, innovations in forest management, including carbon sequestration and forest restoration, can be sustainable, address climate goals, and create new jobs."	**A** This suggested revision has been completed.
14. (page 55) Regulatory Burdens on Key Industries (Page 55): Remove third to last and last sentence in first paragraph.	**A** This comment was considered and partially integrated into the document. The paragraph has been updated to say, "A complex and overlapping regulatory environment affects economic development across key industries in Humboldt County. While regulations play a vital role in protecting the environment, worker safety and public health, they also create high compliance costs—particularly for small and mid-sized businesses with limited administrative capacity. Sectors such as agriculture and forestry are especially affected. For instance, California farmers face some of the highest regulatory costs in the nation, with small farms bearing a disproportionate burden."

Comment	Action/Response
15. (page 27) The CEDS must recognize dense urban communities as a climate mitigation and resiliency strategy that will boost our local economy. Research from Cities Alive by Arup highlights that creating dense, walkable urban environments can boost small businesses, street markets, and startups by improving accessibility and visibility for consumers. Similarly, economist Joe Cortright found that Portland's 20% reduction in driving led to a $1.2 billion "green dividend" that stayed in the local economy—demonstrating how walkability can drive economic resilience and support thriving local communities. Moreover, suburban sprawl is costly, largely due to the long-term infrastructure maintenance it requires—often more expensive than urban upkeep—partly because suburban tax bases are less stable and efficient. In contrast, dense urban development not only eases fiscal strain but also benefits the climate by reducing greenhouse gas emissions. The Arcata Gateway Plan, Eureka General Plan, and the proposed Mckinleyville Town Center all encourage denser communities. Thus, please consider the following changes: Strategic Action Plan, 5. Infrastructure, 1.15 Develop and maintain transportation infrastructure that supports local industries and increases access for residents (Page 27): Add (1.15.8): Invest in infrastructure and urban design improvements that promote walkability—such as expanded sidewalks, pedestrian-only zones, safe crossings, and mixed-use development—to reduce car dependency and encourage foot traffic in commercial areas.	**A** This recommendation was considered and mostly integrated into the document. It overlaps with the intent outlined in 5.1.2. This has been revised to the suggested language with the slight change to replace "walkability" with "multi-modal transportation." The new strategic action reads, "Invest in infrastructure and urban design improvements that promote multi-modal transportation—such as expanded sidewalks, pedestrian-only zones, safe crossings, and mixed-use development—to reduce car dependency and encourage foot traffic in commercial areas." The supporting research mentioned has not been incorporated, however the local plans mentioned have been reviewed. Alignment with those local plans is important to the CEDS process.
16. (page 41) To ensure a just and forward-looking economic strategy, the CEDS must emphasize Humboldt County's critical role in advancing clean energy—particularly offshore wind—while acknowledging the need to transition away from climate-harming industries and avoid investing in false solutions. The CEDS must highlight to the fullest extent, Humboldt County's opportunity to be a leader in offshore wind development. A study by the California State Lands Commission showed that the Humboldt Bay Heavy Lift Marine Terminal in particular is essential to offshore wind development. Offshore wind development cannot be understated as one of the least environmentally impactful and yet most powerful sources of energy that we can pursue, which is critical as we shift from reliance on fossil fuels. Relatedly, it is important for this document to acknowledge that some industries will need to be phased out due to their contributions to climate change. Finally, we cannot invest in false solutions such as industrial scale biomass, which is not only related to deforestation, but is also a significant source of pollution. Please consider the following changes: SWOT Analysis (Page 41-53): Include a section under either Strengths or Opportunities that emphasizes Humboldt County's strategic advantage in supporting offshore wind development, given its abundant wind resources and available space for port infrastructure.	**C** Offshore wind and port infrastructure development are discussed in many places in the document, both directly and indirectly. In the Strategic Action Plan's Infrastructure section, 5.1.5 and 5.2.2 take actions to support these opportunities. In the SWOT analysis, language about the emergence and importance of offshore wind currently exists in the Opportunities section under Diversification of Legacy Industries as well as Expansion and Diversification of Local Construction Industry. Offshore wind is also discussed in the Summary Background within the Natural Assets and Disaster Preparedness (Natural Resources) and Infrastructure (Renewable Energy) sections.

Comment	Action/Response
17. (page 56) 4. Threats, Climate Change (Page 56-58): This section should address the fact that some industries such as natural gas, logging, biomass, need to transition to alleviate their contributions to climate change - we need to decrease the County's reliance on natural gas, internal combustion vehicles, and industrial forestry.	**C** The CEDS discusses the economic opportunities related to the concerns outlined in this comment. Language has been strengthened in the SWOT Analysis under Diversification of Legacy Industries.

Comment	Action/Response
18. (Pages 138-139) Can you include Open Door Community Health Centers in the employment sections on Appendix A? Data is available through HCAI SIERA Utilization Reports (page 2 has FTE by staff type with total FTEs) – https://reports.siera.hcai.ca.gov/ Contact Natasha Wood, CFO – Sites - https://opendoorhealth.com/locations/ (Page 24-26) Sections 1.12 and 1.14 align well with the RRRISE Activation Plan & align with most of the strategies outlined in the RRRISE Strategic Plan Part II. 1) Determine How to Best Address the Limited Access to Healthcare and Caregiving Services in our Redwood Region, 2) Support and Expand Capacity, & 3) Address System and Policy Issues Can you add a description of the "healthcare hubs" that you have listed in 4.1.3? Additional short-term to mid-term activities to consider adding: • Help support CR and CalPoly-Humboldt as they develop new health education programs and expand existing health education programs to meet high growth, high needs healthcare careers (ex: RN, social work, radiologic tech, CHWs, speech pathology) • In alignment with 1.14.1 - Explore ways to support clinical placements for hands-on learning and training experiences necessary for educational attainment. • 1.14.4 - Invest in coordinated recruitment and retention programs and services (ex: Home in Humboldt) • 1.14.6 – Can you add expansion of subsidized dual enrollment and STEAM education opportunities to include remote and underserved schools (currently dual enrollment at CalPoly limited to a few Humboldt Bay area schools). • Aligned with 1.14.6 - There is a model in Mendocino where high school students are being educated and trained to be CNAs by the time they graduate - https://empoweredaging.org/healthcare-career-pathway/ What are similar models we can develop and deploy in Humboldt? Additional longer-term activities to consider: • Evaluate community benefit funding set-aside or special tax districts to fund core healthcare and childcare infrastructure • Explore including healthcare and childcare services as a necessary component for establishing new, large businesses, as well as zoning, land use and housing & commercial development planning.	**C** For the purposes of data consistency, we have chosen to rely on employment data provided by the California Employment Development Department (EDD) for private sector employers and the California State Controller's Office for public sector employers. The CEDS must cover a broad range of higher-level strategies that strengthen other ongoing efforts. The alignment with RRRISE and other current plans is intentional to promote more streamlined collaboration to achieve shared goals. The CEDS Committee has chosen not to amend section 4.1 of the Strategic Action Plan at this time. The activities listed in this comment align well with the existing strategies and could still be used by those collaborative partners to implement the strategies outlined in the document. A definition for "healthcare hubs" has been added as a footnote to 4.1.3. It reads, "The hub model organizes health care services around a central facility that coordinates with smaller, connected satellite campuses. This structure helps streamline patient care and resource management across the network."

Comment	Action/Response
19. Correct numbering of figures and update narrative references to those figures.	**A** The figure numbering sequence and corresponding narratives have been updated.
20. (page 98) Correct typo. There is a missing space: “anxietyand”	**A** The typo has been corrected by changing “anxietyand” to “anxiety and”
21. (pages 190-195) To Appendix C, add Humboldt County projects listed in the RRRISE Project Inventory Spreadsheet. Add projects from the RRRISE Preliminary Catalyst Awardees Summary Packet. Add current construction projects from the City of Arcata’s website.	**A** The projects have been added to the list in Appendix C.
22. (page 7) Tribal Names from Page 42 need to be listed on Page 7 under history.	**A** This suggested revision has been completed.
23. (page 129) Hoopa Valley Tribe is the applicant.	**A** This suggested revision has been completed.
24. We have received a conditional award from DOE that is still going through programmatic review.	**A** The narrative has been updated to reflect the inclusion of RCEA, conditional award, and programmatic review.
25. (page 150) The Hoopa Valley Tribe is a federally recognized tribe with over 3,500 enrolled members. The Tribe has been federally recognized since 1864, following the signing of a treaty giving the Hupa people writes to a 141-square mile area, less than a third of their ancestral lands. The Tribe has worked to regain parts of that area over time, most recently purchasing 10,395 acres of land on the western boundary of the Tribe’s Reservation. The Hoopa Valley Tribe operates a number of Tribal enterprises, such as the Hoopa Valley Public Utilities District (HVPUD), Lucky Bear Casino, Hoopa Shopping Center, Hoopa Forest Industries and the K’ima:w Medical Center. To further economic development, the Tribe has established the Hoopa Development Fund, a Native Community Development Financial Institution (CDFI), to provide financial services and promote entrepreneurship in the community. The Hoopa Valley Tribe is one of a small group, estimated to be 10% nationwide, of Tribes with their own Tribal Business Codes.	**A** The changes to the first sentence were made as suggested.
26. (pages 190-191) Grocery Store Project, Hoopa Downtown Project are complete	**A** The status of those projects has been updated.
27. (page 193) Hoopa Valley Public Utilities District (Valley missing)	**A** This correction has been made.

Letters Submitted for Public Comment

RCCER

June 13, 2025

Humboldt County Economic Development Division
825 Fifth St #112
Eureka, CA 95501
GoHumCo@co.humboldt.ca.us

Dear Humboldt County Economic Development Division,

The Redwood Coalition for Climate and Environmental Responsibility (RCCER) expresses its general support for the County's Comprehensive Economic Development Strategy (CEDS), particularly its attention to housing and climate resilience, adaptation, and mitigation. The mission of RCCER is to ensure that local elected officials and government agencies on California's North Coast take robust, just, and equitable actions to address the climate crisis and other key environmental issues. Please note that these comments have also been submitted via the Humboldt County CEDS 2025-2030 Public Comment Form.

I. The Strategic Action Plan and Evaluation Framework Must Strongly Advance Housing Needs

To make this a truly effective strategic planning document, Humboldt County must clearly and emphatically articulate its housing needs and the barriers to meeting them. With the County currently falling short of its Regional Housing Needs Allocation, a bold and coordinated strategy is essential—one that recognizes that meaningful solutions across all sectors depend on a workforce that is adequately housed. RCCER thus recommends the following adjustments to the Strategic Action Plan:

- 1. Industry Elevation and Diversification, 1.2 Catalyze growth for Humboldt County's emerging industries (Page 16-17): **Add (1.2.3) develop housing to attract and retain employees of emerging industries.** Providing adequate housing opportunities is critical to supporting the growth and long-term sustainability of emerging industries in Humboldt County such as offshore wind and healthcare. Acknowledging this need within the strategy creates alignment and reinforces the interconnectedness of economic development and housing.
- 2. Collaboration, 1.8 Leverage partnerships and marketing to attract and retain residents and workforce (Page 20):

    - **Add (1.8.7) collaborate with local organizations, tribes, developers, and public agencies to increase housing supply for growing workforce.**
        - **Add (1.8.7.1) support tribal housing programs.**
- 3. Natural Assets and Disaster Preparedness (Page 20-21): **Consider adding to "The Reason" section that one of Humboldt County's greatest assets is its natural beauty, and it's important to be intentional about preserving it by avoiding unchecked sprawl.**
    - 1.10 Prepare for natural disasters (Page 22): **Add (1.10.3) ensure housing and long term relocation for communities facing climate change displacement.** Such communities include Fields Landing and King Salmon.[1]
    - 1.11 Balance increases in use and development with the protection of natural assets (Page 22-23): **Add (1.11.4) encourage infill housing and dense, walkable communities to reduce urban sprawl and carbon emissions associated with vehicle travel.** Supporting this will ensure that natural landscapes and wildlife are protected. These kinds of decisions are already encouraged in zoning and other regulations such as the Arcata Gateway Area Plan, Eureka General Plan, and proposed McKinleyville Town Center.

RCCER also recommends adjustments to the format of the tables within the Evaluation Framework to ensure that implementation of the Strategic Action Plan is successful. Within the tables, there needs to be a way to convey when each action will start. For example, on page 35 the timeline for "4.2.2 Encourage the development of a range of housing types suitable for a range of income levels, including market rate, moderate income, low income, mixed income, single-family, multi-family, ADUs and mixed-use housing" is "Long-term 4-5 years." This overlooks the fact that housing development is already underway—though progressing too slowly—and is hindered by challenges such as high development costs and individuals expressing opposition to local projects, underscoring the need for active support and encouragement.There needs to be a way to convey urgency and immediacy of certain actions.

The Strengths Weaknesses Opportunities Threats (SWOT) analysis narrative needs to be direct and clear in talking about the housing crisis in Humboldt County. While the Housing Needs section of the Summary Background (Page 105) explicitly links the relationship between housing affordability and supply, the SWOT analysis is lacking in this regard. Section 2. Weaknesses, Housing Availability, Affordability, and Quality (Page 47-48) presents the issues of housing supply and housing costs as disconnected. Recent research consistently shows that increasing housing supply helps reduce or slow rent growth regionally and, in some cases, locally—without increasing displacement—and creates a ripple effect that opens up housing

[1] Humboldt County Government, *Fields Landing and King Salmon Coastal Resiliency Projects*, https://humboldtgov.org/3621/Fields-Landing-and-King-Salmon-Coastal-R#:~:text=These%20two%20communities%20on%20Humboldt,potential%20risks%20to%20these%20communities (last visited June 11, 2025).

options across the income spectrum.[2] The first sentence in the second paragraph of the Housing Availability, Affordability, and Quality should be revised to state "Rising housing costs caused by limited housing supply exacerbates stalled economic growth in Humboldt County."

II. Climate Change Mitigation Compliments Economic Growth in Humboldt County

Humboldt County must be a leader in transitioning to a green economy, and this means a just transition to industries that do not further contribute to the climate crisis. We commend the CEDS for acknowledging that climate change is the biggest long-term threat to the economy. However, much of the CEDS focuses on the need to increase legacy industries such as logging and agriculture. Increasing these industries, especially in sensitive biological areas, will only do more harm and will delay a needed transition to greener industries. In particular, logging at the levels we are currently logging at, with a focus on commercial logging, destroys carbon reserves and biodiversity[3] and is not sustainable. Mature forests store significantly more carbon than those that have been logged.[4] Moreover, logging is increasingly unsustainable, as climate change—along with its cascading impacts like rising pest infestations and disease—is already slowing forest regrowth.[5] Assuming trees will regenerate quickly enough to justify higher logging rates is flawed.

Any investments in Humboldt County's agricultural industry should focus on diversified, regenerative, climate-friendly agriculture. The County should not invest in expansion of high output industrial agriculture that consumes unsustainable amounts of water, and leads to degradation including air and water pollution, significant greenhouse gas emissions, soil depletion, and loss of biodiversity.[6]

It's wiser to invest in greener infrastructure and begin a gradual transition away from industries that contribute to costly climate impacts. This includes prioritizing truly sustainable

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[2] Vicki Been, Ingrid Gould Ellen & Katherine M. O'Regan, *Supply Skepticism Revisited*, SSRN Elec. J. (Jan. 2023), https://doi.org/10.2139/ssrn.4629628.
[3] Bartowitz KJ, Walsh ES, Stenzel JE, Kolden CA and Hudiburg TW (2022) Forest Carbon Emission Sources Are Not Equal: Putting Fire, Harvest, and Fossil Fuel Emissions in Context. Front. For. Glob. Change 5:867112. doi: 10.3389/ffgc.2022.867112 https://static.frontiersin.org/articles/10.3389/ffgc.2022.867112/full
[4] Dellasala, D., Kormos, C., Keith, H., Mackey, B., Young, V., Rogers, B., & Mittermeier, R. (2020). Primary Forests Are Undervalued in the Climate Emergency. *BioScience*, *70*. https://doi.org/10.1093/biosci/biaa030
[5] Battles, J. J., Robards, T., Das, A., Waring, K., Gilless, J. K., Biging, G., & Schurr, F. (2008). Climate change impacts on forest growth and tree mortality: A data-driven modeling study in the mixed-conifer forest of the Sierra Nevada, California. Climatic Change, 87(1), 193–213. https://doi.org/10.1007/s10584-007-9358-9 ; https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2010JG001471
[6] Cal. Dep't of Water Resources, Statewide Agricultural Water Use Data 2016–2020 (Excel Application Tool), California Natural Resources Agency, https://data.cnra.ca.gov/dataset/agricultural-water-use-data-2016-2020 (last visited June 12, 2025); Leo Horrigan, Robert S. Lawrence & Polly Walker, *How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture,* 110 *Envtl. Health Persp.* 445 (May 2002); U.S. Env't. Prot. Agency, Agriculture Sector Emissions, https://www.epa.gov/ghgemissions/agriculture-sector-emissions (last visited June 12, 2025).

building materials. Our focus should shift toward job creation in restoration forestry and carbon-sequestering industries—efforts that support a healthy, productive landscape for future generations. Furthermore, statutes such as the Endangered Species Act, Forest Practices Act, and California Environmental Quality Act and their counterpart regulations remain among the few safeguards for wildlife and forest ecosystems. The logging industry has already benefited from significant regulatory streamlining and does not require further rollbacks. For these reasons, RCCER recommends the following adjustments to the CEDS Strategic Action Plan.

- 4. Fundamental Community Needs, 1.13 Enhance housing stock availability and quality at all income and market levels (Page 25): **Revise 1.13.3 to "Support growth in the construction industry to increase supply of sustainable and alternative building materials and increase skilled workforce for housing development, especially infill multifamily housing development."**

  RCCER also requests the following adjustments to the Evaluation Framework:

- 4.2 Enhance housing stock availability and quality at all income and market levels (Page 35): **Revise 4.2.3 to "Support growth in construction industry to increase supply of sustainable and alternative building materials and increase skilled talent for housing development."**

  RCCER also recommends the following changes to the SWOT analysis sections:

- Strong Legacy Industries (Page 44-45): **Revise last sentence in second paragraph to "With deep local expertise and infrastructure, the forestry sector is well positioned for future innovation in restoration forestry, carbon sequestration, and providing for sustainable building materials."**
- 3. Opportunities, Diversification of Legacy Industries (Page 50): **Revise last sentence in first paragraph to "Similarly, innovations in forest management, including carbon sequestration and forest restoration, can be sustainable, address climate goals, and create new jobs."**
- Regulatory Burdens on Key Industries (Page 55): **Remove third to last and last sentence in first paragraph.**

The CEDS must recognize dense urban communities as a climate mitigation and resiliency strategy that will boost our local economy. Research from *Cities Alive* by Arup highlights that creating dense, walkable urban environments can boost small businesses, street markets, and startups by improving accessibility and visibility for consumers[7]. Similarly,

[7] Arup, Cities Alive: Towards a Walking World (Feb. 2019), https://www.arup.com/en-us/insights/cities-alive-towards-a-walking-world.

economist Joe Cortright found that Portland's 20% reduction in driving led to a $1.2 billion "green dividend" that stayed in the local economy—demonstrating how walkability can drive economic resilience and support thriving local communities.[8] Moreover, suburban sprawl is costly, largely due to the long-term infrastructure maintenance it requires—often more expensive than urban upkeep—partly because suburban tax bases are less stable and efficient. In contrast, dense urban development not only eases fiscal strain but also benefits the climate by reducing greenhouse gas emissions.[9] The Arcata Gateway Plan, Eureka General Plan, and the proposed Mckinleyville Town Center all encourage denser communities. For these reasons RCCER requests the follow adjustment to the CEDS:

- Strategic Action Plan, 5. Infrastructure, 1.15 Develop and maintain transportation infrastructure that supports local industries and increases access for residents (Page 27):
    - Add (1.15.8): **Invest in infrastructure and urban design improvements that promote walkability—such as expanded sidewalks, pedestrian-only zones, safe crossings, and mixed-use development—to reduce car dependency and encourage foot traffic in commercial areas**.

III. Align Renewable Energy Investments with Climate Change Mitigation Goals

To ensure a just and forward-looking economic strategy, the CEDS must emphasize Humboldt County's critical role in advancing clean energy—particularly offshore wind—while acknowledging the need to transition away from climate-harming industries and avoid investing in false solutions. The CEDS must highlight to the fullest extent, Humboldt County's opportunity to be a leader in offshore wind development. A study by the California State Lands Commission showed that the Humboldt Bay Heavy Lift Marine Terminal in particular is essential to offshore wind development.[10] Offshore wind development cannot be understated as one of the least environmentally impactful and yet most powerful sources of energy that we can pursue, which is critical as we shift from reliance on fossil fuels. Relatedly, it is important for this document to acknowledge that some industries will need to be phased out due to their contributions to climate change. Finally, we cannot invest in false solutions such as industrial scale biomass, which is not

[8] Joe Cortright, *Portland's Green Dividend,* City Observatory (Oct. 16, 2018), https://cityobservatory.org/portlands-green-dividend/
[9] Charles Marohn, *Is a Street an Asset?* Strong Towns (Aug. 19, 2014), https://www.strongtowns.org/journal/2014/8/19/is-a-street-an-asset.html;
Charles Marohn, *What Strong Towns Really Says About Infrastructure Spending,* Strong Towns (July 22, 2024), https://www.strongtowns.org/journal/2024/7/22/what-strong-towns-really-says-about-infrastructure-spending.
[10] California State Lands Commission, *AB525 PORT READINESS PLAN, Final Report,* July 7, 2023, https://slcprdwordpressstorage.blob.core.windows.net/wordpressdata/2023/07/AB525-Port-Readiness-Plan_acc.pdf

only related to deforestation, but is also a significant source of pollution.[11] Thus, RCCER recommends the following changes to the CEDS:

- SWOT Analysis (Page 41-53): **Include a section under either *Strengths* or *Opportunities* that emphasizes Humboldt County's strategic advantage in supporting offshore wind development, given its abundant wind resources and available space for port infrastructure.**
- Strong Legacy Industries (Page 44-45): **Revise last sentence in second paragraph to "With deep local expertise and infrastructure, the forestry sector is well positioned for future innovation in restoration forestry, carbon sequestration, and providing for sustainable building materials."**
- 3. Opportunities, Diversification of Legacy Industries (Page 50): **Revise last sentence in first paragraph to "Similarly, innovations in forest management, including carbon sequestration and forest restoration, can be sustainable, address climate goals, and create new jobs."**
- 4. Threats, Climate Change (Page 56-58)**: This section should address the fact that some industries such as natural gas, logging, biomass, need to transition to alleviate their contributions to climate change - we need to decrease the County's reliance on natural gas, internal combustion vehicles, and industrial forestry.**

Thank you for the opportunity to comment on the CEDS, we look forward to seeing improvements to the document and appreciate all your work on this.

Sincerely,

Melodie Meyer

Melodie Meyer, RCCER

[11] Sami Yassa, *No, Burning Wood Fuels Is Not Climate-Friendly,* NRDC (Oct. 2021), https://www.nrdc.org/stories/no-burning-wood-fuels-not-climate-friendly.; L. Clarke et al., Energy Systems in IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla et al., (eds.)], Cambridge University Press at 646 (2022), doi: 10.1017/9781009157926.008.

Humboldt County Growers Alliance

HUMBOLDT COUNTY
GROWERS ALLIANCE

June 12, 2025

Humboldt County Economic Development Division
Re: Public Comment on Draft Comprehensive Economic Development Strategy (CEDS) 2025–2030

To Whom It May Concern,

On behalf of the Humboldt County Growers Alliance (HCGA), thank you for the opportunity to provide public comment on the draft Comprehensive Economic Development Strategy (CEDS) for 2025–2030. We appreciate the County's commitment to inclusive and forward-looking economic development, and we offer the following feedback to ensure that the final CEDS reflects the full scope of Humboldt's economy—past, present, and future.

Recognizing Cannabis: Clarity Beyond "Alternative Agriculture"

We understand that the CEDS uses the term "alternative agriculture" to accommodate federal funding restrictions on naming cannabis directly. However, we urge the County to be as clear and specific as possible in acknowledging that licensed cannabis cultivation and manufacturing are a distinct and significant sector of Humboldt's economy.

Over time, HCGA's long-term goal is to see cannabis treated like any other agricultural crop. But we are not there yet. Cannabis is still not treated like "just ag." Licensed operators face a regulatory framework that is far more burdensome than any other form of agriculture, with separate zoning, licensing, taxation, and enforcement regimes—all under federal prohibition and in the context of a rapidly collapsing market.

Until true regulatory parity is achieved, we cannot afford to treat cannabis as a footnote or euphemism. This is not an "emerging" sector—it is a foundational one. Cannabis built Humboldt's rural economy, and with proper support, it can be a pillar of rural revitalization once again.

Replace Incomplete Federal Data with Local Economic Reality

The CEDS relies heavily on federal data sources (e.g., NAICS, BEA, BLS) that exclude or undercount cannabis. Without integrating local data, the CEDS risks presenting an inaccurate picture of Humboldt's economic landscape and missing opportunities for targeted support.

We urge the County to supplement federal data with locally grounded sources, including:

- **Humboldt County Crop Reports** – cannabis exceeded all other commodities combined in 2021, with an estimated value of $278 million, compared to $251 million for all other commodities combined.
- **Economic Impact of Cannabis Study** (Cal Poly Humboldt / SSU / DCC, 2023) – Humboldt's regional cannabis supply chain supported over 6,000 jobs and $263 million in labor income.
- **Project Trellis reporting** – local grant and equity investment data.
- **State excise tax and license data** – from CDTFA and DCC.

Grounding the CEDS in local economic truth is essential to building policy that is honest, equitable, and effective.

Missed Opportunity: Cannabis in Buy Local and Tourism Strategies

The CEDS includes thoughtful goals related to tourism, collective branding, and "Buy Local" campaigns—but omits cannabis from these discussions. This is a missed opportunity to align with existing regional efforts, such as:

- **Ask for Humboldt** – a local branding and market development campaign run by HCGA.
- **Cannabis tourism development** – a natural complement to Humboldt's broader regenerative and agricultural tourism goals.
- **State-level branding and regional economic identity** – where cannabis should be included as both a historic and future-facing component.

We recommend the final CEDS explicitly include cannabis in:

- Regional procurement and branding strategies
- Tourism development and promotion plans

- Business support and grant eligibility
- Sector-specific workforce and permitting streamlining efforts

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Rebuilding from Collapse: A Rural Recovery Strategy

The CEDS references the need to support industries facing disruption—but fails to mention the economic collapse of Humboldt's licensed cannabis sector.

Since 2021, we have seen:

- Hundreds of cannabis farms shut down
- A surge in property foreclosures in cultivation zones
- Declines in employment, supplier business, and consumer spending
- Drops in local tax revenue from cannabis

This is not just a market correction—it is a rural economic crisis. While compliance has always been important, the weight of Measure S, market saturation, and inadequate state enforcement have pushed many small farms to the brink.

To address this, we urge the County to incorporate cannabis into its economic recovery priorities, including:

- Transitional support for farms in crisis
- Regulatory reform and cost reduction
- Access to economic development and equity grants
- Support for diversification and value-added opportunities

Cannabis Is Not the Past—It's the Path Forward

Since 2017, cannabis farmers in Humboldt have paid over $55 million into the County's general fund through Measure S. Beyond revenue, this sector has supported families, funded environmental restoration, and kept rural communities afloat.

But cannabis is not plutonium. It's a plant. And it's time we stop penalizing it.

If Humboldt wants legal cannabis to survive, we must normalize—not stigmatize—this industry. That means acknowledging its role, supporting its future, and ensuring it has a seat at the table in every economic development conversation.

Thank you for your consideration and for your work on behalf of our community.

Sincerely,
Natalynne DeLapp
Executive Director
Humboldt County Growers Alliance (HCGA)

Blue Lake Rancheria

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June 11th, 2025

Elishia Hayes, CAO
Humboldt County
825 5th Street
Eureka, CA 95501

RE: Humboldt County CEDS 2025 – 2030

Dear CAO Hayes:

I am writing in response to Humboldt County's open comment period for the 2025 – 2030 draft Community Economic Development Strategy (CEDS). Blue Lake Rancheria welcomes the opportunity to discuss long-term strategic economic development strategies and continued partnerships with the County of Humboldt.

Blue Lake Rancheria appreciates the inclusion of several of our strategic initiatives in the County's draft CEDS, including the Toma Resilience and workforce training campus, microgrid deployment and the proposed TERAS project, and broadband development. BLR believes that these projects are a critical driver of resiliency and prosperity for the Tribe and its members as well as the broader community. BLR also appreciates County partners and staff who have worked to support many of these and other efforts.

The recognition of Tribal initiatives in County planning is critical and belies the need for increased regional government to government coordination. Increased uncertainties in market conditions and government budgets will require coordination and consultation to improve utilization of existing local resources, reduce siloed and duplicative efforts, and increase efficiencies. As such, BLR recommends the execution and adoption of a comprehensive Tribal consultation and partnership plan as a much-needed component to successful economic development. BLR is happy to share best practices and expertise with County partners as you consider your Tribal consultation efforts.

I appreciate your critical economic development planning efforts and look forward to continuing our partnership. If you have any questions or would like additional information, please call my staff, Ciara Emery, at (707) 713-9696.

Sincerely,

Jason Ramos
Chairman
Blue Lake Rancheria

Appendix F

Approval and Adoptions