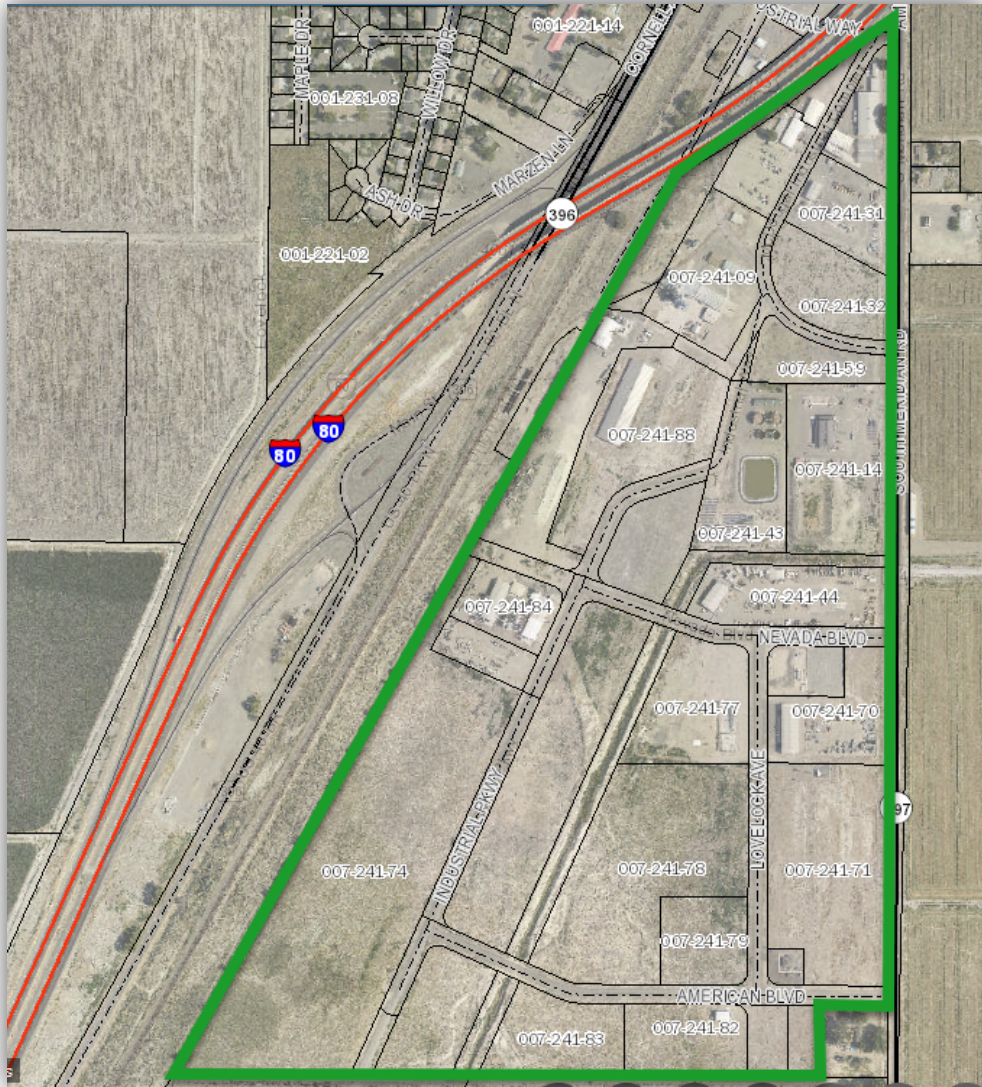


Pershing County Report

Lovelock, NV

Technical Assistance



March 7, 2022

Provided through technical assistance by the U.S. EPA Land Revitalization Team

Table of Contents

- Key Takeaways, Recommendations and Next Steps 3
 - Lovelock Industrial Park Strategies 3
 - Housing Strategies..... 4
- Background 4
- Market Assessment..... 6
 - Demographic Characteristics 6
 - Commutation Patterns..... 9
 - Employment Trends 11
 - Employment by Industry 12
- Reports Reviewed 15
 - WNDD Comprehensive Economic Development Strategy 2020-2025 15
 - Humboldt County Housing Needs Assessment 16
 - Northern Nevada Vacant Land Analysis 17
 - Lithium Mine Impact Analysis 17
- Stakeholder Interviews 19
- Housing 21
 - Housing Supply and Sales..... 22
 - Modular & Manufactured Housing 23
- Lovelock Industrial Park – Site Analysis and Background Information..... 25
 - Positioning the Lovelock Industrial Park 26
- Appendix 27
 - Presentation 1: Presentation Webinar_1_Slides.pptx 27
 - Presentation 2: Webinar_2-Final.pptx 27

The U.S. Environmental Protection Agency (EPA) Office of Brownfields and Land Revitalization (OBLR) contractors, GDIT and Vita Nuova, provided technical assistance (TA) redevelopment support targeted at the Lovelock Industrial Park and the community of Lovelock, Nevada. Technical assistance aimed to:

- Understand and provide key insights on local market conditions;
- Provide site analysis of Lovelock Industrial Park;
- Make recommendations for actions that can assist the community in growing its economic base; and
- Provide strategies that assist in facilitating development outcomes within the Lovelock Industrial Park.

This report compiles the technical assistance team's recommendations and includes:

- Analysis of demographic characteristics, commutation patterns, and employment trends.
- Review of existing reports and studies highlighting key takeaways.
- Summary of feedback received from interviews with stakeholders, including economic development and planning staff, elected officials, real estate brokers, property owners, and industry representatives.
- Compilation and analysis of data on housing in Pershing County.
- Discussion of manufactured housing as an alternative construction-delivery method.
- Site analysis of the Lovelock Industrial Park.

Key Takeaways, Recommendations and Next Steps

The following key takeaways, recommendations and next steps have been drawn from the interviews, discussions, research, and analysis that has occurred over the duration of the technical assistance and its content is the same as what was presented in the two webinars. They are provided here as reference and are organized into two categories: Lovelock Industrial Park and Housing Strategies.

Lovelock Industrial Park Strategies

- Connect with commercial brokers specializing in smaller sized industrial (e.g., up to 30,000 square feet or so).
- Sponsor and participate in commercial real estate events (e.g., Commercial Association of Realtors, CCIM Reno Chapter, etc.).
- Prepare concise marketing collateral for end-users and interested parties.
- Be attentive to market opportunities that relate to and/or support larger regional projects.
- Reach out to potential end-users who may benefit from a remote location.
- Work with USDA 'Re-Connect' on community fiber deployment.
- Continue to pursue Certified Sites designation for Lovelock Industrial Park – and market that status once received.
- Keep the Pershing County EDA and Nevada 95-80 RDA websites up to date.
- Add to the Pershing County EDA and/or Nevada 95-80 RDA websites a separate webpage specifically on the industrial park and any other available buildings/sites.

- Utilize “Nevada Stronger Economies Together” information (currently on the Pershing County EDA website) more effectively in conjunction with marketing efforts.
- Consider providing updates, and/or links to news articles and reports, on current activities and developments.
- Consider producing unique community event(s) to support tourism revenue and raise awareness of the community.

Housing Strategies

- Connect with and maintain a list of residential developers/investors who have built in Pershing, Humboldt, and other rural Nevada counties.
- Manufactured housing, while currently experiencing pricing pressures, should continue to be considered an option for lower cost housing.
- Continue to interface with affordable and attainable housing providers – Nevada Rural Housing Authority, State Division of Housing, USDA, CDFIs, and others.
- Review inventory of vacant residential lots available for housing.
- Explore development of additional affordable housing units with housing partners. Consider contribution of land, reduction in local fees, and other partnership strategies.
- Conduct/update a Housing Needs Study for Pershing County that takes into consideration recent and proposed economic development projects and their impact.

Background

Covering an area of 6,067 square miles, Pershing County is located in northwestern Nevada and has a 2020 population of 6,650. It is bordered by Humboldt County on the north, Lander County on the east, Churchill County on the south, and Washoe County on the west.

Most of the Pershing County’s population is concentrated in and around Lovelock, the and the County seat and only incorporated city. The County’s topography, water supply, and climate restrict development. In addition, about 75% of the acreage in the County is owned by the federal Bureau of Land Management.

The Pershing County economy is strongly rooted in agriculture and mining, although the last several decades have brought an increase in retail and tourism. The County is served by Interstate 80, which links it to the Reno-Sparks Metropolitan Statistical Area about 90 miles to the west. I-80 also connects Nevada with the states of California and Utah.

Pershing County is one of eight counties in the Western Nevada Development District (WNDD). Designated as an Economic Development District in 1983, WNDD also includes the counties of Carson City, Churchill, Douglas, Humboldt, Mineral, Storey, and Washoe and the cities of Fallon, Fernley, Lovelock, Reno, Sparks, and Winnemucca. Most of the region’s population is in Washoe County, the second largest county in Nevada.

In July 2021, the Nevada 95-80 Regional Development Authority (RDA) was approved by the state. The RDA will allow Pershing and Humboldt Counties and the cities of Lovelock and Winnemucca to combine economic development efforts and jointly market the region.

Two economic development projects – one in Pershing County and one in Humboldt County - offer the potential for substantial job creation and economic growth in the coming years:

- **West Coast Salmon.** A Norwegian company is planning to develop and operate an industrial scale land-based salmon farm at a site about 70 miles north of Lovelock, near the Pershing/Humboldt County line. The facility will use a recirculating aquaculture system to raise up to 50,000 metric tons of Atlantic salmon for the West Coast market. Initially, the salmon will be sold to processors and distributors; they in turn will package the product and sell it to supermarkets and restaurants. Future build-out could include the construction of a processing facility.

The salmon farm will be constructed in three phases over the next 5-7 years, with 80-100 jobs to be created in Phase 1 and as many as 250-300 jobs available when Phases 2 and 3 are completed. Although a lot of the staff will be recruited locally, some specialized positions (e.g., fish veterinarians) will need to be brought in from other locations. The company intends to break ground in Q2 2022 and the first harvest is expected to be in late 2024 to early 2025.

According to company officials, the 2,000-acre site off I-80 was selected for several reasons, with the most important being proximity to major markets. Other factors included access to transportation and energy infrastructure, good power rates and climate, permitted freshwater rights and high quality water, significant acreage for future expansion, and the geology of the site.

- **Thacker Pass Lithium Mine.** Recognizing the unique opportunity presented by large deposits of lithium identified in the McDermitt Caldera area, Lithium Nevada Corp. has proposed to construct and operate a new lithium mine, lithium processing plant and sulfuric acid manufacturing plant in Humboldt County. Lithium is used in many products, including batteries, glass and ceramics, lubricants, and pharmaceuticals.

The project will be constructed in two phases spread out over seven years. Direct construction investment is estimated at more than \$218.4 million; approximately 1,000 workers will be employed during construction. Annual operations will have a long-term economic impact, directly employing up to 313 workers at an average wage of nearly \$74,000. The results of an economic impact assessment show that the operations will have a considerable economic and fiscal impact on Humboldt County. The proposed lithium operations will also contribute to the diversification of the local mining industry.

Market Assessment

This section provides an analysis of the Pershing County market, highlighting demographic characteristics, commutation patterns, and employment trends relative to other nearby counties.

Demographic Characteristics

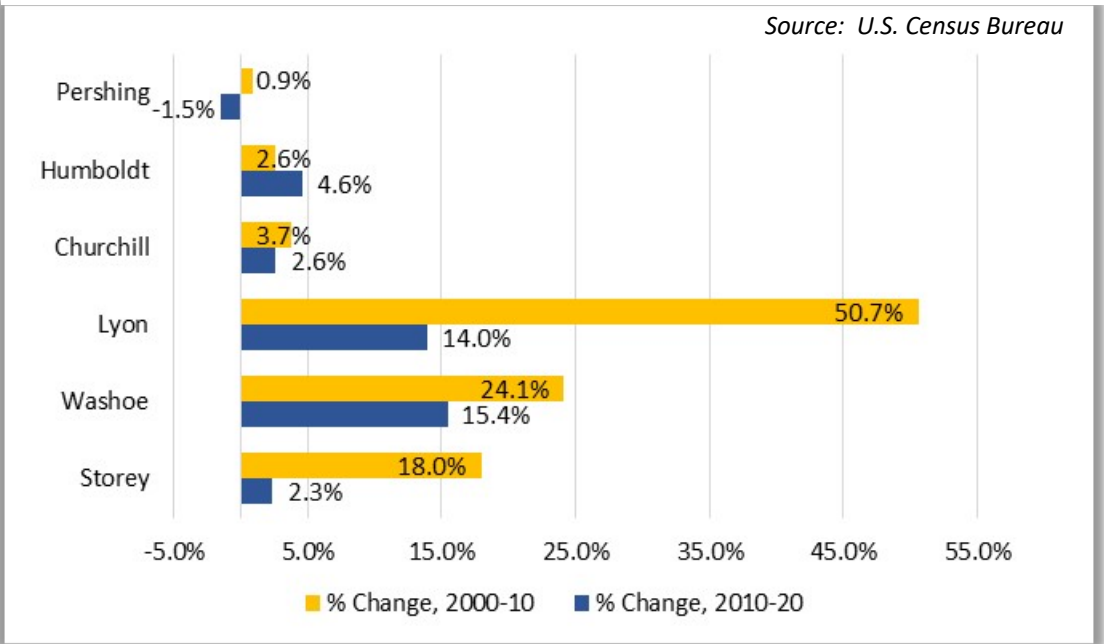
Table 1 presents demographic information for Pershing County, with data provided for other counties in western Nevada for comparison.

	Population			Median Age*	Median Household Income*
	2010 Census	2020 Census	% Change, 2010-20		
Pershing County	6,753	6,650	-1.5%	41.9	\$50,518
Humboldt County	16,528	17,285	4.6%	38.0	\$68,272
Churchill County	24,877	25,516	2.6%	40.5	\$54,533
Lyon County	51,980	59,235	14.0%	43.2	\$55,336
Washoe County	421,407	486,492	15.4%	38.3	\$72,690
Storey County	4,010	4,104	2.3%	54.8	\$63,760

Source: U.S. Census Bureau and ESRI Business Analyst (*2021 estimates).

For most of its history, Pershing County had a small population that fluctuated between about 2,600 and 3,200 residents. It was not until the 1970s that the County began to experience steady growth. From 1980 to 2000, the number of residents increased 96%, from 3,408 to 6,693. This trend dropped off sharply in the subsequent decade, however; between 2000 and 2010, the County’s population increased by a scant 0.9%. According to the 2020 Census, Pershing County currently has 6,650 residents, reflecting a 1.5% decrease from ten years earlier.

Figure 1. Population Growth by County



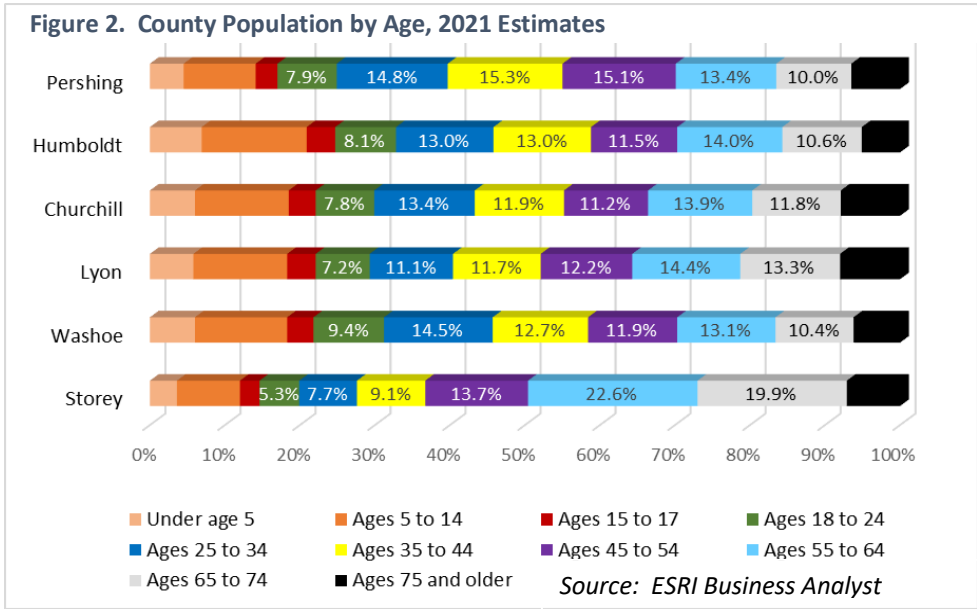
Migration data produced by the U.S. Census Bureau show that more people are moving into Pershing County than are leaving to move elsewhere. From 2015 to 2019, the County had a net gain of 586 residents. About 61% of the people moving into Pershing County are from other counties in Nevada. The rest are from other states, with the largest in-migration coming from California and Utah.

Other counties in western Nevada have been growing, in some cases dramatically. Lyon County, for example, more than tripled its population between 1970 to 2000, and is now the third most populous county in Nevada with 59,235 residents. Both Lyon and Washoe counties have seen a continuing influx of new residents, some moving to the area from states like California, Arizona, Texas, and Oregon. The number of residents in Humboldt County increased by nearly 5% between 2010 and 2020.

According to ESRI Business Analyst, Pershing County has a median household income estimated at \$50,518. This is \$12,295 lower than the median for the state of Nevada (\$62,813). It also falls below the median household income levels of each of the counties included for comparison. This may reflect low educational attainment levels and a limited number of high-paying job opportunities.

The median age of Pershing County residents is 41.9, above the statewide median (38.0). The county with the highest median age in the region, however, is Storey County (54.8), which has attracted many retirees.

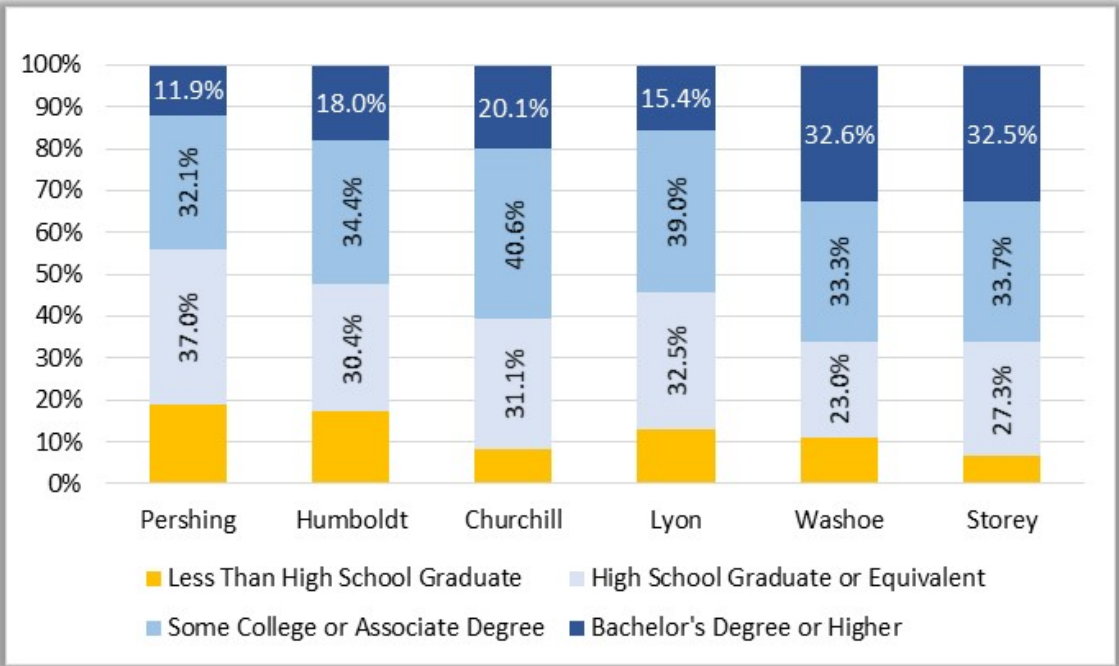
The distribution of the population by age is shown in Figure 2. Pershing County has a relatively small share of children up to age 14 compared to its peers. Approximately 3,100 Pershing County residents or 45.2% are between the ages of 25 and 54. This is considered the prime working-age population, when rates of labor force participation are at their peak. Among the other counties, the 25-to-54 age cohort ranges from 30.5% of the population in Storey County to 39.5% in Washoe County. Nevertheless, the size of the potential workforce in Pershing County may constrain its ability to recruit large employers like those found in the Reno-Sparks metro area.



Approximately 12% of Pershing County residents aged 25 and over have a bachelor’s degree or higher. In contrast, the proportion of residents with at least a bachelor’s degree ranges from 19% in Lyon County to 33% in Washoe County. From a competitive perspective, this may impact Pershing County’s ability to attract companies with jobs that require college degrees without recruiting additional residents and/or drawing labor from other locations.

Figure 3. Educational Attainment by County, 2021 Estimates

Source: ESRI Business Analyst



Commutation Patterns

Pershing County is a net exporter of labor, with 827 workers traveling to the County each day and 872 residents leaving the County for work. Nevertheless, the extent of the commutation *into* the County is somewhat unusual for a rural area; it suggests that local job opportunities are highly valued and/or offer above-average wages and benefits. The number of jobholders who live *and* work in Pershing County is 689; this figure declined between 2009 and 2019.

Figure 4. Labor Inflow and Outflow, Pershing County
Source: U.S. Census Bureau, OntheMap Application and LEHD Origin-Destination Employment Statistics.



As illustrated in Table 2 below, 55.6% of the workers employed in Pershing County commute to the County from other locations. The data indicate that Pershing County is served by a relatively large labor shed that extends from Washoe County on the west to Elko County on the east, although jobholders from Pershing and Humboldt counties make up 60% of the local labor force.

Nearly 58% of those who work in Pershing County commute more than 50 miles each way from home. This figure represents an increase from 49.5% ten years earlier. In contrast, only 24% commute less than ten miles from home to work, a decline from 37.0% in 2009. Workers employed in Pershing County are clearly traveling greater distances than they did in the past.

The commuting destinations of Pershing County residents are shown on the right side of Table 2. More than 44% of residents who are employed work in the County. The remaining residents travel outside Pershing County, with 57.0% commuting at least 50 miles from home to work. Although the share of residents traveling more than 50 miles has not changed much in the last ten years, there has been a notable increase in the share of residents commuting 10 to 24 miles each way, from 5.7% to 10.2%.

Table 2. Where Workers Live and Residents Work, Pershing County					
Origins of Pershing County Workers (Pershing County Labor Shed)			Destinations of Pershing County Residents (Pershing County Commute Shed)		
County	Count	Share	County	Count	Share
Pershing County	689	45.4%	Pershing County	689	44.1%
Humboldt County	221	14.6%	Humboldt County	264	16.9%
Washoe County	178	11.7%	Washoe County	173	11.1%
Churchill County	101	6.7%	Elko County	88	5.6%
Lyon County	94	6.2%	Lyon County	47	3.0%
Elko County	52	3.4%	Carson City	39	2.5%
Lander County	28	1.8%	Storey County	32	2.0%
Clark County	22	1.5%	Clark County	31	2.0%
Mineral County	14	0.9%	Lander County	22	1.4%
Carson City	13	0.9%	Churchill County	19	1.2%
Douglas County	12	0.8%	Eureka County	17	1.1%
All Other Counties/Locations	92	6.1%	All Other Counties/Locations	157	10.1%
Distance Traveled from Home			Distance Traveled from Home		
Less than 10 miles	366	24.1%	Less than 10 miles	381	24.4%
10 to 24 miles	144	9.5%	10 to 24 miles	159	10.2%
25 to 50 miles	129	8.5%	25 to 50 miles	132	8.5%
Greater than 50 miles	877	57.8%	Greater than 50 miles	889	57.0%

Source: U.S. Census Bureau, OntheMap Application and LEHD Origin-Destination Employment Statistics.

Data is as of 2019, the most recent available. Due to differences in methodology, the job counts shown are not comparable to those from other sources.

Employment Trends

Figure 5 illustrates annual trends in private sector employment in Pershing County since 2010. The source of the data is the Quarterly Census of Employment and Wages (QCEW). Under QCEW, the state’s Research and Analysis Bureau collects employment and wage data for workers covered by Nevada unemployment insurance laws.

Total private employment in Pershing County increased from 908 in 2010 to 1,186 in 2019, a net gain of 278 jobs or 30.6%. In 2020, employment levels dropped in many areas of the U.S. due to the COVID-19 pandemic. In Pershing County, however, the number of private sector jobs over the year in fact increased to 1,250, a 5.4% gain. Preliminary QCEW data for Q2 2021 show the number of private sector jobs in the County at 1,359.

Figure 5. Private Sector Employment Trends, Pershing County
 Source: Nevada DETR, Quarterly Census of Employment & Wages

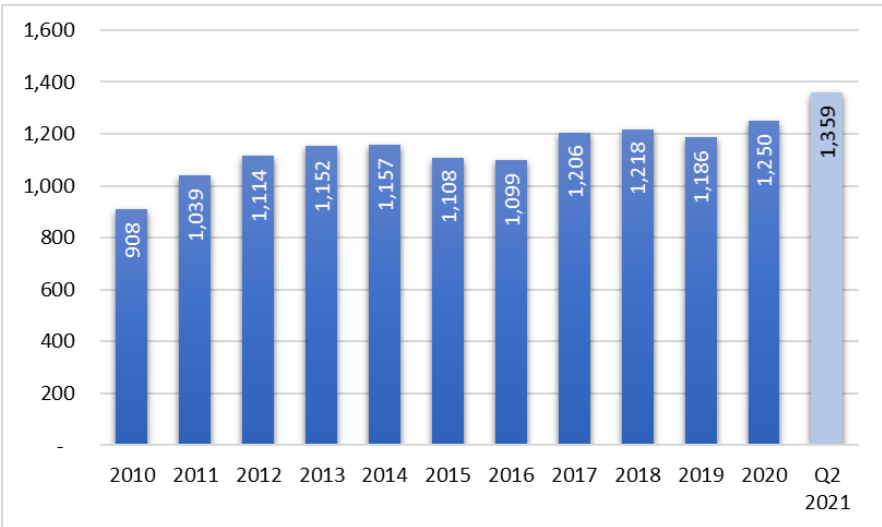
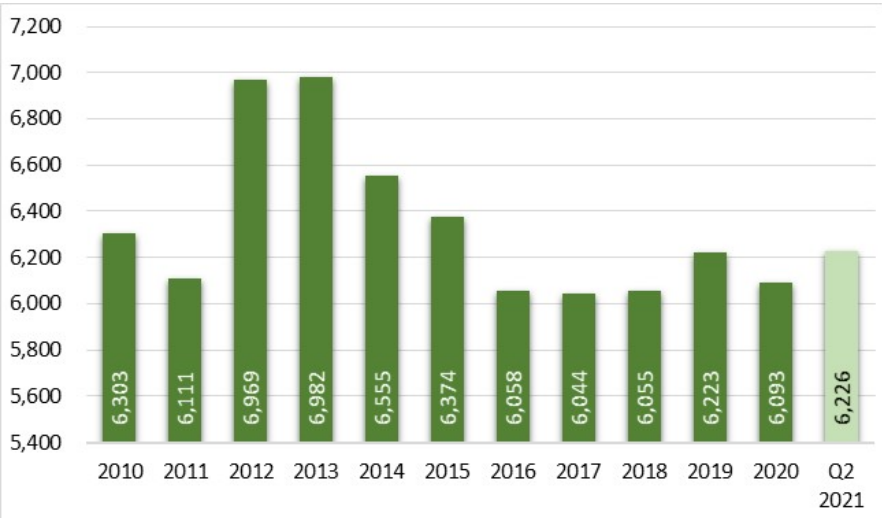


Figure 6 presents the same data for neighboring Humboldt County. Its total private sector employment decreased from 6,303 in 2010 to 6,223 in 2019, reflecting a net decline of 1.3%. Although Humboldt County subsequently lost about 300 jobs to the pandemic in 2020, preliminary data for Q2 2021 suggest that pre-COVID employment levels have been restored.

Figure 6. Private Sector Employment Trends, Humboldt County
 Source: Nevada DETR, Quarterly Census of Employment & Wages



Employment by Industry

According to the QCEW, government accounts for 35% of the total employment in Pershing County. Although many of these public sector jobs are in municipal and county government, they also include personnel at the Lovelock Correctional Center, a medium-security state prison constructed in 1995, the County school district, and Pershing General Hospital.

The mining industry is among the primary drivers of Pershing County’s economy, comprising approximately 61% of private sector employment (Table 3). The County has a vast array of mineral resources, and mining activity has occurred in the area since the mid-nineteenth century. Among the County’s major employers in the mining industry are Florida Canyon Mining and Coeur Rochester.

Coeur Rochester, which operates one of the largest silver mines in the country, is in the process of completing a \$334 million expansion project that will extend the life of the mine until 2033. The company currently employs about 325 people, but could increase its workforce to as much as 350 by the time its project is finished in 2023. Approximately 50% of Coeur Rochester’s workforce is from Pershing County, while 30% is from Humboldt County.

	Number	Percent
Agriculture/Forestry/Hunting	83	6.6%
Mining	766	61.3%
Construction	1	0.1%
Manufacturing	18	1.4%
Wholesale Trade	16	1.3%
Retail Trade	148	11.8%
Transportation & Warehousing	30	2.4%
Information	6	0.5%
Financial Activities	21	1.7%
Professional & Business Services	13	1.0%
Health Care & Social Assistance	12*	1.0%
Leisure & Hospitality	135	10.8%
Other Services	11	0.9%
Total, Private Sector	1,250	100.0%

Source: Nevada Department of Employment, Training and Rehabilitation, Research and Analysis Bureau, Quarterly Census of Employment & Wages; 2020 annual averages.

Like mining, agriculture remains an important part of the Pershing County economy. According to the Nevada Department of Agriculture, the County is home to 154 farms and ranches, most of them family-owned and -operated. Leading agricultural products include beef cattle, hay, and oilseeds and grain. The most recent U.S. Census of Agriculture reports that farms in Pershing County generated \$33.8 million in sales of agricultural products in 2017.

Retail trade is the second largest private industry in Pershing County, employing nearly 150 workers, though some of these jobs may be part-time. Most retail stores are small establishments. There are exceptions, however, as a truck stop and an automotive dealership are among the County’s top ten employers (see Table 4).

Table 4. Top Ten Employers in Pershing County				
Name	Industry	Description	Ownership	Employment Range
Lovelock Correctional Center	Government	State prison	State gov't	250 to 499
Coeur Rochester Inc.	Mining	Silver ore mine	Private	100 to 249
Florida Canyon Mining Inc.	Mining		Private	100 to 249
Pershing General Hospital	Health Care	Hospital	Private	100 to 249
Travel Centers of America	Retail	Truck stop & plaza	Private	50 to 99
C Punch Inn & Casino	Hospitality	Hotel/casino	Private	20 to 49
Ramada Inn Sturgeons Casino	Hospitality	Hotel/casino	Private	20 to 49
McDonald's	Hospitality	Limited svc restaurant	Private	20 to 49
Burns Brothers Inc.	Retail	Automotive dealership	Private	20 to 49
Alamo Casino	Hospitality	Casino	Private	20 to 49

Source: Nevada Department of Employment, Training and Rehabilitation, Research and Analysis Bureau, as of 16 November 2021.

The leisure and hospitality sector – made up of arts, entertainment, and recreation and accommodations and food services – is also a significant employer. Pershing County is home to several casinos, motels, inns, RV parks, and campgrounds and about a dozen restaurants. Visitors come to the area not only for gaming, but also for its historic sites, scenery, and recreational opportunities. Currently based in Sparks, where it attracts about 30,000 visitors annually, Seven Troughs Distilling plans to relocate, developing a production facility and tap room in Lovelock. The facility will take advantage of the County's high quality water and utilize local crops. It is also anticipated that the tap room will strengthen downtown shops, restaurants, and other businesses.

Unlike other counties in western Nevada, manufacturing has a relatively limited presence in Pershing County. Local manufacturers include Nevada Soy Products, a company that processes organic oilseeds (such as soybeans and safflower, sunflower, canola, and jojoba seeds) for food and feed products, and the US Silica EP Mineral Plant, "the world's largest producing diatomaceous earth plant," which has been operating in Lovelock since 1959.

	Number	Percent
Agriculture/Forestry/Hunting	314	5.2%
Mining	1,908	31.3%
Utilities	126	2.1%
Construction	310	5.1%
Manufacturing	285	4.7%
Wholesale Trade	154	2.5%
Retail Trade	936	15.4%
Transportation & Warehousing	236	3.9%
Information	59	1.0%
Financial Activities	112	1.8%
Educational Services (Pvt)	277	4.5%
Professional & Business Services	15	0.2%
Health Care & Social Assistance	240	3.9%
Leisure & Hospitality	930	15.3%
Other Services	183	3.0%
Total, Private Sector	6,093	100.0%

Source: Nevada Department of Employment, Training and Rehabilitation, Research and Analysis Bureau, Quarterly Census of Employment & Wages; 2020 annual averages.

Employment by industry in Humboldt County is provided in Table 5 for comparison. As the data indicate, mining is also a significant part of the Humboldt County economy, and retail trade and leisure and hospitality are major employers. However, Humboldt County has a much more diverse economy, with a higher share of jobs in such industries as construction, transportation and warehousing, wholesale trade, and manufacturing.

Manufacturers in Humboldt County produce transportation equipment, plastics and rubber products, chemicals, and fabricated metals, among other products. Cyanco operates the world's

largest sodium cyanide production facility in Winnemucca and completed a \$42.5 million expansion in 2018. The company serves the gold mining industry. Three manufacturers are on the list of the County's major employers (Table 6).

Name	Industry	Description	Ownership	Employment Range
Walmart Supercenter	Retail	Department store	Private	250 to 499
Model T Hotel Casino RV Park	Hospitality	Hotel/casino	Private	100 to 249
Humboldt County Sheriff	Government	County sheriff	County gov't	100 to 249
Winnemucca Inn	Hospitality	Hotel/casino	Private	100 to 249
Winners Inn Casino	Hospitality	Hotel/casino	Private	100 to 249
Roadhouse Casino	Hospitality	Hotel/casino	Private	100 to 249
Carry On Trailer Inc.	Manufacturing	Trailer mfg	Private	100 to 249
Diamond Plastics Co.	Manufacturing	Plastics mfg	Private	100 to 249
Hunewill Construction	Wholesale	Sand and gravel	Private	100 to 249
Winnemucca Farms Inc.	Manufacturing	Potato products	Private	50 to 99

Source: Nevada Department of Employment, Training and Rehabilitation, Research and Analysis Bureau, as of 16 November 2021.

Reports Reviewed

Several recent reports and studies were made available and reviewed to better understand economic issues in Pershing County and the surrounding region. Reports included:

- *Western Nevada Development District (WNDD) Comprehensive Economic Development Strategy 2020-2025 Update: Recovery and Resiliency, 2021*
- *Housing Needs Assessment, Humboldt County, Nevada, Ekay Economic Consultants, Inc. in partnership with the Center for Regional Studies at University of Nevada, Reno, July 2021*
- *Social, Economic and Fiscal Impact Assessment for New Lithium Operations in Humboldt County, Nevada, Center for Economic Development, University of Nevada, Reno, December 2018, Revised September 2019*
- *Northern Nevada Vacant Land Analysis: Inventory & Implications for Economic Growth & Development, RCG Economics LLC, prepared for the Economic Development Authority of Western Nevada, December 2021*

WNDD Comprehensive Economic Development Strategy 2020-2025

WNDD was designated as an Economic Development District by the U.S. Economic Development Administration in 1983. The region is made up of eight counties (Carson City, Churchill, Douglas, Humboldt, Mineral, Pershing, Storey, and Washoe) and six cities (Fallon, Fernley, Lovelock, Reno, Sparks, and Winnemucca) in the northwest corner of the state.

WNDD’s investment priorities are based on the Comprehensive Economic Development Strategy, or CEDS. The CEDS is a “locally based, regionally driven

economic development planning process and document that successfully engages the region’s community leaders, private sector partners, and stakeholders.” The process results in the creation of “an economic roadmap to diversify and strengthen the regional economy and to qualify the region” for additional EDA assistance. The CEDS is updated annually and revised and rewritten every five years.



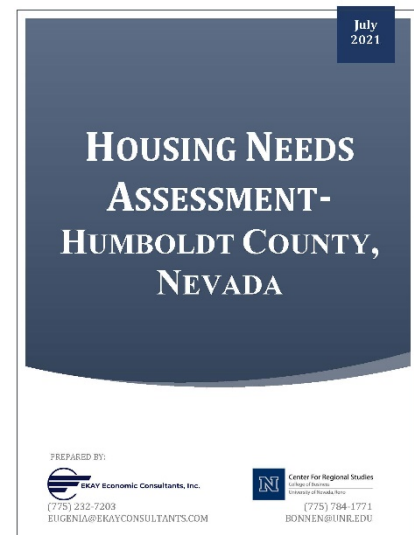
The 2021 update identifies critical issues impacting economic vitality in western Nevada, with six of them considered “most pressing for the region.” Challenges most applicable to Pershing County are:

- Inadequate broadband connectivity, particularly in rural areas
- Workforce quality (e.g., inadequate training) and availability
- Low wages
- Limited housing supply and rising cost of housing
- The need to diversify economic activity and employment by industry

Humboldt County Housing Needs Assessment

A housing needs assessment was produced for Humboldt County in 2021 to provide an overview of the County’s housing market, examining the factors impacting housing demand (e.g., demographics, employment trends) as well as the existing supply of housing to determine the need for additional units. Some of the findings are equally relevant to Pershing County; the assessment considers the impact of the jobs to be created by two proposed development projects, Lithium Nevada and West Coast Salmon. Key findings include the following:

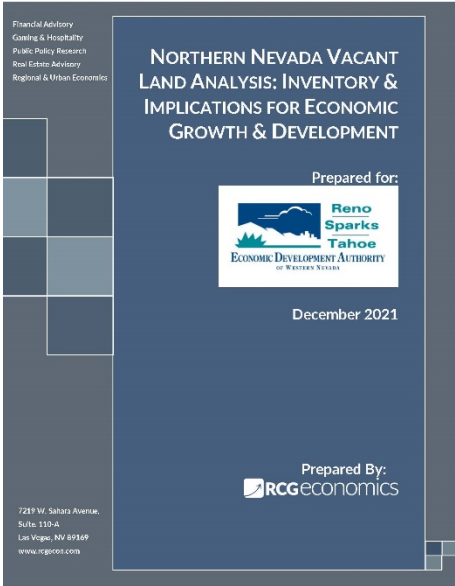
- Given low unemployment rates, labor for new industries will either cannibalize from existing industries or require importing new employees
- The housing inventory is primarily single family detached and manufactured homes, each representing 38% of all housing units (76% total); multi-family rental units account for 24% of the total inventory
- Adjusted housing vacancy rates based on ACS estimates declined from 3.5% in 2010-14 to 2.9% in 2015-19, indicating that there are few existing units available for rent and/or for sale
- There is strong, consistent, and increasing demand for homes, as evidenced by the rising prices of existing homes and a \$100,000 differential between existing and new homes
- Based on 2019 average wages, a household with 1.73 workers can afford to purchase a home for \$294,500; however, wages for Lithium Nevada and West Coast Salmon Nevada will be significantly higher than average, with home affordability estimated at \$468,000 for those workers
- There is a significant shortfall in the number of multifamily units, especially in light of the more than 1,000 temporary construction jobs projected
- An average of 58 new housing units per year will be needed between 2022 and 2027 to support the new jobs associated with Lithium Nevada and West Coast Salmon



Northern Nevada Vacant Land Analysis

Prepared for the Economic Development Authority of Western Nevada (EDAWN), this analysis was designed to determine the developable land constraints that could negatively impact the region’s economic competitiveness and the quality of life of its residents.

According to the report, there are roughly 25,500 gross acres remaining of developable residential and nonresidential land in parcels of 20 acres or more in the EDAWN service area, which covers the greater Reno-Sparks area. Approximately 9,700 of these acres have an “above average” rating, based on the methodology described in the study. The number of parcels available to accommodate large-scale development (i.e., 100 acres or more) is especially limited; most of these properties are at least 30 miles from Metro Reno-Sparks.



The main conclusion of the study is that developers will face challenges in finding desirable properties to accommodate development by 2027 if no action is taken to expand regional access to land. The report asserts that failing to ensure an adequate supply of developable land could lead to an estimated 15%-24% reduction in the growth of the study area’s gross regional product. In addition, a dwindling supply of land available for residential development could dramatically increase housing costs.

The implications of the report are twofold. Stakeholders in the Reno-Sparks area can use its findings to advocate for the transfer of federally-owned land in the region, allowing for the sale and development of these properties to support continued economic growth. The limited supply of land for residential, office, retail, and industrial purposes in the study area might also compel developers to seek out property served by appropriate infrastructure in outlying counties, such as Pershing.

Lithium Mine Impact Analysis

This analysis was produced to estimate the economic, fiscal, and community impacts resulting from the construction and operation of a proposed lithium mine, lithium processing plant, and sulfuric acid manufacturing plant in Humboldt County. It was also used as part of Lithium Nevada’s permit application to fulfill socioeconomic impact assessment requirements under the National Environmental Policy Act (NEPA).

The three new facilities will be constructed over seven years, although the actual construction will take place in two phases, each lasting a total of two years. Direct construction investment over the four-year period is estimated at \$218.4 million annually, resulting in the creation of 1,000 jobs paying an average wage of \$56,553 (Table 7). This investment is projected to generate an additional \$147.0 million in

indirect and induced activity, for a total economic impact of \$265.4 million. The total direct, indirect, and induced job creation is estimated at 1,340, paying an average annual wage of \$51,200.

Table 7. Estimated Annual Construction Impacts on Humboldt County					
	Direct	Indirect	Induced	Total	Multiplier
Economic Activity	\$218,394,336	\$115,119,708	\$31,917,271	\$265,431,316	1.22
Personal Income	\$56,553,554	\$4,291,382	\$7,763,556	\$68,608,492	1.21
Employment	1,000	97	243	1,340	1.34
Average Wage Per Job	\$56,553	\$44,241	\$31,948	\$51,200	

Source: Social, Economic and Fiscal Impact Assessment for New Lithium Operations in Humboldt County, Nevada, p. 11.

Among the top impacted industries associated with the mining-related construction activity are construction of new commercial structures, full-service and limited-service restaurants, wholesale trade, truck transportation, real estate, food and beverage stores, general merchandise stores, nonstore retailers, and automotive repair and maintenance.

The annual impact of Lithium Nevada’s operations will take place over a projected 41-year period. Sustainable impacts will include consistent levels of direct, indirect and induced purchases, employment, and incomes. Over the long-term, the company’s operations are expected to directly generate \$277 million in annual spending and support 331 jobs – 147 jobs in lithium mining, 106 jobs in lithium processing, and 78 in sulfuric acid manufacturing – with an average annual wage of \$73,536. When indirect and induced impacts are considered, annual operations will result in \$332.7 million in economic activity and a total of 540 jobs paying an average of \$62,675 per year.

Table 8. Estimated Annual Operation Impacts on Humboldt County					
	Direct	Indirect	Induced	Total	Multiplier
Economic Activity	\$277,366,874	\$41,154,497	\$14,182,120	\$332,703,490	1.20
Personal Income	\$24,340,416	\$6,763,008	\$2,733,821	\$33,837,245	1.39
Employment	331	136	73	540	1.63
Average Wage Per Job	\$73,536	\$49,728	\$37,510	\$62,675	

Source: Social, Economic and Fiscal Impact Assessment for New Lithium Operations in Humboldt County, Nevada, p. 12.

The leading impacted sectors associated with lithium operations activity in Humboldt County include lithium mining, lithium processing, sulfuric acid manufacturing, maintenance and repair construction – nonresidential, full-service and limited-service restaurants, accounting and bookkeeping, real estate, wholesale trade, and food and beverage stores. The report notes that the Lithium Nevada project may provide the opportunity for Humboldt County to attract additional manufacturing, a “cluster of industries that use lithium carbonate as part of their production process.” Lithium is used in the production of batteries, glass and ceramics, lubricants, and pharmaceuticals.

No reference is made in the impact assessment to Pershing County. However, the project is likely to stimulate economic activity there as well. Short-term construction workers and permanent employees of the lithium mine, lithium processing, and sulfuric acid manufacturing operations will undoubtedly Pershing County residents, who are likely to spend their wages at local establishments. There is also the potential for new businesses to be established and jobs to be created indirectly or through induced impacts. Finally, Pershing County could attract other manufacturing operations that rely on lithium carbonate.

Stakeholder Interviews

In coordination with Pershing County EDA Director (and Nevada 95-80 Regional Development Authority co-chair) Heidi Lusby-Angvick, Vita Nuova conducted interviews with various stakeholders on January 11, 2022. The participants were divided into four groups: Planning and Economic Development, Industry, Real Estate, and Elected Officials. Topics of discussion included County issues and challenges, development activity, the availability of infrastructure, land costs, current economic development projects, and housing, among others.

Key points from the stakeholder interviews are summarized below.

Lovelock Industrial Park

- Well suited for small- and medium-scale industrial development
- Offers great interstate access; also has small rail spur available
- Has all utilities, including natural gas
- Served by Lovelock Meadows Water District
- Size of contiguous acreage in the park lends itself to smaller-medium sized operations

Housing

- Severe lack of supply is a critical concern for employers
- Unsatisfied housing demand is a challenge for workforce recruitment and retention
- Affects enrollment in older grade levels
- Employers are leasing local hotels and motels to provide temporary housing for construction workers
- Difficult to attract builders to Pershing County from active Reno area

PARTICIPANTS

Astrid Armani, *Realtor*
Darin Bloyed, *Property Owner and Former County Commissioner*
Dennis Bradley, *Dickson Commercial Group*
Joe Crim, *City of Lovelock Public Works*
Tim Dutra, *Property Owner*
James Evans, *Pershing County Planning Department*
Russell Fecht, *Pershing County School District*
Frankie Graham, *Coeur Rochester*
Mark Hauenstein, *Pershing County Building Department*
Shayla Hudson, *County Commissioner*
Rusty Kiel, *Lovelock Meadows Water District*
Jan Morrison, *Humboldt County EDA and Nevada 95-80 Regional Development Authority*
Larry Rackley, *County Commissioner*
Ralph Runge, *West Coast Salmon Nevada*
Carol Shank, *County Commissioner*
Ron Ward, *Property Owner*

- The small size of the housing market, remoteness, and competing Reno market are key challenges
- Per-unit costs can be lower with larger projects (economies of scale), but can carry more risk in smaller market
- Land rates in Pershing County are lower, but this may be offset by cost premium to attract contractors out of larger market
- There are shovel ready lots in approved subdivisions that only need a builder
- Major employers and local officials recognize housing availability as a challenge
- Mining wages can support new housing development, but wages in other industries (e.g., prison, school district) cannot support the high cost of construction
- Modular construction, previously a viable construction delivery method, has more than doubled in cost, but should be reevaluated when pricing stabilizes

Upcoming Development Projects

- West Coast Salmon:
 - 2,000-acre site
 - Proximity to major markets along West Coast a major factor in choosing location
 - First phase will be approximately 80-100 new jobs
 - Ancillary services will be important
- Coeur Rochester expansion:
 - Silver mine active under current ownership since 1986
 - ~\$334 million expansion project will extend life of mine until 2033
- Thacker Pass Lithium Mine:
 - Will employ up to 313 jobs annually, paying approximately \$24.3 million per year in wages over a 41-year production schedule
- Seven Troughs Distilling:
 - Relocating from the Reno-Sparks area
 - Attracted to quality of water, supportive local government, and lower costs
 - Will take advantage of local supply chain (crops)

Utility Services

- Stable but limited water supply
- There have been recent investments in water system
- Water availability would be a challenge for more intense uses
- Rate structure is based on residential use; commercial/industrial users are not a source of profit
- Electric utility is slow to respond

Broadband

- Despite being located adjacent to fiber corridor along I-80, broadband access is very limited within community
- High costs for middle- and last-mile service (e.g., cost to serve West Coast Salmon site is \$2 million); economics work better when distributed across many more households
- Significant issue for certain business users, and a challenge for remote workers and school students

Summary of Pershing County Strengths

- Fast permitting process and business-friendly climate
- Lower land costs versus Reno area and much greater availability of land - may offset construction cost premium for contractor to work in remote area
- Well suited for so-called nuisance uses (e.g., that generate fumes or use epoxies) that would not be appropriate in a densely-populated location
- Access to open space and amenities with small town/rural lifestyle
- Proximity to high fiber density
- Cool-temperate climate
- Opportunity to participate in the state's Certified Sites Program, which allows shovel ready sites to be fast tracked through approvals

Summary of Pershing County Weaknesses

- Shortage of housing – a “chicken or egg” situation
- Lack of traditional/larger market amenities
- Workforce challenges in some industries
- No local incentives available, though the state offers tax abatements with specific employment thresholds
- Government services will need to expand with additional business development

Housing

From the stakeholder interviews, housing emerged as a major economic development issue in Pershing County. Without quality housing available, local companies cannot attract a viable labor force and the County must focus on recruiting small- and mid-sized employers. Based on discussions, housing is needed “across the board,” for entry-level workers as well as more affluent professionals, for both permanent and temporary workers, and for rental units as well as homes for purchase. With housing costs rapidly rising in the Reno area, rural Pershing County could become a bedroom community for lower-wage workers and commuters, but it does not have an adequate supply of housing.

Given these circumstances, housing data was compiled for Pershing County as part of the technical assistance provided. This included information on the existing housing supply from assessment records, based on a methodology used in the recent Humboldt County Housing Needs Assessment.

Housing Supply and Sales

- Over the fifteen-year period from 2006 through 2020, building permits were issued for the development of 45 single-family and 4 multi-family housing units in Pershing County, an average of 3.3 units per year. In contrast, building permits were issued for 493 single-family and 208 multi-family housing units in Humboldt County during the same period, or 46.7 units per year.
- Data from the Pershing County Assessor’s Office shows that there were 21 “arm’s length” sales of single-family residences (land use code 200) and manufactured homes converted to real property (land use code 220) in 2019, 17 in 2020, and 53 in 2021. Sales averaged 2.5 per month.
- The median selling price of homes in Pershing County was \$132,000 in 2019, \$120,000 in 2020, and \$209,000 in 2021. The homes ranged in price from \$7,000 to \$2,150,000; the latter was for a home with more than 25 acres of land.

Table 9. Sales of Single-Family and Manufactured Homes in Pershing County			
	2019	2020	2021
TOTAL SOLD	21	17	53
Single-family residence (LUC 200)	12	10	30
Manufactured home converted to real property (LUC 220)	9	7	23
Median selling price	\$132,000	\$120,000	\$209,000
Low price	\$7,000	\$38,000	\$20,000
High price	\$310,000	\$2,150,000	\$491,773
Median year built	1969	1963	1983
Median acreage	0.18	0.24	0.32

Source: Pershing County Assessor’s Office. Arm’s length transactions only. “Manufactured home converted to real property” means that the home has been placed on a foundation.

- Arm’s length sales of multi-family properties in Pershing County from 2019 through 2021 consisted of one duplex (land use code 300), six parcels with two single-family units (310), three parcels with three or four units (320), one low-rise building with five or more units (330), and one manufactured home park with ten or more units (350). Prices ranged from \$10,000 to \$2,150,000; building square footage and acreage varied.
- As of February 14, 2022, there were 6 homes in Pershing County listed for sale on the Northern Nevada Regional MLS. Based on the average sales rate of 2.5 per month from 2019 through 2021, only two to three months of for-sale inventory exists in Pershing County. This is an extremely tight housing market; a healthy, balanced housing market typically has a five- to six-month supply of homes.
- Parcel records from the Pershing County Assessor’s Office provided the following information on residential property as of February 2022:

Table 10. Residential Properties in Pershing County by Land Use Code		
	# of Parcels	# of Units
Single Family Residence (200)	610	610
Single Family Residence Under Construction (201)	9	9
Individual Residential Unit in a Multiple Unit Building (210)	0	0
Manufactured Home Converted to Real Property (220/222)	474	474
Manufactured Home Personal Property (230/232/233/236)	424	424
Manufactured Home – Conversion Pending (231)	8	8
Agricultural Deferred with Residence (692)	77	77
TOTAL, SINGLE-FAMILY	1,602	1,602
Duplex (300)	5	10
Two Single Family Units (310)	86	172
Three to Four Units (320)	27	80*
Five or More Units – Low Rise (330)	11	126*
Five or More Units – High Rise (340)	2	40
Manufactured Home Park - Ten or More Manufactured Home Units (350)	7	212**
Other – Lovelock Garden Apartments (400 – Commercial)	1	40
TOTAL, MULTI-FAMILY	139	680*
GRAND TOTAL	1,741	1,864*
<i>Source: Pershing County Assessor's Office.</i>		
* Estimated; unable to find the number of units for some multi-family properties.		
** Number of lots		

- Based on American Community Survey (ACS) 2015-19 Five-Year Estimates from the U.S. Census Bureau, Pershing County has a total of 2,494 housing units. Of these, 52.2% are owner-occupied, 25.9% are renter-occupied, and 21.9% are vacant. Most of the housing stock in Pershing County is comprised of single family detached (42.5%) and manufactured homes (41.2%). Multi-family housing units represent 12% of the total inventory. These estimates tend to have higher margins of error in smaller jurisdictions and may not be completely accurate.

Modular & Manufactured Housing

As part of one of a number of housing discussions, the idea of modular and/or manufactured housing was introduced as a more affordable means of obtaining additional units in the community. Out of this discussion, EPA shared a recently commissioned study on modular housing titled “Modular Construction for Multifamily Affordable Housing” that was conducted in San Francisco and the project team engaged in research on the viability and economics of both modular and manufactured housing. In sharing these findings, it is helpful to first provide a definition of both manufactured and modular housing.

Manufactured housing is completely constructed in a factory and then transported to the site of the home where it is appropriately secured and/or supported with a foundation system. Manufactured homes are built to a building code standard that’s administered by the Department of Housing and Urban Development (HUD) – versus the local building code.

In contrast, *modular housing*, also built in a factory, is constructed according to the applicable local building code. Modular construction ranges from simple components that are built ‘off-site’ (e.g., a roofing truss) to complete construction.

Manufactured and Modular – Strengths and Weaknesses

- Modular construction results in substantial time savings (approx. 40-50% according to some estimates), with varying degrees of cost savings based on local labor market conditions, product type and design, timing factors, cost of capital, etc.
- Key challenges of modular construction include: constructing to the local building code; upfront capital requirements; proximity to a factory; and, the required scale of a project. It’s this last challenge, required scale, why we feel like this method may be less valuable and appropriate for the Lovelock/Pershing market. The Lovelock market is better suited for individual unit or small multiunit solutions, rather than a much larger multistory project (modular lends itself to projects that can be repeated – e.g., hotels).
- Manufactured housing shares the same benefits of modular construction, but is the appropriate scale for the Lovelock/Pershing market – single family and small multifamily construction.
- Manufactured housing eliminates and reduces the need for on-site contractors. This is especially valuable in markets where construction professionals are in short supply and would need to be drawn in from other markets, such as the case with Lovelock.

To evaluate the affordability of a manufactured home we worked with a local dealer to ascertain real pricing on a standard 3-bedroom two-bath unit. We looked at a unit manufactured by Champion, but many manufacturers offer a comparable unit with similar pricing. The total price including modest and fairly typical upgrades, taxes/fees, a hypothetical foundation and lot expense, indicated a total cost of around \$221,000. Utilizing a 10% down payment and prevailing loan terms, resulted in a theoretical monthly payment of \$1,170. Calculating the minimum annual earnings someone would need to make in order to afford this unit, when 30% of their earnings goes to housing, indicates that this unit is affordable to a household making \$46,799 or more. This is a relatively promising result given that the median household income \$50,518.

Manufactured Home Purchase Scenario		
\$	135,000	Unit
\$	27,000	Delivery/Set Cost
\$	7,220	Modest Upgrades
\$	7,000	Taxes / Fees
\$	14,500	Foundation
\$	30,000	Hypothetical Lot Value
\$	220,720	Total Cost
\$	220,720	Purchase
\$	22,072	Down Payment
\$	198,648	Financed
\$	892	Principal + Interest
\$	278	Ins. + Property Tax
\$	1,170	Monthly Payment
\$	46,799	Derived Annual Income @ 30%
\$	50,518	2021 Median Household Income

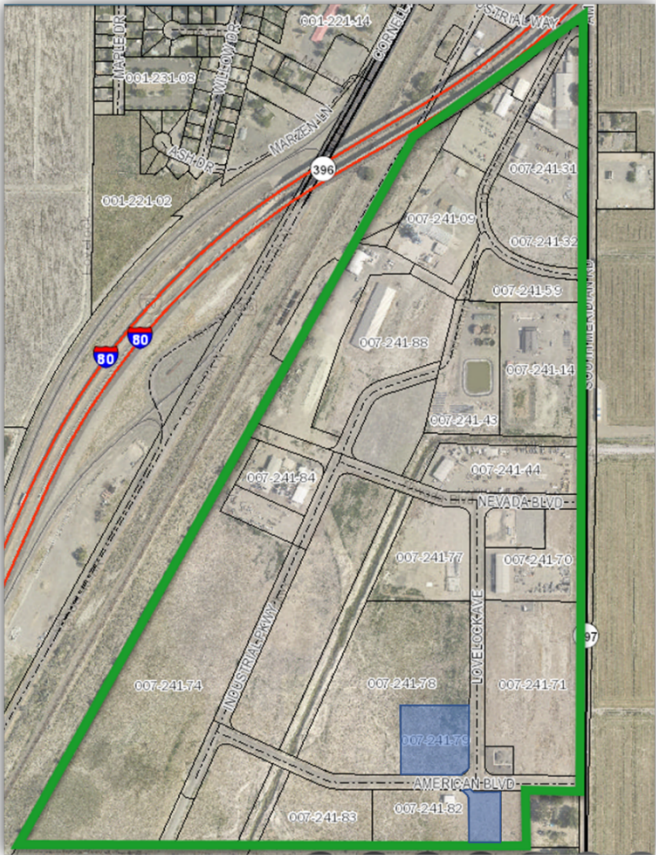
Although this example indicates the relative affordability of a manufactured housing, it should also be noted that costs have increased substantially in the past 12-18 months due to supply and labor shortages impacting housing manufacturers and their supply chain. As of late November 2021, Champion was adding a materials surcharge of \$20.50 per square foot to all orders. It's difficult to predict where we will land on inflation in the medium and longer term – especially with the Federal Reserve more strongly communicating that it's taking inflation seriously and is prepared to pump the brakes with Federal Reserve Funds rate increases. In the short term, although some areas are seeing some amount of pricing relief (e.g., lumber), many expect construction and building material prices to remain elevated for the remainder of 2022.

Lovelock Industrial Park – Site Analysis and Background Information

To identify its possible attributes and understand potential impediments to development the team conducted a review and analysis of the Lovelock Industrial Park. This information can be used to inform marketing collateral materials for the park.

The Lovelock Industrial Park is located just south of the City of Lovelock. It is a triangular shaped area bounded by Meridian Road on the east and I-80 on the west. The park is approximately 143 acres in size and contains 28 parcels with 18 distinct owners. The median parcel size is 3.7 acres, which at a .30 Floor Area Ratio (FAR), could yield a floor area of approximately 48,500 square feet. That said, given the remoteness of the park and the availability of land, it seems probable that development will occur at a lower density – smaller buildings, larger yard areas. Summary Review:

- **Zoning.** The park is zoned Industrial (I) and includes an extensive list of permitted uses, including Heavy Industrial, with approval.
- **Environmental Assessment.** Our team was provided two Phase I Environmental Site Assessment Reports (pertaining to the parcels shaded blue in the aerial map). Neither report found any recognized environmental conditions or significant data gaps of concern. To better characterize the area, additional Phase I reports could be considered.



- Utilities.
 - Electric. Nevada Energy was cautious in its statements, but was willing to say that it believed that it had adequate service for the anticipated level of commercial development (3-phase and typical power).
 - Water. ¾" and 1" water connections are available at a very reasonable cost. Connection charges for a ¾" meter are \$3,000 plus time and materials, with a monthly base rate of \$35.02 for 7,000 gallons of water. For a 1" meter, the connection charge is \$4,500 plus time and materials. The monthly base rate for a 1" meter is \$42.02 for 8,000 gallons of water.
 - Sewer. There are no known sewer issues in the area; the team has assumed that there is adequate level of service for the area.

Positioning the Lovelock Industrial Park

Target Users. The team believes the park may be best suited for:

- Support services for mining and other regional employers (e.g., West Coast Salmon);
- Users being priced out of Reno-Sparks. There is a very low industrial vacancy rate in this market; displaced users may not have many options, and the relative market stability in Lovelock, may appeal to users that have seen steep increases in rental rates and land costs.
- Small and independent users who do not have co-location needs - the median parcel size is 3.7 acres, which lends itself to smaller scale uses;
- Industrial uses that generate fumes, noise, or other so-called "nuisance" impacts that are more suitable in remote and sparsely-populated areas; and
- Uses that do not require a significant labor input, as labor availability is challenged by the small market size as well as the lack of housing.

The park is unlikely to be a great fit for large-scale logistics facilities that are more likely to co-locate in areas with abundant services and amenities. Smaller warehouses, however, may be appropriate, especially those that require direct access to the I-80 corridor to reach markets in Nevada, California, and Utah. In addition, data centers are an interesting use to consider as they have fairly low on-site labor inputs; they benefit from inexpensive, reliable power and cooling, strong connectivity, and favorable tax rates.

Marketing Content. To market the industrial park more effectively, we recommend that a separate webpage specifically on the industrial park and any other available buildings and sites in Pershing County be added to the website of the Pershing County EDA, and/or the Nevada 95-80 Regional Development Authority. The webpage should include:

- Map(s) – the location of Lovelock Industrial Park (and other sites) in relation to I-80, Reno, major airports, etc.
- Drivetime to major cities in Nevada, California, and Utah

- Configuration of the site (net useable space)
- Other businesses in the industrial park
- Utilities/infrastructure available
- Lease/purchase prices

It is important to maintain up-to-date profiles on available sites and buildings online. Many site selectors and some companies will move on to competing locations if they cannot find this information through a simple search.

The website(s) – and any collateral materials used for promotional purposes - should also highlight the strengths of Pershing County, as follows:

- Excellent transportation access via the interstate
- Site certification, once designated
- Cost per acre, compared to Reno-Sparks and possibly California)
- Pricing stability - with land/site availability, users are less likely to be subject to the price increases affecting larger markets
- Fast permitting process
- Small-town advantages (e.g., pro-business climate, hospitality, personal assistance)
- “Family-friendly” amenities: school system (98% graduation rate), recreational opportunities, access to shopping/entertainment options in Reno-Sparks
- Unique opportunities presented by new developments.

The Pershing County EDA and Nevada 95-80 RDA websites are critical tools in building awareness of what you have to offer businesses, residents, and visitors, and should be evaluated from the perspective of users who may or may not be familiar with your community.

Example Website. Below is a link to the Victory Logistics Industrial Park website, a master-planned industrial and logistics project located in Fernley, Nevada. This website is an excellent example of effective marketing of an industrial park.

<https://www.victorylogisticsdistrict.com/>

Appendix

The following presentations are provided as Attachments to this report.

Presentation 1: Presentation Webinar_1_Slides.pptx

Presentation 2: Webinar_2-Final.pptx