



Regional Plan Part 2

Latest revision: May 2025

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



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



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 coalition of over 130 organizations and counting, coming together to pursue the California Jobs First goal of embracing 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, creating good-paying jobs and prosperous communities for all. Governed collaboratively and driven by participatory design and research, the Collaborative is completing its planning phase, during which it accomplished 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, provides a comprehensive data portrait of the region- its economic and social characteristics, current 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 will look 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 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 will be 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



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	<p>Few organizations with capacity to secure and expend funds, volatile funding and budgets, siloing, limited regional cooperation on shared goals.</p> <p>Lack of traded sectors and low investment from outside the region. Private sector union membership declined over previous decades.</p> <p>Marginalization and alienation of groups in the workplace, high attrition from the workforce in prime age.</p>	<ul style="list-style-type: none"> ◆ 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. 	<p>Creating critical mass helps the Region pursue and secure more state, federal, and private funding and investment.</p> <p>CBOs serving priority communities and valued (and funded) partners in Workforce and Economic Development initiatives.</p> <p>Projects desired by communities are designed and executed at an accelerated pace.</p>

Redwood Region RISE Theory of Change			
	Current State	RISE's Role	Desired State
Equity	<p>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.</p> <p>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.</p> <p>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.</p>	<ul style="list-style-type: none"> ♦ 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. 	<p>Priority communities in the Redwood Region are empowered advocates and leaders in the community.</p> <p>Organizations are culturally competent and prepared to partner with diverse groups and leaders to execute initiatives benefiting the community.</p>
Climate	<p>Region is unprepared for ever increasing risks from fire and sea level rise.</p> <p>Priority communities particularly impacted by the climate crisis.</p> <p>Traditional Ecological Knowledge and local innovation drive climate solutions, but are inadequately resourced and scaled.</p>	<ul style="list-style-type: none"> ♦ 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. 	<p>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.</p> <p>Traditional Ecological Knowledge is recognized and supported across the region, creating more resilient landscapes and improving ecosystem health.</p>

Redwood Region RISE Theory of Change			
	Current State	RISE's Role	Desired State
Climate (continued)			<p>The region is recognized as a leader in sustainable technologies and industries.</p> <p>The region relies on 100% clean, reliable electricity and renewable fuels as its primary sources of energy.</p>
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.	<ul style="list-style-type: none"> ♦ 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

S trengths

- ◆ 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.



W eaknesses

- ◆ 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 | ◆ Laytonville Healthy Start FRC |
| ◆ North Coast Opportunities | ◆ Middletown Art Center |
| ◆ Arts Council of Mendocino County | ◆ Norcal Lao Foundation |
| ◆ Arbor Youth Center (RCS) | ◆ Nuestra Alianza FRC |
| ◆ Black Humboldt | ◆ Playhouse Arts |
| ◆ Centro del Pueblo | ◆ Sacred Life Recovery Services |
| ◆ HC Black Music & Arts Association | ◆ Vision of Hope village |
| ◆ Ink People | ◆ Weaving Wellness & Diversity Management |
| ◆ Lake County Community Foundation | ◆ 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 712³) 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.

³North 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

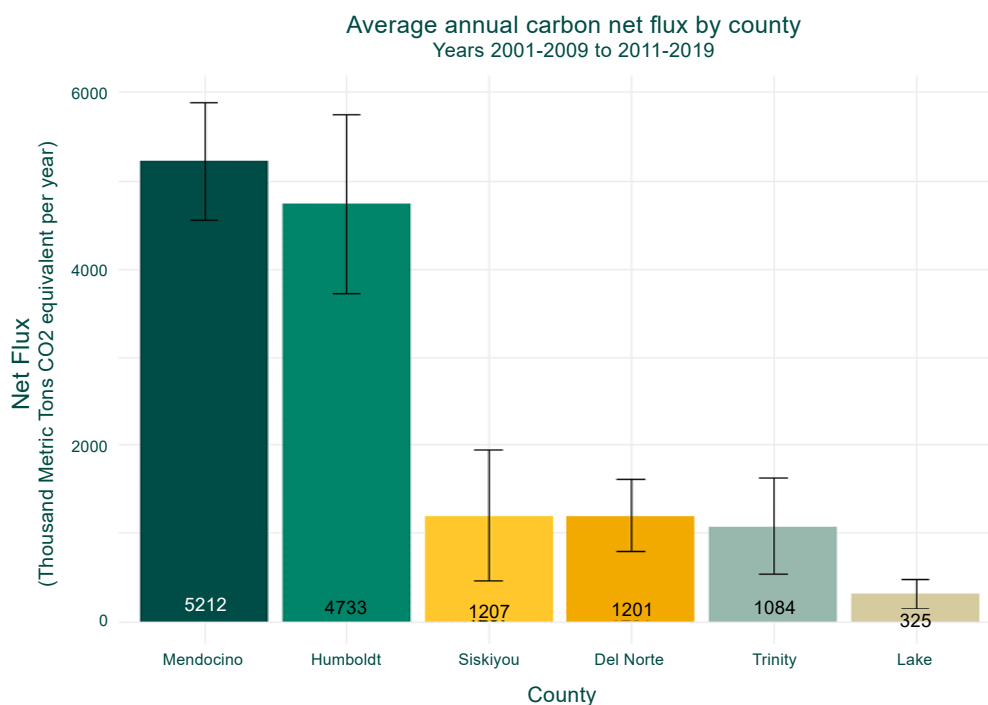
	Employment	LQ	% Change in LQ	% Job Growth	Job-to-Job Multiplier	% Family Sustaining Job	GHG per Job (kq)	
Performing Arts, Spectator Sports, and ... (711)	2,364	1.0	28%	31%	1.4	1%	94	Specialization & Resilience
Museums, Historical Sites, and Similar ... (712)	114	1.2	59%	59%	1.3	18%	557	
Air Transportation (481)	246	0.7	573%	631%	2.3	89%	450,095	Other Industries
Broadcasting (except Internet) (515)	211	0.5	-42%	-24%	3.5	44%	122	
Scenic and Sightseeing Transportation (487)	379	0.5	-3%	15%	1.5	53%	3,565	
Publishing Industries (except Internet) (511)	121	0.1	-69%	-62%	1.5	32%	352	
Rail Transportation (482)	3.1	0.1	-19%	-47%	2.3	96%	316,974	
Other Information Services (519)	56	0.1	-15%	26%	2.9	25%	633	
Food Services and Drinking Places (722)	10,187	0.9	-6%	1%	1.2	13%	623	
Accommodation (721)	1,873	1.2	-10%	-7%	1.3	19%	941	
Transit and Ground Passenger Transporta... (485)	536	0.3	18%	279%	1.2	25%	4,273	
Motion Picture and Sound Recording Indu... (512)	177	0.1	-25%	-22%	1.7	2%	145	
Amusement, Gambling, and Recreation Ind... (713)	1,081	0.8	-21%	-28%	1.2	4%	777	

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.

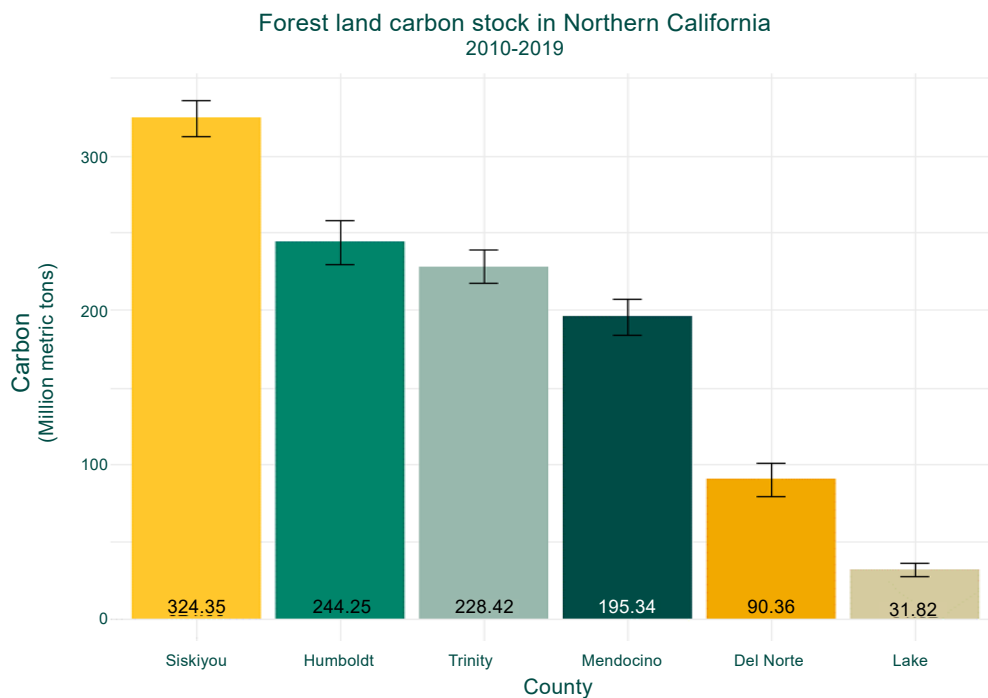
It should be noted that the IMPLAN data is sourced from the Environmental Protection Agency (EPA) for their USEEIO Version 2.0 model. This model uses the U.S. EPA GHG and Sinks: 1990–2016 data; specifically the Land Use, Land-use Change, and Forestry data. This data does not account for storage of carbon 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 *Placemaking* and Creative *Placekeeping*. 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 *placemaking*, 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
<ul style="list-style-type: none"> ♦ Laying the foundational ‘groundwork’ to strategically innovate the Sector: <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> ♦ 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. 	<ul style="list-style-type: none"> ♦ 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.
<ul style="list-style-type: none"> ♦ 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](#)



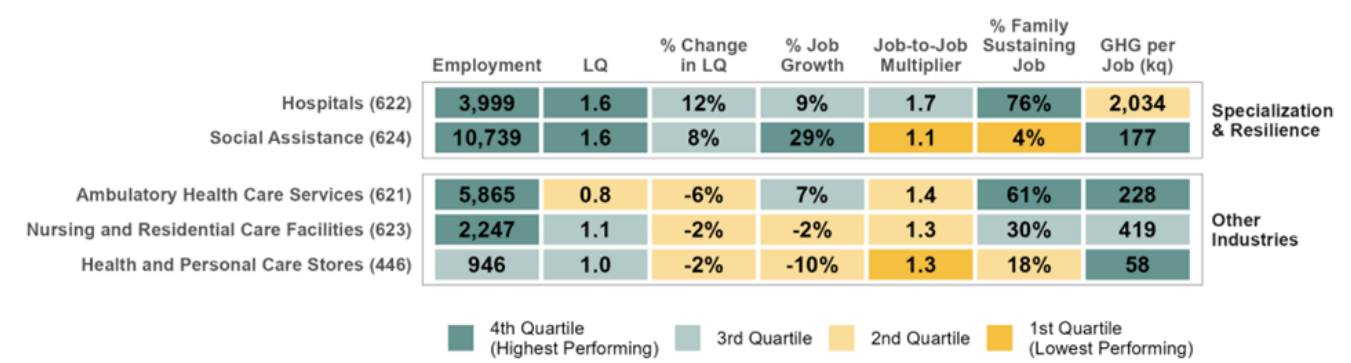
Health and Caregiving Sector

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



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, NCHIN 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	Weaknesses
<ul style="list-style-type: none"> ♦ 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 	<ul style="list-style-type: none"> ♦ 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
<ul style="list-style-type: none"> ◆ 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. <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Build local facilities to meet demand and leverage existing knowledge in trauma and prevention for collective action. 	<ul style="list-style-type: none"> ◆ Leverage existing community projects to ensure that the needs and interests of priority communities are integrated into broader regional efforts. <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> ◆ Develop sustainable infrastructure: <ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> ◆ 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. <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> ◆ 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. NCHIN 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

	Employment	LQ	% Change in LQ	% Job Growth	Job-to-Job Multiplier	% Family Sustaining Job	GHG per Job (kg)	
Construction (23)	10,827	1.3	-3%	14%	1.4	72%	10,279	Specialization & Resilience
Repair and Maintenance (811)	3,143	1.1	7%	3%	1.3	69%	198	Other Industries
Utilities (221)	679	1.6	-12%	-12%	3.1	97%	2,431,384	
<div><div></div>4th Quartile (Highest Performing)</div> <div><div></div>3rd Quartile</div> <div><div></div>2nd Quartile</div> <div><div></div>1st Quartile (Lowest Performing)</div>								

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

<p>Strengths</p> <ul style="list-style-type: none"> ♦ 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 	<p>Weaknesses</p> <ul style="list-style-type: none"> ♦ 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
<p>Opportunities</p> <ul style="list-style-type: none"> ♦ 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 	<p>Threats</p> <ul style="list-style-type: none"> ♦ 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
<ul style="list-style-type: none"> ◆ 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. ◆ 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. ◆ 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. 	<ul style="list-style-type: none"> ◆ 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. ◆ 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. ◆ 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. 	<ul style="list-style-type: none"> ◆ 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. ◆ 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. ◆ 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:

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- ◆ **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.
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- ◆ **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 time. 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 (kg)	
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

	Employment	LQ	% Change in LQ	% Job Growth	Job-to-Job Multiplier	% Family Sustaining Job	GHG per Job (kq)	
Wood Product Manufacturing (321)	1,757	9	-9%	-2%	2.4	76%	22,985	Specialization & Resilience
Support Activities for Agriculture and ... (115)	2,743	1.7	61%	63%	1.2	44%	1,829	
Furniture and Related Product Manufactu... (337)	167	0.8	36%	13%	1.4	46%	2,735	
Furniture and Home Furnishings Stores (442)	410	0.8	5%	-3%	1.3	44%	352	Other Industries
Forestry and Logging (113)	931	22	-4%	-22%	1.6	75%	40,413	
Building Material and Garden Equipment ... (444)	1,903	2.3	1%	-3%	1.3	29%	757	

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.

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

<p>Strengths</p> <ul style="list-style-type: none">♦ 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.	<p>Weaknesses</p> <ul style="list-style-type: none">♦ 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.
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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
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> 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.

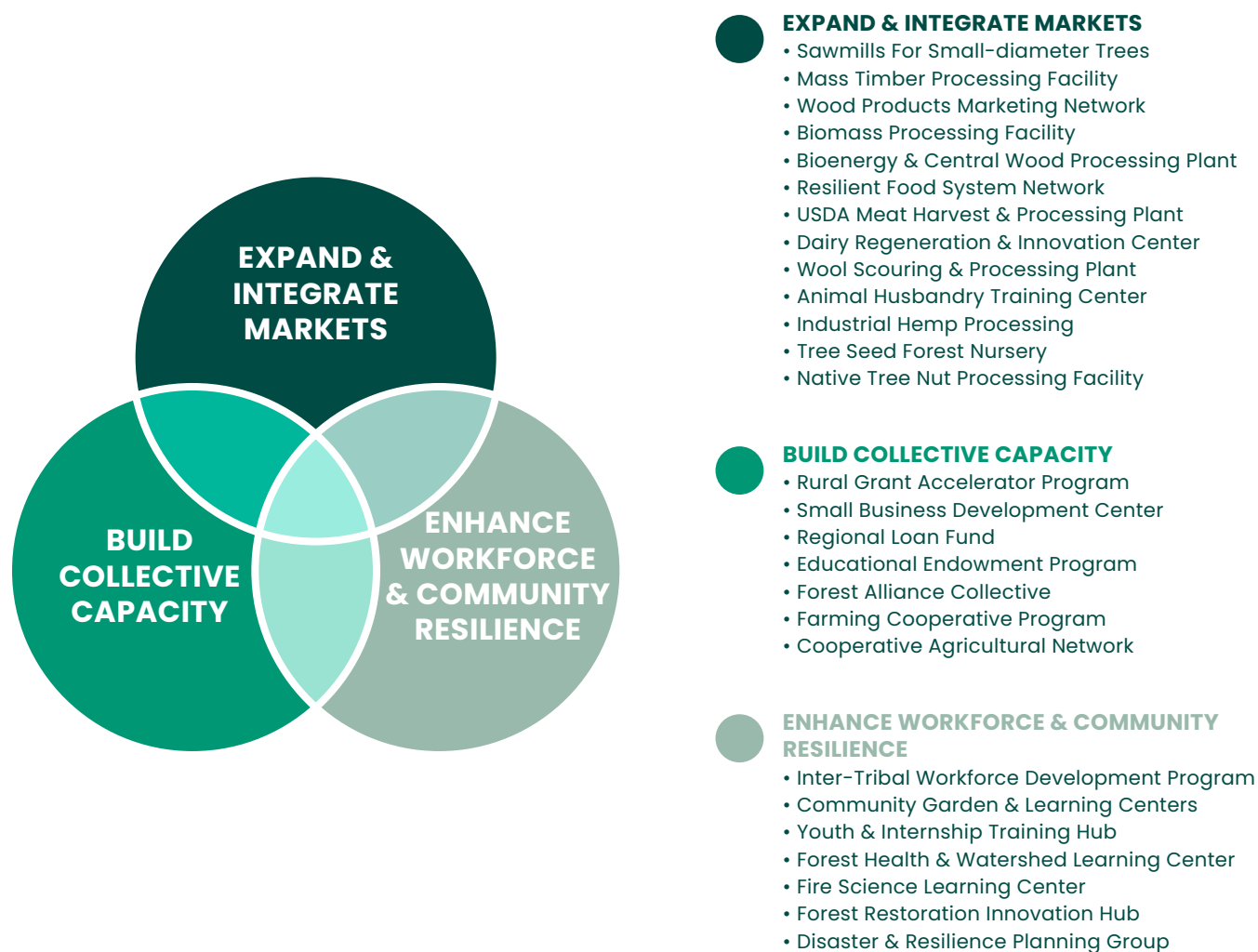
Over the course of this past year working with key partners in the Working Lands Sector, we have mapped out the geographical distribution of work and physical assets across the region. The primary objective of this exercise was to identify current opportunities for enhanced collaboration and connectivity 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



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 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
<ul style="list-style-type: none"> Focus on addressing workforce challenges, promote diversity, and offer training in marine-based jobs, alternative energies, etc. 		<ul style="list-style-type: none"> Invest in research on climate change impacts, disaster preparedness, and nature-based solutions for coastal resilience.
<ul style="list-style-type: none"> Bridge the gap between employers and educational institutions to ensure workers have the needed skills for existing and emerging industries. 		
	<ul style="list-style-type: none"> 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

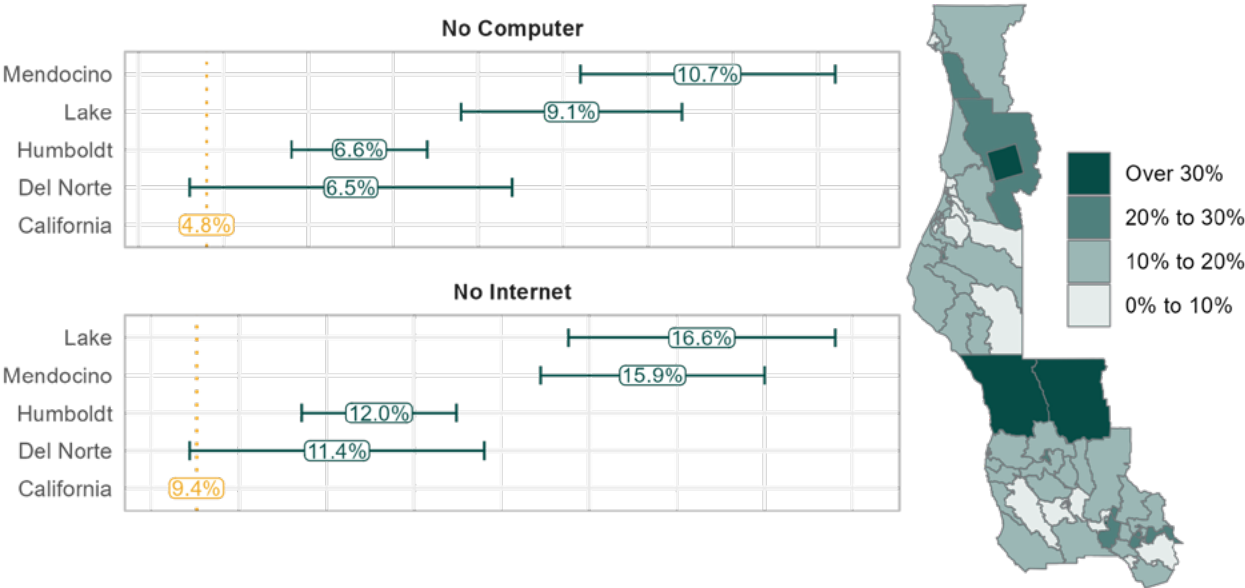
The success of target sector strategies will hinge on several key enablers of the economy at large. During listening sessions with community leaders, this theme was repeated over and over, with a particular emphasis on housing and broadband as key cross-cutting sectors which require investment in order 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
<ul style="list-style-type: none"> ◆ 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. 	<ul style="list-style-type: none"> ◆ 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. 	<ul style="list-style-type: none"> ◆ 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://lakecountycadc.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
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 | ◆ Policy makers and advocates |
| ◆ Non-profit Developers | ◆ Tribal housing organizations |
| ◆ Building Trade orgs and labor groups | ◆ Neighbors |
| ◆ Housing advocates | ◆ Property Owners |
| ◆ Housing supportive services providers | ◆ Building materials suppliers (need less expensive and innovative materials) |
| ◆ County govt actors (housing commissions, etc.) | ◆ Housing Authorities |
| ◆ Municipal govt actors | |

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
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 on 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://humboldt.gov/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
<ul style="list-style-type: none"> ♦ Reduce air pollution burden on rural and remote communities. ♦ Create better connectivity and safety for priority communities. 	<ul style="list-style-type: none"> ♦ Improve climate resilience of rural and remote communities; strategies help fire-safe roads. ♦ Promote green transportation including shared transit, biking and walking. 	<ul style="list-style-type: none"> ♦ Job and procurement opportunities for local workers and firms. <p>*Tribal communities note a need to create more equitable opportunities for Tribal firms to bid on these infrastructure contracts.</p>



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
<ul style="list-style-type: none"> ◆ Improve wraparound services, coordination, trauma-informed practices, and access to training/retraining opportunities for priority communities. 	<ul style="list-style-type: none"> ◆ Strategies prepare the regional workforce to realize opportunities in growing clean energy and climate adaptation related occupations. 	<ul style="list-style-type: none"> ◆ 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 130-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 October 2026.
- 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 130 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 move 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:

Arts, Culture, and Tourism	<ul style="list-style-type: none"> ♦ Adam Spencer (Redwood Rides) ♦ Aerin Monroe (Artist, Pathways of Purpose) ♦ Aislene Delane (Community System Solutions) ♦ Alyssum Wier (Arts Council of Mendocino) ♦ Anissa Vang ♦ Ashley Taylor (Crescent City Department of Economic Development & Recreation) ♦ Barbara Clark (Lake County Arts Council) ♦ Brenda Perez (Centro Del Pueblo) ♦ Calder Johnson (North Coast Repertory Theatre) ♦ Carlon LaMont ♦ Cindy Vosburg (Crescent City/Del Norte Chamber of Commerce & Del Norte Visitor Bureau) 	<ul style="list-style-type: none"> ♦ Dave Zdrazil (Ceramic artist, educator) ♦ David Sedgwick ♦ Dianna Rios (GoHumCo) ♦ Dr. Susanne Sarley (Pathways of Purpose) ♦ Kimberly Haile (Dell'Arte International) ♦ Leslie Castellano (Ink People Center for the Arts) ♦ Lily Haas (Phoenix Ceramic and Fire Supply) ♦ Lisa Kaplan (Middletown Art Center) ♦ Sabrina Klein Clement (Creative Education Consultant) ♦ Sal Munoz (Redwood Parks Conservancy) ♦ Traci Pellar (Healthy Start, Mendocino Producers' Guild Co-Founder)
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