

2018.2022

Sierra Economic Development District

Comprehensive Economic Development Strategy



SIERRA
BUSINESS COUNCIL

Contents

CONTENTS.....	2
ACKNOWLEDGMENTS.....	3
ABOUT THE EDA AND THE CEDS	4
Executive Summary.....	5
BACKGROUND	6
The Region	6
Labor Force	7
Geographic, Climatic and Natural Resource Profile	8
Cultural Assets.....	9
Economy and Key Industries	10
INDUSTRY CLUSTER ANALYSIS	12
Industry Cluster Analysis.....	12
SEDD Analysis.....	13
SWOT Analysis	15
Resilient Communities	16
Nevada County Profile.....	18
Placer County Profile.....	20
El Dorado County Profile	22
Sierra County Profile	24
STRATEGY & ACTION PLAN	26
The Vision.....	26
Goals and Objectives.....	26
Catalyze Economic Diversification.....	27
Support Human Capital by Facilitating Innovation & Entrepreneurship.....	28
Promote Inclusive Economic Development by Expanding Broadband Infrastructure.....	30
Build Community resilience Through Natural Disaster and Extreme Weather Protection Efforts	32
Protect Natural Capital by Advancing Forest Health and Sustainable Biomass Industry Opportunities	35



Acknowledgments

Sierra Business Council wishes to thank the many survey respondents, interviewees, and local government participants who contributed their time and ideas to this effort. In particular we acknowledge our final document reviewers and key advisors:

Placer County

Robert Weygandt, Supervisor District 2
Sherri Conway, Director of Economic Development

Sierra County

Lee Adams, Supervisor District 1
Sharon Dryden, Supervisor District 5
Tim Beals, Director of Public Works
Steve Mueller, formerly of American Renewable Power

Principal Authors & Graphics

Kristin York, VP Sierra Business Council
Ben Maritato, Planning Technician, Sierra Business Council
Chelsea Walterscheid, Project Manager
Dan Keenan, Hatchback Creative Graphic Design

Nevada County

Dan Miller, Supervisor District 3
Mali Dyck, Deputy Chief Executive Officer
Jeff Thorsby, Economic Development Analyst
Tim Corkins, Director, Economic Resource Council
Lynn Saunders, CEO, Truckee Chamber of Commerce

El Dorado County

Shiva Frentzen, Supervisor District 2
Devin Middlebrook, South Lake Tahoe City Council and Tahoe Regional Planning Agency

Regional Advisors

Jennifer Montgomery, Director, CA Forest Management Task Force (Former Placer Co. Supervisor District 5)
Elissa Brown, Sierra Nevada Conservancy
Heidi Hill Drum, Tahoe Prosperity Center
Kim Carr, Kim Carr Consulting (formerly National Forest Foundation)



About the EDA and the CEDS

The U.S. Economic Development Administration's (EDA) mission is to promote innovation and competitiveness in order to prepare American regions for growth and success in the worldwide economy. The EDA's investment policy is designed to establish a foundation for sustainable job growth and a resilient regional economy using two key economic drivers – innovation and regional collaboration. EDA works directly with communities and regions to build capacity for economic development by locally-driven grant investments in planning, technical assistance, and infrastructure construction. To help lead the locally-based, regionally-driven economic development planning process, the EDA has designated Economic Development Districts (EDD) across the US. EDDs are multi-jurisdictional entities composed of multiple counties and involve public, private, and non-profit sectors to establish a strategic blueprint for regional collaboration. Since 2012, \$1.4 billion has been invested in 3,244 projects supporting planning, research, technical assistance, access to capital, and other activities. Historically, two-thirds of this funding has gone to rural areas.

The strategic planning blueprint, called the Comprehensive Economic Development Strategy (CEDS), is a cornerstone of the EDA planning programs and successfully serves as a means to engage community leaders,

leverage the involvement of the private sector, and establish strategic regional collaboration. Economic development planning implemented by the CEDS provides a foundation for regional economic prosperity. CEDS are designed to guide the coordination necessary for individuals, organizations, local governments, and private industry to engage in a meaningful conversation and debate about the economic direction of their region.

The CEDS is a driver of public-private partnerships of all types. While the EDD program is governed by the EDA, the CEDS is applicable to multiple public agencies to support funding requests for economic development projects.



EXECUTIVE SUMMARY

The goal of the Sierra Economic Development District CEDS is to codify a regional strategy to advance prosperity and improve quality of life. This CEDS articulates a strategy and action plan designed to achieve the region's vision. This CEDS marks a point in time but is considered a living document that will be updated with changing conditions. The CEDS captures the region's strengths, weaknesses, opportunities, and threats (SWOT), identifies economic development potential, and considers key stakeholder input to create strategies to achieve objectives, coordinate activities to implement the strategies, and measure progress towards achievement of the vision.

This CEDS was created in close collaboration with more than 34 community leaders, local government staff and elected officials, and representatives from business, education, public safety, workforce development, and key industry sectors including agriculture, technology, tourism, forestry, energy, and manufacturing. In addition, this CEDS incorporates input from over 150 responses to a focused community web-based survey.

Input was solicited consistent with the EDA's focus on high quality private sector job creation and economic growth. EDA investments are targeted at essential facilities such as water and waste water systems, middle-mile broadband networks, workforce training centers, incubators, intermodal facilities, and research parks. While access to affordable housing is a key economic concern for the region, it is out of the scope of this

document. Housing is only addressed to the extent that infrastructure projects would facilitate housing developments and the associated commerce and job creation.

The District's vision materialized from the numerous conversations, formal interviews, and on-line input from community leaders, business people, educators, and local government stakeholders.

During the process more than 100 projects and actions were taken into consideration to advance the Sierra Economic Development District's vision of shared prosperity, equitable opportunity, and a culture of innovation in a resilient economy. Based on the input from regional stakeholders, five goals were established that shape the CEDS:

1. Catalyze economic diversification
2. Support human capital by facilitating innovation and entrepreneurship
3. Promote inclusive economic development by expanding broadband infrastructure
4. Build community resilience to natural disaster and extreme weather events
5. Protect natural capital by advancing forest health and biomass opportunities.

Ultimately, quality of life is the foundation for increased health and prosperity. Sustainable economic and social factors such as access to education, medical services, affordable housing, and reliable employment opportunities will empower the Sierra Economic Development District to thrive. This plan incorporates priority projects that will advance sustainable economic development, improve resilience, and lead to prosperous communities.



The vision of the Economic Development District is shared prosperity, equitable opportunity, and a culture of innovation in a resilient economy.

Background

THE REGION

The concept of a regional economy is rooted in the people and the kind of place they want to cultivate. A regional economy must consider how best to protect and/or utilize its natural resources, transportation routes, commercial markets, suitable industries, and, most importantly, its stakeholders and relationships.

The four counties of the Sierra Economic Development District (SEDD or “District”), El Dorado, Nevada, Placer, and Sierra, are primarily rural and socio-economically and ecologically diverse. As administrators for the SEDD, Sierra Business Council (SBC) seeks to aid in the creation of prosperity through the responsible mobilization of human, financial, physical, and natural capital to generate a healthy and collaborative local economy. While there are many aspects of economic development, this plan focuses on preserving, creating, and attracting sustainable jobs to the region.

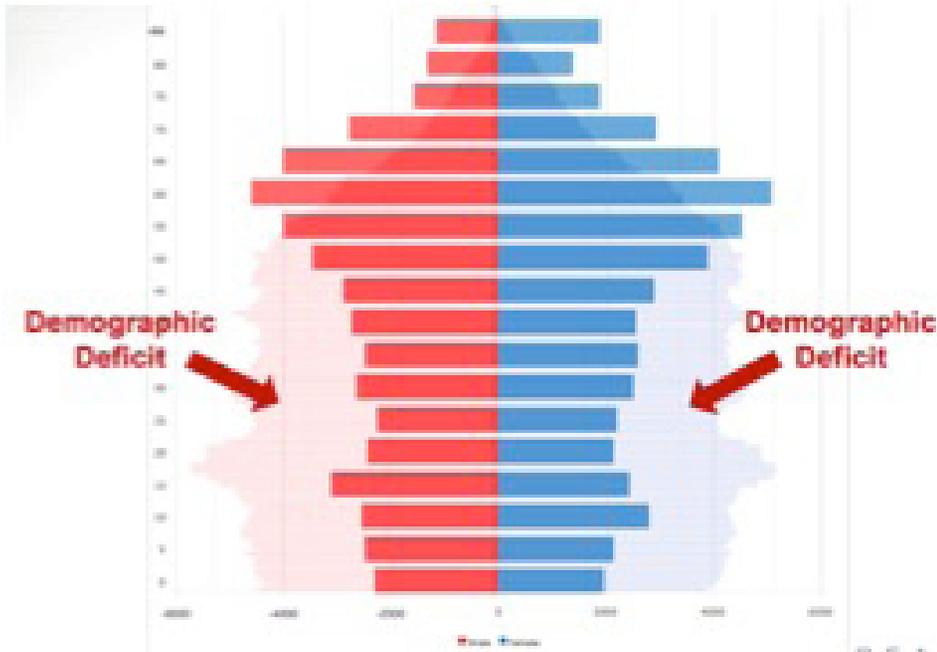
The SEDD region includes 12 incorporated cities and a total population of approximately 630,000. The largest cities, Roseville, Rocklin, and El Dorado Hills at the farthest southwest edge of the region, have populations over 50,000 each and are not considered rural. The emphasis of this plan is focused on the more rural communities that exhibit the highest economic need.

The SEDD region must also be viewed through the lens of the Sierra Pacific Megapolitan Area as defined by the 27-county area extending from Northern California to Nevada. The mega-region projects a population increase of more than 30% in the next 20 years. Accordingly, the SEDD region is expected to experience the majority of its absolute growth west of the Sierra Nevada mountain range and along the Interstate 80 corridor while parts of Nevada County and the entirety of Sierra County project a decline in population skewed towards an aging demographic.



LABOR FORCE

Overall, the region has a relatively strong workforce and, as of the fourth quarter of 2018, a low unemployment rate. The more populated areas of the SEDD enjoy a relatively well-educated workforce. However, two key concerns have been identified related to workforce: 1.) Lack of affordable workforce housing, and 2.) an aging demographic resulting in a “demographic deficit.”



In particular, the smaller rural communities are experiencing a severe demographic deficit in the most productive age groups. For example, in Nevada County, the largest age group is 60-65 with severe deficits in the 25-44 age groups. This is problematic because it contributes to declining population in the rural communities and lack of employee base. It also reduces the number of young families who tend to be the larger consumers and users of services such as school districts, healthcare, and recreation. As a general rule, communities with sustainable economic prosperity tend to have a more balanced demographic representation.

The SEDD is serviced by Lake Tahoe Community College, three campuses of Sierra Community College, one small private four-year college, as well as a number of private vocational schools. Four major public universities

are within 100 miles of the region’s core. The area is also serviced by two workforce investment boards. Unemployment is considered “average” with the exception of Sierra County and rural El Dorado County, which typically experience unemployment rates double those of the rest of the region. This is primarily due to the decline of timber-related industries. The region as a whole exhibits a relatively high percentage of high school graduates.

There are a number of key challenges to an abundant and prosperous labor force, including: lack of affordable housing, inadequate broadband, a tourism-dominated/seasonal workforce economy, and remote locations of populated areas. We know the housing issue is important because a lack of affordable housing can limit a community’s ability to attract new businesses and workers to the region. But as mentioned, that topic is beyond the scope of this document. The CEDS will focus on the challenges within the scope determined by the EDA.

	Population	Poverty Rate	Unemployment Rate
Placer Co.	393,149	8.2 %	4.4%
Rocklin	67,221	7.0 %	--
Auburn	14,103	11.7 %	--
Nevada Co.	99,696	12.1%	4.7%
Grass Valley	12,914	26.3%	--
Nevada City	3,142	22.4%	--
Truckee	16,561	6.9%	--
El Dorado Co	190,678	9.8 %	5.1%
Placerville	11,048	18.6 %	--
So. Lake Tahoe	22,036	15.5 %	--
Sierra Co	2,987	12.3%	7.6%
Total	686,510	9.3%	--

GEOGRAPHIC, CLIMATIC AND NATURAL RESOURCE PROFILE

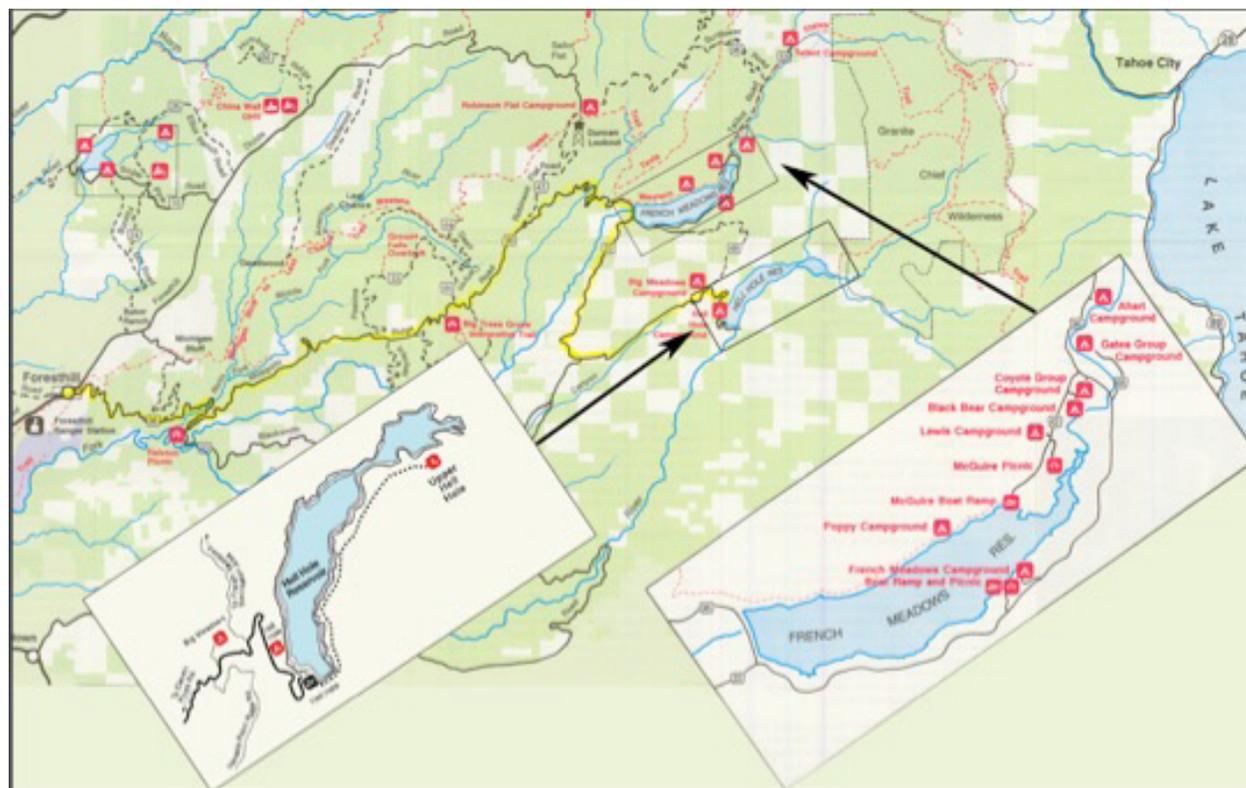
The SEDD covers an area of 5,026 square miles and is bisected by the Sierra Nevada mountain range. Elevations from 1,000 feet above sea level in the foothill region to over 10,000 at the mountain peaks make this one of the most geographically diverse regions of California. The unique geography provides a plethora of diverse recreation opportunities which include both the El Dorado and Tahoe National Forests, multiple wild and scenic rivers, and the world famous Lake Tahoe. Many recognize the Sierra region as a mecca for winter sports because of its 12 ski resorts, but it is an equally impressive summer destination with the Pacific Crest Trail crossing the entire region. Principal commerce routes, like Interstate 80 and the Union Pacific rail, originate in the San Francisco Bay ports and climb over the Sierra Nevada at the Donner Pass elevation of 7,089 feet, before continuing to points east.

The lower elevations with milder climates boast some of the most abundant agricultural lands in Northern California and are populated by relatively small family farms and ranches. The four counties in the region rank low in terms of total production value; however, the production per acre is relatively high. According to the California Department of Agriculture 2016 Report, the total value of production by agricultural enterprises in Placer, El Dorado, Nevada, and Sierra Counties was approximately \$139 million¹. In addition to livestock (primarily dairy and beef cattle) the primary crops in the four-county region include; wine grapes, apples, rice, and hay. Thus agriculture is a significant factor for the district both in terms of economic development and community heritage.

With respect to climate, the disparity in elevation makes for a wide range of weather conditions, with typically a 40-degree swing between the lower elevations and higher elevations of the region. The higher elevation Tahoe region of eastern Placer, Nevada, and El Dorado counties contains the massive winter snowpack that is vital for feeding a vast system of rivers, reservoirs, and hydroelectric

plants for Northern California to the west and providing most of the drinking water for the Washoe Valley to the east. Water from snowpack for hydroelectric power, drinking, and irrigation is a primary resource provided by the region. In addition, a healthy snowpack is critical to the winter recreation and tourism industry. California as a whole experiences real-time water issues related to climate change and rising sea levels. The SEDD stewards water that mitigates impacts of climate change well beyond the actual region, making water infrastructure projects and forest/watershed restoration a key priority.

Natural Resource Management in the SEDD is a critical component of the economy. The region acts as steward for the forests and watersheds that serve the local tourism economy as well as the connected urban communities. The major regional water agencies (Placer County Water Agency, Nevada Irrigation District, El Dorado County Water Agency and portions of the Lahontan Regional Board) handle a broad range of



Map indicates portions of Placer County's French Meadows forest restoration project and recreational amenities.



responsibilities including retail and wholesale supply of drinking and irrigation water, management of major water storage reservoirs that provide recreational opportunities, production of hydroelectric energy, multiple dam facilities, and water resource planning and management. The SEDD region also includes the Tahoe-Central Sierra Initiative (TCSI), which brings together innovative approaches and partners to increase the pace and scale of restoration work across the region’s watersheds. The TCSI creates opportunities to support a forest restoration economy and explore innovative process, investment, and governance tools.



CULTURAL ASSETS

Arts and culture are key drivers of tourism and known contributors to economic vitality and community well-being. The SEDD is home to an abundance of cultural and historic assets, most notably two of 14 designated California Cultural Districts: Truckee and Grass Valley/Nevada City. The districts highlight thriving cultural diversity and unique artistic identities. These communities are noted for catalyzing and inspiring art and culture through their thousands of events, annual festivals, street fairs, art walks, and studio tours. These Cultural Districts promote economic influx, retention of artists, and homegrown assets and inclusive development.

The region also includes treasured Native American history, the gold discovery site at Sutter’s Mill in Coloma, the Donner Party’s epic survival route across the Sierra, and the original Pony Express route.

The discovery of gold on the American River in 1848 sparked the 1849 California Gold Rush and the subsequent population explosion throughout the region and state. The area, known as the “Gold Country,” is home to many historic towns, preserved as tourist attractions. El Dorado County has 14 sites listed in the National Register of Historic Places, Nevada County has 39 listed sites with an additional 22 eligible and Placer County has 14 sites. The smallest county in the region, Sierra County, boasts numerous historic mining and ranching sites along the North Fork of the Yuba River and includes the town of Downieville, the runner up to Sacramento to be the state capitol in 1852.

Pre-dating its mining history, the SEDD contains numerous heritage and sacred sites that give testament to the robust Native American cultures of the Sierra. The Nisenan, Maidu, Miwok, and Washoe tribes all have ancestral and current ties to territory throughout the SEDD. These indigenous cultures continue to enrich surrounding communities through their educational programs, historical record-keeping, and preservation of traditions and customs.

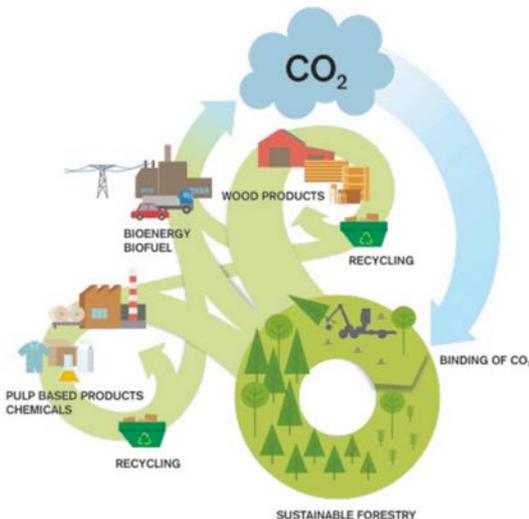
The region’s diverse cultural and historical assets contribute to a strong sense of place throughout the District for both residents and visitors.

ECONOMY AND KEY INDUSTRIES

Because of the diverse geographic features, micro-economies and recreational offerings, the SEDD's economy must be looked at by sub-region. The more urban southern edge of the region (primarily El Dorado Hills and Roseville areas) experience vastly more robust economies with a variety of healthcare, technology, construction, miscellaneous corporate jobs, and related suburban development. This sub-region enjoys a plethora of retail options, however this sector is feeling the squeeze of online commerce, and both Placer and El Dorado counties have seen a dramatic drop in sales tax revenue over the past decade. Regardless, this sub-region has a relatively strong base and a rather diversified industry composition. By contrast, Nevada and Sierra Counties, as well as the eastern portions of Placer and El Dorado, have been impacted by the loss of timber, mining, and logging industries. A significant number of jobs related to these businesses were lost when entire industries folded. Some jobs were replaced with lower paying service sector jobs. However, there does appear to be a correlation between job losses and population decline in certain communities. Overall, the region has seen the largest growth in agriculture, tourism, and government-related services. Growth in the agriculture and tourism/service sector tends to yield lower-wage occupations.



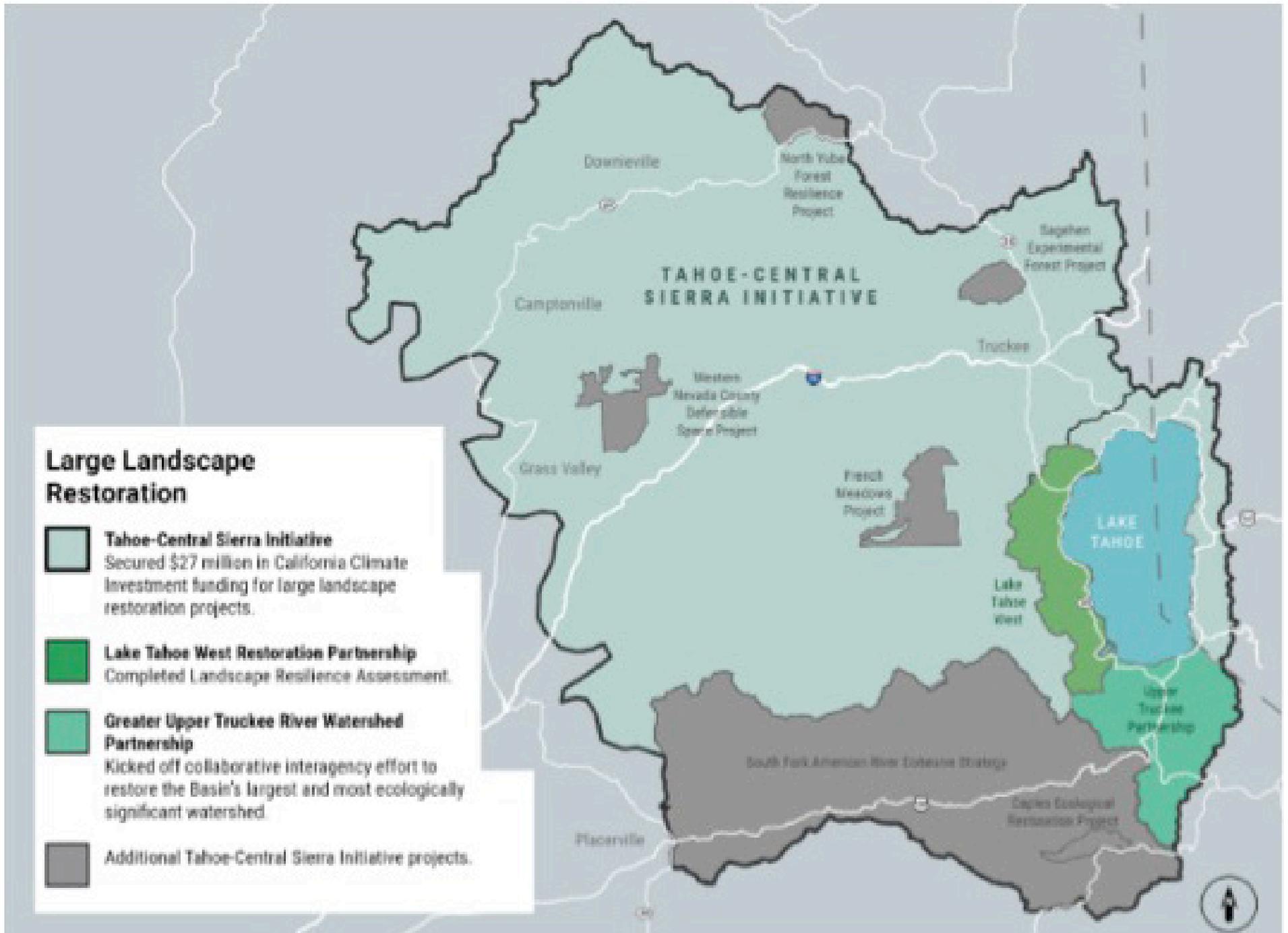
abundant source biomaterials from forest thinning operations and dead trees. The region also has multiple idle lumber mills and biomass facilities that can be rehabilitated to accept and process small diameter trees and forest by-products. Forests play a crucial ecosystem services role in the region and developing a sustainable industry around forest management, woody biomass transport, energy production, and wood-based products presents a substantial opportunity to create a replicable circular economy model with the assistance of grant funding related to carbon sequestration, forest restoration and community wildfire protection. The amount of state funding dedicated to these areas has greatly increased in the past few years and is an economic driver for the area. For example, a pilot master plan project funded by the Sierra Nevada Conservancy at the Loyalton Resource Regen Campus (former Sierra Pacific Industries facility) is expected to be a major economic driver for the region if private investment can be secured. In addition, The Tahoe Central Sierra Initiative (TCSI) is a public private partnership designed to accelerate regional scale forest and watershed restoration through ecologically based management actions while creating the opportunities to support a forest restoration economy. The TCSI covers land in all four counties of the SEDD.



Growth of well-paying jobs in the rural portions of the region is severely limited by lack of access to high-speed broadband. Connectivity is an absolute essential to support high paying and living wage jobs. To grow and prosper, the region needs to supply job opportunities and training for residents. More and more, this is completely dependent on access to high-speed broadband.

An emerging sector for the region is the wood-product and resurging biomass industries. The region has

Biomass Systems Model Source: IEA Bioenergy.



Tahoe Central Sierra Initiative Coverage Area. Source: California Tahoe Conservancy

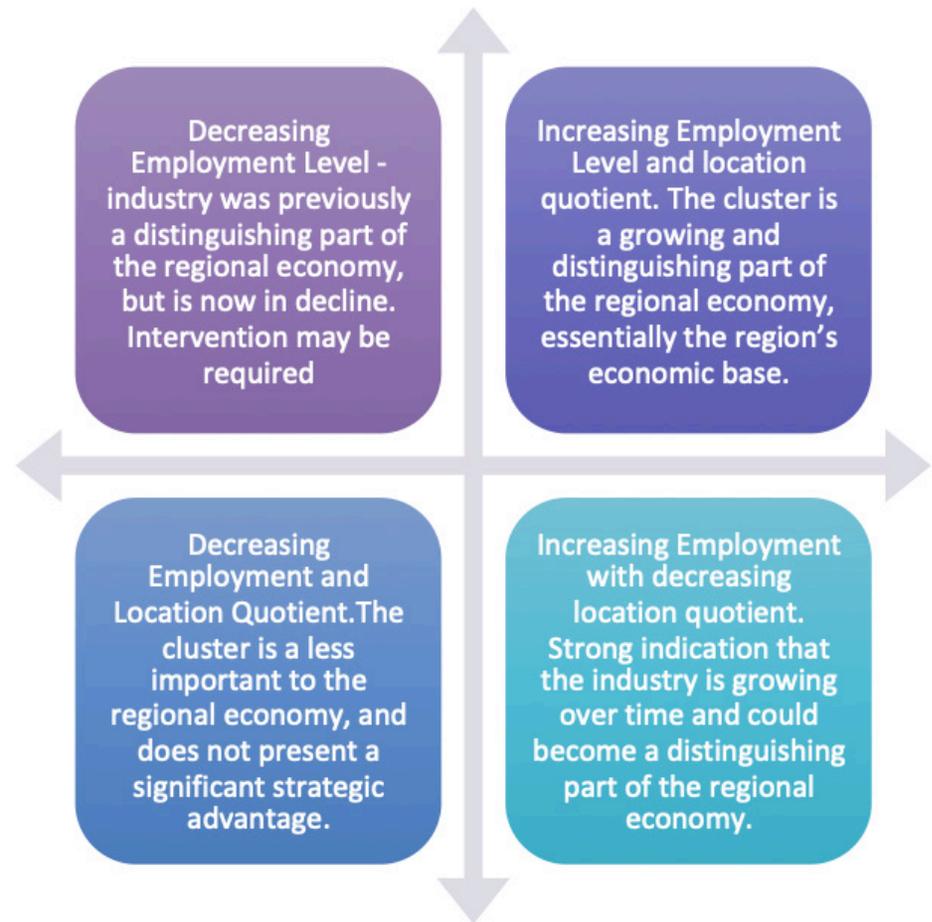
Industry Cluster Analysis

INDUSTRY CLUSTER ANALYSIS

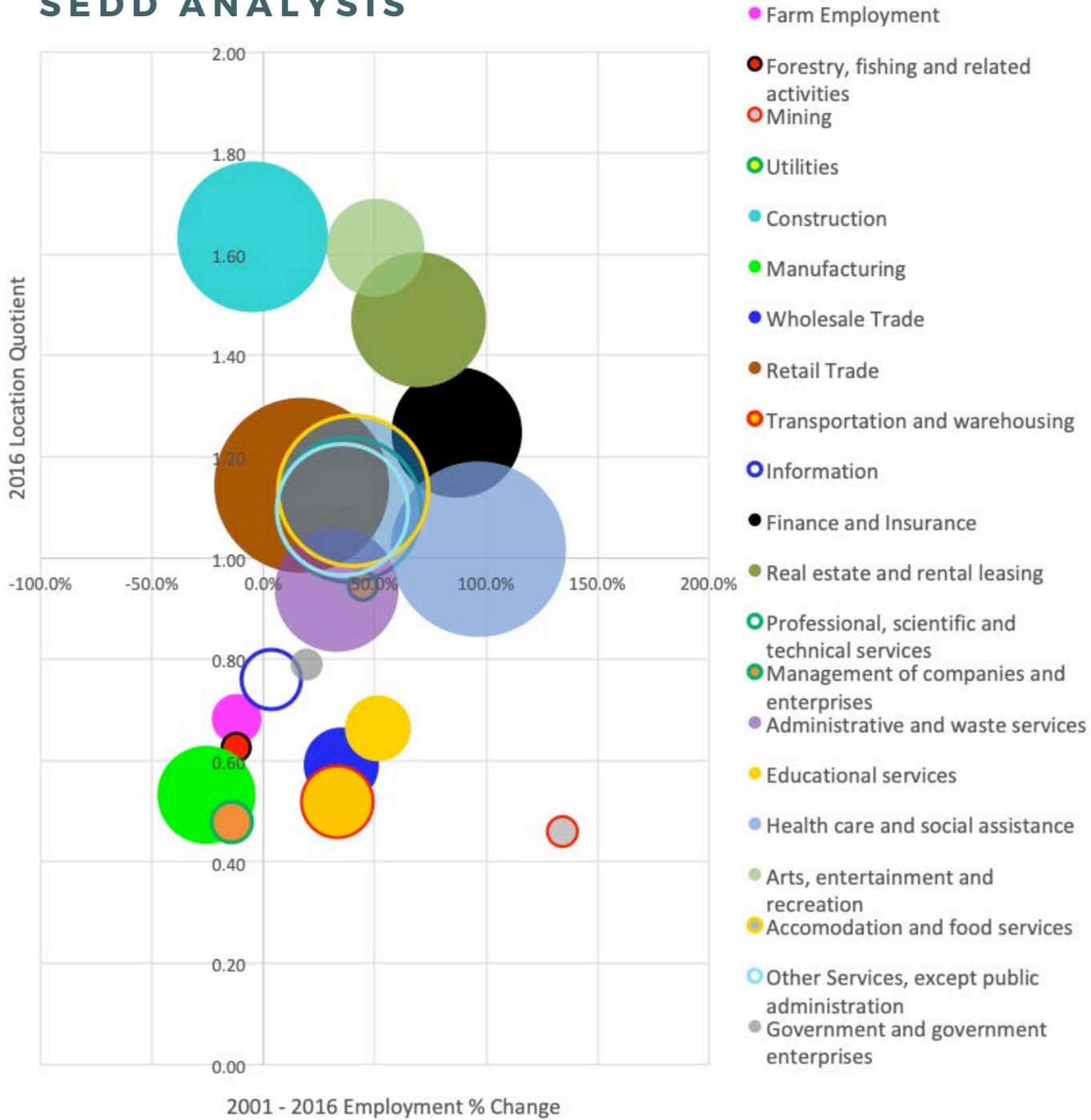
Industry clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that are present in a region. Characteristically, industry clusters share connection on the supply side, the service side, or both, and enhancements or improvements made on the supply side and/or the service side boost the productivity/economic health of all firms in the cluster. This cluster analysis relies on both an evaluation of regional and national employment patterns using a bubble chart tool, and local knowledge, history, and culture.

The bubble chart on the next page allows for the comparison of an industry cluster's change in employment level along the horizontal axis, location quotient along the vertical axis and proportion of total employment within the District represented by the size of the bubble. Location quotient is a comparison of an industry cluster's regional proportional make-up of employment to the national proportional make-up of employment for that same cluster. A location quotient greater than one indicates that there is a higher concentration of employees working in a regional cluster than the national average. In many cases, this attribute has been shown to support a regional cluster's competitive advantage over other geographic areas. The bubble chart should be interpreted as follows:

Industry cluster analyses based solely on location quotient can have shortcomings. By aggregating a large number of industries into larger clusters for analysis, some granularity can be lost, resulting in more prominent industries within a successful cluster elevating the profile of a few less prominent industries within that same cluster. In that same vein, less prominent industries in a poorly performing cluster can overshadow a few smaller but well performing industries within the same cluster. In an attempt to mitigate these limitations, additional cluster analysis was incorporated from the U.S. Cluster Mapping Project, created by the Institute for Strategy & Competitiveness at Harvard Business School.



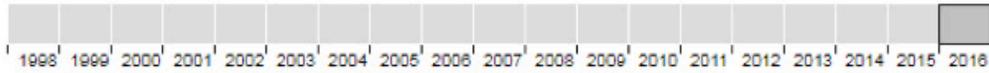
SEDD ANALYSIS



Cluster Specialization

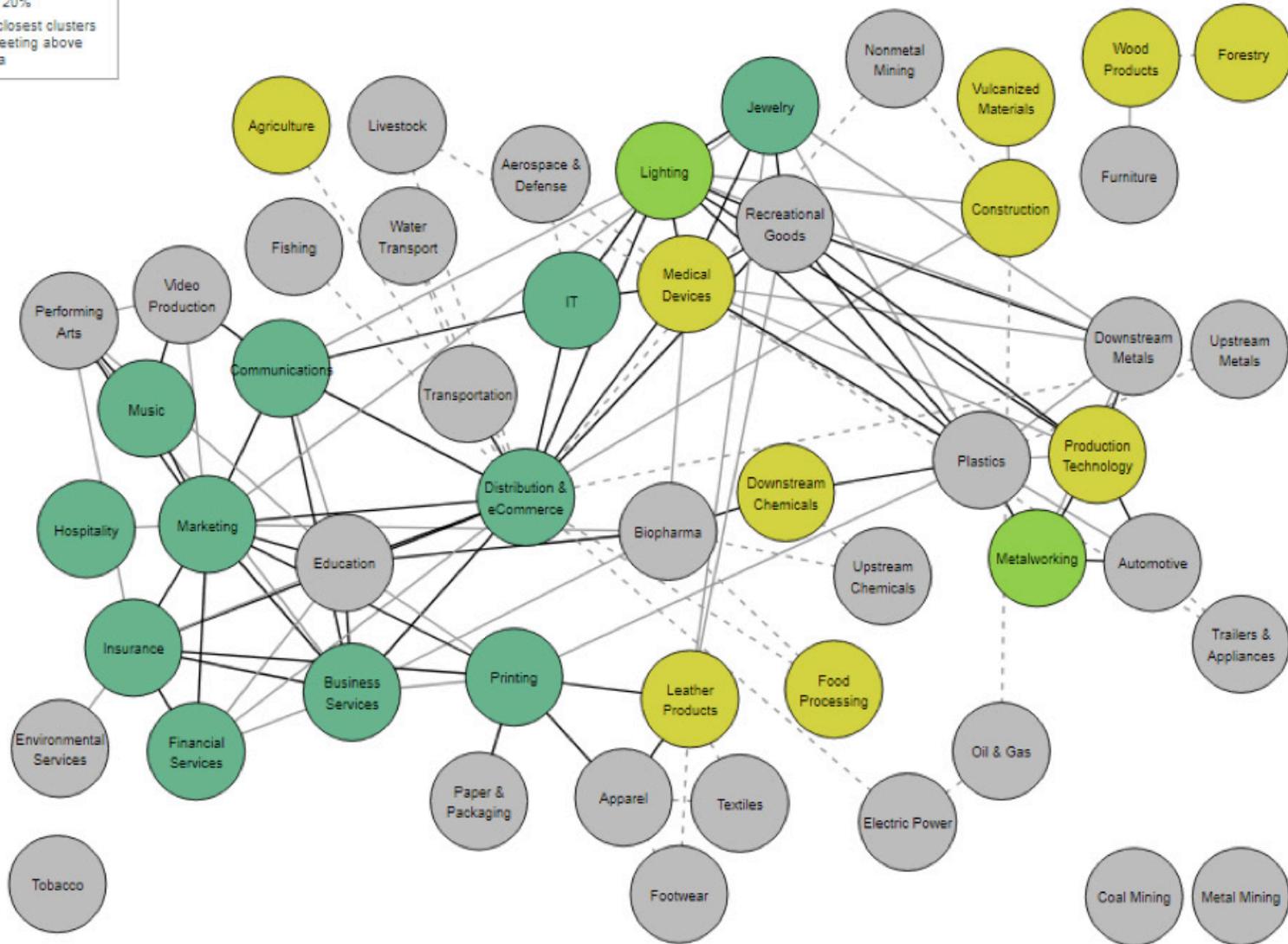
- Strong clusters above 90th percentile specialization
- Strong clusters above 75th percentile specialization
- Other specialized clusters (LQ > 1.0)

- BCR >= 95th ptile & RI >= 20%
- BCR 90th-94th ptile & RI >= 20%
- - -** Next closest clusters not meeting above criteria



Cluster Linkages and Economic Diversification

Sierra Economic Development District by bmaritato95, 2016



Cluster Linkages and Economic Diversification

The analysis identifies “Strong” regional clusters by comparing a cluster’s location quotient to other regional cluster location quotients throughout the country. Clusters in the top 90% are colored dark green, clusters in the top 75% are colored lime green, and any other clusters with a location quotient greater than one are colored yellow-green. Related clusters are connected by lines, with solid black lines representing the strongest connection, followed by solid grey lines and lastly, dotted grey lines.

A comparison between the two different cluster analyses results in several discrepancies. For example, Forestry is identified as having a location quotient greater than one in the second analysis, but in the first analysis, the “Forestry, Fishing and Related Activities” cluster has a location quotient of less than 1.0. This discrepancy may be attributed to the larger breadth of industries included in the Industry Cluster Analysis. By also including fishing (an industry that is not prominent in the Sierra Nevada, compared to coastal areas) in the first analysis’ cluster, it may overshadow any forestry industries’ success within that cluster. This hypothesis is further supported by the fact that fishing is included as a separate cluster in the second analysis and is not identified as strong or specialized. It should also be noted that the second analysis only looks at “Traded” clusters, or clusters that sell to other regions and nations. It does not look at “Local” clusters, or clusters that primarily sell within their own region.

Traded clusters are the drivers of regional economies. They bring in money from outside regions, rather than recirculating existing money within the regional economy. Because Traded clusters compete in multi-regional markets, they face competition from other regions. As such it is incredibly difficult to achieve high levels of overall economic performance without strong Traded clusters.

Local clusters, on the other hand, are made up of industries that serve local markets. They exist throughout most every region, unrelated to any competitive advantages an area may offer. This results in regional employment within Local clusters staying relatively proportional to regional population. Local clusters typically employ the majority of regional workers despite garnering lower wages than Traded clusters. Traded clusters drive regional economies, while Local clusters provide necessary services as part of the supply chain for Traded clusters in a region, and both are essential for bolstering a healthy regional economy.

SWOT ANALYSIS

As of the fourth quarter of 2018, Sierra Business Council interviewed 34 local citizens, business owners, elected officials, and other stakeholders to gather their insights on the state of the region’s economy. In addition, SBC received 152 responses to an online survey that collected information on stakeholders’ perceptions of local and regional economies and communities in Sierra, Nevada, Placer, and El Dorado Counties. Throughout the information-gathering process, business growth in the health industry and tourism, Interstate-80 connectivity, and quality public education were frequently identified as primers for the region’s successes. In contrast, lack of affordable housing, deteriorating infrastructure, public safety during wildfire and burdensome business regulation were often identified as significant impediments to the region.

The local knowledge and firsthand accounts collected from stakeholders and summarized below served to inform an analysis of the region’s strengths, weaknesses, opportunities, and threats (SWOT). The SWOT analysis was then used to formulate the goals, strategies, and initiatives presented in the CEDS.

Strengths

- Business Growth in Health industry & Tourism
- I-80 Connectivity
- Bay Area & Sac Proximity
- K-12/Jr. College public education
- Abundant Natural Resources

Weaknesses

- Lack of Affordable Housing
- Crumbling Infrastructure
- Poor Internet Connectivity
- Limited access to capital
- Business Regulation
- Shortage of Skilled Workforce

Opportunities

- Business Growth in Sustainable Ag, Tech & Remote Work
- Business Attraction from Bay Area
- Transient Occupancy Tax Revenues
- Natural Resources
- Diversify Economy

Threats

- Overall high cost of living
- Mono-economy (tourism)
- Natural disasters (wildfire, drought, flood, tree mortality)
- Political polarization in region
- Nevada brain drain

RESILIENT COMMUNITIES

Resilience in the context of this CEDS refers to a community’s ability to recover from, withstand, and avoid disruptions in economic activity to ensure sustainable regional prosperity. This CEDS identifies regional vulnerabilities and recommends proactive initiatives related to the five strategic goals listed on the following page. While affordable housing and lack of adequate broadband are the critical challenges for labor, the biggest threats to overall community resiliency are:

- Natural disasters such as flood or wildfires
- Economic recession
- Dependency on a single predominant industry (tourism)

The biggest threat by far is the frequency and intensity of natural disasters, in particular, catastrophic wildfire. The threat is expected to increase as the result of climate change, legacy forest management practices, and the proximity of populated areas to the wildland urban interface, also known as the WUI. In the four-county SEDD, economic and environmental resiliency

are inextricably linked because of the region’s reliance on nature-based tourism and because the region is a major source of fresh water for the state of California. The massive snowpack in the higher elevation portions of the SEDD feed multiple watersheds and provide water for hydroelectric power, drinking and irrigation. This plan includes strategies to build long-term economic resilience and considers tactics and collaborative partnerships that would improve response initiatives. The process for establishing an effective resiliency strategy began with identifying persistent economic challenges and analyzing the region’s strengths as a part of the SWOT to create action plans for mitigating potential exposure.

With respect to responsive strategies, this CEDS focuses on the relationship between local governments and those entities that can quickly mobilize in the event of a natural disaster or economic crisis including: Office of Emergency Services, water districts, utilities, volunteer fire departments, Small Business Development Centers, chambers of commerce, telecommunications providers, schools, non-profits, and community development personnel.

Key Factors of a Resilient Community

All goals and initiatives positively impact these factors.

Local Government

- Prioritized areas of risk for implementation of mitigation projects
- Collaborative & resourceful leadership
- Partnerships and funding are leveraged

Economy

- Diversified economy, not dependent on one industry
- Infrastructure supports economic goals
- Economic gardening to amplify strengths & talent

Environment

- Natural resources are valued as economic driver
- New development is sustainable
- Forest restoration, water conservation are prioritized

Community

- Ensure continuity of public safety and basic services
- Equitable support for workforce development
- Citizens are engaged and informed

Based on the key factors described, this CEDS categorized resiliency across all five strategic goals. Resiliency factors considered were economic, environmental, social, community, overall public safety and more specifically, disaster preparation. Key stakeholders were identified to drive initiatives as follows:

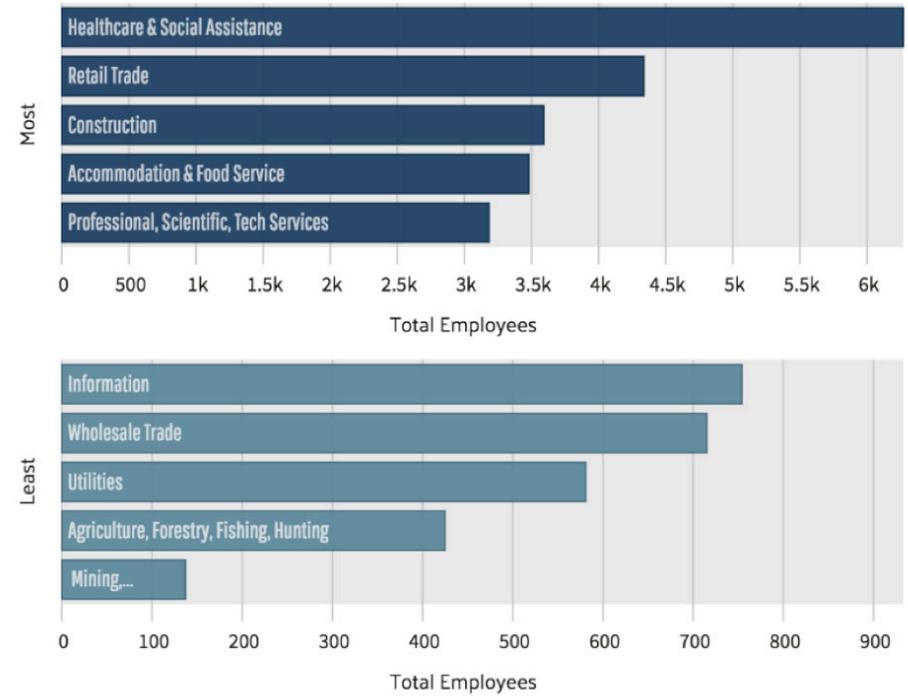
Strategic CEDS Goal	Resilience Factor	Key Stakeholders to drive initiatives
1. Catalyze Economic Diversification	Economic, Community	Business Community, Local Government, Chambers of Commerce, SBDC, lenders, investors, USDA
2. Support Human Capital by facilitating innovation & entrepreneurship	Economic, Community	Business Community, Education Institutions, Workforce Development Boards, Chambers of Commerce, SBDC, lenders, investors, Local Governments, NGOs
3. Promote inclusive economic development by expanding broadband infrastructure	Economic, Community, Public Safety	Broadband Consortium, California Public Utilities Commission, Local Government, Internet providers and developers, Business Community, USDA
4. Build community resilience through natural disaster and extreme weather protection efforts	Disaster preparedness	Utilities, Irrigation Districts, Cal Fire, Emergency Services, US Forest Service, Local Government, NGOs
5. Protect natural capital by advancing forest health and sustainable biomass	Economic Environment	GoBiz Wood Products Team, Utilities, Irrigation Districts, Cal Fire, Sierra Nevada Conservancy, Emergency Services, US Forest Service, Local Government, NGOs

NEVADA COUNTY PROFILE

Demographic & Economic Profile				
	Nevada Co	Truckee	Grass Valley	Nevada City
Population	99,696	16,561	12,914	3,142
Median Age	49.8	40.5	43.7	53.3
Median HH Income	\$60,610	\$89,154	\$35,157	\$43,614
Poverty Rate	12.1%	6.9%	26.3%	22.4%

Most Common ACS Industries in Nevada County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



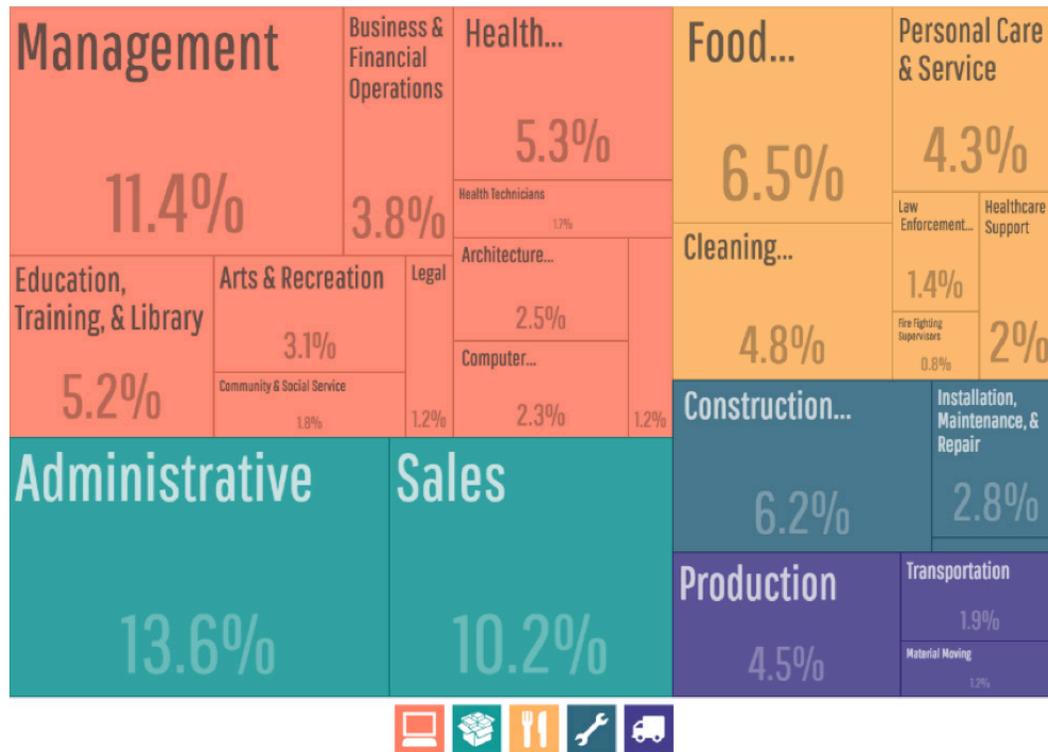
Dataset: ACS 5-year Estimate
Source: Census Bureau

DATAUSA:



Employment by Occupations in Nevada County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.

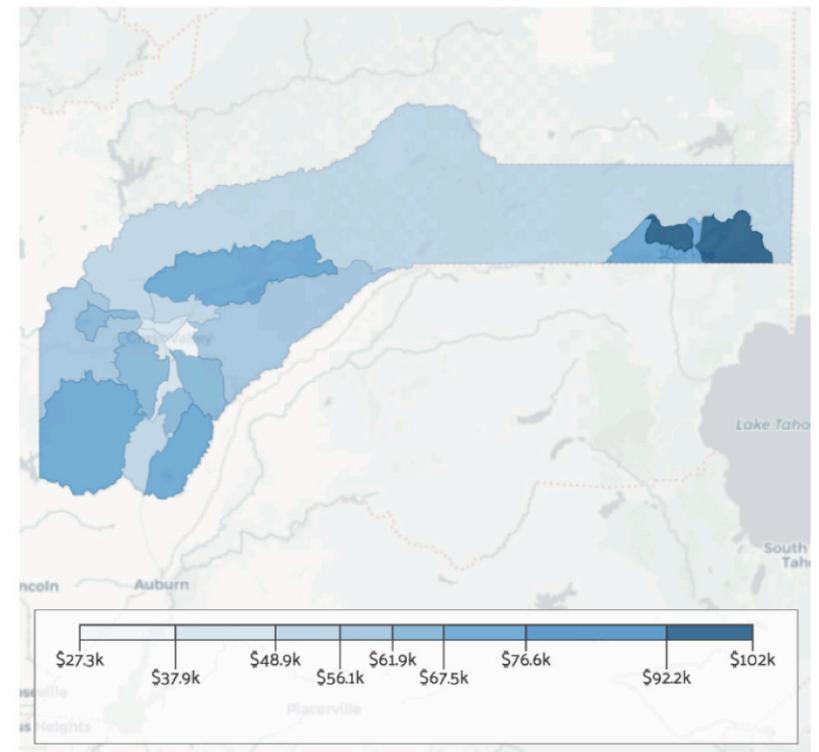


Dataset: ACS 5-year Estimate
Source: Census Bureau

DATAUSA:

Income by Location in Nevada County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



Dataset: ACS 5-year Estimate
Source: Census Bureau

Key Concerns from Survey

- Lack of affordable housing
- Inadequate broadband
- Aging population
- Too much reliance on tourism
- Availability of living wage jobs
- Threat of wildfire

Largest Private Employers

- Sierra Nevada Memorial Hospital
- Boreal Mountain Resorts
- Tahoe Forest Health System
- Sugar Bowl Resort
- Safeway
- Clear Capital
- Robinson Enterprises

General Plan Economic goals

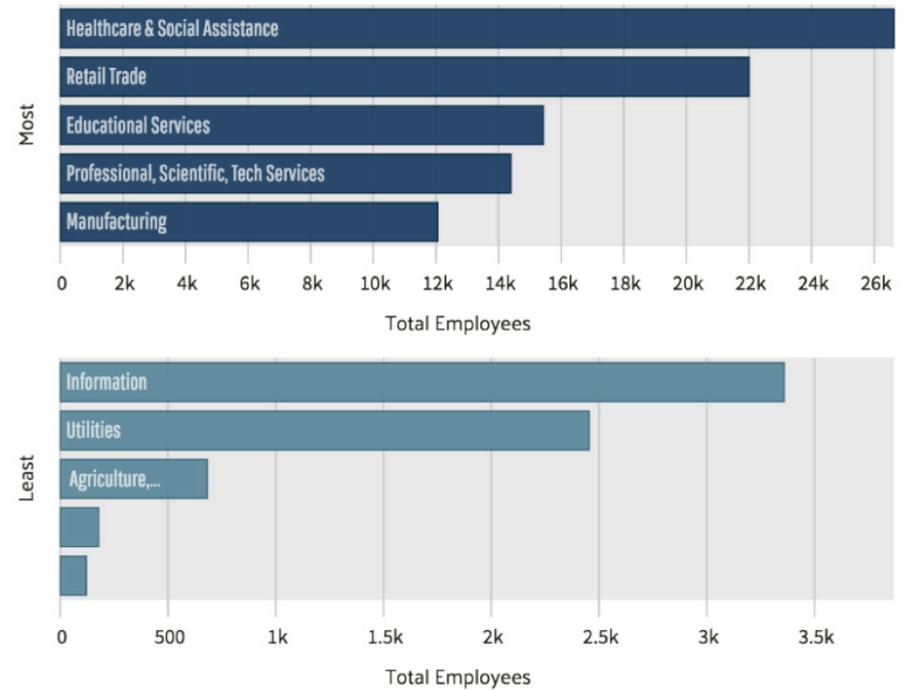
- Healthy & diverse local economy
- Retain and expand existing businesses
- Diversify & strengthen export base
- Support & promote tourism

PLACER COUNTY PROFILE

Demographic & Economic Profile			
	Placer Co	Roseville	Rocklin
Population	393,149	139,117	67,221
Median Age	41.6	38.5	37.7
Median HH Income	\$80,488	\$81,119	\$91,995
Poverty Rate	8.2 %	8.9%	7.0%

Most Common ACS Occupations in Placer County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



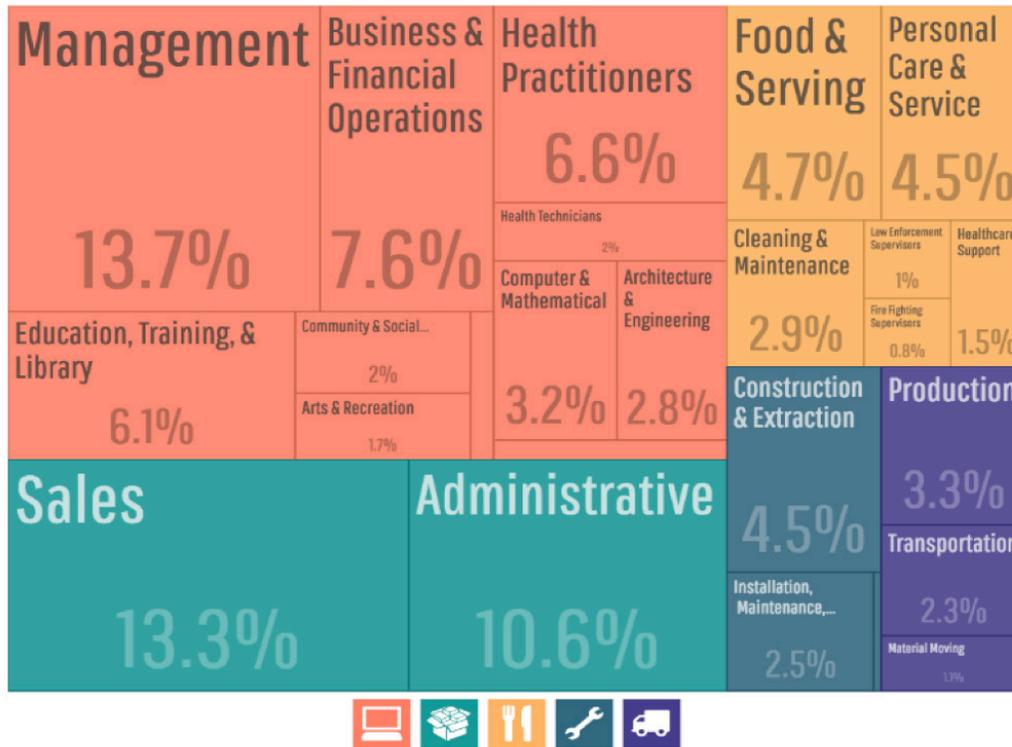
Dataset: ACS 1-year Estimate
Source: Census Bureau

DATAUSA:



Employment by Occupations in Placer County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.

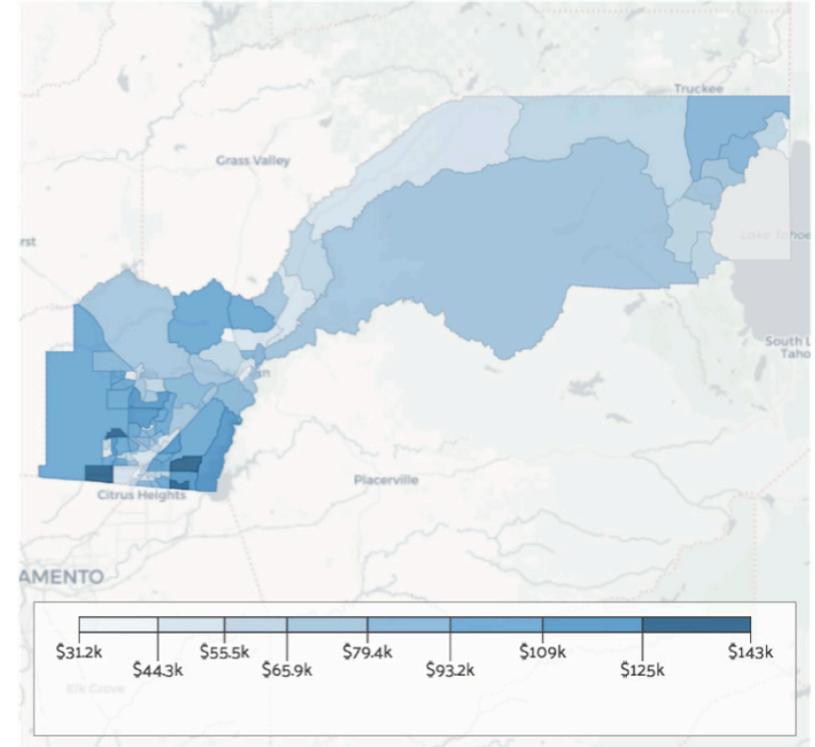


Dataset: ACS 1-year Estimate
Source: Census Bureau

DATA USA:

Income by Location in Placer County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



Dataset: ACS 5-year Estimate
Source: Census Bureau

Key Concerns from Survey

- Lack of affordable housing
- Declining retail sector (western county)
- Dependency on tourism (eastern county)
- Traffic and mobility
- Income disparity

Largest Private Employers

- Sutter Health
- Kaiser Permanente
- Squaw Alpine
- Thunder Valley Casino
- Hewlett Packard
- Union Pacific Railroad
- Northstar-at-Tahoe
- PRIDE Industries
- Raley's

General Plan Economic goals

- Positive balance between job & population growth
- Increase % of income spent in county
- Adequate housing for workforce
- ED through tourism, arts and culture

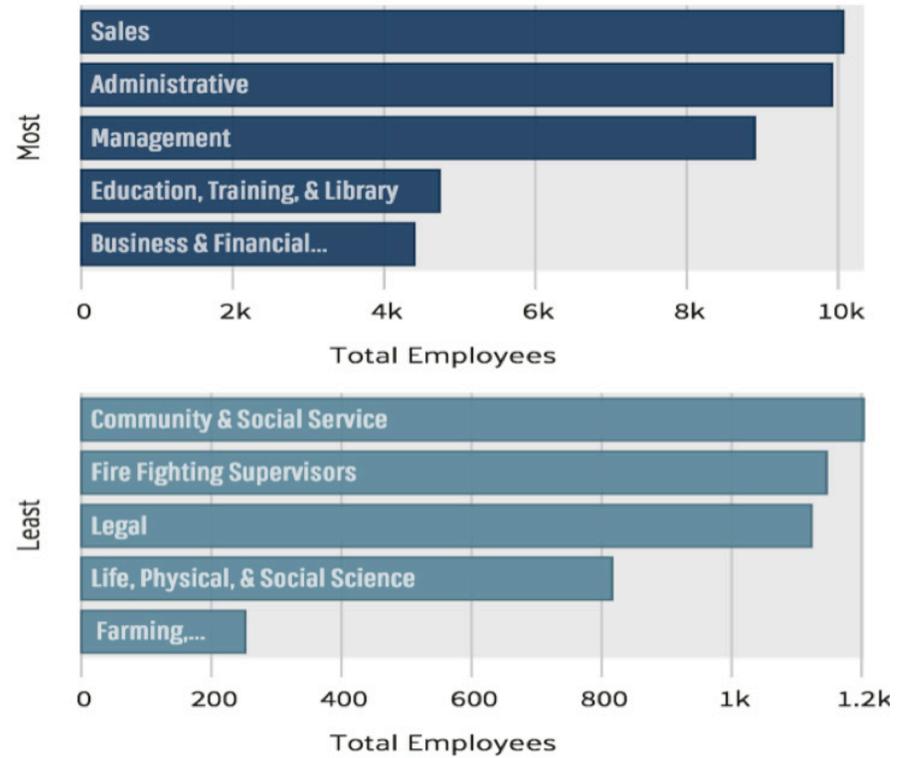
EL DORADO COUNTY PROFILE

Demographic & Economic Profile

	El Dorado Co	So. Lake Tahoe	Placerville
Population	190,678	22,036	11,048
Median Age	45.5	38.0	41.0
Median HH Income	\$74,885	\$45,223	\$51,250
Poverty Rate	9.8 %	15.5%	18.6%

Most Common ACS Occupations in El Dorado County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



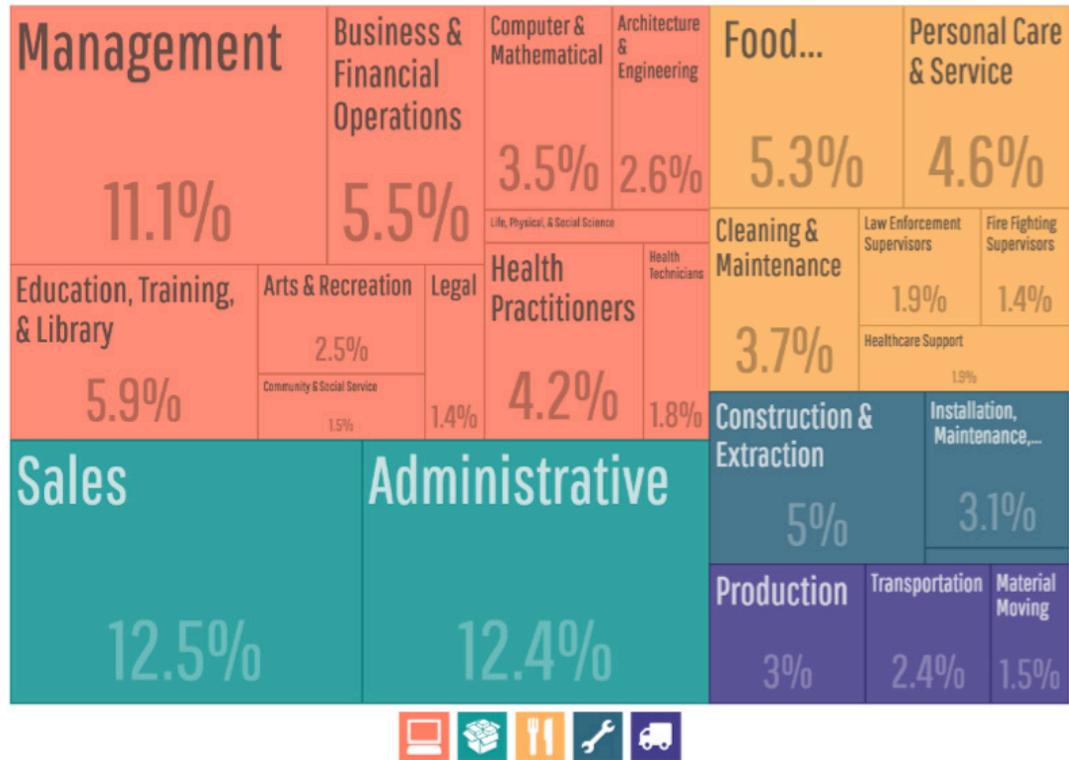
Dataset: ACS 5-year Estimate
Source: Census Bureau

DATA USA



Employment by Occupations in El Dorado County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.

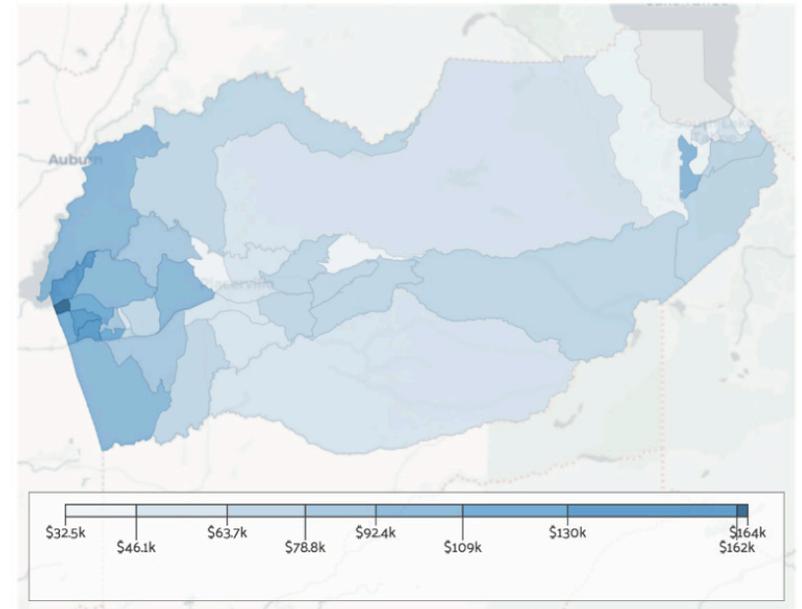


Dataset: ACS 5-year Estimate
Source: Census Bureau

DATAUSA:

Income by Location in El Dorado County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



Dataset: ACS 5-year Estimate
Source: Census Bureau

Largest Private Employers

- Blue Shield of CA
- Red Hawk Casino
- Marshall Medical Center
- Broadbridge Financial
- Heavenly Sports
- Barton Memorial Hospital
- More Rehab

General Plan Economic goals

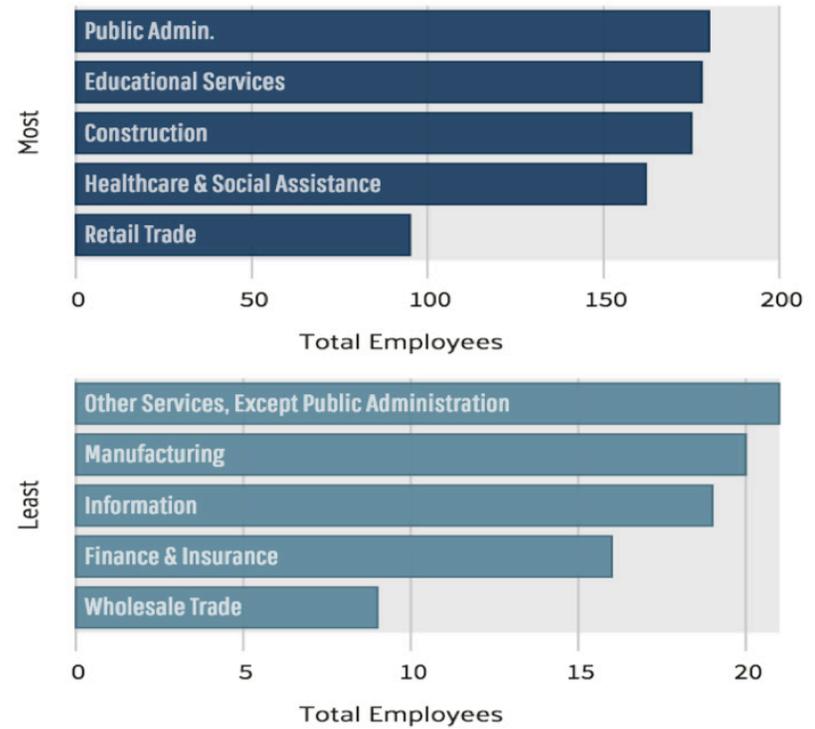
- Promote expansion of small businesses & home-based enterprise
- Monitor jobs/housing balance
- Emphasize employment creation

SIERRA COUNTY PROFILE

Demographic & Economic Profile			
	Sierra Co	<u>Loyalton</u>	Sierra City
Population	2,987	699	221
Median Age	55.0	37.2	62.7
Median HH Income	\$44,190	\$42,045	\$173,958
Poverty Rate	12.3%	12.9%	6.1%

Most Common ACS Occupations in Sierra County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



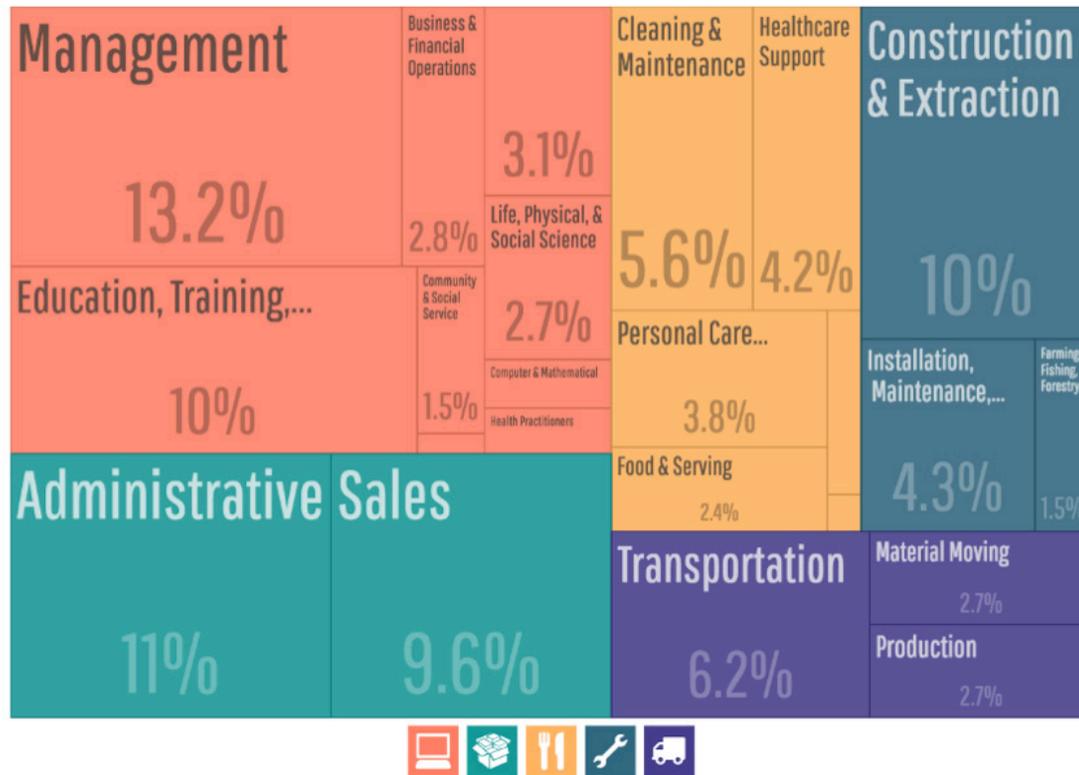
Dataset: ACS 5-year Estimate
Source: Census Bureau

DATAUSA



Employment by Occupations in Sierra County, CA

The closest comparable data for the county of Nevada County, CA is from public use microdata.



Dataset: ACS 5-year Estimate
Source: Census Bureau

DATAUSA:

Key Concerns from Survey

- Declining and aging population
- Lack of broadband
- Availability of living wage jobs
- Limited ability to increase tax base
- Threat of wildfire

Largest Private Employers

- Sierra County
- Sierra County Health
- Sierra Co. School District
- US Forest Service
- American Renewable Power

Note: over 40% of jobs in Sierra County are government related so they are included in this profile

General Plan Economic goals

- Develop land use policies that encourage economic development
- Promote recreation and arts
- Protect natural resources
- Diversify and strengthen year-round economy

Strategy & Action Plan

THE VISION

The SEDD CEDS strategy and action plan is designed to achieve the region's vision, goals and measurable objectives considering SWOT assessment, economic development potential, and other stakeholder findings. The vision considers elements of regional general plans, area specific plans, special district strategic plans, and various economic development plans.

The vision materialized from numerous conversations, formal interviews, and a comprehensive online survey with community leaders, business people, educators, and local government stakeholders.

The Sierra Economic Development District strives for shared prosperity, equitable opportunity and a culture of innovation in a resilient economy.

GOALS AND OBJECTIVES

Goals and objectives are what drive the CEDS action plan and reflect the key concerns of regional stakeholders. The goals are directly related to the top priorities that emerged in the SWOT analysis and are designed to advance the region's vision and achieve the overarching mission of community vitality. The related objectives are specific, measurable, action oriented, relevant, and time-based. It is important to note that the goals and objectives are not mutually exclusive but rather are systemically synergistic, designed to promote a more prosperous, sustainable, and resilient economy.



Catalyze Economic
Diversification



Support Human Capital by
Facilitating Innovation &
Entrepreneurship



Promote Inclusive
Economic Development
by Expanding Broadband
Infrastructure



Build Community
Resilience Through
Natural Disaster and
Extreme Weather
Protection Efforts



Protect Natural Capital by
Advancing Forest Health
and Sustainable Biomass
Industry Opportunities



Strategic Goal 1

CATALYZE ECONOMIC DIVERSIFICATION

Economic diversification is a fundamental goal to better position the SEDD to address risk mitigation from economic downturns and seize growth opportunities in emerging sectors. Several communities in the SEDD have historically been dominated by mining and lumber mills and more recently by tourism. Communities’ dependence on these industries has rendered them highly vulnerable to the commercial obsolescence of mines and lumber mills. More recently, dependence on winter and summer tourism is leaving communities vulnerable to reduced snowpack, rising elevations of base snowpack from a warming climate, increasingly frequent and intense wildfires, and poor air quality from wildfire smoke.

Economic diversification will help the District build a more stable economy for the long term while preparing workers trained in new growth sectors such as automation and artificial intelligence (AI). Specifically, in communities impacted by the closure of lumber mills or reduced logging (e.g. Loyalton, Camino, Foresthill), economic diversification may result from the re-purposing of abandoned or unused facilities and reintroduction of more living wage jobs. In communities dominated by tourism (e.g. Lake Tahoe basin, eastern Nevada, Placer, and El Dorado Counties), diversification is best led by attracting businesses that are not reliant on weather patterns or snowfall. Strategies associated with this goal include:

- Attract and support new industry clusters and emerging industries that support living wage jobs
- Support and grow existing businesses
- Focus resources on next economy growth sectors
- Ensure adequate transportation infrastructure and affordable housing to support economic development
- Expand non-tourism related commerce to bolster

region’s resilience to economic downturns and extreme weather events.

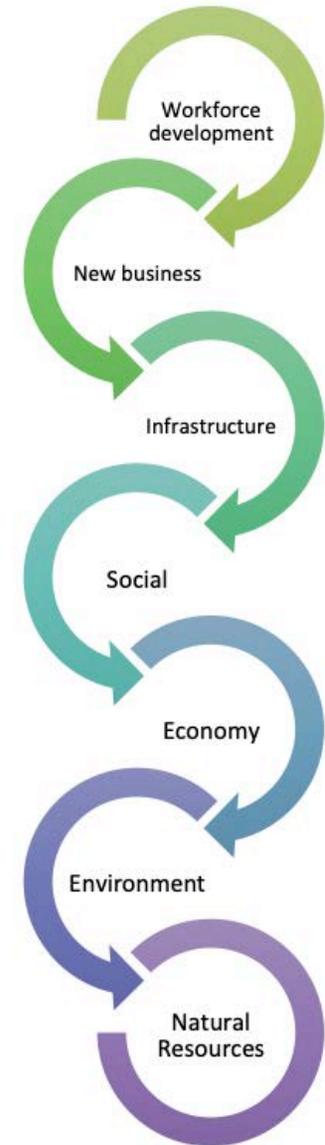
Metrics

- Industry cluster location quotient
- Increase in new jobs and participants in workforce development training programs
- Percentage change in workforce by industry
- Miles of roadwork improvements completed
- Number of public transportation trips made and decreased cost per rider

Case Study: Elevate to El Dorado

Launched in 2017, “Elevate to El Dorado” is an online economic development guide developed by the County to help attract and retain business. It does this by guiding users through the steps to start or expand a business in El Dorado County while simultaneously highlighting the County’s unique geography, high quality of life, and other strategic advantages. The tool includes easy-to-use interactive mapping of land use, vacant parcels, amenities, and schools. It hosts updated demographic data compiled by CSU Chico’s Center for Economic Development and promotional videos.

By hosting all of these different tools and information sources in one place, Elevate to El Dorado provides a comprehensive introduction to the potential benefits of opening or expanding a business in El Dorado County. Elevate to El Dorado was even part of the reason why in December of 2017, the Greater Sacramento Economic Council recognized the County’s achievement of exceptional economic development results by awarding it the “Paving the Way” award.





Strategic Goal 2

SUPPORT HUMAN CAPITAL BY FACILITATING INNOVATION & ENTREPRENEURSHIP

SEDD stakeholders acknowledge that a strong support system and wide array of workforce skills are necessary elements of a strong economy. To that end, the District's plan includes working with existing technical assistance providers, educational institutions, maker spaces, and business incubators to provide the necessary training and support to strengthen the region's skill base. Additionally, a strong supply of capital and enhanced access, particularly for underserved or disadvantaged populations, is a key factor in building prosperity. To that end, the District has identified the following goals consistent with attracting investment to the region:

- Provide technical assistance to small businesses
- Improve access to capital with a revolving loan fund to support entrepreneurial efforts
- Encourage sustainable business growth and job creation with training
- Leverage training assets and co-op networks to help small agriculture businesses thrive
- Support business diversity and underserved markets by accessing SBDC, Placer Business Resource Center, SCORE, Workforce Investment Board, and Community College resources
- Increase awareness and utilization of customized training available through workforce development boards
- Address aging population concerns by offering inter-generational opportunities
- Prioritize STEAM education to attract younger workers to region.

Metrics

- Sierra Small Business Development Center and Placer Business Resource Center annual number of consultations
- Number of loans made through various regional revolving loan funds
- Number of students in or graduated from career and technical education programs that are linked to in-demand jobs.

Case Study: Tahoe Pitch Camp and Showcase

The Tahoe Pitch Camp and Showcase is a series of workshops designed to help local entrepreneurs hone their presentation skills and learn successful pitch techniques to secure support for their business ideas. Participants develop a five-minute pitch of their business, in which they identify their value proposition and capital needs. The workshops culminate with a showcase for Tahoe/Truckee entrepreneurs, startups, and founders to present their innovative ideas and companies to the community. The Tahoe Pitch Camp and Showcase is run by Sierra Business Council in conjunction with Tahoe Silicon Mountain. The overall goal of the program is to help entrepreneurs throughout the greater Tahoe/Truckee area grow and thrive.

Building off of a successful launch in 2017, 2018 was the second year for the Pitch Camp program as it continues to grow in popularity. The 24 program spots filled up within the first five days of registration. The culminating public showcase saw six finalists give their pitches to a panel of judges and an audience of more than 120 people. All 12 finalists from both years are still in business. They have collectively created 42 direct jobs and have received funding of over \$2.3 million.



What drives Innovation?

66%

Value of Innovation

believe that innovation will happen when the general public is convinced of the value that innovation will bring to their lives



65%

Universities & Schools

feel that innovation happens when local universities and schools provide a strong model for tomorrow's leaders

62%
Patent
Protection



agree that when the protection of the copyright and patent are effective then innovation can occur

58%
Private
Investors



believe that innovation will occur when private investors are supportive of companies that need funds to innovate

Budget Allocation 48%



believe that when government and public officials set aside an adequate share of their budget to support innovative companies, innovation can brew

Government Support 43%



think innovation can occur when governmental support for innovation is efficiently organized and coordinated





Strategic Goal 3

PROMOTE INCLUSIVE ECONOMIC DEVELOPMENT BY EXPANDING BROADBAND INFRASTRUCTURE

High-speed broadband is an absolute necessity for a prosperous, resilient economy. It is the backbone for entrepreneurship, education, innovation, commerce, health, and quality of life. Remote workers in the gig economy are essential to economic sustainability in hard-to-reach rural communities, and they need connectivity. This is particularly true in Nevada County where a once-robust tech sector is struggling with a lack of high-speed connectivity and limited opportunities for employees to work remotely for adjacent urban centers.

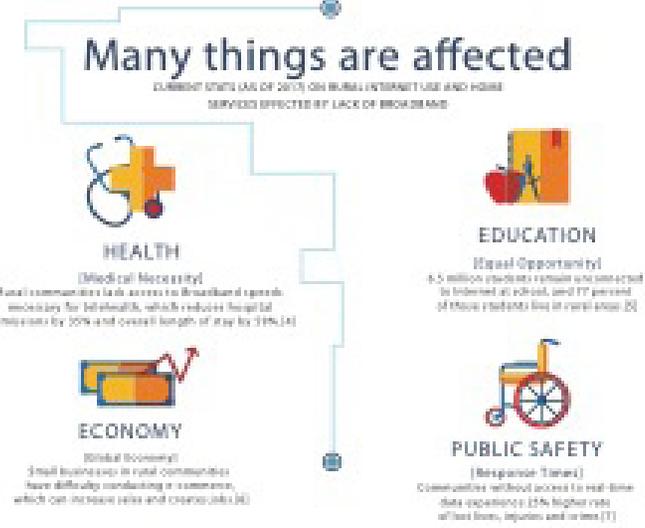
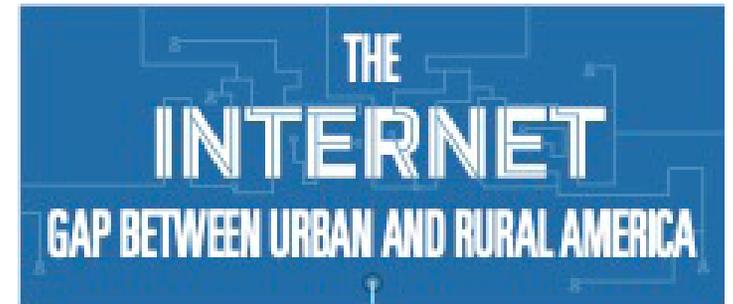
The ability to connect reliably at high speeds is a clear differentiator. There is a proven need to expand the broadband infrastructure in the District. Many areas are unserved or underserved (6Mbps or less) and rely on aging copper cable systems that are approaching the end of their technologically useful life. These antiquated systems simply do not have the bandwidth nor will they support the speeds necessary to compete effectively in the cyber-economy.

As the District looks to the future, fiber optics is considered the required infrastructure to support economic development needs. Gigabit fiber service to commercial centers with wireless network extension to hard-to-reach areas of the District is the baseline technology being considered in this plan. Initiatives in support of this goal include:

- Participate in Gold Country Broadband Consortium task force and Tahoe Basin Project Consortium
- Complete broadband plan that provides access to all businesses, households, and anchor institutions
- Pursue fiber optic installations for commerce zones or wireless installations where cost prohibits fiber
- Identify and support priority projects that connect underserved communities.

Metrics

- Number of new broadband installations and feasibility studies implemented
- Number of commerce zone fiber installations
- Available broadband speeds as recorded
- Percentage of population considered “served.”



We can do better.

FCC funding, regulations and rate-of-return that helped to reduce the divide, but it's still significant. The FCC is loosening the regulations and big internet is clearly turning off their old copper lines and migrating a fiber-and-wireless network. Doing this migration process they are cancelling fiber's ability to pass internet if doesn't pass fiber then to maintain it with no indication on when or if they will be adding more services. The deregulation and lack of accountability is only adding to the number of people without internet.

Graphic courtesy of www.fcc.gov/record/2018/03/20/18-108



Case Study

Recognizing the need for better access to broadband throughout the Sierra Nevada, the Gold Country Broadband Consortium (GCBC) was established with the mission to increase digital access and use of broadband in underserved and unserved areas throughout El Dorado, Nevada, Placer, Sierra, and eastern Alpine counties. With funding from the California Advanced Services Fund, GCBC leverages regional, state, and private resources as an investment in improving and expanding broadband access. The process involves identifying areas in need of broadband access and then working with different internet service providers (ISP) to try and determine a connection strategy that is economically amenable for customers and the ISP. By looking at both traditional technologies, like wireless networks, and emergent technologies, like TV Whitespace, to help expand broadband coverage, GCBC is helping connect these historic counties to the 21st century.

GCBC is working with both federally-funded projects through the Connect America Fund (“CAF2”), administered by ATT in the SEDD region, and with smaller Internet service providers willing to connect rural neighborhoods. Examples of GCBC projects include:

- In 2018, a local provider, Exwire, was able to collectively organize 27 homes in the rural Juniper Hills neighborhood of Truckee to connect them through a wireless repeater at speeds up to 25bps.
- Plumas Sierra Rural Electric worked with Truckee Donner PUD to light up dark fiber to serve the commercial corridor of Truckee with gigabit service.
- Bright Fiber Network transferred ownership to Race Communications and will potentially serve 2,700 homes and businesses with gigabit service in Nevada County.



Bright Fiber Project Map, Nevada County



**Strategic Goal 4**

BUILD COMMUNITY RESILIENCE THROUGH NATURAL DISASTER AND EXTREME WEATHER PROTECTION EFFORTS

The District is particularly vulnerable to threats from wildfire, flood, and other natural disasters and extreme weather events due to a geography that includes several national forests and extensive network of high-risk communities in the wildland-urban interface. As shown in the map to the right, the four-county region has more than 100 communities at risk from wildfire on both Federal and non-Federal lands. The area in general has experienced a hotter, drier climate that has escalated tinder-box conditions.

The SEDD has several severe risk areas, as determined by CalFire. Namely, the Highway 49 corridor along the North Yuba River canyon, the area from Grass Valley to Auburn, areas of Nevada, Placer, and El Dorado foothills, and the entire Tahoe basin. Decreasing risk to the region will require a combination of interventions and behavior change including vegetation chipping and mulching, selective removal of smaller trees, and prescribed burns where feasible. Historic development patterns, especially in mountain and historic Gold Rush towns have put people in close proximity to forested areas, making it difficult to conduct controlled burns and increases the odds of deadly wildfires from human causes or sparking power lines.

The risk to populated communities was on full display during the Camp Fire in nearby Butte County. The largest fire in California's history burned over 153,000 acres, destroyed 13,972 residences, 528 commercial buildings, and killed 85 people. In an effort to help develop an early warning system, Sierra Business Council is working with the US Forest Service and Commonwise, a private consulting organization, to develop an interactive web-based tool that can model fire risk, vegetation layer thickness, and evacuation planning routes. The current need is for a comprehensive dataset to update evacuation strategies, evacuation simulation, location of initial strike, combustible materials and structures, wind direction and speed, and geography. The evacuation scenario developer is considered critical to account for shifting wind patterns and to deliver real time information to first responders who are often from out of the area and

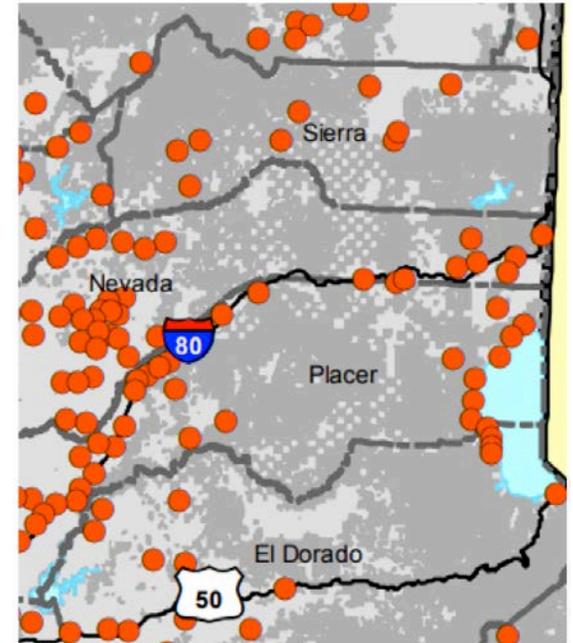
do not know the local landscape.

Alert Tahoe is a system of networked sensors designed to protect the Lake Tahoe Basin from wildfires, earthquakes and other natural hazards through early detection. To date the system has prevented over 50 fires in the Tahoe Basin.¹ Combining systems like Alert Tahoe with current interactive modeling efforts will help to raise the overall resiliency and preparedness of communities to natural disasters like wildfire.

With respect to flood risk, the four counties collectively

steward the watershed for much of the Sacramento River Basin, including multiple forks of the Feather, Yuba, Bear, and American Rivers. These rivers are important economic assets in the region, providing fresh drinking water, hydro-electric power and recreational opportunities.

The snowpack that melts and feeds the reservoirs and rivers is one of the largest in California's state water system. The District is host to 121² dams, 5 major river systems³ and 138⁴ reservoirs, making it the steward of the headwaters for a large portion of California and Nevada's drinking water. Scientists from UCLA's Institute of the Environment and Sustainability predict that warming in the region will cause snow to melt faster and more



No. CA Communities at Risk from Wildfire. Source: CalFire

¹ <https://tahoeprosperity.org/alert-tahoe/>

² Dams - El Dorado: 57, Nevada: 43, Placer: 48, Sierra: 13

³ Cosumnes, American, Yuba, Bear, Truckee

⁴ <https://www.usatoday.com/story/money/nation-now/2018/10/15/pge-voluntarily-shut-off-power-north-california-wildfires/1646686002/?fbclid=IwAR3dxR2WiOIKL07dCpYXnyXSoWUGeq1VTTUk5stxc61qiWlPKQ4INb74>

precipitation to fall as rain rather than snow. This will pose problems in managing water in the reservoir system that stores water for use in dry seasons and protects downstream communities against flooding. If the pace of global warming remains unchanged, there will be 64 percent less snow in the Sierra Nevada by the end of the century.

Given these changing conditions, forest fire and flood impacts have presented increasing threats to communities in the District. This trend is expected to worsen due to conditions caused by climate change, unprecedented drought, bark beetle infestations, and high tree density. In addition, population growth, urban expansion, historic rural development patterns, and homeowner preferences to live outside city limits has resulted in rapid development across the landscape into wildland areas with high fire risks. Communities and businesses have already begun to experience impacts from the increasing presence of forest fire risk. On October 15, 2018, Pacific Gas and Electric shut off electricity to 60,000 homes from the Sierra Foothills to the North Bay to reduce wildfire risks from power lines during extreme winds. Outages like these, though far less devastating and intrusive than wildfire, are still significant interruptions to the economies and communities, and they will likely only become more prevalent in the immediate future.

In order to bolster community resilience against these recurring natural disasters, the following measures should be taken:

- Invest in wastewater infrastructure to accommodate flood events
- Invest in early detection procedures and tools for forest fires
- Promote fire-resistant infrastructure
- Participate in state tree mortality task force and forest projects with US Forest Service
- Develop comprehensive, location-specific evacuation plans to accommodate multiple extreme weather and natural disaster scenarios
- Update community General and Specific Plans and zoning to reduce future development in the WUI

Metrics

- Dollars invested in wastewater infrastructure, riparian restoration and flood plain development
- Dollars invested in early detection measures for forest fires

- Acres of systemic forest health projects completed
- Number of new Alert Tahoe and/or early fire detection systems added in the region.

Case Study 1: Sierra CAMP Business Resilience

Originally a project of Valley Vision, the Business Resilience Initiative (BRI) program helped communities in the Sacramento region better prepare for, withstand, and recover from disasters such as catastrophic wildfire and flooding. In 2018, Valley Vision and Sierra Business Council's Climate Adaptation and Mitigation Project (CAMP) expanded the program to rural communities specifically identified for their high wildfire risk in the Sierra Nevada, and with the support of a PG&E Emergency Preparedness Grant, hosted disaster preparedness workshops in Grass Valley and Sonora. Small businesses in rural communities play a critical role in the health



of surrounding forests and community well-being. They form the foundation of community economic sustainability and generate the primary source of income and financial prosperity for local families and residents; yet small businesses are among the most vulnerable to disasters, including climate-related events like extreme wildfire and flooding. After a natural disaster, businesses without a resiliency plan have a much smaller chance of reopening or recovering. This project provides the information, resources, and methodology to prepare these businesses, as well help each business initiate a customized resiliency / disaster recovery plan.



Case Study 2: Blue Forest Conservation

Forests in the Yuba River Watershed are currently perilously dry, overgrown, and filled with dead trees. They have managed to escape the impacts of large-scale fire to date, but as climate change intensifies, it is becoming increasingly apparent that without intervention, catastrophic wildfire is not a matter of if, but when. The area’s need for some sort of intervention is amplified by the fact that it is the water supply for the Yuba County Water Agency and forest fire could cause sediment to clog the agency’s reservoir. This large-scale sedimentation event could result in damage to infrastructure and increased operating costs.

In an attempt to mitigate all of these potential threats, the Yuba Watershed was chosen as the inaugural project for the Forest Resiliency Bond (FRB), an innovative new tool for financing for interventionary forestry practices. Created by Blue Forest Conservation, FRB works by raising private capital to fund interventions, like forest restoration,

that reduce the chances of fire. Investors provide capital to fund project implementation, and stakeholders that benefit from the restoration – smaller fires means lower costs – reimburse the investors with interest over time. The FRB is particularly valuable because it allows a group of stakeholders that couldn’t afford to undertake necessary forest restoration measures individually, to share the costs and spread payments out across time.

Blue Forest Conservation, in conjunction with World Resources Institute, secured investments of more than \$4 million dollars in private money for the project from the Rockefeller Foundation, Gordon & Betty Moore Foundation, Calvert Impact Capital, and CSAA Insurance. The Yuba Water Authority and the State of California will be the beneficiaries responsible for reimbursing the project’s private investors over time. With forest restoration work set to begin summer of 2019, the FRB is looking like a promising new way to fund forest resiliency with private investment.



Strategic Goal 5

PROTECT NATURAL CAPITAL BY ADVANCING FOREST HEALTH AND SUSTAINABLE BIOMASS INDUSTRY OPPORTUNITIES

The SEDD includes populated areas in the wildland-urban interface (WUI). The SEDD has experienced an increased threat in WUI areas because of continued development and decreasing forest health. In the high Sierra and foothills, tree mortality is a clear and present danger as far more trees are dying due to catastrophic wildfire, invasive beetles, and disease than are being harvested and utilized as wood product. With this trend comes opportunity as California creates policies focused on woody biomass and forest health. Due to budget constraints, Federal forest lands are not being actively managed, whether through logging, thinning, or prescribed fire. Tree density in the region has increased to unhealthy levels throughout most of the SEDD region in the past 70 year. This creates an opportunity for the District that includes well over 2,000 square miles of USFS property.

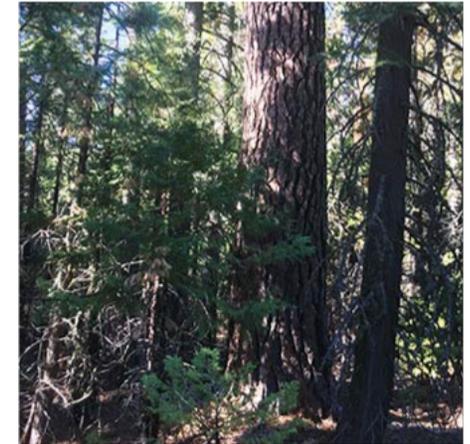
Active management of forests can ease overcrowding, promote healthy tree growth, and help make our forests more resilient to wildfire, insects, and disease. In addition, sustainable active forest management increases the ability of watersheds to store water and can provide feedstock for marketable wood products and biomass energy generation. Public private partnerships are an effective way to tackle this challenge. For example, the French Meadows Forest Restoration Project in Placer County, west of Lake Tahoe, is a model for increasing the pace and scale of ecologically-based forest management and fuels reduction throughout the region. The project involves clearing underbrush, thinning small trees, removing excess material from forest health interventions to renewable energy other value-added product manufacturing facilities. The project includes

reforestation and restoring watersheds and ecosystems. This type of project supports this goal and is in line with the following objectives:

- Work with US Forest Service and private sector to advance forest resiliency bond projects and investments
- Conduct feasibility studies on existing and abandoned biomass facilities to determine forest material processing capacity, power generation capacity, and to identify obstacles to facility redevelopment
- Identify synergistic wood product or other businesses to co-locate at biomass facilities
- Assess existing educational programs' abilities to meet workforce need.

Metrics

- Number of forest resiliency bond projects and investments
- Number of businesses co-located at biomass facilities
- Number of students enrolled in educational programs related to biomass energy or related industries, like cross-laminated timber.
- Operational biomass facility power generation capacity



Overgrown Forest - Before



Restored Forest - After

Case Study: Loyalton Biomass Facility and Resource Regen Campus

Located in Sierra County, the City of Loyalton was historically supported by its ranching and logging industries, with a lumber mill located in the middle of town. In the 1980s a biomass plant was constructed alongside the lumber mill to generate electricity for the plant from unusable wood by-products of the milling process, like saw dust or wood chips. Milling operations at the Loyalton facility shut down in 1990, but the biomass plant remained open, exporting electricity to the grid, until it also shut down in 2010. With the closing of the mill and biomass plant, the small town of Loyalton lost over 200 jobs and a large portion of the population.

In April 2018, the biomass plant was restarted after being purchased by American Renewable Power. The plant sources its biomass fiber from nine



counties within a one-hour drive of the plant. Historically, over 90% of the fuel for the power station has been sourced from surrounding national forests to remove fire-risk forest materials. As of the 4th quarter of 2018, 25 new jobs have been created at the Loyalton Biomass Plant, now re-branded as “Resource Regen Campus.”

In addition to generating renewable base load power and creating a market for healthy forest management and fire mitigation, the facility has the potential to offer innumerable co-benefits and revenue streams. The biomass electricity generation process produces a large amount of steam as a by-product. By co-locating businesses and facilities that have a large demand for steam, operating costs for the business can be reduced significantly. The entire campus is envisioned as a multi-use site for light and heavy commercial ventures, that gain an additional advantage because of their close proximity to a biomass facility. It is hoped that Loyalton will serve as an example for other shuttered biomass plants.

Goal 1: Catalyze Economic Diversification

Performance Measures	Responsible Entity	Timeframe*
Attract and support new industry clusters and emerging industries	Chambers of Commerce, County Business Resource Centers	Mild
Support and grow existing businesses	Chambers of Commerce, County Business Resource Centers	Short
Focus resources on next economy growth sectors	Economic Development Agencies	Long
Ensure adequate transportation infrastructure to support economic development	Community Development Agencies, County Transportation Planning Agencies, Transit Agencies	Mild
Expand non-tourism related commerce to bolster region’s resilience to economic downturns and extreme weather events	Community Development Agencies, Chambers of Commerce	Long

* Short (1-3 years) Mild (3-5 years) Long (5+ years)

Goal 2: Support Human Capital by Facilitating Innovation & Entrepreneurship

Performance Measures	Responsible Entity	Timeframe*
Provide technical assistance to small businesses.	Chambers of Commerce, County Business Resource Centers, Nonprofit Business Development Organizations	Short
Improve access to capital with a revolving loan fund to support entrepreneurial efforts		Short
Encourage sustainable business growth and job creation with training		Mild
Leverage training assets and co-op networks to help small agriculture businesses thrive		Mild
Support business diversity and underserved markets by accessing SBDC, SCORE, Workforce Investment Board and Community College resources		Short
Increase awareness and utilization of customized training available through workforce development boards		Short
Address aging population concerns by offering inter-generational opportunities		Long
Prioritize STEAM education to attract younger workers to region		Mild

* Short (1-3 years) Mild (3-5 years) Long (5+ years)

Goal 3: Promote Inclusive Economic Development by Expanding Broadband Infrastructure

Performance Measures	Responsible Entity	Timeframe*
Participate in Gold Country Broadband Consortium and Tahoe Basin Project Consortium task force	County and Local Governments, Businesses, Internet Service Providers	Short
Complete broadband plan that provides access to all businesses, households and anchor institutions		Mild
Pursue fiber optic installations for commerce zones		Mild
Identify and support priority projects that connect underserved, high potential areas		Short

* Short (1-3 years) Mild (3-5 years) Long (5+ years)

Goal 4: Build Community Resilience Through Natural Disaster and Extreme Weather Protection Efforts

Performance Measures	Responsible Entity	Timeframe*
Invest in wastewater infrastructure to accommodate flood events, per water agency plans	County & Regional water agencies	Long
Invest in early detection procedures and tools for forest fires	County Fire Departments/Districts, CALFire, University of Nevada, Reno	Short
Promote fire resistant infrastructure	County and Town Building Services Departments, Community Development Agencies	Short
Participate in state tree mortality and tree removal task force		Short
Coordinate forest health projects with US Forest Service	Sierra Nevada Conservancy, California Tahoe Conservancy, Community Development Agencies	Long

* Short (1-3 years) Mild (3-5 years) Long (5+ years)

Goal 5: Protect Natural Capital by Advancing Forest Health and Biomass Opportunities

Performance Measures	Responsible Entity	Timeframe*
Conduct feasibility studies on existing and abandoned biomass facilities to determine power generation capacity	Regional Utilities/Community Choice Aggregators	Long
Identify synergistic businesses to co-locate at biomass facilities		Short
Conduct feedstock inventory to indicate forest capacity	US Forest Service, Sierra Nevada Conservancy, California Tahoe Conservancy	Short
Work with forest service and private sector to advance forest resiliency bond projects and investments	US Forest Service, Sierra Nevada Conservancy, California Tahoe Conservancy, Blue Forest Conservation	Short
Assess existing educational programs abilities to meet workforce need	School Districts, Community Colleges	Long

Sierra Economic Development District Stakeholders and Interviews

EL DORADO COUNTY

Debbie Manning - El Dorado Hills Chamber of Commerce, President/CEO

Devin Middlebrook - Tahoe Regional Planning Agency, Sustainability Program Coordinator

Heidi Hill Drum - Tahoe Prosperity Center, Executive Director

Jenny Wilson - El Dorado County Employment and Training Supervisor

Kim Carr - Lake Tahoe Community College, Board Member

M. Clive Morris - Placerville Town Manager

Michael Velez - Community

Facilities USDA / El Dorado County Resident

Shiva Frentzen - El Dorado County Supervisor, District Two

Tiffany Schmid - El Dorado County Planning and Building Director

William Robie - El Dorado Community Foundation, Executive Director

NEVADA COUNTY

Cassie Hebel - Truckee Downtown Merchants Association, Executive Director

Hilary Hodge - City of Grass Valley, Council Member

Jeffrey Thorsby - Nevada County Board of Supervisors Senior Administrative Analyst

Michael Anderson - Business Owner, Client Works, Nevada City
Mali Dyck - Nevada County, Assistant County Executive Office

Richard Anderson - Nevada County Board of Supervisors, District Five

Robin Galvan-Davies - Greater Grass Valley Chamber of Commerce, CEO

Stephen T. Monaghan - Nevada County Chief Information Officer

PLACER COUNTY

Amy Andrews - Colfax Area Chamber of Commerce, Executive Director

Brian Clausman - Placer County Visitors Bureau, Board Director

James Importante - Placer County

Economic Development Manager
Jennifer Merchant - Placer County Deputy County Executive Officer

Jennifer Montgomery - Former Placer County Board of Supervisors, District Five

Jonathan "JJ" Jansen - Placer County, Management Analyst I, Lake Tahoe

Keith Nesbitt - Auburn Chamber of Commerce, Executive Director

Lindsey Romack - Placer County Board of Supervisors, Lake Tahoe Field Representative, District Five

Marcy Schmidt - Placer County Economic Development Program Supervisor

Michelle Johnson - Foresthill

Divide Chamber of Commerce, Executive Director

Mora Rowe - City of Auburn Economic Development Director

Patrick Thompson - Business Owner, Mega's Café, Foresthill

Robert Richardson - City of Auburn City Manager

Rick Velgos - Grant Plumbing & Hardware, Foresthill Economic Development Council Member

Robin Husman - Sebastian High Speed Internet, Foresthill Economic Development Council

Chair Sherri Conway - Placer County Economic Development, Director

Sherry Wicks - Foresthill Economic Development Council, Treasurer

