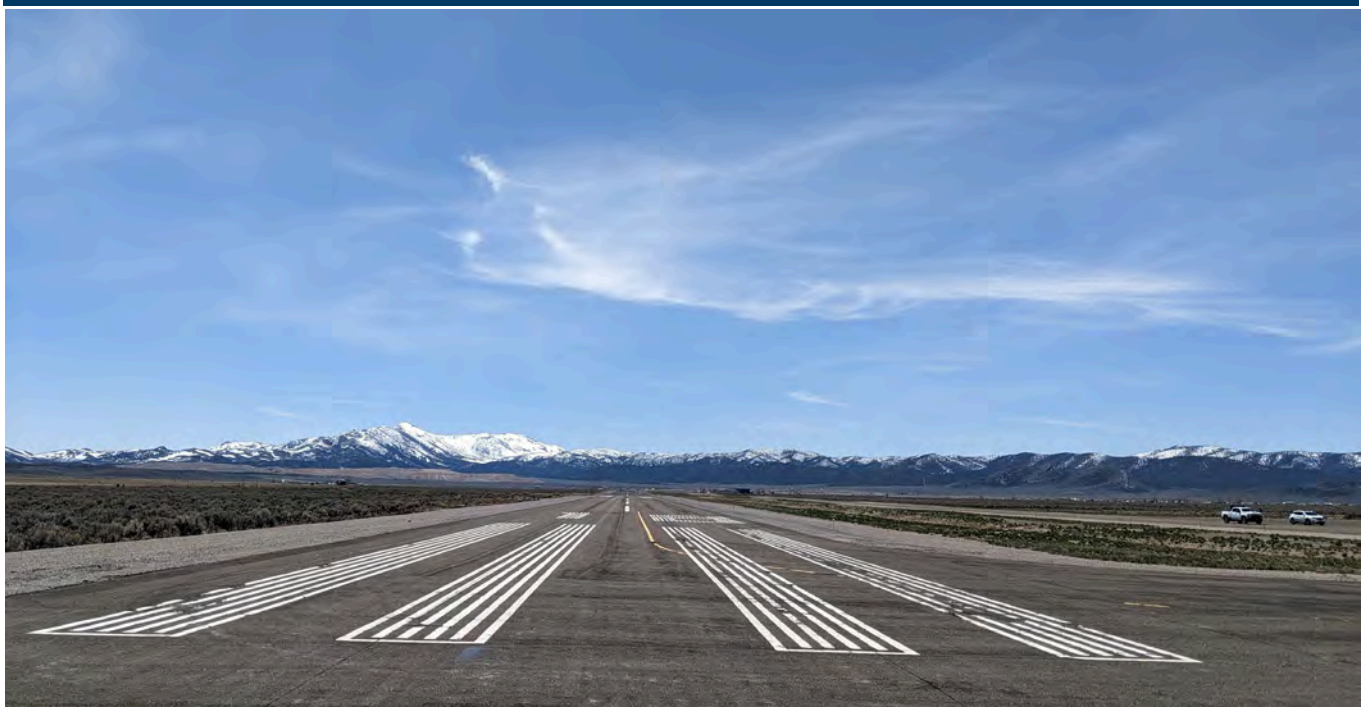
EUREKA AIRPORT (05U)

Draft Airport Layout Plan Narrative Report

Eureka, NV



DRAFT January 2024

CENTURY WEST ENGINEERING

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Chapter 1

Introduction

In collaboration with the Federal Aviation Administration (FAA), Eureka County is developing an Airport Layout Plan (ALP) Update for Eureka Airport (05U) to address its requirements for the next two decades. The ALP Update and accompanying report will offer precise directives on the necessary enhancements to ensure the airport's safety, efficiency, and sustainability in economic, environmental, and social aspects.

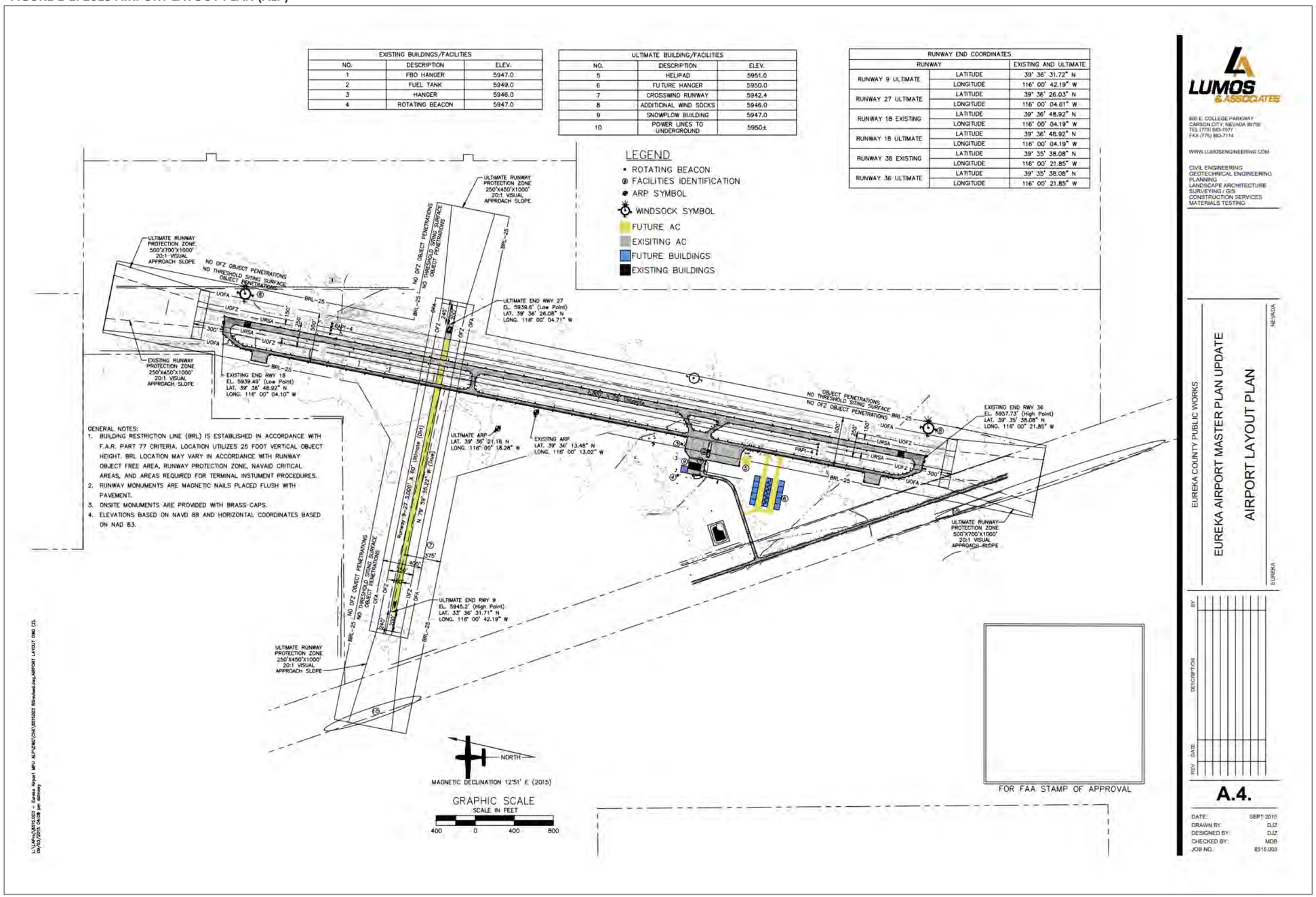
Study Purpose

The ALP Update aims to identify the present, near-term, and long-term requirements of the airport by thoroughly examining its facilities, conditions, and compliance with FAA airport planning and design regulations. The evaluation will also encompass aspects of local planning, such as land use, transportation, environmental concerns, and economic development, that could impact the airport's planning, development, and operation.

Project Need

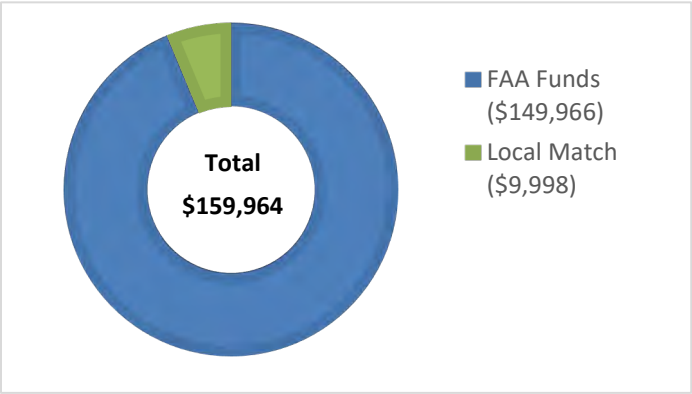
Airports are required to periodically update the ALP as conditions change to maintain current planning and conformance with the latest Federal and State standards. This project replaces the previous ALP **(Figure 1-1)** developed as part of the 2015 Airport Master Plan (AMP). The 2015 AMP will be referenced as the primary source of inventory data which will be updated with recent information from Local, Federal, and consultant resources.

FIGURE 1-1: 2015 AIRPORT LAYOUT PLAN (ALP)



Project Funding

Funding for the ALP Update is being provided through an FAA Airport Improvement Program (AIP) grant of $149,966 (93.75%) and a local match of $9,998 (6.25%) provided by Eureka County for a total project cost of $159,964. The AIP is a dedicated fund administered by FAA with the specific purpose of maintaining and improving the nation's public use airports. The AIP is funded exclusively through fees paid by users of general aviation and commercial aviation.



Goals of the ALP Update

The goals of an ALP Update Report are similar to those of an AMP Update, but scaled back to address changes in conditions and needs that have developed since the previous ALP was completed. The FAA has goals and objectives each master plan should meet to help airports ensure that future development will be cost-effective, satisfy aviation demand, and consider potential environmental and socioeconomic impacts. The ALP Update will address the same goals with a more limited scope. These goals are listed as follows:

1. Define the vision for the airport to effectively serve the community, airport users, and the region. Assess known issues including airspace, runway length, ability to accommodate development, auto parking, fencing, and land use to develop a realistic and sustainable plan to improve the airport.
2. Document existing activity, condition of airfield facilities, and policies that impact airport operations and development opportunities.
3. Evaluate facilities and conformance with applicable local, state, and FAA standards.
4. Identify facility improvements to address conformance issues and accommodate demand.
5. Identify potential environmental and land use requirements that may impact development.
6. Explore alternatives to address facility needs. Work collaboratively with stakeholders to develop workable solutions to address needs.
7. Develop an Airport Layout Plan drawing set to graphically depict proposed improvements consistent with FAA standards as a road map to future development.
8. Prepare a supporting Capital Improvement Plan to summarize costs and priorities.
9. Provide recommendations to improve land use, zoning, and County oversight of the airport to remove barriers to appropriate growth at the airport.
10. Summarize the collective vision and plan for the airport in the Airport Master Plan report.

FAA ROLE IN THE AIRPORT LAYOUT PLAN UPDATE

Specific requirements and evaluation methods are defined by the *FAA's Advisory Circular (AC) 150/5070-6B*. This AC provides guidance on planning requirements for all airports regardless of size, complexity, or role. Each plan must be focused on the specific needs of the airport for which the plan is being prepared.

The views, policies, and development plans of an AMP/ALP Update are representative of the airport sponsor, not necessarily the FAA. When the FAA approves an ALP, that does not mean the Federal Government plans to participate in the development depicted in the plan, nor does it mean that the proposed development is in accordance with appropriate environmental public law. All elements of the plan are reviewed by the FAA to ensure the plan uses sound planning techniques, but the FAA typically approves the Aviation Activity Forecasts and Airport Layout Plan. In this case, per the scope of work, forecasts are not required. Discussion on the assumptions pertaining to future activity at Eureka Airport is presented in the Critical Aircraft section of Chapter 3: Facility Goals and Requirements.

PLANNING PROCESS

The three-phase planning process aims to facilitate continuous communication and idea exchange among project stakeholders and the community, with the goal of enhancing public participation and engagement. It involves multiple feedback loops to ensure a steady flow of information.

DEVELOP UNDERSTANDING

A comprehensive understanding of the issues and opportunities, existing conditions, and an identified level of future aviation activity that would require facility improvements to satisfy future demand.

Analysis
- Develop Scope of Work
- Public Involvement Strategy
- AGIS Survey
- Existing Conditions Analysis

Project Meetings
- Bi-Weekly Planning Team Meetings
- Project Kick-off Meeting
- Planning Advisory Committee (PAC) Meetings

Work Product
- Introduction
- Existing Conditions

EXPLORE SOLUTIONS

A collaborative exploration of local airport needs, goals, and facility requirements in sequence with the development of locally-generated ideas, solutions, and development alternatives.

Analysis
- Define Updated Airfield Design Standards
- Perform Demand/Capacity Analysis
- Define Facility Goals and Requirements
- Identify & Prepare Development Alternatives
- Evaluate Development Alternatives

Project Meetings
- Bi-Weekly Planning Team Meetings
- Planning Advisory Committee (PAC) Meetings
- Public Open House

Work Product
- Facility Goals & Requirements
- Airport Development Alternatives

IMPLEMENTATION

An implementation program with recommended strategies and actions for future land use, transportation, and environmental requirements; a realistic and workable CIP; and current ALP drawings that graphically depict existing conditions at the Airport as well as proposed development projects.

Analysis
- Develop Strategies & Actions
- Develop CIP/Phasing/Financial Plan
- Develop ALP Drawing Set

Project Meetings
- Bi-Weekly Planning Team Meetings
- Planning Advisory Committee (PAC) Meetings

Work Product
- Strategies & Actions
- Financial Plan (CIP/Phasing)
- ALP Drawing Set
- Draft Report
- Final Report

Framework of the Airport Layout Plan Update

The framework of the ALP Update is intended to analyze the regional setting, the landside elements, and the airside elements of the airport in addition to the airport management and administrative functions of the airport. This model is based upon an airport-urban interface model. The framework provides a straightforward structure to guide future planning decisions and allow the plan to take shape through flexibility, iteration, and adaptation. The framework can adapt to changing conditions to increase opportunities to develop understanding, explore solutions, and implement the preferred alternatives for the Airport and nearby urban and rural environments.

Project Schedule

■ Develop Understanding ---------- ■ Explore Solutions---------- ■ Implementation----------

April 2023 – June 2023

Existing Conditions Analysis

- Chapter 1 – Introduction
- Chapter 2 – Existing Conditions

June 2023 – November 2023

- Chapter 3 - Facility Goals and Requirements
- Chapter 4 - Airport Development Alternatives

November 2023 – February 2024

- Chapter 5 - Airport Layout Plan
- Chapter 6 - Capital Improvement Plan

September 2023

PAC Meeting #1

November 2023

PAC Meeting #2

March 2024

FAA Review

Public Involvement Process

The key to a successful ALP update is engaging the public in a comprehensive involvement process. The Planning Advisory Committee (PAC) was assembled by County staff to allow for information to be disseminated to the public and for the public to provide input. PAC meetings typically consist of 5-10 members to provide input from the community. Members of the PAC are airport tenants, pilots, local and regional economic interests, and staff or representatives of the County. Representatives from the FAA and Nevada Department of Transportation (NDOT) will serve as ex officio members of the PAC. There will be two virtual meetings to present progress and collect input from the PAC and the public.

Known Issues and Opportunities

A preliminary evaluation of Airport design standards, coupled with a site visit by the planning team, and a recent NDOT inspection identified the following issues and opportunities at the Airport. The issues and opportunities presented below will be evaluated further in the Facility Requirements analysis in Chapter 3. Mitigating solutions will be investigated and presented in Development Alternatives analysis in Chapter 4.

ISSUES

RUNWAY:

- Runway 36 Runway Protection Zone (RPZ) extends beyond the Airport property and is bisected by Highway 278. It is preferred for airports to control RPZ land use through ownership in fee simple or through easements. Public roads are considered an incompatible land use in RPZs and should be removed where possible.
- Power lines located west of Highway 278 penetrate the Runway 36 Part 77 Airspace 20:1 Approach Surface and the Terminal Instrument Procedures (TERPS) Airspace 40:1 Departure Surface. Traffic traveling on Highway 278 may also penetrate these airspace surfaces and should be evaluated.
- There is an unregistered crosswind gravel alternate landing area (ALA) located north of Taxiway A3. The ALA corresponds to the position of the ultimate Runway 9/27 depicted on the current ALP. In the current location, if the ALA were converted to a registered runway RPZ land use incompatibilities (HWY 278) are present on the west end and Runway Safety Area (RSA)/Runway Object Free Area (ROFA)/Runway Obstacle Free Zone (ROFZ) grading would be required on the east end. As an unregistered ALA, runway design standards do not apply, however if registered as a runway in the future these issues will need to be addressed. Furthermore, the need for a crosswind runway should also be evaluated.

TAXIWAYS:

- Taxiway/Runway geometry does not meet current standards. The 45-degree connector taxiways and associated hold markings located at A1, A2, A3, and A5 do not meet current standards and should be reconfigured to meet the runway at 90-degree angles.
- Parallel Taxiway A is positioned at a centerline-to-centerline separation of 240 feet which exceeds the standard for a B-I (small) airport.
- The primary drainage channel for the airport located between Taxiway A and Runway 18/36 is obstructed by soil and debris where it crosses Taxiway A5.

TERMINAL AREA:

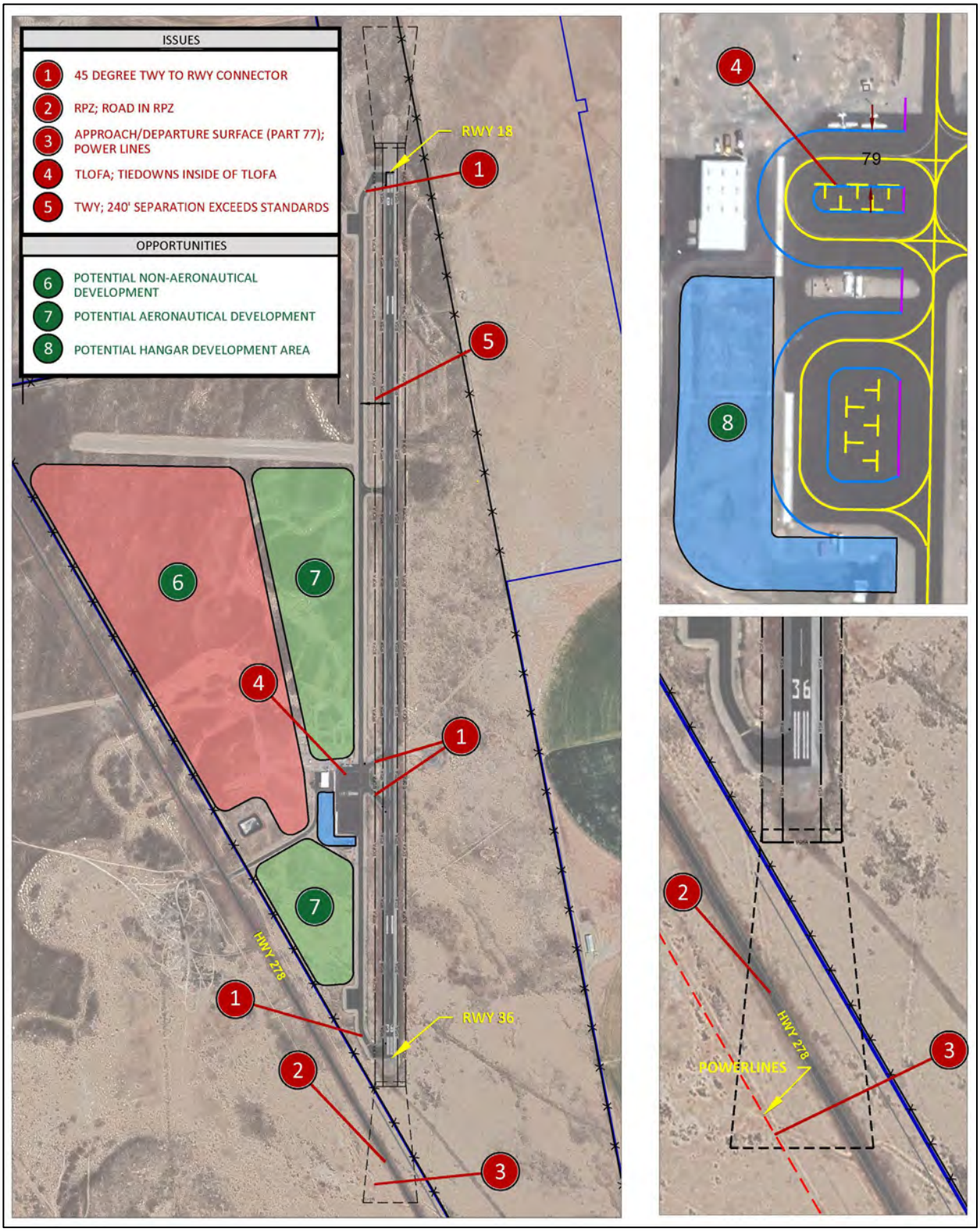
- Above ground lines and wires on and around the apron may obstruct Part 77 Airspace Transitional surfaces.

OPPORTUNITIES

- There is space available around the terminal apron for hangar development land leases, as well as non-aeronautical development along Highway 278, both of which would provide additional revenue for the Airport.
- A third-party operator could be contracted to manage a Fixed Base Operator (FBO).
- The County could engage with regional medevac service providers to investigate establishing a base of operations at the Airport to provide increased life-saving medical transport access to the immediate and surrounding communities.

An overview of the Issues and Opportunities identified above is depicted in **Figure 1-2.**

FIGURE 1-2: ISSUES AND OPPORTUNITIES



Chapter 2

Existing Conditions

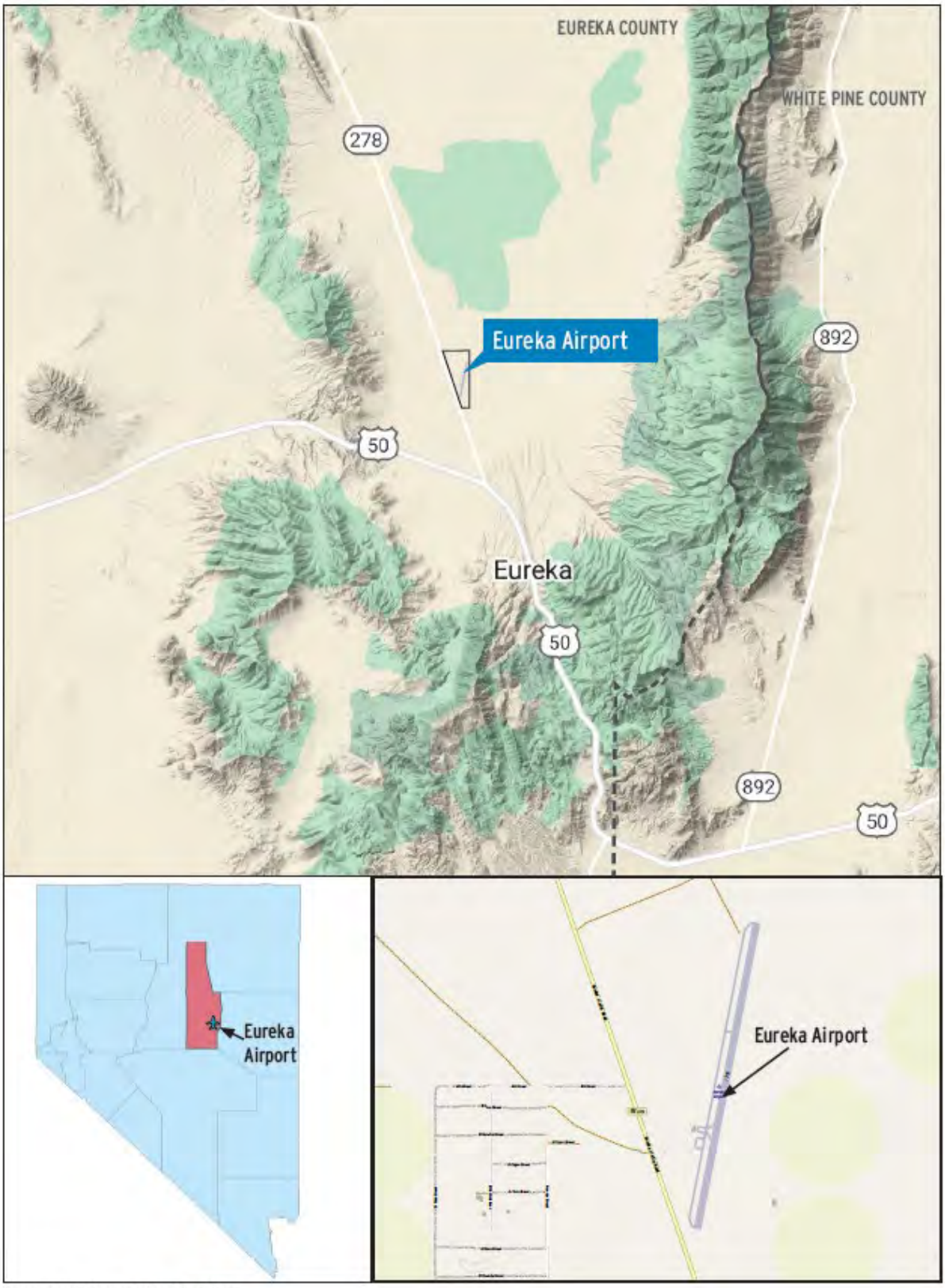
Existing Conditions Analysis

The existing conditions analysis documents existing airfield facilities and conditions that affect the operation and development of the airport within the context of the regional setting, landside, and airside functions of the Airport. The existing conditions analysis utilizes previous planning and design documents related to the Airport in addition to meetings with tenants, stakeholders, and County staff, to support the effort. The findings documented in the Existing Conditions Analysis chapter will be used to support subsequent studies and recommendations throughout the development of the ALP Update.

REGIONAL SETTING

The Regional Setting section is comprised primarily of the features that provide higher level context of the Airport to ensure a better understanding of the social, economic, and environmental impacts airports can have in a region, county, and city. This section of the existing conditions analysis includes a discussion of the location & vicinity of the Eureka Airport as well as the socio-economic conditions, airport history, airport role, area airports context, historic airport operations, relevant studies, environmental data, and land use on and around the Airport.

FIGURE 2-1: EUREKA AIRPORT VICINITY MAP



Source: Google Maps and Open Street Maps

LOCATION & VICINITY

As depicted in **Figure 2-1**, Eureka Airport is located off Highway 50, 7 miles north of Eureka, in Eureka County, in central Nevada. The Airport is located approximately 10 miles west of White Pine County, it's eastern neighbor. Eureka Airport is located in a local region known as Diamond Valley, which is an agricultural basin between the Sulphur Spring Range and the Diamond Mountains.

SOCIO ECONOMIC DATA

Though the town of Eureka is unincorporated, the United States Census Bureau classifies the community as a Census-Designated Place (CDP). CDPs are populated areas that generally include one officially designated unincorporated community plus smaller surrounding communities, and they are used for the purposes of gathering and correlating statistical data representative of that area. The populations of Eureka CDP and Eureka County have remained generally stable over the past decade. The CDP population increased to a peak in 2018 and has since decreased. CDP Population estimates for 2022 at the time of writing. The County population increased slightly from a low in 2015 to the high in 2022. The neighboring White Pine County population has steadily decreased over the same period dropping from the high in 2014 to the low in 2022. Conversely, Nevada has shown steady and consistent growth since 2013, adding an average of over 40,000 residents each year. A detailed summary of population since 2013 is presented in **Table 2-1**.

TABLE 2-1: POPULATION SUMMARY

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Eureka CDP**	450	423	487	425	442	480	462	411	340	N/A
Eureka County**	1,804	1,761	1,669	1,730	1,728	1,830	1,859	1,839	1,603	1,863
White Pine County**	10,023	10,043	9,974	9,893	9,858	9,737	9,679	9,570	9,192	8,788
Nevada*	2,790,136	2,839,099	2,890,845	2,940,058	2,998,039	3,034,392	3,080,156	3,030,281	3,143,991	3,177,772

Source: U.S. Census Bureau
* All values except 2020 reflect American Community Survey 1-year estimates. 2020 value is based on 5-year estimate.
** All values reflect American Community Survey 5-year estimates.

Eureka and White Pine County's Gross Domestic Product (GDP) – a measure of economic activity – have been fairly variable over the past decade, with both counties experiencing similar year-over-year declines in GDP from 2013 to 2015, significant upswings in 2016 and 2017, followed by significant decreases in 2017 and a return to positive growth from 2018 onward. At the time of this writing, GDP data was not available for 2022. A detailed summary of County GDP since 2013 is presented in **Table 2-2.**

TABLE 2-2: COUNTY GDP IN THOUSANDS OF US DOLLARS

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Eureka County, NV	$690,020	$644,373	$595,154	$624,707	$724,126	$621,304	$642,423	$741,784	$776,655
% Change	-	-6.6%	-7.6%	5.0%	15.9%	-14.2%	3.4%	15.5%	4.7%
White Pine County, NV	$1,699,200	$1,383,982	$1,211,164	$1,444,609	$1,731,023	$1,455,118	$1,469,411	$1,667,393	$1,784,594
% Change	-	-18.6%	-12.5%	19.3%	19.8%	-15.9%	1.0%	13.5%	7.0%

Source: Federal Reserve Economic Data (FRED)
*Real Gross Domestic Product: Thousands of Chained 2012 U.S. Dollars, Annual, Not Seasonally Adjusted
Note: Economic Data for 2022 were not available at the time of writing.

AIRPORT HISTORY

Eureka Airport was granted land by the Federal Government in 1952 and was constructed shortly after with two runways: 8/26 and 17/35 (now 18/36). The County acquired additional land in the early 1990s to expand on the northeast side. Runway 17/35 was extended from 4,800 feet to 7,300 feet. Around the same time Runway 8/26 was decommissioned and the FBO building was constructed. The Airport's original hangar (constructed in the 1960s) was taken down in the early 2000s to facilitate the construction of the parallel taxiway. In 2012, Runway 17/35 was reconstructed and renamed Runway 18/36. A detailed history of FAA funded projects over the past 20 years is presented in **Table 2-3.**

TABLE 2-3: 20 YEAR FAA GRANT HISTORY

	Fiscal Year	Entitlement	Discretionary	CARES General	COVID Relief General	COVID Relief Local Match
Construct Taxiway	2003	$350,000	-	-	-	-
Rehabilitate Apron	2009	$104,621	-	-	-	-
Rehabilitate Runway	2009	$445,492	-	-	-	-
Rehabilitate Taxiway	2009	$83,030	-	-	-	-
Rehabilitate Runway	2011	$1,737,568	$672,369	-	-	-
Rehabilitate Taxiway	2011	$194,783	-	-	-	-
Rehabilitate Runway Lighting	2014	$198,518	-	-	-	-
Update Airport Master Plan Study	2014	$54,017	-	-	-	-
Rehabilitate Access Road	2017	$51,353	-	-	-	-
Rehabilitate Apron	2017	$81,787	-	-	-	-
Rehabilitate Runway	2017	$119,355	-	-	-	-
Rehabilitate Taxiway	2017	$110,981	-	-	-	-
Acquire Snow Removal Equipment	2018	$234,036	-	-	-	-
CARES Act Funds	2020	-	-	$20,000	-	-
Construct/Rehabilitate/Modify/Expand Snow Removal Equipment Building	2021	$71,000	-	-	-	$4,000
CRRSA Act Funds	2021	-	-	-	$9,000	-
Install Miscellaneous NAVAIDS	2021	$4,000	-	-	-	$1,000
General ARPA	2022	-	-	-	$22,000	-
Update Airport Master Plan or Study	2022	$150,000	-	-	-	-
TOTAL		**$3,990,541**	**$672,369**	**$20,000**	**$31,000**	**$5,000**

Source: FAA

AIRPORT ROLE

Having a clear understanding of the different functions that an airport serves is essential for identifying the facility's long-term goals and development requirements. The specific responsibilities of an airport may differ depending on how it relates to a National, State, or Local system.

NATIONAL ROLE

Through the National Plan of Integrated Airport Systems (NPIAS), the FAA maintains a record of aviation facilities in the United States. The NPIAS catalogues airports that are critical to air transportation in the country, making them eligible for Federal financial assistance via the Airports Improvement Program (AIP). The AIP can provide up to 90% of the qualifying costs for planning and development initiatives. NPIAS airports must be available for public use in order to be included. Eureka Airport is classified as a Basic, General Aviation (GA) airport.

State Role

Nevada's Aviation Planning Section, part of the state's Department of Transportation Planning Division, ensures safety compliance and maximum utility for the state's general aviation airports through safety inspections, education programs, and the State Airport Systems Plan. Additionally, the Section oversees the Nevada State Fund for Aviation, a grant program for rural airports' FAA projects. In 2022, NDOT completed the Nevada Airport and Heliport System Plan (NAHSP) with the intent to provide guidance and direction on how to maintain the state aviation system, monitor performance, and invest in the future. The NAHSP assigned functional classes to each airport based on NPIAS and unique NAHSP roles. Eureka was classified in the NAHSP as a "General" Airport. General airports serve a variety of GA activities, support local economies, and provide basic aeronautical needs.

LOCAL ROLE

The Eureka Airport serves the community in several ways; primarily by supporting a variety of GA operations, including recreational flights, emergency medical service operations, and business air traffic. Eureka also serves as a Bureau of Land Management (BLM) air base, providing support during fire season.

The FAA provides operational characteristics of public use airports through the Airport Master Record, commonly referred to as 5010 data. These data include operations counts (or estimates) and fleet information as reported by the individual airports. According to the 5010 data for Eureka Airport, the Airport is home to six (6) based aircraft and experiences 2,200 aircraft operations annually. It should be noted that data from the 5010 are often estimates and may not reflect the operational conditions at the Airport at a given time. An updated count of based aircraft was completed in 2023 and the results of that count are shown here. An estimate of operational activity is discussed later in this chapter.

Eureka does not have a fixed based operator (FBO). However, the County-owned terminal provides services to users including self-service avgas and Jet A fuel dispensing facilities, aircraft parking, and a pilot lounge with WI-FI and restrooms.

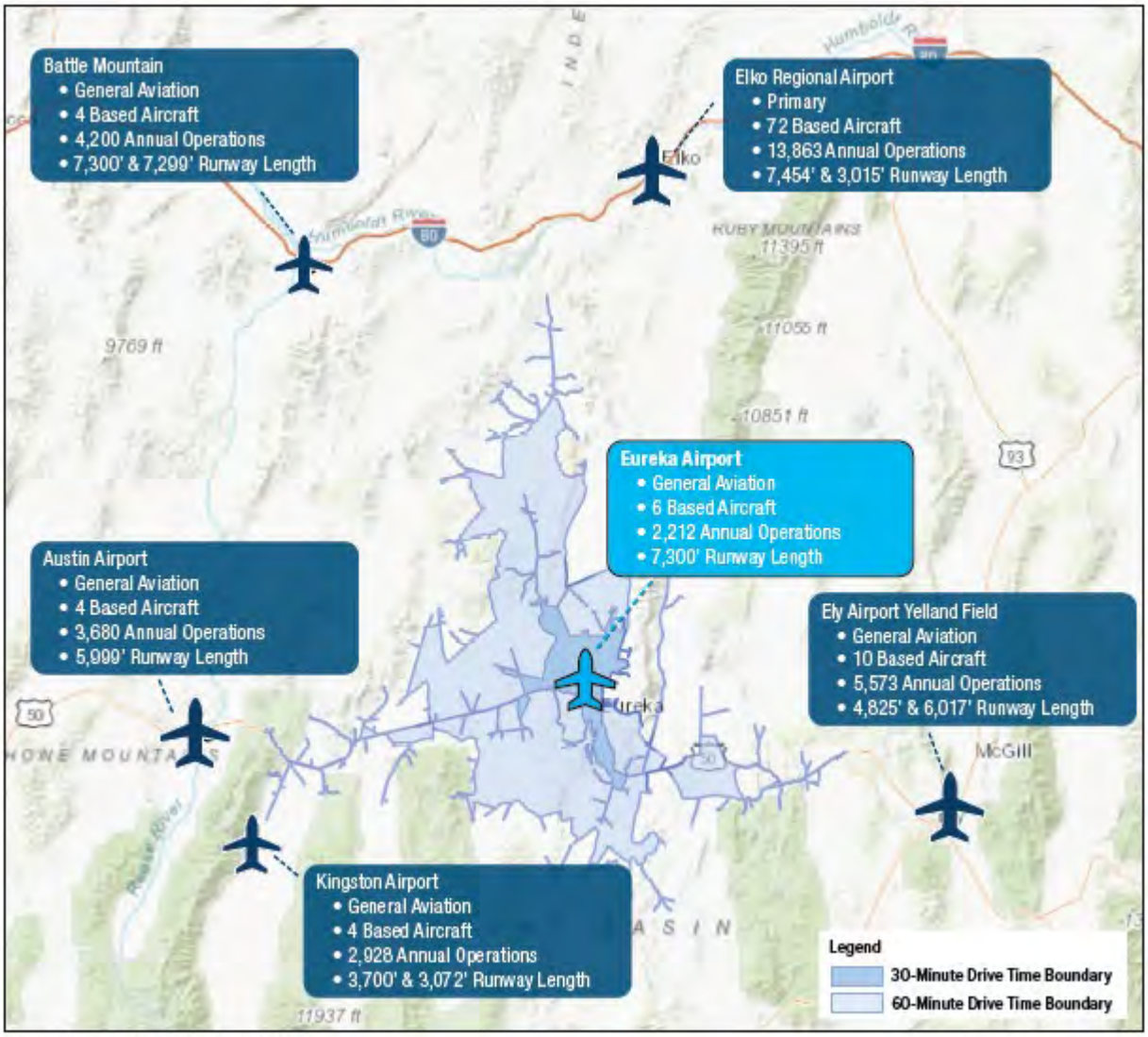
The 2022 Nevada Airport Economic Impact Study (AEIS) evaluated the economic impacts of all system airports in Nevada, including Eureka. The study identified on-airport direct economic impactors as well as multiplier impacts generated throughout Nevada through re-spending and supplier purchases. According to the AEIS, Eureka Airport provides over 32 jobs and contributes almost $2 million in labor income and over $6 million in total economic output to the local and regional economy.

AREA AIRPORTS CONTEXTUAL ANALYSIS

Contextual analysis of the airport service area refers to the geographic area that is immediately affected by the activities of the Airport. A 30 or 60-minute drive time is used to approximate the extent of a service area. Normally, airports located more than 30 minutes away are considered to have less impact on local airport activity due largely to redundancy of services provided by closer facilities. When there are numerous nearby airports, service areas overlap, creating competition between the airports. Having many facilities located within a short distance from each other affects demand for hangar space, fuel, and aviation services.

Due to the somewhat remote location of the Airport and the relatively few airports located in the 60-minute drive time area, the five nearest public-use airports were selected for analysis. These five airports are discussed in detail below, displayed in **Figure 2-2**, and summarized in **Table 2-4**. Operational activity in **Table 2-4** are as presented in the FAA Airport Master Record, commonly referred to as 5010.

FIGURE 2-2: AREA AIRPORTS SUMMARY



Source: AirportIQ 5010, Esri, USGS, NOAA

TABLE 2-4: AREA AIRPORTS 5010 DATA

	Eureka Airport	Austin Airport	Kingston Airport	Ely Airport Yelland Field	Elko Regional Airport	Battle Mountain
Runway(s)	18/36 - 7,300' x 60'	01/19 - 5,999' x 75'	07/25 - 3,700' x 80' 16/34 - 3,072' x 60'	12/30 - 4,825' x 60' 18/36 - 6,017' x 150'	06/24 - 7,454' x 150' 12/30 - 3,015' x 60'	04/22 - 7,300' x 150' 13/31 - 7,299 x 100'
Services	100LL, Jet A, Hangars, Tiedowns, AWOS, ASOS	100LL, Jet A, Tiedown, AWOS	Helipad, Tiedowns	100LL, Jet A, Hangars, Tiedowns, ASOS	100LL, Jet A, Hangars, Tiedowns, AWOS, Flight Training	Helipad, 100LL, Jet A, Hangars, Tiedowns, AWOS
Operations						
Air Carrier	0	0	0	0	2,711	0
Air Taxi	12	360	36	1,260	662	800
GA Local	600	1,080	1,080	1,413	6,554	1,240
GA Itinerant	1,440	2,000	1,800	2,670	3,936	1,800
Military	160	240	12	230	0	360
Total Operations	**2,212**	**3,680**	**2,928**	**5,573**	**13,863**	**4,200**
Based Aircraft						
Single Engine	6	4	3	9	62	4
Multi Engine	0	0	0	1	5	0
Jet	0	0	0	0	0	0
Helicopter	0	0	1	0	4	0
Glider	0	0	0	0	0	0
Military	0	0	0	0	0	0
Ultra-Light	0	0	0	0	1	0
Total Based Aircraft	**6**	**4**	**4**	**10**	**72**	**4**
OPBA*	**369**	920	732	557	193	1050

Source: AirportIQ 5010 (https://www.airportiq5010.com/)
* Operations per Based Aircraft

Austin Airport

Austin Airport (TMT) is a public airport owned by Lander County. It primarily serves GA aircraft and, to a lesser extent, military aircraft. TMT is a nontowered airport 77 miles west of Eureka airport, 1 hour and 15 minutes by car.

TMT has one asphalt runway (01/19) that is 5999’ x 75’. The Airport accommodates GA aircraft, typically single-engine piston and multi-engine piston models. The Airport offers full-service Jet-A fuel and self-service 100LL fuel is also available. There are no published instrument approach procedures to Runway 01/19.

The Airport supports GA operations as well as air taxi and military operations. Real-time weather information is available from an onsite AWOS-3PT, which provides weather data including altimeter, visibility, cloud/ceiling, precipitation, and lightning data.

Kingston Airport

Kingston Airport (N15) is a publicly-owned airport owned by the US Bureau of Land Management and serves general aviation aircraft. It is located 75 miles Southwest of Eureka Airport, 1 hour and 10 minutes by car.

N15 has two unpaved runways, 07/25 and 16/34. Runway 07/25 is 3700' x 80'. Runway 16/34 is 3072' x 60' supporting primarily single-single engine piston GA aircraft. The Airport also has a heliport primarily supporting emergency services, and aircraft tiedown parking is available to transient aircraft. Real-time weather information is not available at Kingston.

Ely Airport Yelland Field

Ely Airport (ELY) is a GA airport publicly owned by White Pine County. It is located 89 miles East of Eureka Airport and is a 1 hour 30-minute drive. The Airport has two asphalt runways. The primary runway is 18/36 (4825' x 60'). Runway 12/30 (6017' x 150') is a crosswind runway. There is an Area Navigation (RNAV) GPS procedure published to Runway 18, as well as a circling procedure that directs aircraft to the Airport's airspace.

The Airport supports small GA aircraft as well as larger and faster turbo-prop and turbine powered aircraft capable of providing air taxi services to the region. The FBO, Ely Jet Center, has full-service 100LL and Jet-A and bottled oxygen. Ely Airport also has an ASOS weather station and published instrument approach procedure.

Elko Regional Airport

Elko Regional Airport (EKO) is a publicly owned airport owned by the City of Elko. EKO is a non-hub primary airport with two runways, 06/24 (7454' x 150') and 12/30 (3015' x 60'), both asphalt. This airport is 105 miles north of Eureka, which is a 1 hour 38-minute drive.

The Airport offers Commercial Service to the region with nearly 3,000 annual air carrier operations. The local FBO is Mountain West Aviation which provides full-service and self-service 100LL and full-service Jet-A. They also do major airframe and powerplant service. EKO has real-time weather reporting through an onsite AWOS, as well as circling approach procedures to the Airport airspace, straight-in RNAV GPS approaches into Runways 06 and 24, and a Localizer Directional Aid (LDA)/Distance Measuring Equipment (DME) approach to Runway 24.

Battle Mountain Airport

Battle Mountain Airport (BAM) is a publicly owned airport owned by Lander County. BAM is a basic general aviation airport with two runways, 04/22 (7300' x 150') and 13/31 (7299' x 100'), and two helipads, H1 and H2. This airport is 130 miles northwest of Eureka and a 2-hour drive.

The Airport supports activity by small single-engine piston GA aircraft, as well as activity by larger multi-engine piston, turbo props, and turbine powered aircraft. This airport gets approximately 800 air taxi operations per year. The FBO is Fallon Airmotive who provides full-service and self-service 100LL and full-service Jet-A, as well as major airframe and powerplant service. BAM also has real-time weather reporting through an onsite AWOS. Pilots can access the Airport in Instrument Flight Rules (IFR) conditions utilizing circling approach procedures to the Airport airspace and straight-in RNAV GPS approaches into Runways 04 and 22.

AIRPORT OPERATIONS SUMMARY

Eureka Airport primarily serves small single-engine piston aircraft, though a small but growing number of operations can be attributed to some multi-engine piston aircraft, business class turbine aircraft (jets and turboprops), and helicopters.

As is the case with many small non-towered airports, historic operations and based aircraft records are limited to the FAA Airport Master Record 5010-1. The FAA's 5010 Airport Master Record is the official record kept by the FAA for public-use airport activity. However, the 5010 based aircraft data are self-reported by the airports and validated by the FAA through the FAA's National Based Aircraft Inventory Program. Operations at non-towered airports are periodically estimated by airports through planning efforts such as master plans and submitted to the FAA for approval and referenced in the FAA's Terminal Area Forecast (TAF). While the FAA refers to the 5010 as an input to the TAF, due to the multiple inputs used in developing the TAF, the totals reported each year for the 5010 may not exactly match what is reported in the TAF.

The 10-year TAF histories of Based Aircraft and Operations are presented in **Figure 2-3** and **Figure 2-4** respectively.

FIGURE 2-3: HISTORICAL TAF BASED AIRCRAFT

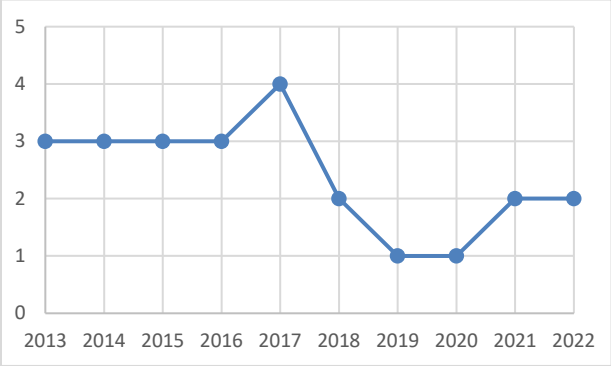
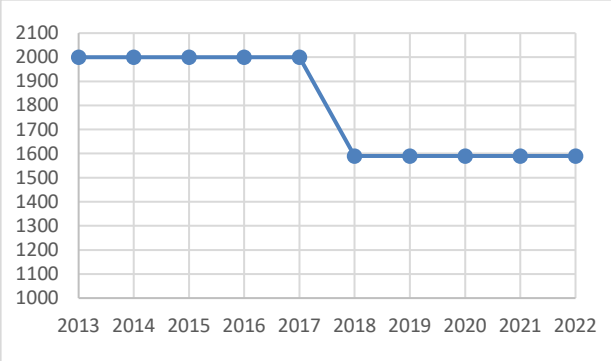


FIGURE 2-4: HISTORICAL TAF OPERATIONS



UPDATED BASED AIRCRAFT COUNT

In the Spring of 2023, a detailed inventory of based aircraft was completed by Eureka County. The count identified six (6) single engine piston aircraft that were based at Eureka. To officially validate count, the registration numbers (n-numbers) of the identified aircraft were submitted to the FAA's National Based Aircraft Inventory Database, commonly known as BasedAircraft.com. Upon submission to BasedAircraft.com, aircraft that are claimed by a particular airport are queried against the based aircraft claimed by other airports. If no other airport has claimed that particular aircraft, that aircraft is included in that airport's validated based aircraft count. If the aircraft is claimed by more than one airport, it is removed from all airports' validated counts until additional supporting evidence is provided to prove where the aircraft is based for more than six months of a year. If that evidence is provided, the aircraft is added to the airport's validated count.

The six (6) based aircraft identified in the Airport's based aircraft inventory count were submitted to BasedAircraft.com. Of the six (6) aircraft, all were validated as based at Eureka.

OPERATions EstiMATE

As discussed above, the TAF-provided operations numbers are estimates that are infrequently updated. As such, there is little confidence in their accuracy. As is the case with many planning efforts at small GA airports, a detailed operations count is not within the scope of this project. Instead, an estimate based on operations per based aircraft (OPBA) has been calculated. This method of using OPBA to estimate airport operations at non-towered airports is described in FAA Order 5090.5. The order states that an OPBA estimate of 250 operations per based aircraft may be applied to basic GA airports in order to generate reasonable operations estimates. See **Table 2-5** for a breakdown of the OPBA calculation and final updated operations estimate.

TABLE 2-5: OPBA OPERATIONS ESTIMATE

Validated Based Aircraft	6
OPBA Multiplier	250
Annual Operations (Est)	1,500

Source: Century West Engineering

RELEVANT STUDIES

There are numerous local, regional, and statewide studies available for reference that contain valuable information as it relates to the Airport and the greater community. The relevant studies summarized below have been incorporated into the planning process to provide greater context when developing the plan.

2015 Airport Master Plan

The most recent Airport Master Plan was completed in 2015 and provided a path forward through 2035. The intent of the plan was to evaluate the existing facilities at the time, identify needs, and propose improvements to address those needs. The outcome of that planning process is depicted on the current ALP drawing set, which is being updated as part of this study.

The 2015 plan proposed pavement maintenance work, purchase of snow removal equipment (SRE), and construction of a SRE storage building in the 5-year term. All of these projects have been completed or are in progress at this time.

Projects included in the 10-year term include installation of windsocks, helipad construction, an upgrade to the AWOS, and the construction of a med-flight hangar and addition to the FBO.

The 20-year term projects include paving of the runway, relocation of powerlines, and construction of additional hangar space.

2022 Nevada Airport and Heliport System Plan and Airport Economic Impact Study

In 2022 the NDOT jointly completed the Nevada Airport and Heliport System Plan (NAHSP) and Airport Economic Impact Study (AEIS). The intent of these studies was to provide guidance and direction on how to:

- Monitor aviation system performance;
- Provide guidance and direction to maintain the aviation system;
- Provide justification for continued investment in the aviation system.

The combined report classifies Eureka Airport as a General airport in the State system. Airports classified as General:

> "Serve a variety of general aviation (GA) activities, support local economies, and provide basic aeronautical needs"

The economic impact portion of the report states that the Airport provides 32 jobs to the community and generates nearly $2 million in labor income and a total economic output of over $6 million.

The plan also identifies general facility needs sourced from the Airport Capital Improvement Plan totaling over $8 million, including nearly $7.5 million in airside improvements, $600,000 in planning projects, and $28,000 in pavement maintenance projects.

2010 Eureka County Master Plan

First developed in 1973 and most recently updated in 2010, the Eureka County Master Plan is intended to aid the County in responding to growth and provide a comprehensive, long-term general plan for the development of the county and serve as a basis for development over time.

The plan specifically addresses airports in the "Airport" section (4.4.4.3) and offers the following recommendation specific to Eureka Airport:

> "Improvements to the Eureka and Crescent Valley airports may be desirable should population increase occur."

ENVIRONMENTAL DATA

The Eureka Airport is located in Diamond Valley with Diamond Peak to the east of the airport. The following sections describe the climate and environmental conditions at Eureka Airport.

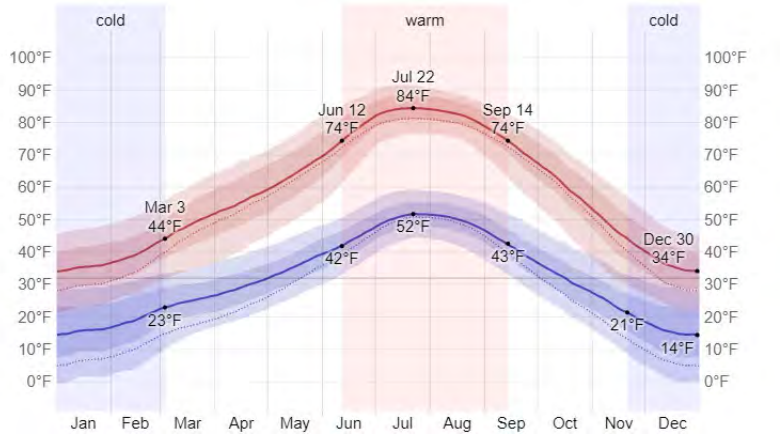
AREA CLIMATE

In Eureka, the summers are warm, dry, and mostly clear and the winters are freezing, snowy, and partly cloudy. Over the course of the year, the temperature typically varies from 14°F to 84°F and is rarely below -1°F or above 92°F.

Temperature

Figure 2-5 summarizes the annual temperature normal at Eureka Airport. The warm season lasts for 3.1 months, from June 12 to September 14, with an average daily high temperature above 74°F. The hottest month of the year in Eureka is July, with an average high of 84°F and low of 51°F.

FIGURE 2-5: ANNUAL TEMPERATURE

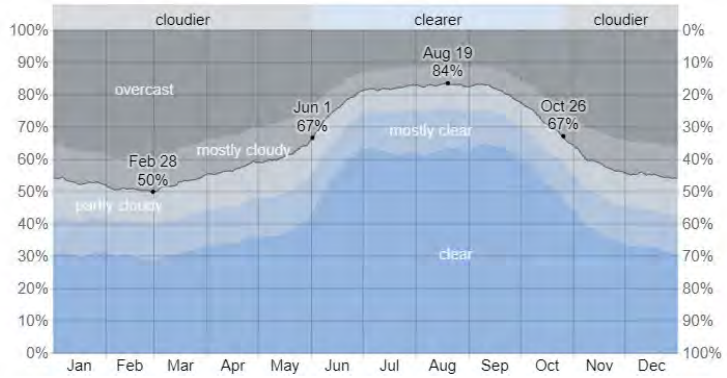


The cold season lasts for 3.5 months, from November 20 to March 3, with an average daily high temperature below 44°F. The coldest month of the year in Eureka is December, with an average low of 16°F and high of 36°F.

CLOUD COVEr

Figure 2-6 depicts the annual cloud cover at Eureka Airport. In Eureka, the average percentage of the sky covered by clouds experiences significant seasonal variation over the course of the year. The clearer part of the year in Eureka begins around June 1 and lasts for 4.8 months, ending around October 26.

FIGURE 2-6: ANNUAL CLOUD COVER



The clearest month of the year in Eureka is August, during which on average the sky is clear, mostly clear, or partly cloudy 83% of the time. The cloudier part of the year begins around October 26 and lasts for 7.2 months, ending around June 1.

The cloudiest month of the year in Eureka is February, during which on average the sky is overcast or mostly cloudy 49% of the time.

Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

FIGURE 2-7: ANNUAL WIND DATA

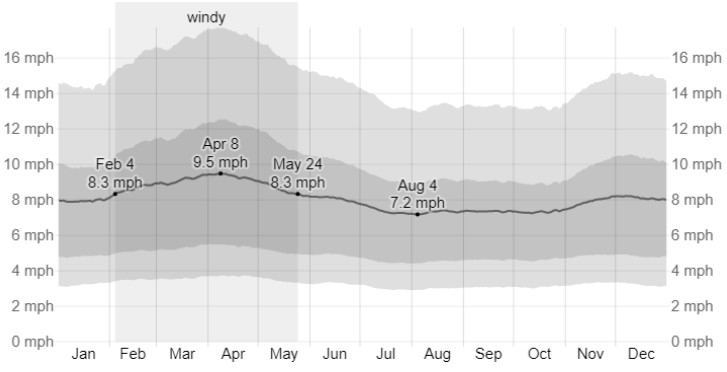


Figure 2-7 summarizes the normal wind patterns at Eureka Airport. The average hourly wind speed in Eureka experiences mild seasonal variation over the course of the year.

The windier part of the year lasts for 3.6 months, from February 4 to May 24. During this time the average wind speeds of more than 8.3 miles per hour. The windiest month of the year is April, with an average hourly wind speed of 9.3 miles per hour.

The calmer time of year lasts for 8.3 months, from May 24 to February 4. The calmest month of the year in Eureka is August, with an average hourly wind speed of 7.3 miles per hour.

The predominant average hourly wind direction in Eureka varies throughout the year. The wind is most often from the west for 3.5 months, from March 14 to June 28, with a peak percentage of 37% on June 1. The wind is most often from the south for 8.5 months, from June 28 to March 14, with a peak percentage of 42% on January 1

FAA WIND ANALYSIS

The FAA recommended planning standard states that primary runways should be capable of accommodating at least 95% of wind conditions within the prescribed crosswind component. To evaluate the wind coverage of Runway 18/36, ten years of tabulated wind data collected on site at the Eureka AWOS was downloaded from Iowa State University

(ISU)[1] for analysis. Typically, these data are available through the FAA Airport Data Information Portal (ADIP). However, the data from the Eureka AWOS are not included in the ADIP database, so the ISU data were used instead. It is unclear why the wind data history is available through ISU, but not in the ADIP system. The data were uploaded to the FAA Windrose Generator Tool (https://adip.faa.gov/agis/public/#/windAnalysisTools) and wind coverage was calculated for each runway end. The results of the wind analysis are presented in **Table 2-6**.

TABLE 2-6 WIND ANALYSIS

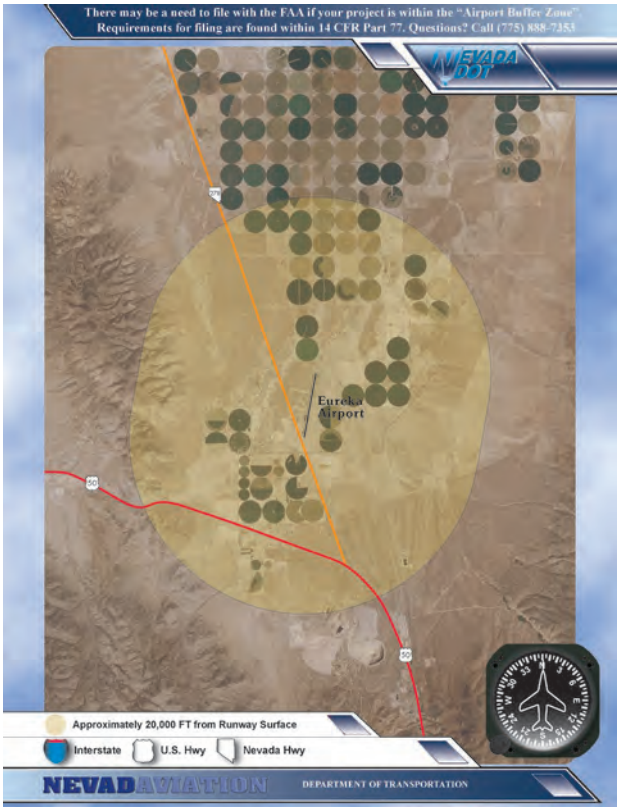
	VFR		IFR		All Wx	
	10.5 KT	13 KT	10.5 KT	13 KT	10.5 KT	13 KT
RWY 18	78.94%	79.96%	56.84%	57.71%	78.26%	79.32%
RWY 36	57.89%	58.45%	84.45%	85.30%	58.78%	59.38%
Combined	96.86%	98.43%	96.12%	97.83%	96.80%	98.44%

Source: ISU Mesonet (https://www.mesonet.agron.iastate.edu/sites/locate.php?network=NV_ASOS), FAA ADIP Wind Rose Generator (https://adip.faa.gov/agis/public/#/windAnalysisTools)

ENVIRONMENTAL AND CULTURAL RESOURCES

The Airport Layout Plan Report scope of work includes an overview of environmental conditions and a preliminary assessment of NEPA environmental impact categories. A cultural resource assessment was also performed for the site. A review of recommended improvements is provided in Chapter 5 – Alternatives Analysis. These assessments are summarized below and the full technical memorandums are provided in the listed appendices.

FIGURE 2-8: NDOT EUREKA AIRPORT BUFFER ZONE



ENVIRONMENTAL REVIEW

A preliminary environmental screening of the airport property and surrounding areas was completed as part of the Airport Layout Plan Update. The screening study examined the following environmental categories on and in vicinity of the Airport:

- Air Quality
- Biological Resources (including fish, wildlife, and plants)
- Department of Transportation Act, Section 4(f)
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Natural Resources and Energy Supply
- Farmlands (Farmland protection Policy Act)
- Noise and Compatible Land use
- Natural resources and energy supply. The complete report is available in Appendix A.

[1] https://www.mesonet.agron.iastate.edu/sites/locate.php?network=NV_ASOS

AIR QUALITY

Eureka County along with 14 other counties in Nevada are considered to be "unclassifiable" as no monitoring has been conducted and National Ambient Air Quality Standards violations would not be expected.

BIOLOGICAL RESOURCES

Biological resources include sensitive plants, fish, wildlife, and their respective habitats. There are no recorded sightings of any federally or state listed protected species with the immediate vicinity of the Airport. However, the Monarch Butterfly is a species that has the potential to be found in the area.

Several migratory bird species covered by the Migratory Bird Treaty Act are known to occur in the vicinity of the Airport. Please consult the full report in **Appendix A** for the complete list and note that the species listed are representative of species found in the area of the Airport, not necessarily on the property.

The bald eagle and golden eagle are protected under the Bald and Golden Eagle Protection Act of 1940, which provides specific guidance for minimizing effects to these species. While no golden eagles or bald eagles have been recorded within the immediate vicinity of the Eureka Airport, there have been recorded sightings of golden eagle nests within cliffs nearby within 10 miles from the airport. On site habit does not provide suitable nesting or foraging habitat for bald eagles therefore bald eagles are not anticipated to occur on-site. However, the undisturbed areas of the airport do provide a suitable foraging habitat for the golden eagle and this species may occur within the project area. Raptors which are protected by state and federal laws have been spotted within a 10 mile radius of the airport but not on the airport site.

HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

A query of publicly accessible databases identified nine Superfund sites approximately 6 miles away in the town of Eureka; and one contamination cleanup site within one mile of the airport. Finally, the Airport offers self-serve avgas, and provides opportunities for aircraft maintenance activities. Both activities involve fossil fuels and other types of hazardous materials or wastes.

CULTURAL RESOURCES REVIEW

The Airport Layout Plan Update must meet the requirements of Section 106 of the National Historic Preservation Act (NHPA) and consider impacts of future airfield improvements to any potential historic properties. The Section 106 review was conducted in two phases: pre-field research, and field work.

Pre-field research included the review of known archaeological resources within a 1.0-mile radius of the airport property using publicly available archeological resource databases.

The subsequent fieldwork included inspections, including subsurface excavations, to identify surface and subsurface archaeological resources. No Native American or historic-era cultural materials or features were observed during the pedestrian survey. The survey yielded a final recommendation that future airport improvements will result in No Historic Properties Affected, and no further archaeological investigations are recommended prior to, or during, execution of the Airport Layout Plan Update.

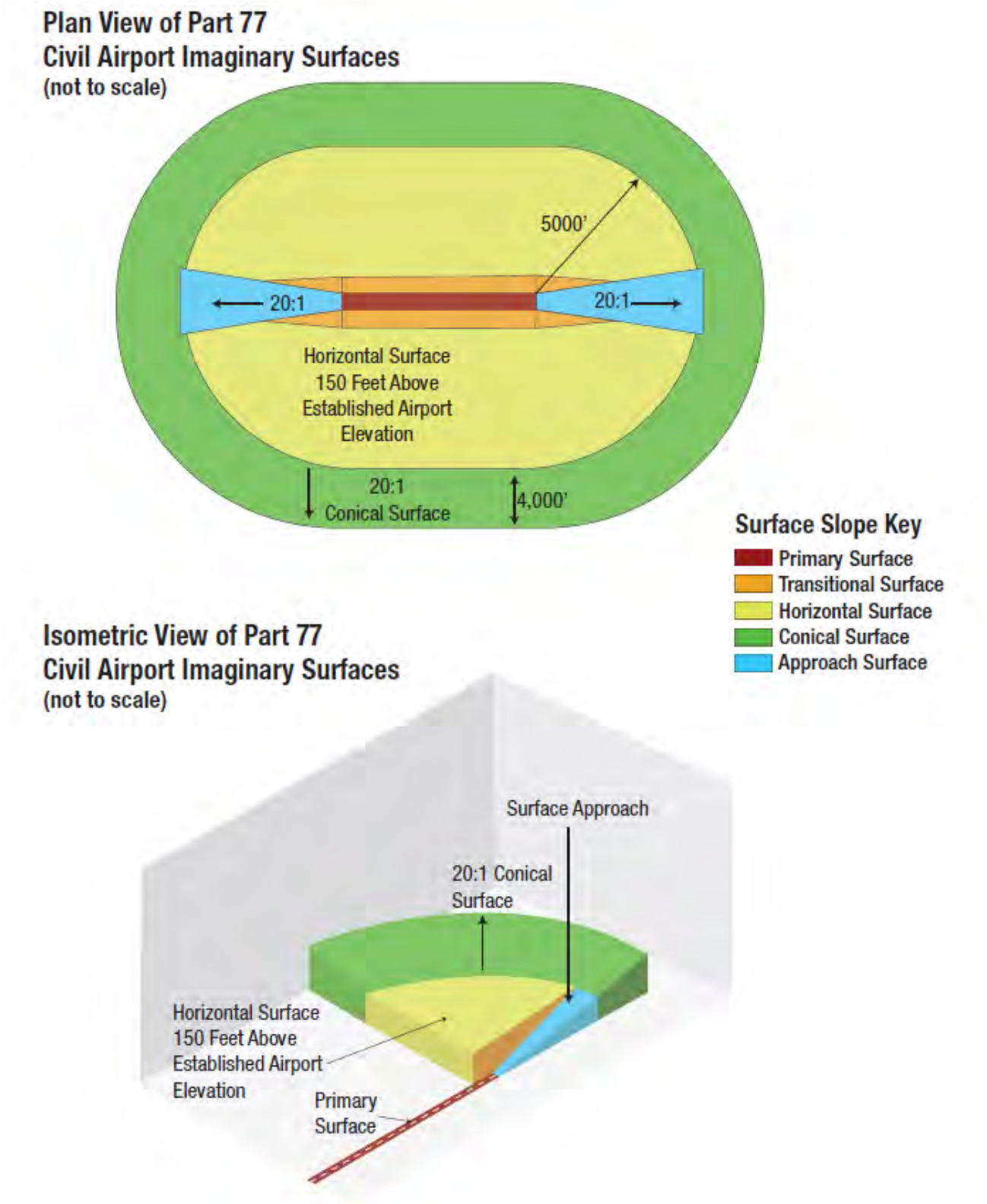
NOISE CONTOURS

Noise analysis is not included in the scope of work for this planning effort due to the relatively low levels of flight activity at the Airport, which falls below the FAA threshold for analysis.

LOCAL SURFACE TRANSPORTATION

The Airport can be accessed by vehicle transportation from NV-50, via NV-278. US-50 is a trans-continental highway stretching from Sacramento, California to Ocean City, Maryland. The Nevada portion crosses the central region of the

state from Reno to Baker. The region of Nevada that the highway serves is sparsely populated and has few services for travelers, which has earned this portion of the highway the nickname “The Loneliest Road in America”.



LAND USE & ZONING

The land use around the Airport is primarily agricultural use, consisting of private and public rangeland, and pivot-irrigated crop land. There is a small area of low-density residential lots to the west of the property positioned under

FIGURE 2-9: CFR 14 PART 77 IMAGINARY SURFACES

the standard left-hand traffic pattern.

Eureka County does not have any zoning ordinances published in the County Code. NDOT enforces limited land use control around airports through the FAA 7460-1 process, which requires developers to notify FAA prior to construction of objects that may affect the navigable airspace of an airport. For any proposed temporary or permanent structure in the vicinity of an airport, developers must submit a description, location, and height, as well as any radio frequencies emitted from the structure to the FAA for evaluation. Though there are no local ordinances to enforce these requirements, the filing requirement set forth in CFR 14 Part 77 states failure to file Notice of Construction with the FAA subjects a $1000 per day civil penalty for each day CFR 14 Part 77 filing requirements are violated. NDOT cites the regulation on its Aviation website and provides a "Buffer Zone" map (**Figure 2-8**) detailing the area around each airport for which a 7460 should be filed.

AIRSIDE ELEMENTS

This section consists of the facilities that allow the movement and operation of aircraft at Eureka Airport. This section of the existing conditions analysis includes a discussion of the area airspace, instrument flight procedures, runways, taxiways/taxilanes, aprons/tiedowns/aircraft parking, airfield pavement condition, and airside support facilities.

AIRSPACE-CFR 14 PART 77, TERPS, AND THRESHOLD SITING SURFACES

There are a variety of rules, regulations, design standards, and policies connected to the protection of airspace, evaluation of proposed objects on and near airports, and their effects on navigable airspace in addition to the airport classifications and operating environments with which pilots are familiar. A comprehensive description of the regulations, standards, evaluation criteria, and processes designed to protect the airspace surrounding airports is provided by Airport Cooperative Research Program (ACRP) Report 38 – Understanding Airspace, Objects, and Their Effects on Airports. This report is summarized below and provides context for airspace evaluation and design to serve Eureka Airport.

CFR 14 PART 77 AIRSPACE

Part 77 is the central regulation governing airspace protection that lists requirements for notifying the FAA of proposed construction, defines obstruction criteria, and describes aeronautical studies required to assess hazard status. The Part 77 surfaces are discussed below and depicted in **Figure 2-9**.

Approach Surface

The approach surface extends outward and upward from each end of the primary surface, along the extended runway centerline. The dimensions and slope of the approach surfaces are determined by the type of aircraft intended to use the runway and the most demanding approach planned for the runway.

Primary Surface

The primary surface is a rectangular plane longitudinally centered on the runway (at centerline elevation) extending 200 feet beyond each runway end. The width of the primary surface depends on runway category, approach

capability, and approach visibility minimums. The primary surface should be free of any penetrations, except items with locations fixed- by-function (i.e., precision approach path indicators (PAPI), runway or taxiway edge lights, etc.). The outer ends of the primary surface connect to the inner portion of the runway approach surfaces.

Transitional Surface

The transitional surface is located along the lateral edges of the primary surface and is represented by a plane rising perpendicularly to the runway centerline at a slope of 7 to 1. The transitional surface extends outward and upward to an elevation 150 feet above the airport elevation. The outer edges of the transitional surface connect with the horizontal surface. The transitional surface should be free of obstructions (i.e., parked aircraft, structures, trees, terrain, etc.).

Horizontal Surface

The horizontal surface is a flat plane located 150 feet above the airport elevation. The horizontal surface boundaries are defined by the radii (10,000 feet for larger than utility instrument runways and 5,000 feet for utility runways) constructed from each runway end. The outer edges of the radius for each runway are connected by tangent lines, which taken together define the horizontal surface.

Conical Surface

The conical surface is an outer band of airspace that encircles the horizontal surface. The conical surface begins at the outer edge of the horizontal surface and extends outward 4,000 feet and upward at a slope of 20:1.

The Part 77 surfaces will be depicted in the Airport Layout Plan drawing set. The existing and future surfaces will be evaluated during the production of the ALP and all obstacles will be identified and the appropriate dispositions determined.

FAA ORDER 8260.3B-UNITED STATES STANDARD FOR TERMINAL INSTRUMENT PROCEDURES (TERPS)

FAA flight procedure designers use this order, several other orders in the 8260 series, and other related orders when designing instrument flight procedures. Part 77 references airspace protection requirements for instrument flight procedures which are one of the most common criteria analyzed for hazard status in aeronautical studies.

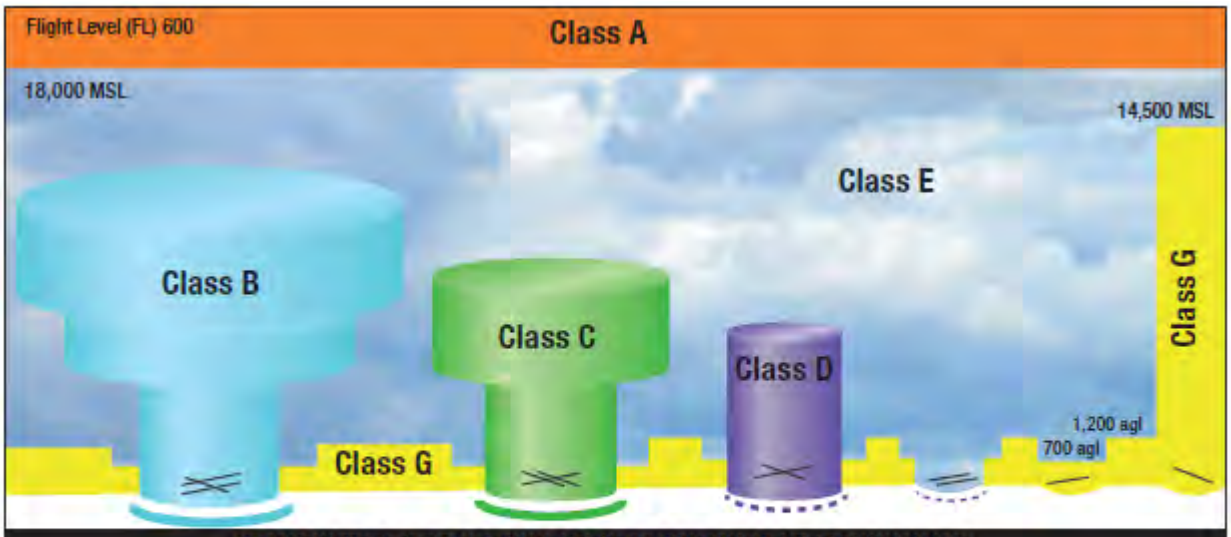
FAA AC 150/5300-13B-AIRPORT DESIGN

This AC defines airspace clearances for key runway end features in the discussion of Runway End Siting Surfaces. It is used by the FAA, airport sponsors, and planning consultants when planning and designing new airports or making modifications to current airports.

AIRSPACE CLASSIFICATIONS

The FAA classifies airspace in the United States as “controlled” or “uncontrolled” extending up to 60,000 feet above mean sea level (MSL). Controlled airspace is classified as Class A, B, C, D, or E; uncontrolled airspace is Class G. Each airspace classification has a unique level of positive air traffic control that all aircraft operating within the space are subjected to. Controlled airspace requirements vary, with the airspace associated with large commercial airports in high traffic areas being the most stringent. **Figure 2-10** summarizes the different classifications of airspace in the National Airspace System (NAS).

FIGURE 2-10: AIRSPACE CLASSIFICATIONS



COMMUNICATION REQUIREMENTS AND WEATHER MINIMUMS

	Class A	Class B	Class C	Class D	Class E	Class G
Airspace Class Definition	Generally airspace above 18,000 feet MSL up to and including FL 600.	Generally multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports	Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control	Generally airspace from the surface to 2,500 feet AGL surrounding towered airports	Generally controlled airspace that is not Class A, Class B, Class C, or Class D	Generally uncontrolled airspace that is not Class A, Class B, Class C, Class D, or Class E
Minimum Pilot Qualifications	Instrument Rating	Student*	Student*	Student*	Student*	Student*
Entry Requirements	IFR: ATC Clearance VFR: Operations Prohibited	ATC Clearance	IFR: ATC Clearance VFR: Two-Way Communication w/ ATC	IFR: ATC Clearance VFR: Two-Way Communication w/ ATC	IFR: ATC Clearance VFR: None	None
VFR Visibility Below 10,000 MSL**	N/A	3 Statute Miles	3 Statute Miles	3 Statute Miles	3 Statute Miles	Day: 1 Statute Mile Night: 3 Statute Miles
VFR Cloud Clearance Below 10,000 MSL***	N/A	Clear of Clouds	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal***
VFR Visibility 10,000 MSL and Above**	N/A	3 Statute Miles	3 Statute Miles	3 Statute Miles	5 Statute Miles	5 Statute Miles
VFR Cloud Clearance 10,000 MSL and Above	N/A	Clear of Clouds	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	1,000 Below 1,000 Above 1 Statute Mile Horizontal	1,000 Below 1,000 Above 1 Statute Mile Horizontal

* Prior to operating within Class B, C, or D airspace (or Class E airspace with an operating control tower), student, sport, and recreational pilots must meet the applicable FAR Part 61 training and endorsement requirements. Solo student, sport, and recreational pilot operations are prohibited at those airports listed in FAR Part 91, appendix D, section 4.

** Student pilot operations require at least 3 statute miles visibility during the day and 5 statute miles visibility at night.

*** Class G VFR cloud clearance at 1,200 agl and below (day); clear of clouds.

Source: Federal Aviation Administration (FAA)

Local Area Airspace Structure

The Las Vegas Sectional Aeronautical Chart depicts airports, notable obstructions, special airspace designations and IFR routes in the vicinity of Eureka Airport. There is a blasting zone about 30 miles southeast of the airport, so pilots should exercise caution when flying below 5000 feet AGL. The airspace surrounding Eureka Airport is Class G from the surface to 700 feet above ground level (AGL) where it becomes Class E. Aircraft operating under Visual Flight Rules (VFR) are not required to maintain radio contact in Class G airspace, although pilots are encouraged to use the common traffic advisory frequency (CTAF) when operating at an airport.

Special Use Airspace

There are several areas of special use airspace impacting Eureka Airport, specifically three Military Operations Areas (MOA), Zircon, Duckwater, and Diamond. Diamond and Zircon MOAs have a floor of 1200 AGL to a ceiling of 17,999 AGL. Air traffic control assigned airspace (ATCAA) extends above these MOAs from 18,000 AGL to 50,000 AGL. The Duckwater MOA extends between 200 AGL to 17,999 AGL. The Highway 50 VFR (Visual Flight Rules) corridor was also extended all the way to the east boundary of the new MOAs. The Navy has implemented a noise-sensitive area around both Crescent Valley and Eureka which includes an avoidance buffer of five nautical mile radius and up to an elevation of 3000 AGL. The Navy has also requested FAA impose on them an “airport exclusion area” of 3 nautical miles around Crescent Valley and Eureka airports. VFR operations are not restricted in MOAs, pilots should exercise caution while flying within, near, or below an active MOA.

Controlled & Uncontrolled Airspace

Eureka Airport is an uncontrolled airport and pilots use the airport Unicom/CTAF 122.9 for communications on and around the airport.

INSTRUMENT FLIGHT PROCEDURES

The FAA developed instrument approach and departure procedures to guide aircraft through a series of prescribed maneuvers in and out of airport’s terminal space using electronic navigational aids. These procedures are designed to continue airport operation during instrument meteorological conditions (IMC), and are used during visual conditions, typically with an instrument flight plan. Instrument approach capabilities are defined by the technical performance of the procedure platform (either ground or satellite navigational aids) and the presence of nearby obstructions. This may affect the visibility minimums and cloud ceiling for the approach in addition to the routing for approach and missed approach procedure segments. Approach minimums may also be affected by the aircraft approach speed and descent rate.

Eureka Airport has and an RNAV (GPS) straight-in procedure to Runway 18 and a GPS circling approach available with visibility minimums as low as 1 mile. The RNAV (GPS) approach procedure to Runway 18 offers visibility minimums as low as 1 mile to category A and B aircraft, and 1 1/8 mile for C and D aircraft. The GPS circling approach has visibility minimums of 1 1/4 mile for Category A, 1 1/2 mile for Category B, and 3 miles for Category C and D. The Mines One departure procedure provides departure vectors to all categories of equipped aircraft departing on Runway 36. Ely Airport, Battle Mountain Airport, and Elko Regional Airport are all nearby airports that also have published IAPs.

RUNWAY

The Airport has a single 7,300 feet by 60 feet asphalt paved runway (18/36) with a pavement strength rating of 30,000 lbs (SWG). The pavement was constructed to 30,000 lbs (SWG) to accommodate military aircraft that were using the runway at that time but have since ceased operating at the Airport.

Runway 18/36 is oriented in a north-northeast/south-southwest direction with a magnetic bearing of 178/358-degree (191/11 degree bearing relative to true north). Local traffic circling the Airport on arrival or departure follow a standard left-hand traffic pattern at 1,000 feet above the runway.

Both ends of the runway have non-precision approach markings that include threshold markings, runway designation numbers, aiming point markings, and centerline stripes. In a recent site visit, the markings appeared to be in good to fair condition.

Runway 18/36 has high intensity runway lighting (HIRL), and 2-box precision approach path indicators (PAPI) servicing both ends.

ALTERNATE LANDING AREA

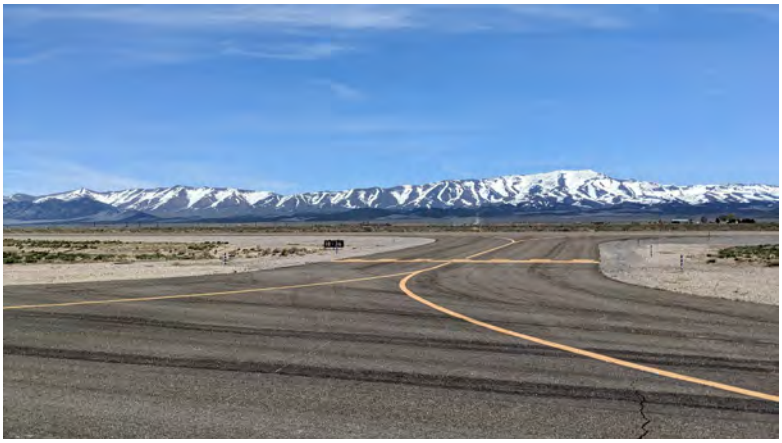
In addition to the paved runway, the Airport also has an approximately 2,300' x 150' unpaved gravel strip oriented perpendicular to Runway 18/36 on the west side of Taxiway A north of Taxiway A4. While the strip is not registered as a runway, it serves as an alternate landing area and provides an additional landing surface to aircraft operating in crosswind conditions.

FAA DESIGN STANDARDS AND EXISTING NON-STANDARD CONDITIONS

The most critical standards in AC 150/5300-13B related to runway design are listed below.

- **Runway Safety Area (RSA)** - The RSA is a defined surface around the runway that is suited to reduce the risk of damage to aircraft if an aircraft were to undershoot, overshoot, or veer off the runway.
- **Object Free Area (OFA)** - The OFA that enhances the safety of aircraft operation in an area on the ground centered on the runway, taxiway, or taxiway centerline. The only objects allowed in this area are those required for air navigation or aircraft ground maneuvering.
- **Object Free Zone (OFZ)** - The OFZ is a volume of airspace that must be clear of obstacles that is centered along the runway and extended runway centerline. Frangible items that are necessary for aircraft navigation are the exception.
- **Runway Protection Zone (RPZ)**-The RPZ is a trapezoidal area off each end of the runway meant to enhance the protection of people and property on the ground. RPZ dimensions are determined by the runway ARC and approach visibility minimums. The RPZ should be free of residences and public gathering places (schools, hospitals, places of worship, etc.), as recommended by the FAA.

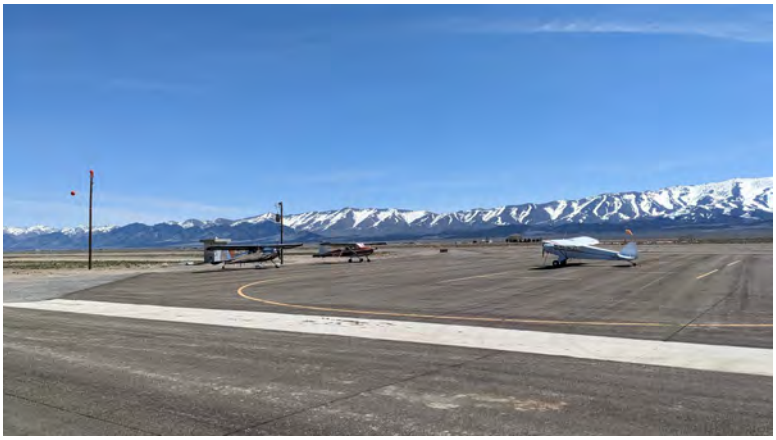
During preliminary analysis, the following non-standard conditions associated with Runway 18/36 were identified. First, Runway 18's RPZ is intersected by NV-278. Per FAA guidance, public roadways are considered an incompatible land use within an RPZ. Secondly, Runway 18/36 has direct access from the apron via the mid-field connector taxiways. Access to runways from apron areas should be configured in a way that forces pilots to make a turn prior to entering a runway surface.



TAXIWAYS & TAXILANES

There is a full-length parallel taxiway west of the runway with five connector taxiways providing access and egress to and from the runway. The parallel and connector taxiways are 35 feet wide, and have standard yellow markings, including centerlines and hold lines. Hold lines are positioned at the OFZ boundary, 150 feet from the runway centerline.

APRONS/TIEDOWNS



There is a single asphalt apron with tiedown parking available separated on either side of the self-serve fuel tanks. The north parking area, next to the FBO is approximately 41,500 square feet and has seven tiedown positions available. The south parking area is approximately 55,800 square feet and has five tiedowns available.

AIRFIELD PAVEMENT CONDITION

The Nevada Department of Transportation Airport Pavement Evaluations summarizes pavement conditions at airports across the state. It also models the state of pavement in future years to help airports plan out their repairs more effectively. The evaluations use pavement condition indices (PCI) to communicate the current and future states of airport pavement. This work helps Eureka Airport, and other airports that receive federal funding, to meet their NPIAS grant assurances. PCI surveys were performed in May 2018 for Eureka Airport. The methodology developed by the U.S. Army Corps of Engineers in the current edition of ASTM D-5340, Standard Test Method for Airport Condition Index Surveys was used to perform the PCI survey. The pavements at Eureka Airport are classified as Satisfactory to Good according to the latest evaluation (**Figure 2-11**) The pavement condition report for Eureka Airport is available for download at https://www.dot.nv.gov/mobility/aviation/airport-pavement-evaluations. It should be noted that in 2020, the County completed a comprehensive pavement maintenance project in an effort to address any areas of observed wear and prolong the life of the pavement.

FIGURE 2-11: PAVEMENT CONDITIONS

AIRFIELD SUPPORT FACILITIES

This section includes information on runway and taxiway lighting, airfield lighting, airfield signage, weather reporting, navigation aids (NAVAIDS), and fueling facilities.

Runway/Taxiway Lighting

Eureka Airport supports day and night operations during visual meteorological conditions (VMC). The runway has high intensity runway edge and threshold lights, which are consistent with nighttime operation requirements. The parallel and connector taxiways have blue edge reflectors installed.

Airfield Lighting

Eureka Airport has a rotating beacon on the northwest side of the hangar used to indicate the airport's location to pilots at night or in reduced visibility. The beacon rotates 360 degrees providing sequenced green and white flashing lights (lighted land airport) for pilots to identify the airport from several miles in all directions. The beacon operates on an automatic switch from dusk to dawn. Vehicle parking areas and the apron area are illuminated by streetlight style flood lights mounted on poles or buildings. The pole-mounted lights are installed at heights below the controlling airspace surfaces at that location.

Airfield Signage

The runway and taxiways areas have required runway identification signage (red background with white letters/numbers) marking aircraft holding positions at each taxiway connection with the runway [18-36, 18, 36, etc.]. Taxiway direction and designations signage (yellow background with black numbers/letters) are in place at each taxiway intersection.

Weather Reporting

Eureka Airport as an automated weather observation system (AWOS-3) that provides 24-hour weather information. The AWOS is located on the west side of Runway 18/36, near midfield. The AWOS-3 reports altimeter setting, wind data, temperature, dewpoint, density altitude, visibility, and cloud/ceiling data.

In addition to the AWOS, Eureka Airport also has an automated surface observing system (ASOS) that reports cloud/ceiling data, visibility, type and intensity of rain, snow, and freezing rain, obstructions to vision, sea-level pressure, altimeter setting, ambient temperature, dew point, wind direction, speed, and character, precipitation accumulation, and significant remarks such as variable cloud height or rapid pressure changes.

NAVIGATION AIDS (NAVAIDS)

NAVAIDS available at Eureka Airport include Precision Approach Path Indicators (PAPI) located 800 feet from each runway end, Runway End Identifier Lights (REIL) located at each runway end, and a rotating beacon located on the north edge of the apron.

AIRCRAFT FUEL

Eureka Airport has self-serve 100-octane low lead (100LL) and jet fuel (Jet-A) available for purchase on site. Eureka County owns and maintains the fuel storage and dispensing system.

SNOW REMOVAL EQUIPMENT

The Airport has two snow removal trucks. The first is a legacy truck, purchased with County funds. The second was purchased in 2018 using Federal AIP funds.

A Snow Removal Equipment (SRE) building project was designed in 2023 and will be put out to bid in 2024. Construction of the SRE building is slated on the current CIP to take place in the 2024 fiscal year.

LANDSIDE ELEMENTS

Landside elements include facilities that support airport operations but are not dedicated to aircraft operations. These elements include the Terminal Building, Hangars, Airport Fencing, Airport Surface Roads, Vehicle Parking, and Utilities.

TERMINAL BUILDING

The Airport has a County-owned terminal building that has a restroom, kitchen, pilot lounge/meeting space, crew quarters, and resources for pre-flight planning such as Wi-Fi provided by the County. The Terminal building is in good condition.

HANGARS

There is a single 5,000 square foot hangar adjacent to the Terminal building. It currently houses three single engine piston aircraft and has room for more aircraft. The hangar is owned by the County who leases the space to Airport Tenants.

AIRPORT FENCING

Eureka Airport has 3-strand wire fencing around the property. Where the fence crosses the access drive, a cattle guard is installed in the road in lieu of a gate. There is an additional short section of 3-strand barbed wire fence with a gate that runs across the access drive behind the apron to control access to the apron after hours.

AIRPORT SURFACE ROADS

Eureka Airport has one access road which is gated at the terminal building. The access road ends at the parking lot and apron area. Once on the airport, vehicles use taxiways and aprons to get around the airport.

VEHICLE PARKING

The Airport has a gravel parking lot north of the hangar with space to park eight to ten vehicles. Additional parking is available in the unpaved areas around the apron and FBO.

UTILITIES

Water, sanitary sewer, stormwater drainage, and electrical service are available at the Eureka Airport

Water

Water service at the Airport is provided by an onsite well managed by Eureka County Department of Public Works. There is an on-site storage tank located northwest of the apron to provide storage capacity and consistent pressure.

Sanitary Sewer

The Airport's sanitary sewage is handled through an underground septic system and provides adequate capacity to meet the needs of the airport users.

Storm Water Drainage

Airport storm water is drained through sheet and open drainage ditches that flow offsite to the north through a main drainage ditch between Runway 18/36 and Taxiway A. The ditch crosses under the connector taxiways through culverts. At the time of the site visit, the culvert under Taxiway A5 was blocked by debris and the area showed evidence of water flowing over the taxiway pavement.

Electrical Service

Electrical service to Eureka Airport is provided by Mt. Wheeler Power. The main feed to the Airport comes from the HWY 278 right-of-way and provides adequate power to the FBO building, hangar, and airport support facilities.

Chapter 3

Facility Goals & **Requirements**

Introduction

The facility goals and requirements analysis was developed based on the information obtained during the existing conditions analysis presented in the Chapter 2 - Existing Conditions Analysis. Aviation Activity Forecasts were not performed for this project per the project scope of work. Instead, FAA Airports District Office (ADO) agreed that Eureka Airport will maintain the Airport Reference Code (ARC) as presented on the current ALP. The critical aircraft and ARC are discussed in more detail in the next section.

The evaluation of airport facility goals and requirements utilizes established planning criteria to determine future demand at the Airport through the 20-year planning period within the framework of the Regional Setting, Airside Elements, and Landside Elements of the Airport.

The facility goals and requirements evaluation is used to identify the adequacy or inadequacy of existing airport facilities, identify what new facilities may be needed during the planning period to satisfy anticipated demand, and identify facility goals for the Airport and adjacent community that airport users may share throughout the course of the planning process. Potential options and preliminary costs for providing these facilities will be evaluated in Chapter 5: Airport Development Alternatives, to determine the most cost effective and efficient means for meeting projected facility goals and requirements.

Critical Aircraft and Airport Design Standards Discussion

The existing and future critical aircraft are determined based on the current and projected level of activity that was determined in the 2015 Airport Master Plan. The critical aircraft establishes existing and future airport planning & design standards that will guide future planning, design, and development of the Airport. FAA has directed that the

existing and future critical aircraft identified in the 2015 plan and depicted in the current ALP will be carried forward through this ALP Update Report process.

CRITICAL AIRCRAFT AND AIRPORT REFERENCE CODE

The current signed ALP – dated September 2015 – lists the existing critical aircraft as the Beechcraft Baron and the future critical aircraft as the Beechcraft King Air 200. The critical aircraft are intended to represent the most demanding aircraft using the Airport on a regular basis and establish the Airport Reference Code (ARC) which is a designation comprised of the highest Aircraft Approach Category (AAC) and Airplane Design Group (ADG). AAC is determined by aircraft approach speed and ADG is determined by aircraft wingspan. The Baron is classified as ARC B-I (small), where the "small" designation indicates the aircraft has a maximum takeoff weight (MTOW) of 12,500 pounds or less. The King Air 200 is classified as ARC B-II(small). A breakdown of the ARC components is presented in **Table 3-1**.

TABLE 3-1: AIRPORT REFERENCE CODE (ARC) COMPONENTS

AAC	AIRCRAFT APPROACH SPEED	ADG	AIRCRAFT WINGSPAN
A	less than or equal to 91	I - Existing	less than or equal to 49'
B	92 to 121	II - Future	50' to 79'
C	122 to 141	III	80' to 118'
D	142 to 166	IV	119' to 171'

A review of the current ALP, the 2015 AMP, the 2011 Runway Reconstruction Project as-built drawing, as well as observations made during the 2023 site visit indicated that a variety of design standards based on a variety of ARCs (B-I small, B-I, B-II small, and B-II) have been applied to the facility over the past several years. This resulted in various facilities built over the past several years being built to standards that do not match the dimensional requirements of the design aircraft. It is appropriate to take the opportunity during this ALP Update process to determine the appropriate ARC and associated critical aircraft for the existing and future conditions and consistently apply those ARC standards throughout the plan.

As noted above, the ALP lists the Beechcraft Baron as the existing critical aircraft. The Baron is a B-I(small) aircraft, which has a MTOW of no more than 12,500 pounds. The ALP lists the existing ARC as B-I, which indicates that the design aircraft has a MTOW of more than 12,500 pounds. Similarly, the future critical aircraft, the Beechcraft King Air 200, is a B-II(small) aircraft but the ALP lists the future ARC as B-II.

Considering that all of the Airport's based aircraft have MTOW of less than 12,500 pounds, and the Airport's operational fleet mix is understood to be made up primarily of single-engine piston aircraft, it is apparent that the 'small' category aircraft identified in the ALP and AMP are appropriate for the Airport and their associated ARCs should be carried forward through the plan. Furthermore, while there is some activity on the airfield by aircraft larger than 12,500 pounds, a review of Terminal Flight Management System Counts (TFMSC) records of filed flight plans over the past 10 years shows only occasional activity by these aircraft.

In summary, the existing ARC for Eureka Airport is B-I(small) and the future ARC is B-II(small). The existing critical aircraft is the Beechcraft Baron 58, and the future critical aircraft is the Beechcraft King Air 200, as identified in the previous plan and current signed ALP.

RUNWAY DESIGN CODE

The Runway Design Code (RDC) is comprised of the AAC and the ADG of the critical aircraft, and the approach visibility minimums of a specific runway end. For airports with more than one runway, each runway will have its own RDC. The RDC provides the information needed to determine specific runway design standards. The approach visibility

minimums refer to the visibility minimums expressed by runway visual range (RVR) values in feet. The existing RDC for the Runway 18/36 is B-I(S)-5000 and the future RDC is B-II(S)-5000.

TAXIWAY DESIGN GROUP

Taxiway Design Group (TDG) is based on the dimensions of the aircraft landing gear including distance from the cockpit to the main gear (CMG) and main gear width (MGW). These dimensions affect an aircraft's ability to safely maneuver around the airport taxiways and dictate pavement fillet design. Taxiways and taxilanes can be constructed to different TDGs based on the expected use of that taxiway/taxilane by the design aircraft.

Currently the primary taxiways at the airport are constructed to TDG 2A standards which can accommodate the future critical aircraft and exceeds the needs of the existing critical aircraft (TDG 1A). If in the future the airport transitions to a B-II(small) ARC, taxiways providing access to the runway and select apron areas should meet TDG 2A standards to accommodate the future critical aircraft. However, it should be noted that in a B-II(small) environment, taxilanes providing access to hangar areas, and aprons will serve a variety of aircraft including those characterized by TDG 1A, 1B, 2A, and 2B. The TDG classification for these areas will be based on aircraft for which they are intended and determined in the development alternatives process.

FAA DESIGN STANDARDS

FAA Advisory Circular 150/5300-13B, Airport Design is the primary reference in establishing the geometry of airfield facilities. As discussed previously, these standards have been applied inconsistantly over the past several years. A comparison of existing condition dimensions as shown on the ALP and the appropriate standards based on the current and future ARC classifications discussed in the *Critical Aircraft and Airport Reference* Code section is summarized in **Table 3-2**.

TABLE 3-2: FAA DESIGN STANDARDS SUMMARY

FAA STANDARD	RUNWAY 18/36 EXISTING CONDITIONS EXISTING STANDARD AS DEPICTED ON CURRENT ALP	RUNWAY 18/36 ARC B-I(small) NOT LOWER THAN 1-MILE OR VISUAL EXISTING STANDARD	RUNWAY 18/36 ARC B-II(small) NOT LOWER THAN 1-MILE OR VISUAL FUTURE STANDARD
Runway Length	7,300'	See Runway Length Analysis Discussion	
Runway Width	60'	60'	75'
Runway Shoulder Width[1]	10'	10'	10'
Runway Safety Area			
• Width	120'	120'	150'
• Beyond RWY End	240'	240'	300'
• Prior to Land Threshold	240'	240'	300'
Runway Obstacle Free Zone			
• Width	250'	250'	250'
• Beyond RWY End	200'	200'	200'
• Prior to Land Threshold	200'	200'	200'
Object Free Area			
• Width	400'	250'	500'
• Beyond RWY End	240'	240'	300'
Prior to Land Threshold	240'	240'	300'
Runway Protection Zone Length	RWY 18: 1,000'	RWY 18: 1,000'	RWY 18: 1,000'
	RWY 36: 1,000'	RWY 36: 1,000'	RWY 36: 1,000'
Runway Protection Zone Inner Width	RWY 18: 250'	RWY 18: 250'	RWY 18: 250'
	RWY 36: 250'	RWY 36: 250'	RWY 36: 250'
Runway Protection Zone Outer Width	RWY 18: 450'	RWY 18: 450'	RWY 18: 450'
	RWY 36: 450'	RWY 36: 450'	RWY 36: 450'
Runway Centerline to:			
• Parallel Taxiway	240'	150'	240'
• Holding Position	183' [2]	125'	125'

Notes:
1. Turf, aggregate-turf, soil cement, lime or bituminous stabilized soil as measured outwards from the runway edge are recommended adjacent to ADG I runways.
2. Existing hold lines are oriented 45° to Runway. Measurement provided is to the hold line at its nearest point to the runway.

Regional Settings Goals and Requirements

The requirements and goals for the airport regional setting are comprised of those that affect the greater context of the Airport regarding the impacts that it has on the social, economic, and environmental issues of the region, county, and city. The regional setting impacts considered include location and vicinity, socio-economic factors, airport operations and system role, relevant studies, environmental data, local surface transportation, and land use/zoning on and around the Airport.

LOCATION AND VICINITY

The Airport is located approximately seven miles north of the City of Eureka in Eureka County, Nevada, serving eastern Nevada including Eureka and White Pine Counties. Surface Access from the surrounding community is readily available via Highway 50 and Highway 278. The Airport is positioned amongst open rangeland and cropland, primarily used for agricultural purposes.

FACILITY GOAL:
It is recommended that the Airport be maintained in its current location where it can continue to serve the surrounding community.

AIRPORT OPERATIONS AND SYSTEM ROLE

Eureka Airport is classified as a Basic GA Airport in the NPIAS, and as a B-I Local GA Airport in the Nevada State System Plan. Locally, the Airport supports a variety of GA operations, including recreational flights, emergency medical services, and business air traffic. Eureka also serves as a BLM air base, providing support during fire season. These roles are appropriate for airports of similar size and activity levels to Eureka Airport. In the event that the Airport documents growth in B-II operations to 500 annual operations, a code change to B-II may be necessary. A code change to B-II would require widening of the runway, and increased clearances for FAA Design Surfaces, which are discussed later in this chapter.

FACILITY REQUIREMENT:
It is recommended that the Airport maintains B-I (small) status but monitors for signs of growth to B-II (small).

FACILITY GOAL:
It is recommended that the Airport investigates a based medevac service provider presence at the Airport to better serve the community emergency medical needs.

RELEVANT STUDIES

There are several local, regional, and statewide studies available that provide relevant information about the Airport and the greater community. The studies listed below are discussed in more detail in Chapter 2 – Existing Conditions Analysis – have been incorporated into the planning process to provide greater context in the planning process.

- 2015 Airport Master Plan
- 2022 Nevada Airport and Heliport System Plan and Airport Economic Impact Study
- 2010 Eureka County Master Plan

FACILITY GOAL:
It is recommended that the Airport works with Local and State entities to update comprehensive plans and system plans to reflect the recommendations of this ALP Update.

ENVIRONMENTAL AND CULTURAL RESOURCES DATA

Environmental and cultural resources screenings of the Airport property are currently underway. This section will be updated upon delivery of those reports.

FACILITY GOAL:
It is recommended that the Airport works with Local, State and Federal agencies to conduct appropriate environmental evaluations and permitting for future development projects.

LOCAL SURFACE TRANSPORTATION

Local surface transportation access to the Airport is provided from Highway 50 via Highway 278. Upon entering the airport property, vehicles use an asphalt-paved driveway to the apron and hangar area. Drivers may also use the parallel taxiway or dirt trails to access outlying areas of the property. Access is considered to be adequate for the Airport's level of activity.

FACILITY GOAL:
It is recommended that the Airport Coordinate with State DOT on future transportation improvements on Highway 50 and Highway 278.

FACILITY GOAL:
It is recommended that additional vehicle access be constructed with the addition of any proposed hangar or apron areas.

LAND USE & ZONING

As discussed in Chapter 2 – Existing Conditions Analysis – the Airport is situated in a primarily agricultural use area dominated by open rangeland and cropland. There is a small pocket of low-density residential development west of the property.

Eureka County has not adopted any zoning ordinances into the county code, including airport overlay zones. It is advisable for municipalities to, at minimum, adopt airport overlay zones to protect the Airport's Federally mandated CFR 14 Part 77 airspace from incompatible development that could jeopardize the safe operation of aircraft in the vicinity of the Airport.

FACILITY GOAL:
It is recommended that the Airport work with Eureka County to codify CFR 14 Part 77 airspace surfaces as airport overlay zoning to protect the airspace of Eureka Airport from incompatible development.

Airside Facility Goals and Requirements

Airside facilities include the airspace around the Airport, approach procedures, runways, taxiways/taxilanes, apron/aircraft parking areas, navigational aids, signage, and lighting systems.

14 CFR PART 77

U.S. airport airspace is defined by Title 14 of the Code of Federal Regulation (CFR) Part 77.25 – Objects Affecting Navigable Airspace, (Part 77). Part 77 defines airport imaginary surfaces that are established to protect the airspace immediately surrounding a runway. The airspace surfaces and ground areas surrounding a runway should be free of obstructions (i.e., structures, parked aircraft, trees, etc.) to the maximum extent possible to provide a safe aircraft operating environment. The Part 77 surfaces are described in Chapter 2 – Existing Conditions Analysis.

Prior surveys and inspections, including a 2023 inspection by NDOT identified "unlighted power poles" that penetrate the Runway 36 Part 77 20:1 approach surface. The NDOT inspector recommended establishing a displaced threshold to clear the obstructions, as well as the addition of obstruction lighting to the poles and orange ball markers to the catenary in the approach path.

Facility Requirement:

It is recommended that the Airport mitigate all Part 77 and TERPS airspace obstructions including public roads and powerlines in Runway 36 approach surface and Runway 18 departure surface. Above-ground power lines and poles located on the apron should be evaluated for Part 77 penetrations. Appropriate lighting and markings should be considered.

INSTRUMENT FLIGHT PROCEDURES

There are published approach and departure procedures available to properly equipped aircraft operating at Eureka. The RNAV (GPS) approach procedure to Runway 18 offers visibility minimums as low as 1 mile to category A and B aircraft, and 1 1/8 mile for C and D aircraft. The GPS circling approach has visibility minimums of 1 1/4 mile for Category A, 1 1/2 mile for Category B, and 3 miles for Category C and D. The Mines One departure procedure provides departure vectors to all categories of equipped aircraft departing on Runway 36.

FACILITY GOAL:

It is recommended that the Airport work with FAA Flight Procedures Team to update procedures to correspond with any changes in runway geometry resulting from the outcome of the development alternatives process.

RUNWAY

Facility goals and requirements for Runway 18/36 were evaluated relative to orientation, length, width, and FAA design standards.

Runway clearance standards defined in the AC were evaluated against the existing taxiway and taxilane system. The results are summarized in the sidebar to the right.

FAA RUNWAY DESIGN STANDARDS

Runway Safety Area (RSA)

Existing Standard: The B-I(small) runway with greater than 1-mile visibility minimums standard is 120' wide or 60' each side of runway centerline and 240' beyond runway ends. Additional gradient standards apply.

Future Standard: The B-II(small) runway with greater than 1-mile visibility minimums standard is 150' wide or 75' each side of the runway centerline and 300' beyond the runway ends with additional gradient standards.

Condition: The RSA for Runway 18/36 appears to meet existing FAA dimensional, object clearing, and grading standards but future planning will require that the Airport satisfies future design standard requirements.

Runway Object Free Area (ROFA)

Standards: The B-I(small) runway with greater than 1-mile visibility minimums standard is 250' wide or 125' each side of runway centerline and 240' beyond runway ends. Additional gradient standards apply.

Future Standard: The B-II(small) runway with greater than 1-mile visibility minimums standard is 500' wide or 250' each side of the runway centerline and 300' beyond the runway ends with additional gradient standards.

Condition: The OFA for Runway 18/36 depicted on the ALP exceeds the existing standard but is short of the future standard. Future runway projects should apply ROFA standards justified at the time of design.

Runway Object Free Zone (ROFZ)

Existing/Future Standards: OFZ standards are based on approach visibility minimums of the runway, and the size and approach speeds of the aircraft using the runway. Standards for operations on runways by small aircraft with approach speeds greater than 50 kts are 250' wide or 125' each side of runway centerline and 200' beyond runway ends.

Condition: The OFZ for Runway 18/36 depicted on the ALP appears to meet FAA dimensional and obstacle clearing standards.

RUNWAY ORIENTATION AND CROSSWIND COVERAGE

Runway orientation is a function of wind velocity and direction, combined with the ability of aircraft to operate under given conditions. FAA has defined the maximum allowable crosswind for small aircraft as 10.5 knots and 13 knots for larger general aviation aircraft.

The FAA recommends that primary runways accommodate at least 95% of local crosswind conditions. When this level of coverage is not provided, a crosswind runway should be considered. The updated wind analysis described in Chapter 2 – Existing Conditions Analysis - indicates that Runway 18/36 is able to accommodate more than 95% of all weather wind conditions for both small and larger general aviation aircraft. The results of the analysis are summarized in Table 2-6 in the previous chapter.

Facility Requirement:

The current configuration of Runway 18/36 provides sufficient wind coverage for both small and large aircraft. This configuration should be maintained throughout the planning period. While a dedicated crosswind runway is not justified or eligible for FAA funding, the existing alternate landing area (that is configured for crosswind operations) should be maintained.

RUNWAY LENGTH

Guidance for determining appropriate runway length is presented in FAA *Advisory Circular (AC) 150-5325-4B, Runway Length Requirements for Airport Design*. The AC determines runway length based on several factors including airport elevation, mean maximum daily temperature of the hottest month, airport regional setting, and characteristics of the critical aircraft for which the runway is designed. The elevation at Eureka Airport is 5,957.8 feet with a mean maximum daily temperature of the hottest month of 90.4° F. The existing critical aircraft is the Beechcraft Baron 58, and the future critical aircraft is the Beechcraft King Air 200.

The FAA requires that airports demonstrate that they experience at least 500 annual operations by a specific aircraft type in order to provide funding to construct the runway to meet the needs of that aircraft. Eureka Airport primarily serves small, single-engine piston aircraft, with MTOW of less than 12,500 pounds. There are not enough documented cases of operations by large aircraft such as the King Air 200 to justify it as critical aircraft for runway length evaluation. As such, the runway length will be evaluated against the requirements of the existing critical aircraft (Beechcraft Baron 58).

The methodology for determining runway length is described in *AC 150/5325- 4B, Section 205*, Small Airplanes with Approach Speeds of 50 Knots or More with Maximum Certificated Takeoff Weight of 12,500 Pounds (5,670 Kg) Or Less. This methodology instructs the designer to use calculation curves presented in one of two figures based on the passenger capacity of the aircraft for which the runway is intended. AC Figure 2-1 is intended for aircraft with fewer than 10 seats, like the Beechcraft Baron 58.

AC Figure 2-1 has two sets of runway length curves differentiated by “Percent of Fleet”, either 95% or 100% of fleet. The differences between the two percentage categories are based on the airport’s location and the amount of existing or planned aviation activities. The 95% of fleet curve should be used for medium sized population communities with a diversity of usage and a greater potential for increased aviation activities. Also included in this category are those airports that are primarily intended to serve low-activity locations, small population communities, and remote recreational areas. The 100% of fleet curve should be used for runways intended to serve communities on the fringe of metropolitan areas or a relatively large population center remote from a metropolitan area. Eureka Airport is best described by the 95% of fleet category.

Referencing Eureka’s elevation and mean maximum temperature on the 95% of fleet curve results in a runway length of 7,300 feet, which matches the Airports current runway length.

FACILITY REQUIREMENT:
It is recommended that the Airport maintains the current 7,300-foot length through the planning period

RUNWAY WIDTH AND SHOULDERS

Runway and shoulder width requirements are dependent on the AAC and ADG of the critical aircraft and are defined in *AC 150/5300-13B Airfield Design*. In the AC, Table G-1 *Runway Design Standards Matrix, A/B-I Small* Aircraft specifies a runway width of 60 feet and a shoulder width of 10 feet for A/B-I(small) runways with visibility minimums not lower than 1 mile, which matches the current runway width at Eureka Airport. In the same AC, Table G-3. *Runway Design Standards Matrix, A/B-II Small* specifies a width of 75 feet for A/B(small)-I runways with the same visibility minimums.

FACILITY REQUIREMENT:
It is recommended that the Airport maintain the current 60 feet width with 10 feet shoulders. In the event the Airport is able to document 500 annual operations by ADG II aircraft, the runway should be widened to 75 feet.

RUNWAY PAVEMENT STRENGTH

An ARC B-I(small) runway should be designed with pavement built to 12,500 single wheel (SW) bearing capacity . In 2012 the runway was reconstructed with a 30,000 pound SW pavement design, which exceeds what is required for the current airport fleet mix.

FACILITY REQUIREMENT:
It is recommended that the Airport maintains the current 30,000 pound SW pavement strength through the remaining useful life of the runway. At the time of the next reconstruction the pavement should be designed to match the fleet mix of the airport at that time.

RUNWAY PROTECTION ZONE (RPZ)

In October 2012, the FAA released interim guidance regarding RPZs and incompatible land uses, including a focus on roads. This guidance directs airport sponsors to evaluate any planned changes to existing RPZs that introduce or increase the presence of roads in RPZs. Existing roads within RPZs are also to be evaluated during master planning to determine if feasible alternatives exist for realignment of a road outside RPZs or for changes to the RPZs themselves.

The most recent update of the FAA Airport Design advisory circular (AC 150/5300-13B, Appendix I) identifies several common conditions and facilities that are considered compatible with RPZs.

The FAA recommends airport control of RPZ through property ownership or acquisition of an avigation easement that limits specific conditions and defines vertical clearances for the corresponding approach surfaces. In general, proposed runway changes that reduce the presence of incompatible land uses such as roads, housing, schools, or other areas of public gathering in an RPZ are considered to provide incremental safety benefits.

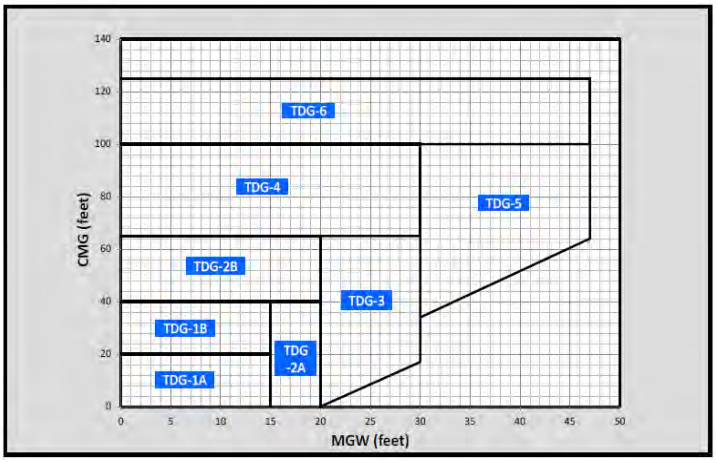
Runway 18 RPZ remains on property and does not contain incompatible land uses. However, runway 36 RPZ extends off airport property and is bisected by Highway 278.

FACILITY REQUIREMENT:
It is recommended that the Airport further evaluates opportunities to minimize the incompatible land uses (Highway 278) in Runway 36 RPZ.

TAXIWAYS & TAXILANES

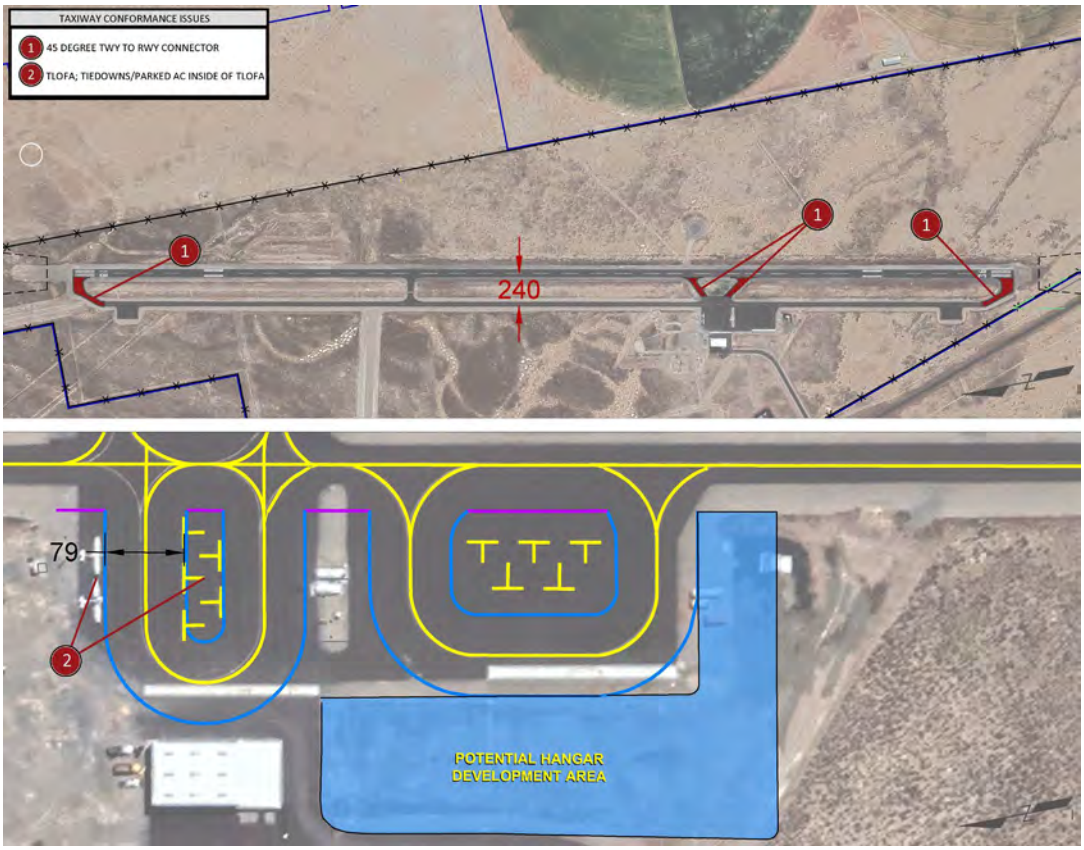
Taxiway and taxilane standards are outlined in Chapter 4 of AC 150/5300-13B. The AC establishes the standards based on ADG which establishes lateral clearances based on wingspan and wingtip clearances, and Taxiway Design Groups (TDG) which defines centerline and pavement fillet dimensions needed based on the maneuverability of an aircraft. The TDG is determined by the main gear width (MGW) and cockpit to main gear distance (CMG). The TDG most representative of the existing critical aircraft is TDG 1A which can accommodate aircraft with MGW up to 15 feet and CMG up to 20 feet. The future critical aircraft is best characterized by TDG 2A which covers aircraft with MGW over 15 feet but less than 20 feet, and CMG greater than 20 feet and less than 40 feet. See Figure 3-1 for a detailed breakdown of TDG classifications.

FIGURE 3-1: TAXIWAY DESIGN



The taxiway issues discussed below are depicted in **Figure 3-2.**

FIGURE 3-2: TAXIWAY CONFORMANCE ISSUES



The parallel taxiway and connector taxiways are 35 feet wide, which exceeds the TDG 1A standard and matches the TDG 2A standard. The centerline and pavement edge fillets are also consistent with TDG 2A standards. It is permissible for an airport to exceed standards in certain situations with the understanding that FAA may only fund maintenance on pavement needed to accommodate the critical aircraft. Additional expense accrued to maintain pavements that exceed standards may be the responsibility of the airport sponsor.

FACILITY REQUIREMENT:
It is recommended that the Airport maintains the current 35-foot taxiway width and TDG 2A pavements and markings. The Airport should coordinate with FAA to determine funding responsibilities for maintenance of the taxiways.

Connector Taxiways A1, A2, A3, and A5 are configured at 45-degree angles to the runway centerline. This is not a preferred configuration since it limits the visibility of a pilot entering the runway. Also, Taxiways A2 and A3 allow direct access to the runway from the north apron. This is not recommended, and the taxiways should be reconfigured so pilots can more easily distinguish between the taxiways and runway.

FACILITY REQUIREMENT:
It is recommended that the Airport reconfigure the 45-degree runway connector taxiways to 90-degrees. The direct runway access at Taxiways A2 and A3 should also be addressed when reconfigured.

The existing taxiway to runway separation is 240 feet. The standard for a B-I (small) runway is 150 feet. The 240 feet separation meets the standard for future critical aircraft. Again, exceeding the standard is allowed with the understanding that the FAA may choose not to provide funding to cover the extra cost of maintenance.

Taxiway clearance standards defined in the AC were evaluated against the existing taxiway and taxilane system. The results are summarized in the sidebar to the right.

FACILITY GOAL:
It is recommended that the Airport maintains the current 240-foot Runway to Taxiway centerline separation.

FAA TAXIWAY/TAXILANE DESIGN STANDARDS

Taxiway Safety Area (TSA)

Existing Standard: ADG I standard is 49’ wide or 24.5’ each side of taxiway centerline for the entire length of the taxiway. Additional gradient standards apply.

Future Standard: ADG II is 79’ wide or 39.5’ each side of the taxiway centerline for the entire length of the taxiway. Additional gradient standards apply.

Condition: The existing TSAs on the Airport appear to meet FAA dimensional and grading standards. Future planning will require that the Airport satisfies future design standard requirements.

Taxiway Object Free Area (TOFA)

Standards: TOFA for ADG I standards is 89’ wide or 44.5’ each side of taxiway centerline.

Future Standard: TOFA for ADG II is 124’ wide or 62’ each side of the taxiway centerline.

Condition: The existing parallel Taxiway “A” TOFA and connector taxiway TOFAs meet FAA dimensional standard for ADG I. Future planning may require future design standard requirements for ADG II.

Taxilane Object Free Area (TLOFA)

Standards: TLOFA for ADG I standards is 79’ wide or 39.5’ each side of taxiway centerline.

Future Standard: TLOFA for ADG II is 110’ wide or 55’ each side of the taxiway centerline.

Condition: The taxilanes on the south apron meet TLOFA clearance requirements for ADG II aircraft. However, on the north apron, the distances from the taxilane centerlines to the top of ‘T” of the parking tiedowns is 55’. With this configuration, the nose of an aircraft parked on the tiedowns would extend into the TLOFA. The taxilanes and aircraft parking positions on the north apron should be reconfigured to clear the ADG I TLOFA. See **Figure 3-2.**

APRONS AND TIEDOWNS

The Airport currently has two apron areas totaling 97,300 square feet and there are currently twelve aircraft parking positions available on the two aprons with three based aircraft parked on apron tiedowns leaving nine parking positions available for transient aircraft use.

The 2015 Airport Master Plan forecasts a total of seven based aircraft by 2035. Generally, it is assumed that owners prefer to store their aircraft in hangars to protect them from the elements. However, in the event that a seventh aircraft bases at Eureka and it chooses to park on the apron, the Airport's existing apron has ample space to accommodate it.

Transient aircraft parking requirements were determined using the Busy Day operations estimate which was calculated using fuel sales data from the last five years. The Busy Day estimate is assumed to be 150% of the average day in the Peak Month. Average monthly fuel sales were calculated to identify the peak month. It is assumed that the peak month of fuel sales will mirror the peak month of aircraft operations. July and September were identified as the peak months, each accounting for 16% of fuel data, and by extension, operations. A summary of the peaking calculation for the current operations estimate as well as for the 2035 forecasted operations from the 2015 Airport Master Plan is presented in **Table 3-3**.

TABLE 3-3: OPERATIONAL PEAKS

	2023 Ops	2035 Ops*
Annual Ops	1500	2300
Peak Month (16%)	240	368
Design Day (Ave in Peak Month)	8	12
Busy Day (Assumed 150% Design Day)	12	18
Design Hour Ops (Assumed 20% Design Day)	2	2

* 2015 AMP Forecast

Parking needs for transient aircraft were calculated to be 25% of Busy Day operations. This multiplier assumes that 50% of the operations at that time are departures and 50% of the remaining operations will require apron parking at one time. Using this formula, it is estimated that the Airport currently requires three tiedowns for transient parking. The same procedure was repeated using forecasted operations from the 2015 Airport Master Plan. The results indicate that the Airport will require up to five (5) aircraft parking tiedowns for transient aircraft.

FACILITY REQUIREMENT:

It is recommended that the Airport maintains at least four (4) tiedowns to accommodate based aircraft storage and five (5) tiedowns on the apron to accommodate transient aircraft parking.

Eureka is an isolated community from an emergency medical response point of view. The community has a medical clinic, but it does not provide emergency medical services. The Airport serves as a lifeline for medical flights transporting critical patients to emergency medical facilities across the region. Medevac helicopters are often used to provide emergency medical transport services from Eureka. In addition to medevac helicopters, BLM and NDOW also operate helicopters at the Airport. Currently, helicopters park on the apron with the fixed wing aircraft. It is generally preferred to separate fixed wing and helicopters on the apron as prop wash from taxiing helicopters can kick up FOD (foreign object debris) and damage parked aircraft.

FACILITY GOAL:

It is recommended that the Airport establishes one (1) dedicated helicopter parking position separated from the fixed wing parking to accommodate transient helicopter parking.

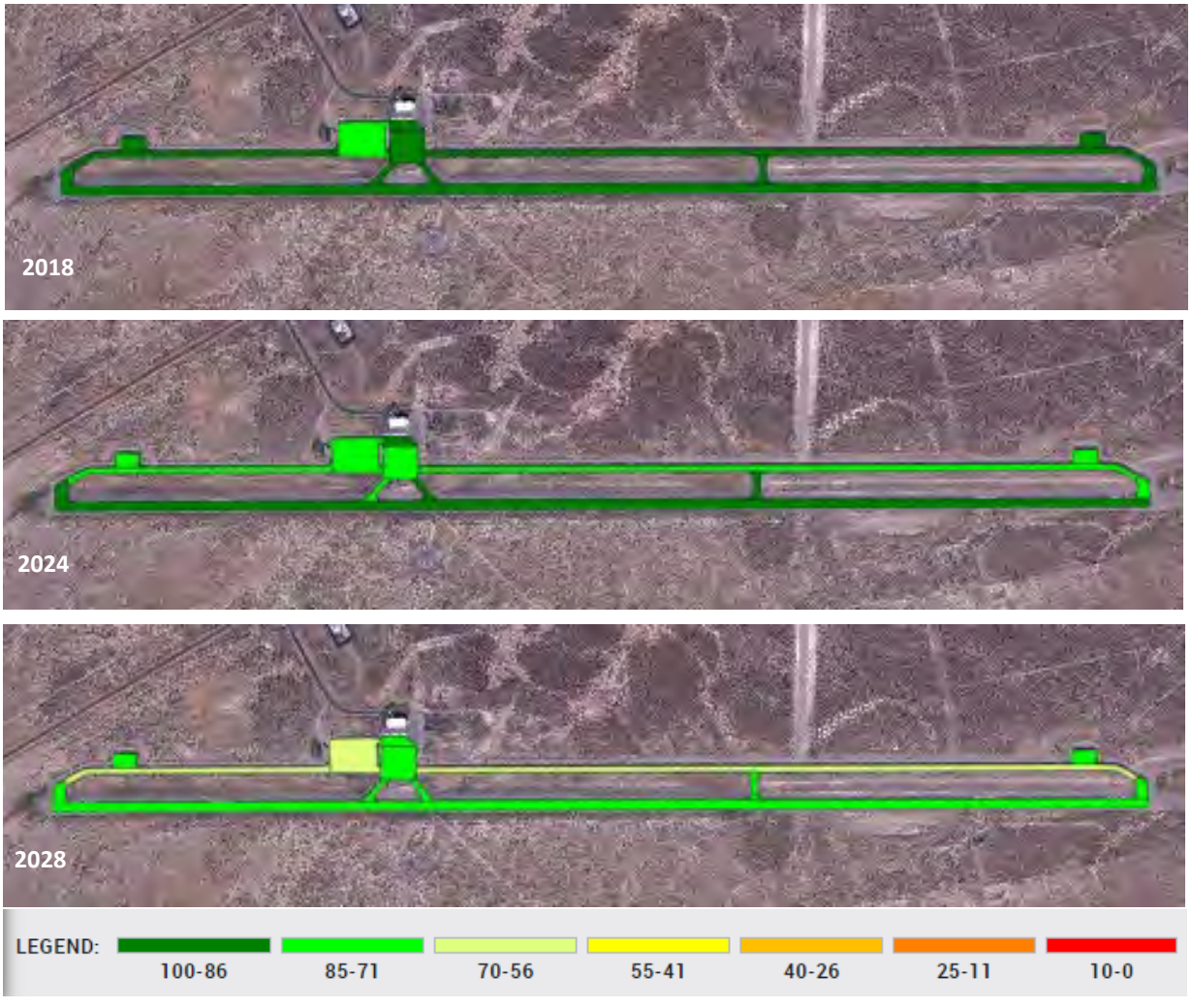
AIRFIELD PAVEMENT CONDITION

The most recent pavement condition evaluation was performed by NDOT in 2018. A graphical depiction of pavement condition in 2018 along with predicted conditions for 2024 and 2028 (assumes no future pavement maintenance) is presented in **Figure 3-2**. The pavements are currently in excellent to good condition. The parallel taxiway will likely require minor maintenance towards the end of the decade.

FACILITY REQUIREMENT:

It is recommended that the Airport coordinates with NDOT to monitor and maintain pavements through IDEA program.

FIGURE 3-2: AIRFIELD PAVEMENT CONDITION



AIRFIELD SUPPORT FACILITIES

Airfield support facilities include runway and taxiway lighting, airfield lighting, airfield signage, weather reporting, navigation aids (NAVAIDS), and fueling facilities.

RUNWAY/TAXIWAY LIGHTING

Runway 18/36 currently has a High Intensity Runway Lighting (HIRL) system in place and it is in good condition. The taxiways and apron have blue edge reflectors that are in good condition. Lighting systems have a typical life of twenty years, though some systems may operate reliably for longer periods.

For planning purposes, the useful life of airfield lighting is assumed to be 20 years.

FACILITY REQUIREMENT:
It is recommended that the runway lighting system and taxiway reflectors be maintained through the remainder of its useful life. The lighting should be updated as necessary to address any changes to the runway identified in the Development Alternative analysis process.

AIRFIELD LIGHTING

The Airport's rotating beacon is in good condition, is operable, and meets standards for location, type, and color. There is a lighted windsock inside the segmented circle on the east side of the runway. There is currently an ongoing project to add two additional lighted windsocks to the airfield, one on the north and one on the south.

FACILITY REQUIREMENT:
It is recommended that the existing airfield lighting system be maintained in its current configuration and updated as required.

AIRFIELD SIGNAGE

The runway-taxiway system has lighted mandatory instruction signs marking the aircraft hold positions at each of the taxiway connections with the runway, and lighted taxiway direction/ designation signs to guide pilots through the taxiway system. The signs appear to be in good working order.

FACILITY REQUIREMENT:
It is recommended that the existing airfield signage be maintained in its current configuration and updated as required.

WEATHER REPORTING

Eureka Airport has an AWOS-3 installed on site that records and broadcasts altimeter, wind, temperature, precipitation, dewpoint, density altitude, visibility, cloud/ceiling data. In addition to broadcasting these data in real-time, they are also transmitted to the National Climatic Data Center (NCDC) where they are stored and available to be downloaded for runway wind coverage and other meteorological studies. There is also ASOS instrumentation installed on site. The reason for the duplication of service is unknown.

FACILITY REQUIREMENT:
It is recommended that the AWOS and ASOS continue to be maintained and updated as needed.

NAVIGATION AIDS (NAVAIDS)

The Airport has the following visual NAVAIDs: Precision Approach Path Indicators (PAPI) located 800 feet from each runway end, Runway End Identifier Lights (REIL) located at each runway end, and a rotating beacon located on the north edge of the apron. There are no electronic NAVAIDs on the Airport. All NAVAIDs on the Airport are in good working condition and operate normally.

FACILITY REQUIREMENT:
It is recommended that the PAPIs, REILs, and rotating beacon continue to be maintained. The PAPIs and REILs should be reconfigured to correspond with any future changes in runway geometry.

AIRCRAFT FUEL

Eureka Airport has a County-owned self-serve fuel dispensing system with above ground tanks located at the center of the main apron. The system dispenses 100-octane low lead (100LL) and jet fuel (Jet-A).

FACILITY GOAL:
It is recommended that the Airport maintains the current fuel system and updates as necessary.

SNOW REMOVAL EQUIPMENT

The Airport has two snow removal trucks. The first is a legacy truck, purchased with County funds. The second was purchased in 2018 using Federal AIP funds. An AIP-funded Snow Removal Equipment (SRE) building project was designed in 2023 and will be put out to bid in 2024. Construction of the SRE building is slated on the current CIP to take place in the 2024 fiscal year.

Landside Facility Goals and Requirements

Landside facilities include terminal buildings, hangars, airport fencing, surface roads and parking, and utilities. Goals and requirements for these facilities are discussed below.

TERMINAL BUILDING

The Airport has a terminal building that has a restroom, kitchen, pilot lounge/meeting space, crew quarters, and resources for pre-flight planning such as Wi-Fi provided by the County. The Terminal building is in good condition, has ample room, and meets the needs of the pilot community.

FACILITY REQUIREMENT:
It is recommended that the existing terminal building be maintained and that through the development alternatives process, adequate space for future business and commercial uses to accommodate changing market demand should be identified.

HANGARS

The Airport has a single 5,000 square foot box fuel attached to the FBO that houses 3 single engine piston aircraft with the space to accommodate more. There is currently no wait list for hangar space at the Airport, but County staff report that there have been informal inquiries about building hangars on site.

The current and future aircraft storage needs are accommodated by the existing hangars and tiedown areas. However, establishing hangar development areas around the current apron would allow users to elect to construct hangar storage on leased airport property, providing additional covered storage capacity to users and additional revenue to the Airport.

FACILITY GOAL:
It is recommended that the airport develop hangar lease areas around the terminal ramp to provide additional aircraft storage and generate additional income.

AIRPORT FENCING

The airport has a 3-strand barbed wire fence around the property and a shorter section of 3-strand barbed wire fence that runs from southwest of the apron to the access drive on the south side of the terminal building. There is a chain link manual security gate crossing the access road at that point to control access to the apron area after hours.

While the FAA does not require full perimeter fencing around airports, wildlife fencing is recommended to keep wildlife off the airport surfaces and enhance the security of the facility.

FACILITY GOAL:
It is recommended that a wildlife perimeter fence be installed to limit wildlife encounters on the airfield.

AIRPORT SURFACE ROADS

The Airport has one access road from Highway 278 which is access controlled by a locked manual gate at the terminal building. The access road ends at the parking lot and apron area. Once on the airfield, users typically use taxiways, and aprons to get around the airport.

FACILITY GOAL:
It is recommended that the County work with NDOT to maintain the Airport's current access from Highway 278.

FACILITY GOAL:
It is recommended that the County maintain the existing asphalt drive from Highway 278 to the apron to provide surface access to the airport facilities.

VEHICLE PARKING

The airport has a gravel parking lot north of the hangar with space to park eight to ten vehicles. Additional parking is available in the unpaved areas around the apron and FBO. Generally, the current parking areas provide adequate capacity and access for users parking vehicles.

FACILITY GOAL:
It is recommended that the current vehicle park be upgraded and paved as required by future airport development identified in the development alternatives process. Additional parking should be considered with any terminal redesign development alternatives.

UTILITIES

The Airport has water, sanitary sewer, stormwater drainage, and electrical services on the property. Water is served by an onsite well and cistern tank managed by the County. Sanitary sewer is provided by a septic system near the terminal building. Stormwater drains off the property to the north via surface channels and culverts. Electrical service is provided by Mt. Wheeler Power and enters the property from Highway 278 right-of-way.

Generally, the Airport has adequate utility capacity to meet the users' needs. The one exception is the stormwater drainage culvert that crosses under Taxiway A5. At the time of the site visit, the culvert was obstructed by soil and debris preventing stormwater from exiting the property.

FACILITY GOAL:
It is recommended that the obstructed culvert under Taxiway A5 be cleared and regularly maintained to allow proper drainage off the Airport.

FACILITY GOAL:
It is recommended that the County work toward establishing municipal water supply services at the Airport.

Chapter 4

Development Alternatives

Introduction

Current and long-term planning for Eureka Airport is based on maintaining and improving the Airport's ability to serve its current and future fleet of general aviation aircraft which range from small single-engine piston aircraft to larger dual-engine turboprop aircraft. The goal of the following development alternatives is to accommodate the needs of the future fleet while also mitigating the local geographic, environmental, and fiscal challenges that are in play.

The alternatives depicted in this chapter address current and future facility demands and FAA airport design requirements discussed in Chapter 3 – Facility Requirements. All proposed facility improvements depicted within each alternative are evaluated against a set of categories that include cost estimates; operational capability; FAA design standards; airspace compatibility; and land use, transportation, and environmental compatibility.

The FAA recommends that airport plans be developed in an "unconstrained" manner when initially defining future demand and related facility improvements, rather than establishing pre-defined limits that drive the planning process. The evaluation of development alternatives for the Airport will be unconstrained, consistent with FAA guidance, forecast demand, and the defined facility goals and requirements.

Summary of Development Alternative Analysis Process

Developing effective alternatives for evaluation represents the first step in a multi-step process that leads to the selection of a preferred alternative. It is important to note that the current FAA-approved airport layout plan (ALP) identifies future improvements recommended in the last master planning process.

The first step in the development alternatives analysis process is to identify focused project elements needed to satisfy the facility requirements discussed in the previous chapter and then analyzed for further consideration. These project elements are then narrowed further into primary and secondary elements:

- Primary elements are improvements that present particularly complex and challenging issues, including those that require large property acquisitions or complex engineering solutions.
- Secondary elements are planned improvements that have greater planning flexibility and typically fill-in around and/or support primary elements.

PRIMARY ELEMENTS

The primary elements determined to meet the facility requirements and goals identified by stakeholders and planners include:

- Runway 18/36
  - Correct incompatible land uses (Highway 278 and Powerline) in Runway 36 RPZ
  - Clear 20:1 approach on Runway 36
  - Address direct runway access from apron
- Parallel Taxiway A
  - Correct 45° runway connector taxiways to 90°
- Crosswind runway/landing area
  - Preserve crosswind capabilities at the Airport

SECONDARY ELEMENTS

The secondary elements, which fit in around the primary elements, required to satisfy facility goals and requirements include:

- Hangar development
- Apron/tiedowns
- Aircraft Fueling
- BLM Operations Area
- Airport surface access
- Vehicle parking
- Airport Fencing

Next individual development alternatives are created to incorporate the relevant primary and secondary elements, with the goal of identifying general preferences for both individual items and the overall concepts being presented. The process allows the widest range of ideas to be considered and the most effective facility development concept to be defined.

The evaluation process utilized in this study is based on guidance provided in AC 150/5070-6B Airport Master Planning. Evaluation criteria categories selected to support the evaluation of development alternatives include:

Cost Estimate – Includes rough order magnitude cost estimates for the large definable projects typically associated with the primary elements to provide an apples-to-apples comparison of major elements depicted in the alternative. Detailed cost estimates are provided in Appendix B.

Operational Capability – Includes criteria that evaluate how well the airport functions as a system and can satisfy future activity levels, meet functional objectives such as accommodating the design aircraft, and provide for the most efficient taxiway system or aircraft parking layout.

FAA Design Standards – Includes an analysis of existing FAA design standards and various requirements or areas of focus currently identified by Advisory Circulars.

Airspace Compatibility – Includes the identification and analysis of the impacts that proposed changes to the airport environment would have on the local and regional airspace systems.

Land Use, Transportation, and Environmental Compatibility - Includes an analysis of best planning practices as they relate to land use, transportation systems, and a cursory analysis/identification of potential environmental effects as defined in FAA order 1050.1 Environmental Impacts Policies and Procedures and FAA Order 5050.4 FAA Airports Guidance for complying with NEPA.

By analyzing the development alternatives against the evaluation criteria presented above, and subsequently discussed with local stakeholders and interested Airport users, an iterative process of identifying and selecting elements of a preferred alternative will emerge that can best accommodate all required facility improvements. Based on the preferences of the airport sponsor, these elements will be consolidated into a draft preferred alternative that can be refined further as the County proceeds through the process of finalizing the remaining elements of the ALP. Throughout this process, public input and coordination with the Planning Advisory Committee (PAC), FAA, and Eureka County will also help to shape the preferred alternative.

To aid in the comparison of the development alternatives and aid stakeholder in selecting a preferred alternative, the findings of the above-described analysis are summarized as pros and cons for each alternative discussed below.

Once the preferred alternative is selected, a detailed implementation plan will be created that identifies and prioritizes specific projects to be implemented. The elements of the preferred alternative will be integrated into the updated ALP drawings that will guide future improvements at the airport.

Development Alternative Summaries

The development alternatives are intended to facilitate a discussion about the most effective way to meet the facility needs of the airport. The facility needs identified in the previous chapter and depicted accordingly within each development alternative include a variety of airside and landside needs. Items such as lighting improvements, minor roadway extensions and pavement maintenance do not typically require an alternatives analysis and will be incorporated into the preferred development alternative and the ALP.

Individual alternatives are presented for each of the three primary elements identified. The primary elements and associated alternatives are organized accordingly:

- Primary Runway 18/36 and parallel Taxiway A
  - No-Build Alternative
  - Runway Alternative 1A – 334’ runway shift and highway realignment
  - Runway Alternative 1B – 334’ runway shift with no highway realignment
  - Runway Alternative 2 – 1,086’ runway shift
  - Runway Alternative 3 – 140’ displaced threshold
- Crosswind Runway/Alternate Landing Area 9/27
  - No-Build Alternative
  - Crosswind Alternative 1 – 3,000’ gravel runway/alternative landing area
  - Crosswind Alternative 2 – 2,180’ gravel runway/alternative landing area
  - Crosswind Alternative 3 – 1,650’ gravel runway/alternative landing area

-

- Landside Facilities
  - No-Build Alternative
  - Landside Alternative 1
  - Landside Alternative 2

It is important to note that the eventual preferred alternative selected by the County may come from one of the alternatives for each element, a combination or hybrid of the alternatives for each element, or an entirely new concept that evolves through the evaluation and discussion of the alternatives.

RUNWAY 18/36 AND PARALLEL TAXIWAY A ALTERNATIVE SUMMARIES

The following elements are common to all the Runway 18/36 and Taxiway A build alternatives.

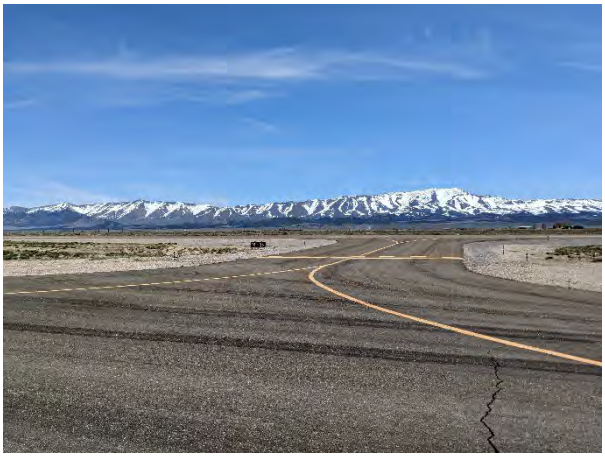
- Maintain existing 7,300' runway length
- Widen runway to 75' at the time of runway construction to accommodate future critical aircraft (ADG II)
- Replace 45° connector taxiways with 90° connectors to improve pilot sight lines and enhance operational safety
- Reposition hold lines to 125' from the runway centerline
- Obstacle lights and markers are installed on overhead power lines in the Runway 36 approach

NO-BUILD ALTERNATIVE

In the no-build alternative existing Runway 18/36 will be maintained in the current configuration with no proposed improvements outside of regular maintenance to preserve the pavement and associated lighting and signage. All existing non-standard conditions including unprotected RPZ with incompatible land use, obstructions in the Runway 36 20:1 approach surface, and 45° taxiway connectors and hold line will remain in place. None of the common elements described above are implemented in the no-build alternative.

PROS:

- Minimal financial investment required
- The runway and taxiway system will continue to operate as they do currently



CONS:

- Non-standard 45° taxiway connectors limit pilot visibility as they enter the runway
- Incompatible land uses remain in Runway 36 RPZ
- Runway 36 RPZ extends off-property and is unprotected from further encroachment of incompatible land uses
- Road and powerline obstruction remain as obstructions to the Runway 36 20:1 approach
- Failure to address non-standard conditions may jeopardize FAA grant assurances

RUNWAY ALTERNATIVE 1A – 334' RUNWAY SHIFT AND REALIGN HIGHWAY 278

Alternative 1A **(Figure 4-1)** shifts Runway 18/36 and Taxiway A north 334'. The shift positions the north edge of the Runway 18 RPZ just inside of the Airport's northern property line. Highway 278 and the adjacent powerline are

realigned approximately 255’ to the west outside of Runway 36 RPZ. The REILS and PAPIs at both ends are also repositioned to match the proposed runway end locations. An avigation easement protects Runway 36 RPZ where it extends beyond airport property.

The shift of the runway causes the east property fence to conflict with the northeast corner of the proposed runway object free area (ROFA). This is remedied by rerouting the fence outside of the proposed ROFA.

The estimated cost to design and construct this alternative as depicted is $6,198,600.

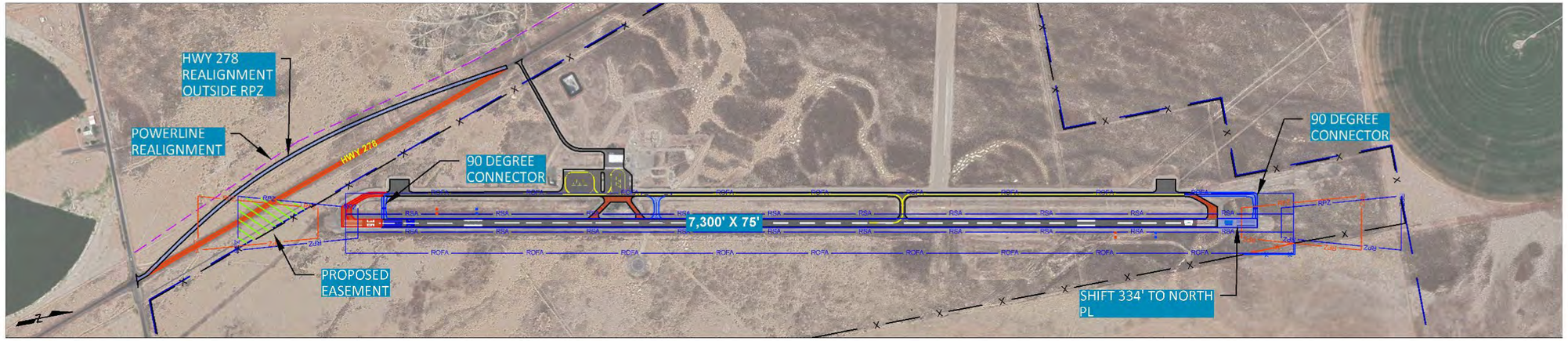
PROS:

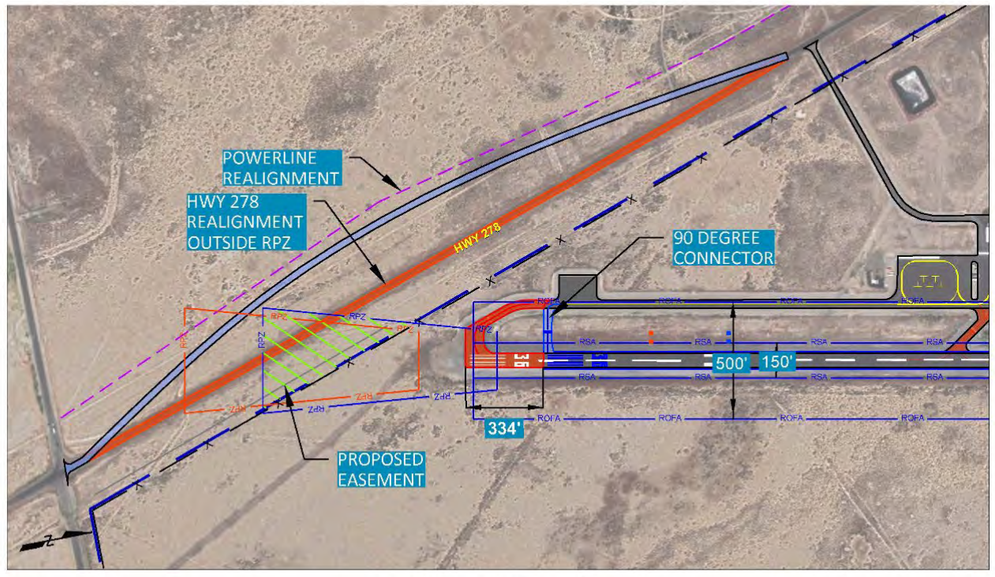
- Maintains current runway length
- Removes the incompatible land uses from RWY 36 RPZ (Highway 278 and powerline)
- Clears Highway 278 and powerline from RWY 36 Part 77 approach surface
- Maintains a clear ROFA

CONS:

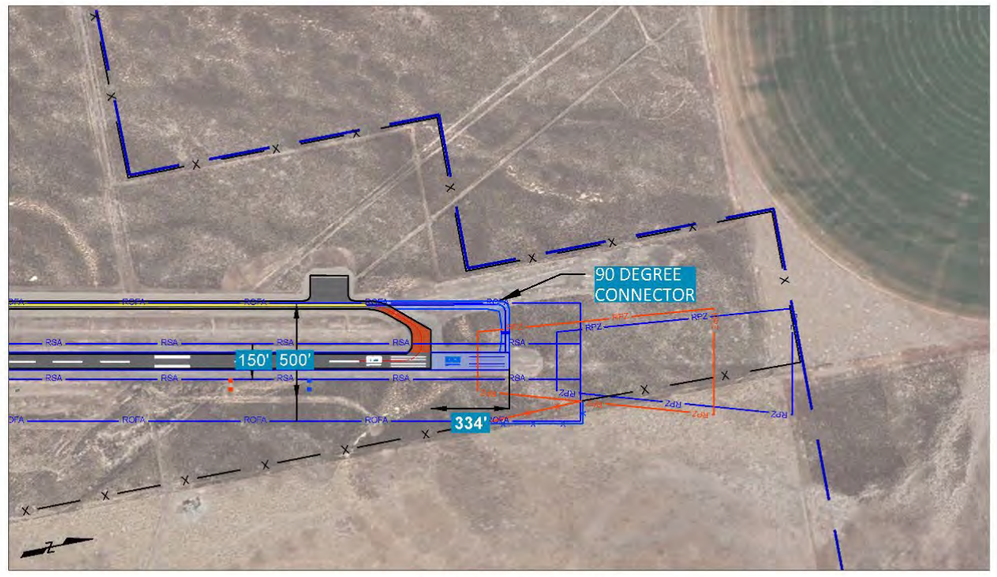
- Requires realignment of Highway 278 and adjacent powerline
- Requires property acquisition for Highway 278 ROW
- Requires close coordination with NDOT
- Extending parallel taxiway over drainage way may be challenging.

ALTERNATIVE 1A, 334’ RUNWAY SHIFT AND REALIGN HIGHWAY





RWY 36 END



RWY 18 END

AIRPORT PROPERTY | POWERLINES | FENCE | PROPOSED PAVEMENT | REMOVE | AVIGATION EASEMENT

FIGURE 4-1 – ALTERNATIVE 1A

RUNWAY ALTERNATIVE 1B - 334' RUNWAY SHIFT WITH NO REALIGNMENT OF HIGHWAY 278

Alternative 1B **(Figure 4-2)** features the same runway and taxiway configuration as Alternative 1A – a 334' runway and taxiway shift to the north – but omits the realignment of Highway 278. In this configuration, the highway intersects the southwest corner of Runway 36 RPZ. The REILS and PAPIs at each end are also relocated to match the proposed runway end locations. A proposed avigation easement protects Runway 36 RPZ where it extends beyond airport property.

Again, the shift of the runway causes the existing east property fence to intersect the northeast corner of the proposed ROFA and is rerouted around the ROFA to give appropriate clearance from the runway.

The estimated cost to design and construct this alternative as depicted is $4,574,020.

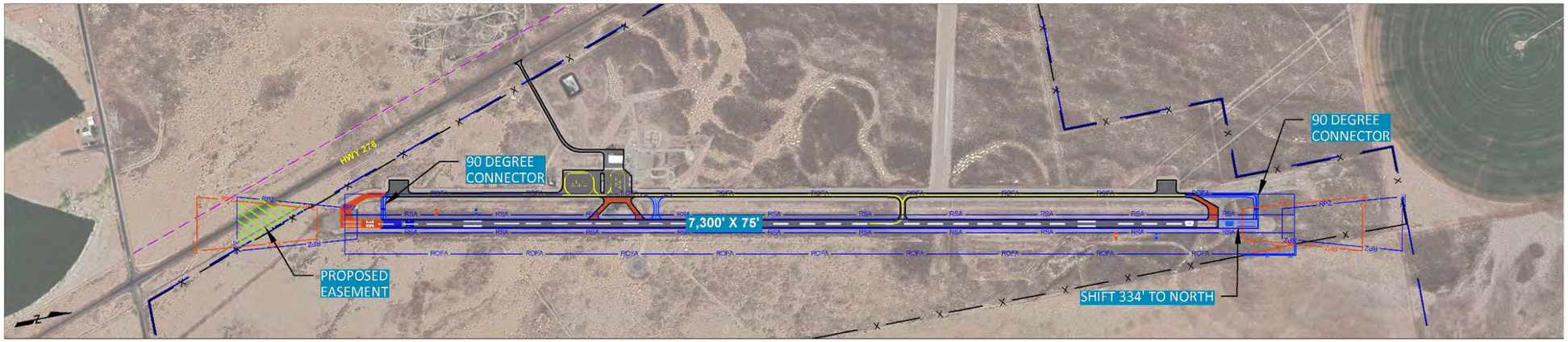
PROS:

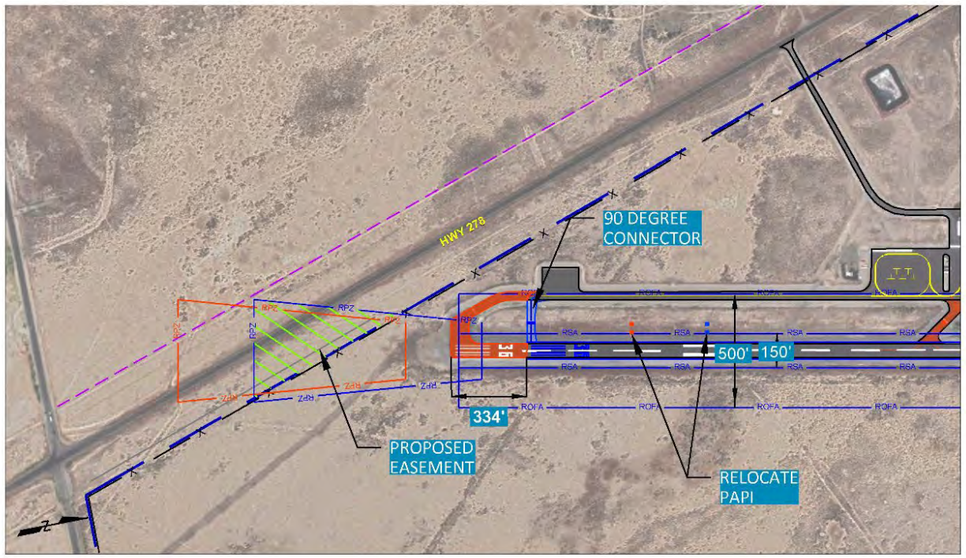
- Less expensive than Alternative 1A due to no property or ROW acquisition
- Incompatible land uses are moved farther out in RWY 36 RPZ (Highway 278 and powerline), lessening their impact.
- Clears Highway 278 and powerline from RWY 36 Part 77 approach surface
- Corrects angled connector taxiway geometry, improving pilots' visibility when entering the runway.
- RPZ is protected via avigation easement

CONS:

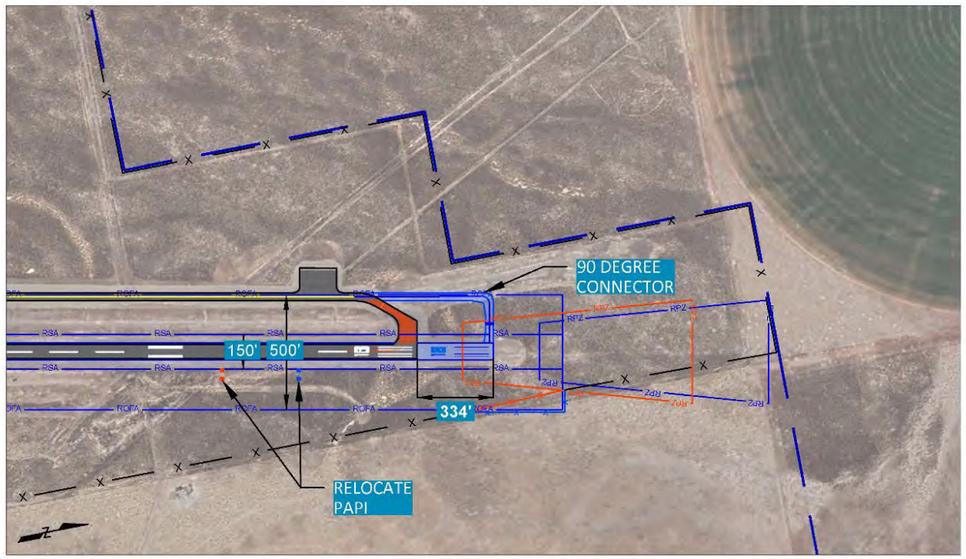
- Incompatible land uses (Highway 278 and powerline) remain in RWY 36 RPZ
- Extending parallel taxiway over drainage way may be challenging.

ALTERNATIVE 1B, 334' RUNWAY SHIFT WITH NO REALIGNMENT OF HIGHWAY





RWY 36 END



RWY 18 END

AIRPORT PROPERTY | POWERLINES | FENCE | PROPOSED PAVEMENT | REMOVE | AVIGATION EASEMENT

FIGURE 4-2 – ALTERNATIVE 1B

RUNWAY ALTERNATIVE 2 - 1086' RUNWAY SHIFT WITH AVIGATION EASEMENT

Alternative 2 **(Figure 4-3)** shifts Runway 18/36 and Taxiway A 1,086' north to a position where Runway 36 RPZ falls inside the existing airport property. The shift pushes the Runway 18 RPZ beyond the north property boundary onto agricultural land. An avigation easement is proposed to protect the RPZ where it extends beyond airport property. The REILS and PAPIs at each end are also relocated to match the proposed runway end locations.

Similarly, to Alternatives 1A and 1B, the northerly runway shift creates a conflict between the existing east property fence and the proposed ROFA. To address the issue, the fence is rerouted to run parallel to the runway outside of the ROFA directly to the northern property boundary and then west along the boundary to connect to the existing fence line.

The estimated cost to design and construct this alternative as depicted is $6,907,360

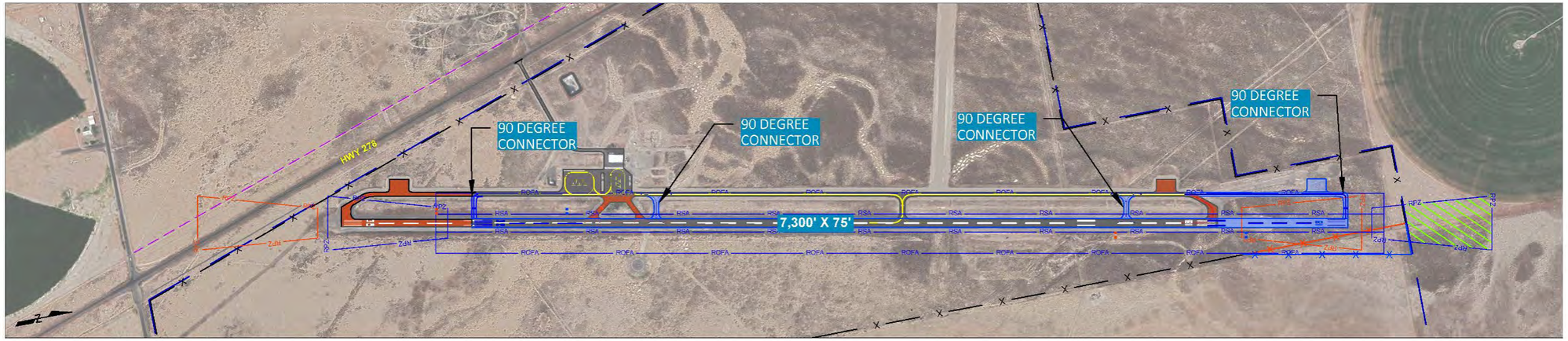
PROS:

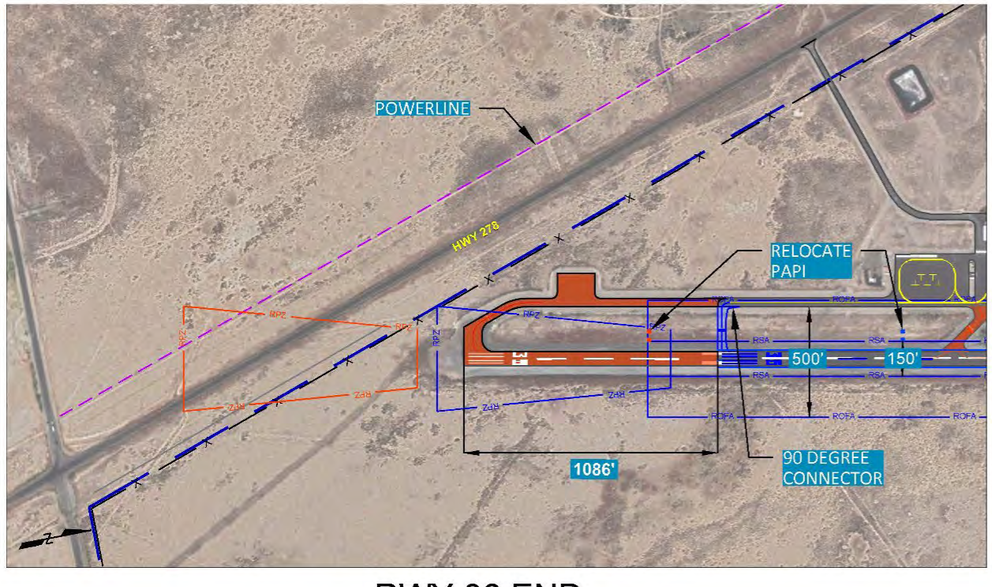
- Removes the incompatible land uses from RWY 36 RPZ (Highway 278 and powerline)
- Clears Highway 278 and powerline from RWY 36 Part77 approach surface
- Maintains a clear ROFA
- Corrects angled connector taxiway geometry, improving pilots' visibility when entering the runway.
- RPZ is protected via avigation easement

CONS:

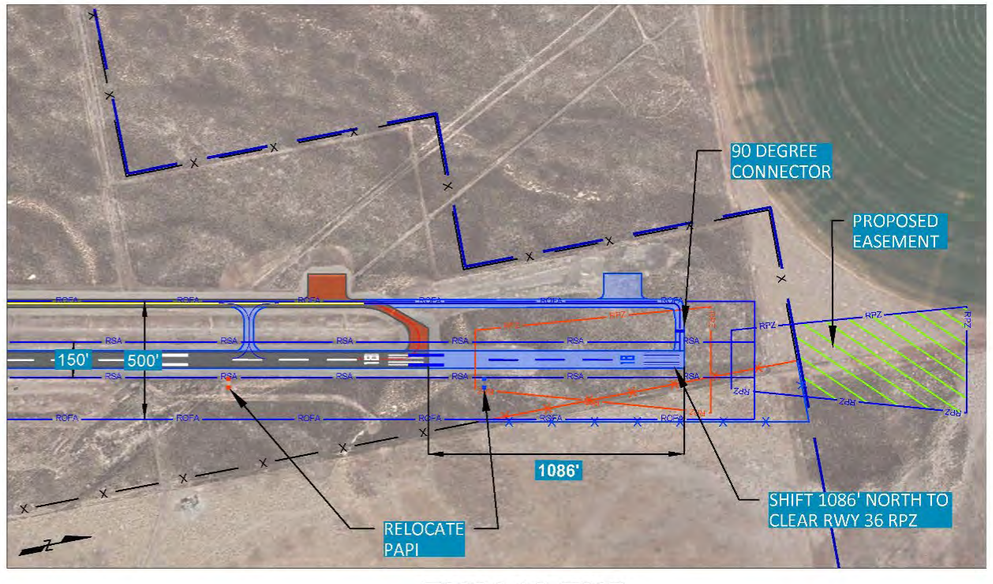
- More expensive than Alternative 1B due to longer runway shift and acquisition of avigation easement.
- Extending parallel taxiway over drainage way may be challenging.

ALTERNATIVE 2, 1,086' RUNWAY SHIFT WITH AVIGATION EASEMENT





RWY 36 END



RWY 18 END

AIRPORT PROPERTY | POWERLINES | FENCE | PROPOSED PAVEMENT | REMOVE | AVIGATION EASEMENT

FIGURE 4-3 – ALTERNATIVE 2

RUNWAY ALTERNATIVE 3 – 140' DISPLACED THRESHOLD ON RUNWAY 36

Alternative 3 **(Figure 4-4)** retains the existing runway and taxiway configuration but adds a displaced threshold 140' north of the Runway 36 threshold to address existing road and powerline obstacles in the Part 77 approach surface. The REILS and PAPIs on Runway 36 are also relocated to match the displaced threshold. An avigation easement protects Runway 36 RPZ where it extends beyond airport property.

It should be noted that precisely surveyed elevations are not available for the highway and powerline at the locations where they intersect the approach surface. The heights used to determine the displaced distance are estimated. An obstruction survey should be completed to determine the final displaced distance required to clear the obstacles.

The estimated cost to design and construct this alternative as depicted is $3,852,300.

PROS:

- Least expensive build option
- Clears RWY 36 Part 77 approach surface
- Corrects angled connector taxiway geometry, improving pilots' visibility when entering the runway.
- RPZ is protected via avigation easement

CONS:

- RPZ incompatible land uses remain
- Shortens runway available to landing aircraft

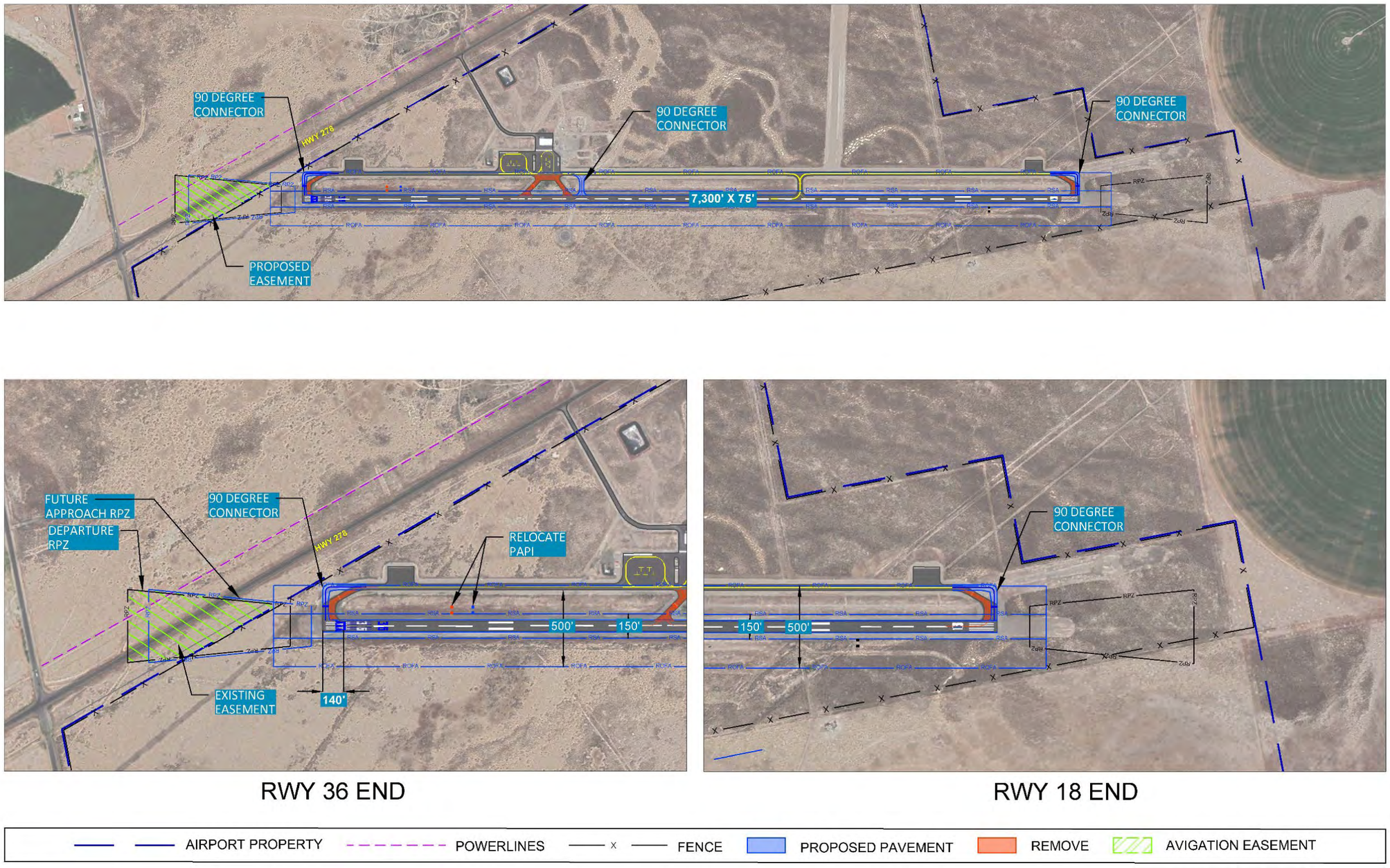


FIGURE 4-4 – ALTERNATIVE 3

CROSSWIND RUNWAY 9/27

The following elements are common to all the crosswind runway build alternatives.

- Positioned on the same centerline alignment of the current alternate landing area
- Non-lighted runway end markers are installed to mark runway thresholds
- Obstacle lights and markers are installed on overhead power lines in the Runway 9 approach
- Formal registration of the runway (via 7480 process) is optional, but it is the preference of County to complete the process to ensure that the crosswind runway appears on the chart supplement
- Not eligible for FAA funding

NO-BUILD ALTERNATIVE

In the no-build alternative, the Airport would maintain the current 2,300' gravel alternate landing area in the current configuration without any additional improvements. The landing area will not be registered as a runway and will not appear on the chart supplement. However, the landing area will continue to be maintained by the County and continue to be made available to aircraft operating in crosswind conditions. None of the common elements described above are implemented in the no-build alternative.

PROS:

- Minimal financial investment required
- The current crosswind landing area will continue to operate as it currently does

CONS:

- Absence of end markings make it challenging for approaching aircraft to identify runway thresholds
- Landing area is not registered and not listed on chart supplement

CROSSWIND ALTERNATIVE 1 – 3,000' GRAVEL RUNWAY AS DEPICTED ON THE 2015 ALP.

Alternative 1 **(Figure 4-5)** matches the future crosswind runway (9/27) depicted on the 2015 ALP. It consists of a 3,000' x 60' gravel runway crossing Runway 18/36, Taxiway A, and the Airport's main drainage ditch approximately 2,200' South of Runway 18 end.

The RPZ for Runway 9 extends beyond the airport boundary and intersects Highway 278 and the adjacent powerline. An avigation easement is proposed for the portion of the RPZ that extends off property to protect the area from additional incompatible land uses.

The estimated cost to design and construct this alternative as depicted is $683,560.

PROS:

- Provides maximum distance for take-off and landing

CONS:

- Expensive option due to length, grading requirements, and drainage ditch crossing (culvert)
- Runway 9 RPZ includes incompatible land uses (Highway 278 and powerline)
- An aviation easement is required to protect Runway 9 RPZ from further incompatible uses.
- RSA grading requirement will be challenging to meet at the drainage ditch crossing
- Crossing Runway 18/36 and Taxiway A presents operational challenges

- LAHSO not feasible from the 27 end
- FOD is likely to become an issue at pavement crossings
- Erosion and compaction at pavement crossings may cause uneven grade on runway.

CROSSWIND ALTERNATIVE 2 – 2,180' GRAVEL RUNWAY

Alternative 2 (Figure 4-5) proposes a 2,180' gravel runway with the Runway 27 end located 240' west of the existing drainage ditch. A paved in-line taxiway stub connecting the Runway 27 end to Taxiway A is proposed to minimize FOD on the taxiway. The Runway 9 end is located in the same location depicted on the 2015 ALP. Positioning the runway in this configuration separates the RSA from the sloping banks of the ditch.

Just like in Alternative 1, the RPZ for Runway 9 extends beyond the property boundary and intersects Highway 278 and the powerline. Again, an avigation easement is proposed to protect the RPZ from further encroachment of incompatible land uses.

The estimated cost to design and construct this alternative as depicted is $469,680.

PROS:

- Does not cross Runway 18/36 or Taxiway A
- Paved connector will help mitigate potential FOD issues on Taxiway A
- RSA remains outside of drainage ditch eliminating the need for expensive grading and culvert construction

CONS:

- Incompatible land uses (Highway 278 and powerline) present in Runway 9 RPZ
- Avigation easement may be needed to protect Runway 9 RPZ from further incompatible uses.
- FOD will likely be an issue at the Taxiway A access point.

CROSSWIND ALTERNATIVE 3 – 1,650' GRAVEL RUNWAY

Alternative 3 (Figure 4-5) proposes the shortest runways of all the crosswind runway alternatives as it positions the Runway 9 RPZ east of Highway 278 and keeps Runway 27 end in the same position proposed in Alternative 2 to deconflict the RSA and drainage ditch. This configuration results in a proposed runway length of 1,650'.

Similarly to Crosswind Alternative 2, a paved in-line taxiway stub connecting the Runway 27 end to Taxiway A is proposed to minimize FOD on the taxiway and Runway 9 RPZ extends off of the property into the right-of-way. An avigation easement is again recommended to protect that portion of the RPZ from incompatible development.

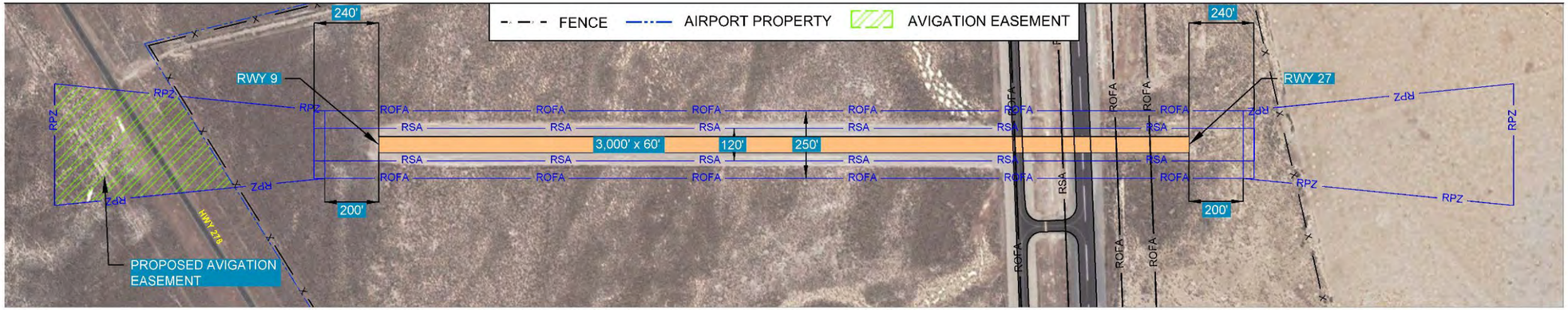
The estimated cost to design and construct this alternative as depicted is $383,860.

PROS:

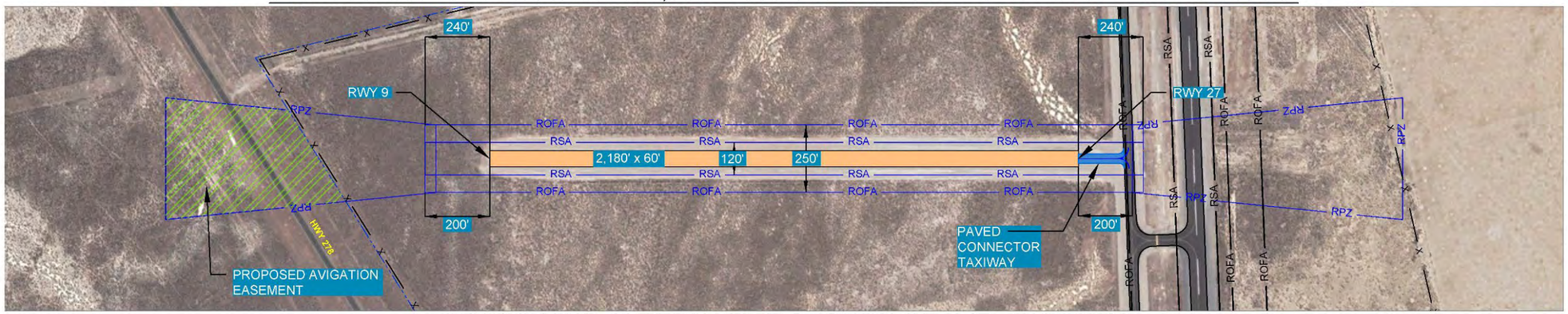
- Does not cross Runway 18/36 or Taxiway A
- Paved connector will help mitigate potential FOD issues on Taxiway A
- RSA remains outside of drainage ditch eliminating the need for expensive grading and culvert construction
- RPZs are clear of incompatible land uses

CONS:

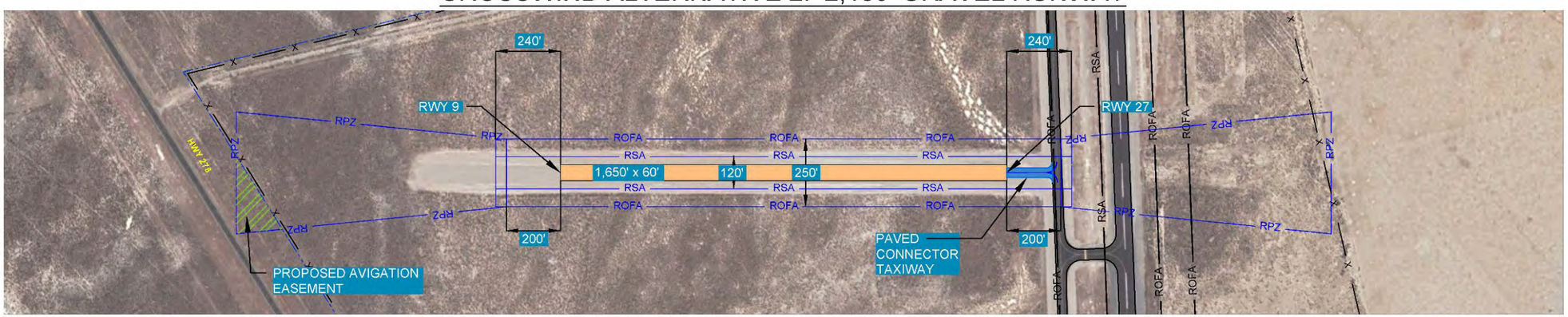
- Short runway length will likely prevent use by most aircraft on hot days



CROSSWIND ALTERNATIVE 1: 3,000' GRAVEL RUNWAY AS DEPICTED ON 2015 ALP



CROSSWIND ALTERNATIVE 2: 2,180' GRAVEL RUNWAY



CROSSWIND ALTERNATIVE 3: 1,650' GRAVEL RUNWAY

FIGURE 4-5- CROSSWIND ALTERNATIVE 3

LANDSIDE ALTERNATIVE SUMMARIES

The following elements are common to all the landside build alternatives.

- Overhead powerlines on the apron are relocated underground and poles removed
- Previously planned and designed SRE building and apron area are included on the northwest corner of the main apron
- Chain-link security fence and vehicle gates are proposed south and west of the terminal area and access drive

NO-BUILD ALTERNATIVE

In the no-build alternative the existing landside facilities will be maintained in the current configuration with no proposed improvements outside of regular maintenance to extend the life of the pavement and structures. All existing non-standard conditions discussed in the Facility Requirements will remain in place. Since the SRE building and apron are currently listed on the 5-year CIP, those improvements are included in the no-build alternative. However, in this scenario the overhead powerlines would remain in place.

PROS:

- Minimal financial investment required
- The Landside facility may continue to operate as it currently does

CONS:

- Inadequate taxiway clearances remain around aircraft tiedown areas
- Overhead powerlines remain as transitional surface obstacles
- Failure to address non-standard conditions may jeopardize FAA grant assurances
- Does not provide additional hangar storage
- Does not provide opportunity to generate additional revenue

LANDSIDE ALTERNATIVE 1 – RECONFIGURE AND EXPAND EXISTING APRON WITH REMOTE HELICOPTER PARKING

Alternative 1 (Figure 4-6) largely builds upon the existing apron footprint. The fuel system remains in the center of the apron with tiedowns to the north and the south. The north tiedown is reconfigured to provide parking for three ADG I aircraft while maintaining appropriate clearances for taxiing aircraft. Tiedowns for two additional aircraft are provided on new pavement located north of the existing apron and planned SRE area.

The south apron area is expanded 60’ west and reconfigured to provide tiedowns for three ADG II aircraft in the center of the apron with appropriate clearance for taxiing ADG II aircraft around the perimeter. Three hangar development sites are available on the west edge of the expanded apron. The hangars can be either County-owned for lease or tenant-owned structures on leased land. Finally, the BLM retardant tanks currently located near the south edge of the apron are relocated outside of the taxilane OFA.

A remote helicopter parking pad is proposed south of the existing apron to provide dedicated helicopter parking separate from the fixed-wing aircraft parking areas. A new asphalt vehicle drive is included to provide vehicle access to the helicopter parking area as well as an additional access point to the main apron area.

The estimated cost to design and construct this alternative as depicted is $4,071,820.

PROS:

- Reconfigures aircraft parking and moves retardant tanks to address TLOFA clearance issues
- Separates helicopter and fixed wing parking areas
- Provides additional access to apron and helicopter parking area
- Proposed hangars provide revenue generating opportunity

CONS:

- Aircraft parked at retardant tanks would block access to the south taxilane
- Mid apron fuel area are an inefficient use of apron space

LANDSIDE ALTERNATIVE 1

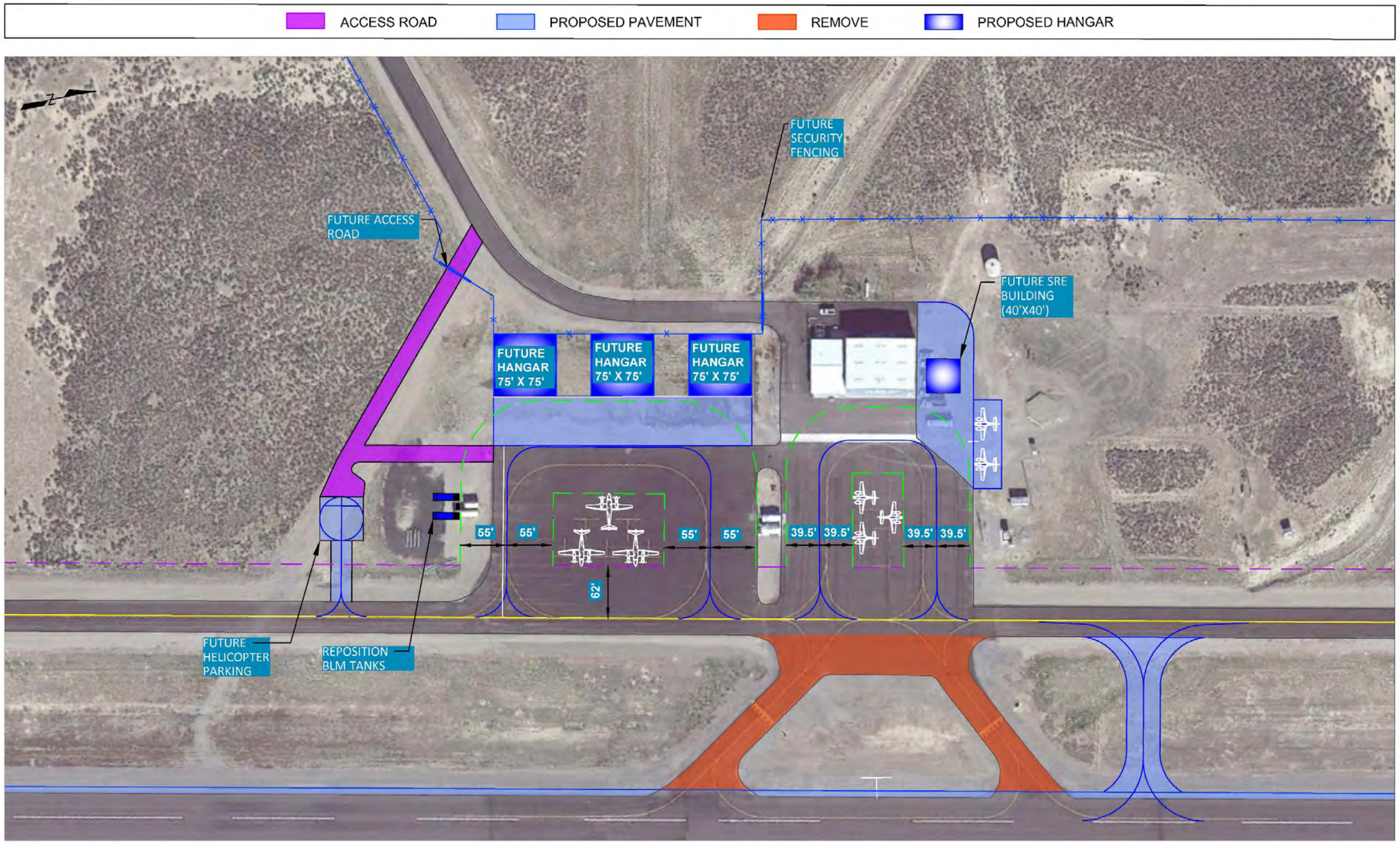


FIGURE 4-6 – LANDSIDE ALTERNATIVE 1

LANDSIDE ALTERNATIVE 2 – RECONFIGURE AND EXPAND EXISTING APRON WITH MULTI-USE FUEL AND HELICOPTER PARKING AREA

Alternative 2 **(Figure 4-7)** reconfigures the existing main apron area in a similar fashion to Alternative 1, providing three ADG I parking locations in the existing north parking area as well as two additional ADG I parking positions on new apron pavement located north of the planned SRE area.

The existing south parking area is also reconfigured to provide tiedowns for four ADG I aircraft with adequate clearance for taxiing. The apron is also expanded 60' west and the existing fuel system is relocated to give space for two pull-through parking stands for ADG II aircraft. Space for five hangar development sites are proposed around the perimeter of the expanded south apron area. The hangars can be either County-owned for lease or tenant-owned structures on leased land. Additional vehicle access is provided to the south end of the apron and additional vehicle parking is provided adjacent to the pull-through aircraft parking areas.

A new apron is proposed adjacent to the south edge of the existing apron to accommodate the fueling system displaced from the main apron and the BLM retardant tanks formerly located within the south taxilane OFA of the main apron. In addition to the fueling and BLM facilities, a helicopter parking position with a dedicated access taxilane is proposed. A single large hangar for a single ADG II or two ADG I aircraft is depicted on the south edge of the apron near the helicopter parking position. Vehicle access is provided via a new asphalt access drive which loops around an area identified as a non-aeronautical mixed use development reserve. Additional vehicle parking is also proposed on the east side of the development reserve.

The estimated cost to design and construct this alternative as depicted is $5,413,260.

PROS:

- Reconfigures aircraft parking areas and moves retardant tanks to address TLOFA clearance issues
- Pull through ADG parking are convenient option for commercial/corporate operators
- Nested ADG I tiedowns can used for ADG II aircraft (by parking over three tiedowns) if needed
- Relocated combined fuel and retardant tank area removes parked (filling) aircraft from taxilane areas.
- Separates helicopter and fixed wing parking areas
- Proposed hangars and mixed used development reserve provide revenue generating opportunities
- Large south hangar's proximity to helicopter parking and vehicle access drive create a prime location for a future based medevac services provider

CONS:

- Proposed pavement expansion would be expensive to construct
- Existing spill containment infrastructure would have to be extended to include relocated fuel and retardant tanks
- North taxilane limited to ADG I aircraft.

LANDSIDE ALTERNATIVE 2

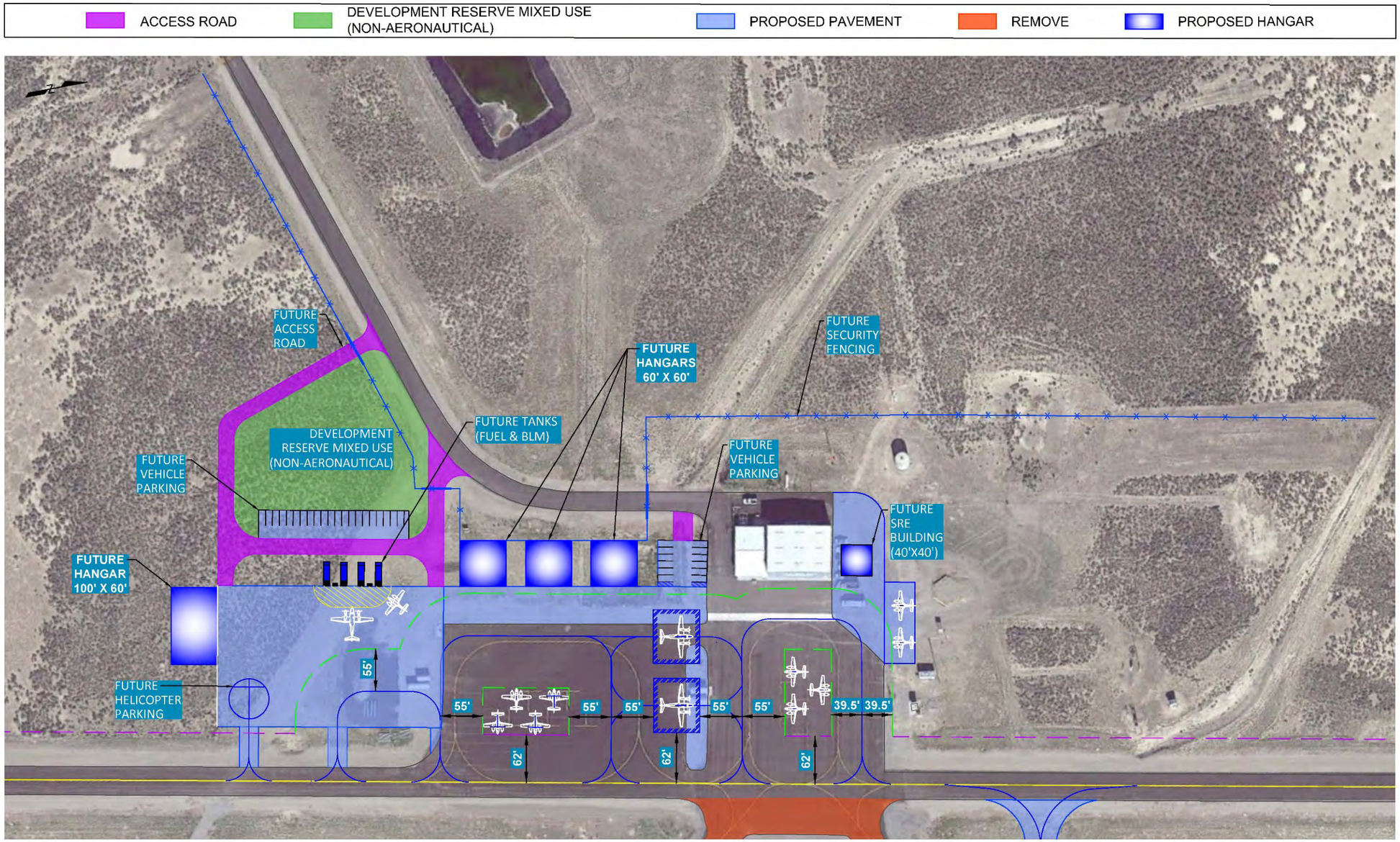


FIGURE 4-7 – LANDSIDE ALTERNATIVE 2

Appendix A – Environmental Review

September 5, 2023

Environmental Screening

for —

Booth Bailey Field Municipal Airport
Eureka County

Prepared For:

Eureka County Public Works
701 South Main Street
Eureka, Nevada 89316

And

Lumos & Associates, Inc,
308 North Curry Street, Suite 200
Carson City, Nevada 89703

Prepared By:

Resource Concepts, Inc.
340 North Minnesota Street
Carson City, Nevada 89703

September 5, 2023

Environmental Screening

for—

Booth Bailey Field Municipal Airport
Eureka County

(RCI # 23-135.1)

Prepared For:

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701 South Main Street
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Attachments

File doc: 2023-09-06 fnl vs2 Rpt Eureka Airport Env Screen Lumos 23-135.1 els jrm-ca L9-1.docx

List of Acronyms

BAPC	Bureau of Air Pollution Control
BLM	United States Bureau of Land Management
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CWA	Clean Water Act
DNL	Day-Night Average Sound Level
DOT	Department of Transportation
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
GHGs	Greenhouse Gases
IPaC	Information Planning and Conservation
NAAQS	National Ambient Air Quality Standards
NAC	Nevada Administrative Code
NAPCP	Nevada Air Pollution Control Program
NDEP	Nevada Division of Environmental Protection
NDNH	Nevada Division of Natural Heritage
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NFHL	National Flood Hazard Layer
NPIAS	National Plan of Integrated Airport Systems
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
NRS	Nevada Revised Statutes
RCRA	Resource Conservation and Recovery Act
SIP	State Implementation Plan
SWReGAP	Southwest Regional Gap Analysis Project
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1. Introduction

The Booth Bailey Field Municipal Airport (Eureka Airport) is located in Eureka County, Nevada and is a County owned, public use aviation facility. The County is in the process of updating the Airport Layout Plan and has retained Resource Concepts, Inc. (RCI) to identify the on-site environmental resources that could be affected by the proposed airport development. This report summarizes the environmental data collected from previous environmental documents, consultation with local, state, and federal agencies, and publicly available data to be used by Eureka County for planning purposes and in support of future environmental review and permitting.

1.1 Eureka Airport Location, Description, and Environmental Setting

1.1.1 Airport Location

The Eureka Airport (FAA Identifier: 05U) is located on approximately 572 acres in Eureka County, Nevada in Diamond Valley along State Route 278, approximately six miles northwest from the town of Eureka, see **Attachment 1 – Eureka Airport Location Map**.

1.1.2 Airport Description

The Eureka Airport was established in 1952 and is a privately owned and operated aviation facility encompassing 572 acres, with one 7,300-foot-long paved runway (Runway 18/36) and one unpaved crosswind runway. The Eureka Airport is primarily utilized by the public, medical and emergency responders, and provides an important access point for the United States Bureau of Land Management (BLM) wildland firefighters.

As of May 15, 2023, the airport reported 2,304 flights per year. The vast majority of the operations involve single-engine aircraft (FAA 2023); however, the airport can also accommodate twin-engine, turboprop, and small turbine aircraft. Eureka Airport is classified in the National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport, which serves aircraft with approach speeds up to 101 knots (Approach Categories A through D) and with wingspans up to 79 feet (Design Group I and II airplanes). The airport will continue to be developed to serve approximately 75% single-engine and small twin-engine airplanes for personal and business purposes, as well as small business and air taxi-type twin-engine airplanes at ultimate buildout. Presently, there are currently six single engine aircrafts based at the airport (Lumos 2015).

1.1.3 Existing Environment

The Eureka Airport is located on the valley floor of the southern end of Diamond Valley. Land use surrounding the airport is predominantly open space and agricultural fields with pivot irrigation. There is a small residential community approximately half a mile to the west (**Attachment 2 – Eureka County Land Use Map**).

The site ranges in elevation from 5,940 feet to 6,000 feet in elevation, sloping to the north at less than one percent. On-site soils are mapped by the National Resource Conservation Service (NRCS) as consisting of Ahlambra, Bruffy-Kobeh and Ruby Hill soil series that are described as well-drained sandy and silty loams. The depth to the water table is greater than 80 inches across the site, reference **Attachment 3 – Soils Map**.

Review of the Southwest Regional Gap Analysis Project (SWReGAP) map identifies the majority of the site vegetation as Big Sagebrush Shrubland, interspersed with areas of Mixed Salt Desert Scrub and Greasewood Flat. Areas of native and non-native grasslands are mapped as commonly within the northeastern portion of the site (SWReGAP 2023). For a complete depiction of plant communities, reference **Attachment 4 – Southwest ReGAP Map**.

Based on a review of the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) map and the United States Geological Survey (USGS) topographic map, there is one mapped intermittent stream that meanders through the Eureka Airport parcel. One excavated freshwater pond (0.37 acres) is mapped near the airport entrance, which serves as a constructed detention basin for stormwater runoff. There are no other mapped water resources on-site (**Attachment 5 – Water Resources Map**).

1.2 Purpose and Need for Environmental Resource Review

The purpose of this environmental screening is to provide the Eureka Airport with a baseline evaluation of the existing natural resources on-site that have the potential to be affected by future airport development plans. In order to meet future aviation demands through the year 2035, a multi-staged development plan is presented in the Eureka Airport Master Plan (2015).

Predicted airport facility improvements consist of the construction of additional hangers, including a medical flight hangar, a helipad, the installation of underground utility lines and removal of overhead lines, weather station improvements, procurement of a snowplow and enclosure, and various runway and runway-adjacent improvement projects. The timeline for these proposed projects is divided into several timeframes between 0 – 5 years, 6 – 10 years, and 11 – 20 years for the various project stages. However, implementation is dependent on funding, resource availability, the surrounding community, and the needs of the airport. Primary funding comes from the Federal Aviation Administration (FAA) and Eureka County (Lumos 2015).

2. Regulatory Setting

2.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires that federal actions that have the potential to impact the quality of the human environment requires environmental review and analysis (42 U.S.C. § 4321-4370h).

2.2 Federal Aviation Administration Policy

The FAA is responsible for complying with procedures and policies of NEPA and other environmental laws, regulations, and orders applicable to FAA actions. The FAA must integrate NEPA and other environmental review and consultations into agency planning processes. NEPA is required for all actions directly undertaken by the FAA and for actions undertaken by a non-federal entity where the FAA has authority to condition a permit, license, or approval. The FAA provides guidance on compliance with NEPA and Department of Transportation (DOT) Order 5610.1C policies and procedures. FAA compliance guidelines are made available in FAA Order 1050.1F and the Desktop Reference. Specific qualifications for proposed actions that are exempt from the NEPA review process are provided in FAA Order 1050.1F, Paragraph 2-1.2.

3. Evaluation of Environmental Resources for NEPA Compliance

3.1 Overview of Eureka Airport Environmental Resources

In the NEPA review process for a proposed action, the FAA may use an initial environmental review, along with cumulative, similar, and connected actions, to determine the level of environmental analysis needed (i.e., Environmental Impact Statement, Environmental Assessment, or Categorical Exclusion). FAA 1050.1F provides NEPA guidelines on 14 “Impact Categories,” or environmental resource categories, that should be considered in the NEPA process for a proposed action.

Direct, indirect, and cumulative impacts for each impact category should be included in the NEPA analysis of a proposed action. Specific significance thresholds and factors to consider for each Impact Category are provided in the FAA Order 1050.1F Desk Reference and are either quantitative or qualitative. All impact categories, regardless of their required level of analysis for the NEPA process, must discuss the affected environment and proposed action.

A summary of the 14 Impact Categories, per FAA Order 1050.1F regulations, identified within the Eureka Airport is provided in Table 3-1. As needed for clarification, additional information and discussion of potential impacts by resource topic are provided after the table.

Table 3-1. Eureka Airport Resource Evaluation and FAA Order 1050.1F Impact Category Description

Impact Category	Relevant Regulatory Setting	Resource Description
Air Quality	Clean Air Act (42 USC 7401 et seq.)	**Resource Present.** The Clean Air Act (CAA) regulates air pollutant emissions from stationery and mobile sources. The United States Environmental Protection Agency (USEPA) is responsible for the implementation of the CAA (42 U.S.C. §7401 et seq. 1970) and has established the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants (40 CFR §50). The six criteria air pollutants include carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur oxides. In Nevada, compliance with the NAAQS is overseen by the Nevada Department of Environmental Protection (NDEP), and the Nevada Air Pollution Control Program (NAPCP), which operates a network of monitoring stations across Nevada's 15 Rural Counties. The closest active monitoring station is in Elko. For the six criteria pollutants, primary and secondary air quality standards have been established to protect the environment and public welfare. Regions are either designated as being in *attainment, nonattainment*, or *maintenance* of the NAAQS. The Eureka Airport is located in Hydrographic Area 153: Diamond Valley, in the east-central portion of the Great Basin, approximately six miles north of the town of Eureka in southwest Eureka County, Nevada. With respect to the obtainment of NAAQS thresholds, Eureka County, along with 14 other rural counties in Nevada, are considered to be "unclassifiable" as no monitoring has been conducted to determine its attainment status and NAAQS violations would not otherwise be expected (NDEP 2021). Section 176(c)(4) of the CAA establishes the General Conformity Rule, which ensures that actions taken by federal agencies do not impede the State's ability to attain or maintain NAAQS. Eureka County is not in nonattainment of NAAQS, therefore, proposed actions within the airport's Master Plan are not subject to the General Conformity Rule. The USEPA Green Book was queried on March 31, 2023 for lists of Nevada County that are in nonattainment or maintenance designation, refer to **Attachment 6 –State of Nevada Air Quality Status Report** for more details. Data collected from the USEPA Green Book National Area and County-Level Multi-Pollutant Information website on April 18, 2023, can be found at (https://www.epa.gov/green-book).
Biological Resources	Endangered Species Act (16 USC 1531 et seq.); Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.); Migratory Bird Treaty Act (16 USC 703 et seq.)	**Resources Present.** There is the potential for one federally threatened species, the monarch butterfly, to occur within the vicinity of the project area. However, preliminary review of on-site vegetation suggests that *the monarch butterfly may occur but is not likely to occur* within the airport parcel. The Bald and Golden Eagle Protection Act prohibits any form of possession or taking of either bald eagles or golden eagles. Based on a review of information provided by the Nevada Department of Wildlife (NDOW), there have been documented occurrences of golden eagle nests constructed within cliffs located nearby (within 10 miles). The undisturbed areas within the airport parcel do provide suitable foraging habitat for the golden eagle, and this species may occur within the project area. Based on a review of NDOW data, there are no documented occurrences of bald eagles within 10 miles of the airport parcel. On-site habitat does not provide suitable nesting or foraging habitat for bald eagles; therefore, bald eagles are not anticipated to occur on-site.

Impact Category	Relevant Regulatory Setting	Resource Description
		The Migratory Bird Treaty Act protects certain migratory birds. Suitable nesting habitat, including habitat for USFWS Birds of Conservation Concern, exists within the airport parcel for migratory birds. Appropriate minimization measures should be implemented prior to and during construction to avoid significant impacts to migratory birds. Refer to **Attachment 7 – Biological Resources and Agency Correspondence**, for a complete list of biological resources and relevant agency correspondences. *Discussed in further detail in Section 3.2.1.*
Climate	Clean Air Act (42 USC 7401 et seq.); Executive Order 31514 (74 Federal Register 52117); Executive Order 13653 (78 Federal Register 66817); Executive Order 13693 (80 Federal Register 15869)	**Resources Present.** Greenhouse gases (GHGs) impact the local and global climate and are different from the NAAQS; GHGs include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Of these gases, only carbon dioxide is a specific byproduct of aircraft combustion. There are currently no significance thresholds for GHG emissions for aviation that have been adopted by the FAA; however, carbon dioxide emissions should be qualitatively or quantitively described and compared to the No Action alternative within NEPA documents. Proposed actions should consider measures that aim to reduce GHG emissions (e.g., fuel efficient equipment, operational changes, delay reductions, etc.) (FAA 2020). Carbon dioxide emission calculations may be included in the NEPA review, conversion equations are provided in FAA 1050.1F Desk Reference, Section 3.3.2 Data Analysis.
Coastal Resources	N/A	**Not Present.** Nevada is a landlocked state with no coastal borders. There are no coastal resources present, see **Attachment 1 – Eureka Airport Location Map**.
Department of Transportation Act, Section 4(f)	Department of Transportation Act (49 USC 303); Safe, Accountable, Flexible, Efficient Transportation Equity Act (49 USC 303)	**Not Present.** If a proposed action has the potential to impact significant publicly owned parks, recreational areas, wildlife or waterfowl refuges, or historic sites, the FAA or other DOT lead NEPA agency must comply with Section 4(f) of the DOT Act and seek agency consultation. The parcel containing the Eureka Airport (Eureka County APN 07-33-006) does not have any of the specific properties that are under the purview of Section 4(f) of the Department of Transportation Act. This investigation included a search for Section 4(f) properties within a 3-mile buffer surrounding the airport parcel. No significant publicly owned parks, recreational areas, or wildlife/waterfowl refuges were found; see **Attachment 2 – Eureka County Land Use Map**. This assessment did not include evaluation of historic and cultural resources with respect to Section 4(f), which are covered under a separate analysis.
Farmlands	Farmland Protection Policy Act (7USC 4201-4209)	**Resource Present.** Farmlands are defined as those agricultural areas considered important and protected by federal, state, and local regulations. Important farmlands include all pasturelands, croplands, and forests (even if zoned for development) considered to be prime, unique or of statewide or local importance (FAA Order 1050.1F). The NRCS Soil Survey maps the entire airport parcel as being located on Farmland of Statewide Importance, if irrigated, and Prime Farmland, if irrigated, see **Attachment 8 – NRCS Farmland Classification Map**. The FAA is the agency responsible for compliance with the Farmland Protection Policy Act (FPPA) regarding any proposed action requiring NEPA review that would occur on prime, unique, State, or locally important farmland. The FAA may make its own determination or elect to coordinate with the NRCS.

Impact Category	Relevant Regulatory Setting	Resource Description
Hazardous Materials, Solid Waste, and Pollution Prevention	Comprehensive Environmental Response, Compensation, and Liability Act; Emergency Planning and Community Right to Know Act (42 USC 11001-11050); Federal Facilities Compliance Act (42 USC 6961); Hazardous Materials Transportation Act (49 USC 5101-5128); Pollution Prevention Act (42 USC 13101-13109); Resource Conservation and Recovery Act	**Resource Project Dependent.** Waste generated from a proposed action, its handling and disposal, and any hazardous materials that could be encountered or used during construction and operation need to be fully discussed for the NEPA review. Currently, the airport does not generate Resource Conservation and Recovery Act (RCRA) defined hazardous waste and does not report to the USEPA for hazardous materials (40 CFR 262.12). The existing airport facility includes fuel storage and distribution infrastructure. Based on review of the 2015 Master Plan (Lumos 2015), the proposed Eureka Airport facility improvements would not substantially change regular operations to warrant a RCRA USEPA Identification Number or Hazardous Waste Treatment, Storage, and Disposal Permit. However, if future proposed actions include the generation of hazardous waste, the airport facility would need to obtain a RCRA hazardous waste generator identification number from the EPA. It is not anticipated that airport facility upgrades will impact any contaminated sites or adversely impact human health and the environment. There are no Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or RCRA cleanup sites within or adjacent to the airport parcel. The nearest contaminated site to the airport is the Tonkin Springs Mine (USEPA Registry ID: 110045554066), see **Attachment 9 – Adjacent EPA-Reporting Sites,** located less than one mile from the airport boundary (USEPA EnviroAtlas, August 2023). This facility has been classified as having a "very small quantity generator." There are nine EPA Superfund sites located in the town of Eureka approximately six miles to the southeast of the airport, see **Attachment 10 – Eureka County Superfund Sites**. Future project construction activities, such as pavement maintenance, runway paving, and helipad construction that include temporary on-site storage and use of hazardous waste materials including petroleum, asphalt projects, concrete curing compounds and paints should be described and quantified in future NEPA documentation. The NEPA document should also include appropriate storage and best management practices to avoid and prevent on-site discharge of pollutants.
Historical, Architectural, Archeological, and Cultural Resources	National Historic Preservation Act (54 USC 300101 et seq.)	*Not evaluated in this environmental screening document – to be evaluated under separate documentation.*
Land Use	Proposed and FAA approved projects must be compatible with State and local land uses	**Compatible with existing zoning laws.** The 2010 Eureka County Master Plan identifies the airport parcel as zoned Commercial/Industrial; surrounding parcels are mostly zoned Agricultural (private) with some being zoned Vacant (private). All future proposed actions within the airport parcel are consistent with Commercial/Industrial zoning, see **Attachment 2 – Eureka County Land Use Map**.
Natural resources and energy supply	Energy Independence and Security Act (42 USC 17001 et seq.)	**Resource Present**. This impact category includes an evaluation of a project's consumption of natural resources and use of energy supplies. NEPA documentation should include the suppliers of energy resources and project specific amounts of resources (e.g., water, asphalt, aggregate, wood, etc.) that would be used in the construction, operation and maintenance of a proposed project and identify where suppliers are located. Current on-site electric power is provided by Mt. Wheeler Power and is anticipated to be adequate to meet future needs (Lumos 2015).

Impact Category	Relevant Regulatory Setting	Resource Description
Noise and Compatible Land Use	Airport and Airway Improvement Act (49 USC 47101 et seq.);	**Resources Present.** For aviation noise analyses, the FAA has determined that the cumulative noise energy exposure of individuals resulting from aviation activities should be established in terms of the Day-Night Average Sound Level (DNL). DNL considers the noise levels of all individual aircraft events, the frequency of those events, and the time of day or night during which they occur (FAA Order 1050.1F). A DNL noise contour of 65 dB is the threshold above which certain land uses are considered incompatible (49 USC § 47502). Based on a review of the 2015 Airport Master Plan (Lumos 2015), the current airport operation includes Design Group I and II airplanes (wingspan less than 79 feet) with landing speeds of less than 166 knots, and a projected operation not to exceed 90,000 annual propeller operations or 700 annual jet operations per year. These numbers of propeller and jet operations result in DNL 60 dB contours covering less than 1.1 square miles, extending no more than 12,500 feet from the start of the aircraft roll. The FAA does not require noise analysis for projects involving these types of design groups and approach categories (FAA Order 1050.1F). Most FAA actions do not involve any required federal consultation processes, permits, or other approvals related to noise and noise-compatible land use. Based on current operations and typical landing speeds (less than 166 knots), NEPA review does not require noise analysis (FAA Order 1050.1F). Furthermore, no noise analysis would be required if the future proposed action includes forecasted helicopter operations that do not exceed an annual average of 10 daily operations with hover times of less than 2 minutes. Projects falling under these exemptions for noise analysis result in a DNL of 60 decibels or less that extends out 12,500 feet from the start of aircraft takeoff (FAA Order 1050.1F). Future proposed actions that result in a higher Design Group or result in an increase in landing speeds, would require a detailed noise analysis that evaluates the noise compatibility of adjacent land use and impacts on noise sensitive areas. Typical noise sensitive areas include residential, educational, health and religious structures and sites, parks, recreational areas, and cultural and historic sites. Eureka County does not have a noise control ordinance as of August 2023.
Socioeconomic, Environmental Justice, and Children's Environmental Health and Safety Risks	Uniform Relocation Assistance and Real Property Acquisitions Policy Act (42 USC 61 et seq.); Civil Rights Act (42 USC 2000d-2000d-7); Executive Order 12898 (59 Federal Register 7629); DOT Order 5610.2(a) (77 Federal Register 27534); Executive Order 13045 (62 Federal Register 19885)	**Not Present.** A proposed action may have a significant impact to socioeconomics and/or environmental justice if there are other environmental impacts associated with a project. However, FAA 1050.1F guidelines do not explicitly establish significance thresholds but does consider the potential impact to the surrounding community. A NEPA document must clearly describe the methods for determining disproportionately high and adverse effects of a proposed action and must also include public notification and involvement. Socioeconomics: based on review of the 2020 U.S. Census Bureau, the median household income between 2017 to 2021 was $68,307, which is above the $66,274 median household income for the entire State of Nevada. There are no low income communities within proximity of the airport. Environmental justice: based on review of the U.S. Census Bureau (2020), there are no distinct minority populations within a 20-mile radius of the airport. *Discussed in further detail in Section 3.2.2.*

Impact Category	Relevant Regulatory Setting	Resource Description
Visual Effects (Including Light Emission)	N/A	**Resources Present.** Visual effects are determined by the extent to which a proposed project would produce light emissions that would create annoyance or interfere with activities, or contrast with the surrounding visual resources and character. Visual Resources and Visual Character: The project area is located in the Basin and Range Physiographic Province, which is characterized by broad, open basins bounded by prominent north-south trending mountain ranges. The airport site is naturally flat, and there are no unique rock outcrops or other manmade or natural landscape features of visual importance or unique character. There are no designated scenic vistas within proximity to the airport. The Diamond Mountains are located to the southeast and rise above the valley providing for scenic views across the valley for hikers and dispersed recreationists; however, there are no designated formalized trails. The visual character of the surrounding landscape is rural and characterized by undeveloped open space and agricultural fields. There is only one on-site structure, and the nearest off-site buildings are within a cluster of low density, single-family residences located approximately half a mile to the west. The airport boarders SR 278 to the west, and travelers on the highway will have short duration unobstructed views of the site. Light Emissions: The Eureka Airport has high intensity edge lighting on its runways, distance marker signs, a precision approach path indicator system, and runway end identifier lights (Lumos 2015). Addition or relocation of these existing features may create additional light emissions.
Water Resources (Including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)	Clean Water Act (33 USC 1251-1387); Fish and Wildlife Coordination Act (16 USC 661-667d); Executive Order 11990 (42 Federal Register 26961); National Flood Insurance Act (42 USC 4001 et seq.); Executive Order 11988 (42 Federal Register 26951)	**Resource Present.** The airport parcel is located within the Diamond Valley basin. A portion of the airport parcel is within a Federal Emergency Management Agency (FEMA) identified floodplain; however, the airport facilities, roads, and runways are outside of the floodplain area. Review of the NWI, aerial imagery, and USGS topographic maps, suggest that there is one intermittent stream located within the airport parcel. A formal aquatic resource delineation and review by the USACE is needed to determine if this aquatic feature would be regulated under the Clean Water Act (CWA). A constructed pond/basin is also identified near the airport entrance for stormwater collection. Depending on the use of this basin, it is likely exempt from regulation under the CWA. Per the CWA, artificial ponds that are excavated on dry land for the purpose of stock watering, irrigation, settling basins or rice growing are exempt. Additionally, as this pond does not have a continuous surface connection to another Water of the US, it is likely non-jurisdictional under the CWA under new USACE definitions of waters of the United States. Refer to **Attachment 5 - Water Resources Map**. *Discussed in further detail in Section 3.2.3.*

3.2 Resources Warranting Additional Discussion

3.2.1 Biological Resources

Regulatory Environment

Endangered Species Act (ESA). The 1973 ESA requires the FAA to determine if a proposed action may affect a species listed as *threated* or *endangered* (16 USC § 1531-1544). If the proposed action does have the potential to impact, then consultation with the USFWS is required under Section 7 of the ESA. A Biological Assessment is required for proposed actions that have potential to significantly affect listed or proposed species and/or listed or proposed critical habitat.

Bald and Golden Eagle Protection Act of 1962(16 USC § 668 et seq.). The Bald and Golden Eagle Protection Act prohibits any form of possession or taking of either bald eagles or golden eagles. In 1962, the Act was amended to create a specific exemption for the possession of eagles or eagle parts (e.g., feathers) for religious purposes of Indian tribes.

Migratory Bird Treaty Act of 1918 (16 USC § 703 et seq.). Migratory birds are protected and managed under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §703 et. seq.) and Executive Order 13186. Specific provisions in the statute include the establishment of a federal prohibition, unless permitted by regulation, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds or any part, nest, or egg of any such bird."

A list of Federal and State listed species that may occur within or potentially be affected by the Eureka Airport parcel was compiled using the following resources:

- USFWS Information Planning and Conservation (IPaC) System (May 3, 2023),
- Nevada Division of Natural Heritage (NDNH) database request (May 3, 2023), and
- NDOW information request (July 10, 2023).

Agency responses are provided in **Attachment 7 – Biological Resources and Agency Correspondence** and are summarized below.

Federally Threatened, Endangered, and Candidate Species

Based on review of the IPaC System data, there is potential for one federal candidate species to occur on-site, the monarch butterfly (*Danaus plexippus*). This species is found in open fields and meadows with milkweed (*Asclepias* spp.), which is required for laying their eggs. Although no

surveys for this species were completed, based on review of the SWReGAP vegetation mapping, there is potential suitable habitat for the monarch butterfly to occur on-site.

Bald Eagle and Golden Eagle

The Bald and Golden Eagle Protection Act prohibits any form of possession or taking of either bald eagles or golden eagles. Based on a review of information provided by NDOW, there have been documented occurrences of golden eagle nests constructed within cliffs located nearby (within 10 miles).

Based on a review of NDOW data, there are no documented occurrences of bald eagles within 10 miles of the airport parcel. On-site habitat does not provide suitable nesting or foraging habitat for bald eagles; therefore, bald eagles are not anticipated to occur on-site.

Migratory Birds

The site does contain habitat for several species of migratory birds, including raptors and other special status species. Based on review of potential habitat and previous surveys in the Eureka area, common birds found in sagebrush dominated shrub communities include:

- American crow (*Corvus brachyrhynchos)*
- Black-throated sparrow (*Amphispiza bilineata)*
- Burrowing Owl (*Athene cunicularis*)
- Common raven (*Corvus corax)*
- Common nighthawk (*Chordeiles minor)*
- Eurasian collared dove (*Streptopelia decaocto*
- Eurasian starling (*Sturnus vulgaris)*
- House sparrow (*Passer domesticus)*
- Mourning dove (*Zenaida macroura)*
- Sage thrasher (*Oreoscoptes montanus*)
- Turkey vulture *(Carhartes aura*)
- Western kingbird (*Tyrannus verticalis)*
- Vesper sparrow (*Pooecetes gramineus*)

Raptors

Raptors use diverse habitat types and are known to reside within the vicinity of the airport. Based on a query of NDOW's raptor nest database, several raptor species have potential to occur on-site or have been documented within 10 miles of the airport, including: American kestrel, Cooper's hawk, Swainson's hawk, barn owl, burrowing owl, ferruginous hawk, flammulted owl, golden eagle, great horned owl, long-eared owl, merlin, northern goshawk, northern harrier, northern saw whet owl, osprey, peregrine falcon, prairie falcon, red-tailed hawk, rough-legged hawk, sharp-shinned hawk, short-eared owl, Swainson's hawk, turkey vulture, and western screech owl.

Greater Sage-grouse

Additional species of concern include the greater sage-grouse (GRSG). GRSG habitat within the airport can be classified as a Priority, General and Other Habitat Management Areas by the Nevada Sagebrush Ecosystem Program. GRSG activity in the vicinity of the airport has been documented by one tracking location generated by at least one radio-marked bird in the vicinity of the project area. There are three known GRSG lek sites within a 4-mile buffer of the airport.

3.2.2 Socioeconomic, Environmental Justice, and Children's Environmental Health and Safety Risks

The process for reviewing socioeconomics, environmental justice, and children's environmental health and safety risks is outlined in Section 12.1-3 of the 1050.1F Desk Reference. This process includes a discussion of the potential impact of a proposed action on various aspects such as economic activity, employment, income, population, housing, public services, social conditions, minority and low-income populations, as well as an assessment of any potential risks to children's health. Significant impacts, whether positive or negative, would modify the current status of these discussion items.

Socioeconomics

As of July 1, 2022, the population of Eureka County was 1,863 individuals, representing a 0.5 percent increase since 2020 (U.S. Census Bureau), reference **Attachment 11 – Eureka County Census Data**. The primary sources of income for residents near the airport are farming in Diamond Valley and mining. The unemployment rate in Eureka County was 2.4 percent in 2021 and increased to 3.0 percent in 2022 (U.S. Bureau of Labor Statistics). Since 2018, Eureka County has experienced moderate economic growth, ranking in the middle among Nevada counties (U.S. Bureau of Economic Analysis). The median household income between 2017 to 2021 was $68,307, which surpasses the state-wide median household income of $66,274 (U.S. Census Bureau 2020).

Environmental Justice

Within a 20-mile radius of the airport, there are no distinct minority populations; approximately 7 percent of the population in the surrounding census blocks consist of "people of color" (USEPA, EJScreen Mapping Tool 2023), refer to **Attachment 12 – USEPA EJScreen 20-Mile Radius**. The approximate percentage of people in the surrounding area living below the Department of Health and Human Services poverty level is 39 percent. Refer to **Attachment 13 – BLM Socioeconomic Profile**.

Children's Environmental Health and Safety Risks

Of the approximately 1,863 people living in Eureka County, roughly 32 percent are below 18 years old, and 8 percent are below 5 years old (U.S. Census Bureau 2021 ACS 5-year Estimate). In the area surrounding the airport, predominantly the town of Eureka, 66 percent of houses were constructed prior to 1960, this is used as an indicator or potential risk to lead paint (USEPA, EJScreen Mapping Tool 2023). Furthermore, the town of Eureka has historic lead smelters that are part of a USEPA Superfund site (EPA Registry ID: 110046428040). The presence of these smelters may pose an increased risk of lead exposure. There are no other "environmental categories" in the area surrounding the airport that may expose children to asthma, unintentional injuries, developmental disorders, or cancer, refer to **Attachment 14 – Populations at Risk Report**.

Discussion

The proposed airport improvement projects are not likely to have a negative impact on the socioeconomics of the surrounding area. Instead, they likely would result in an enhancement of the local infrastructure by providing better access to emergency care and more readily available access to a relatively remote area of Nevada. The town of Eureka has one elementary school, one high school, and one medical clinic; however, there are no hospitals. The nearest hospital is approximately 61 miles away in Ely, Nevada.

3.2.3 Water Resources

Wetlands

Wetlands include land areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support vegetation suited for saturated soil conditions. Wetlands do not include bodies of water or areas that are wetted for a short enough time to not induce vegetation suited for saturated soil conditions (USACE 2023). Per review of the USFWS NWI maps, no wetlands are identified within the airport parcel. The NWI does identify a 0.37-acre excavated freshwater pond habitat (PUSAx) near the entrance to the airport.

Floodplains

Floodplains are assessed and mapped by FEMA using the National Flood Hazard Layer (NFHL) Viewer. A portion of the northwest corner of the airport parcel is located in a flood hazard zone, refer to **Attachment 7 – Water Resources Map**. A small section of the parcel is located in Zone X, which is a minimal flood hazard area with a 0.2 percent annual chance of flood hazard (500-year flood). A somewhat larger section is located in Zone A, which is identified as a special flood hazard area and has a one percent chance of flooding each year (100-year flood). The existing airport operations do not significantly overlap these areas. Any future proposed action will need to address the floodplains in the NEPA evaluation process and consider an alternative location if there is overlap with the FEMA identified floodplains (FAA Order 1050.1F).

Surface Waters

“Surface waters” include streams, rivers, lakes, and ponds. There is possibly one on-site intermittent or ephemeral stream, based on review of USGS topographic maps and NWI maps, see **Attachment 7 - Water Resources Map** for a complete depiction of on-site surface waters. Prior to placement of fill within the on-site stream, a formal delineation of the stream should be completed and submitted to the USACE for determination of jurisdiction under the CWA. All on-site waters are regulated as waters of the State of Nevada.

Groundwater

The NEPA evaluation must consider all potential impacts to groundwater from a future proposed action, these include impacts to an aquifer that is used for public water supply. The airport is located above a large aquifer identified by the Nevada Division of Water Resources (NDWR) as the Diamond Valley groundwater basin (NDWR Basin ID: 153). The Diamond Valley groundwater basin is used to support a significant farming community in Diamond Valley and is used by Devil's Gate Water General Improvement District for public water supply. A future project needs to consider the groundwater basin and implement measures to mitigate any adverse impacts to groundwater quality. This could include using best management practices to reduce erosion, limiting new impervious surfaces, and limiting surface water runoff.

The Safe Drinking Water Act prohibits any actions that would contaminate an EPA designated sole source aquifer. However, Nevada does not have any designated sole source aquifers.

Wild and Scenic Rivers

Nevada does not have any rivers that qualify under the National Wild and Scenic Rivers System (National Wil and Scenic River System, rivers.gov, accessed August 29, 2023).

4. References

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US Environmental Policy Agency. 2023. USEPA Green Book National Area and County-Level Multi-Pollutant Information website https://www.epa.gov/green-book. Accessed on April 18, 2023.

US Fish and Wildlife Service. 2023. Information Planning and Conservation (IPaC) System website IPaC: Home (fws.gov). Accessed May 3, 2023.

Attachments

Attachment 1. Eureka Airport Location Map

Attachment 2. Eureka County Land Use Map

Attachment 3. Soils Map

Attachment 4. Southwest ReGAP Map

Attachment 5. Water Resources Map

Attachment 6. State of Nevada Air Quality Status Report

Attachment 7. Biological Resources and Agency Correspondence

Attachment 8. NRCS Farmland Classification Map

Attachment 9. Adjacent EPA-Reporting Sites

Attachment 10. Eureka County Superfund Sites

Attachment 11. Eureka County Census Data

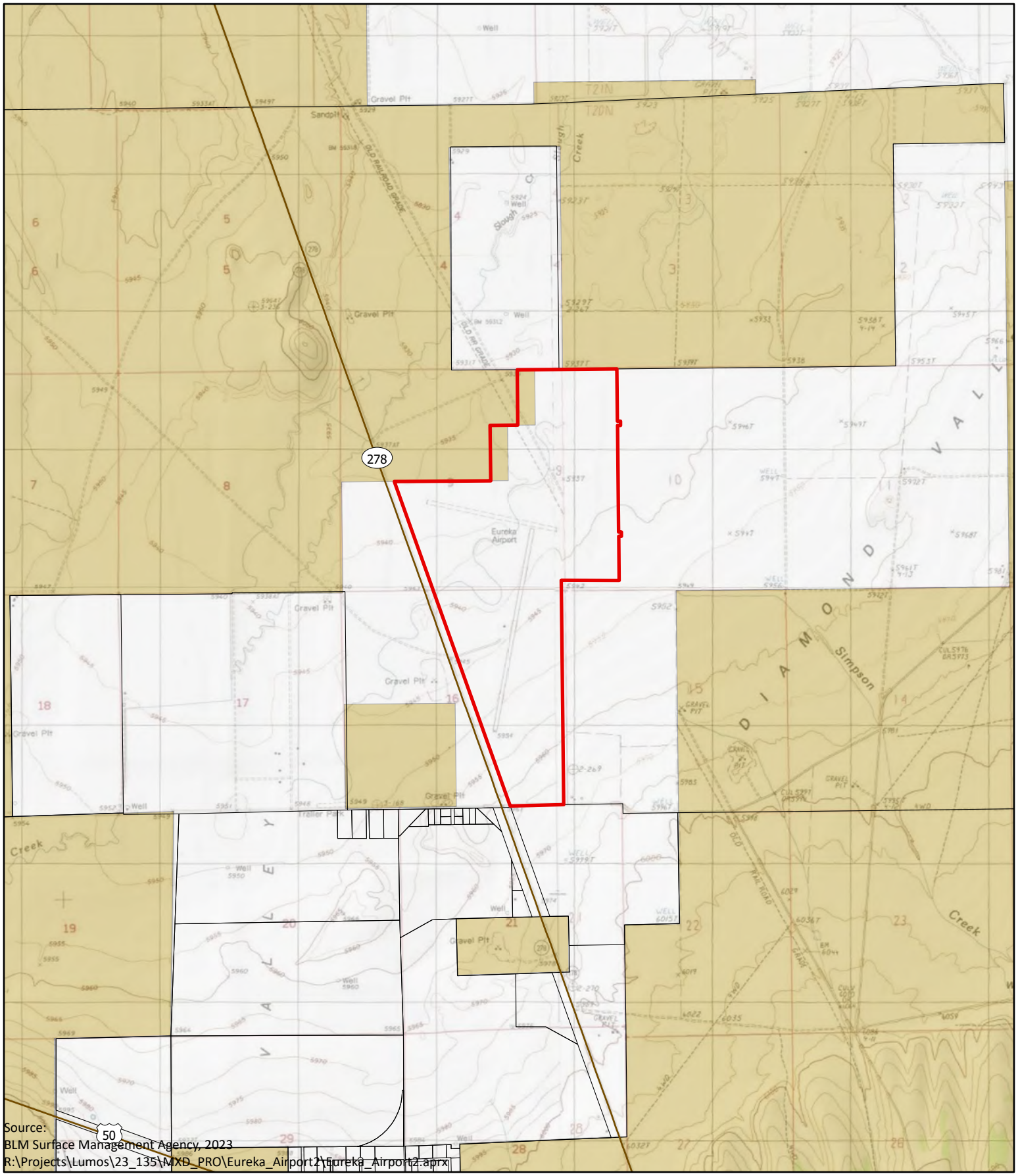
Attachment 12. USEPA EJScreen 20-Mile Radius

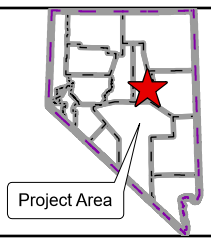
Attachment 13. BLM Socioeconomic Profile

Attachment 14. Populations at Risk Report

Attachment 1

Eureka Airport Location Map





Parcel Boundary
Eureka County Parcels
Bureau of Land Management
Private

N

1 In = 3,000 Ft

Feet

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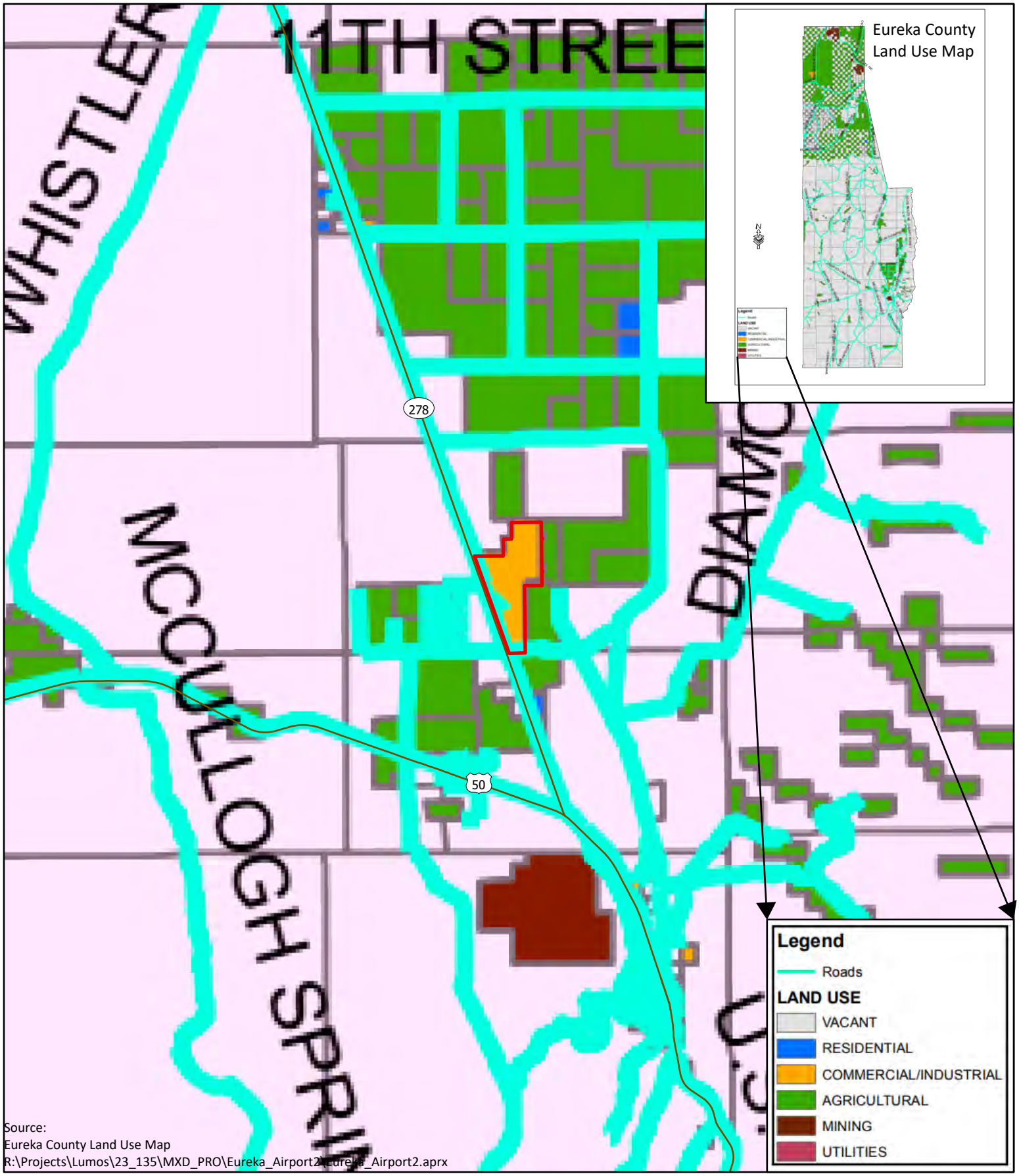
Date Saved: 9/1/2023

Attachment 1.
Location and Vicinity Map
Eureka Airport
Environmental Screening

Attachment 2

Eureka County Land Use Map



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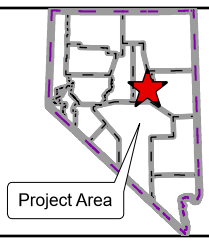

Parcel Boundary

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1 In = 10,000 Ft
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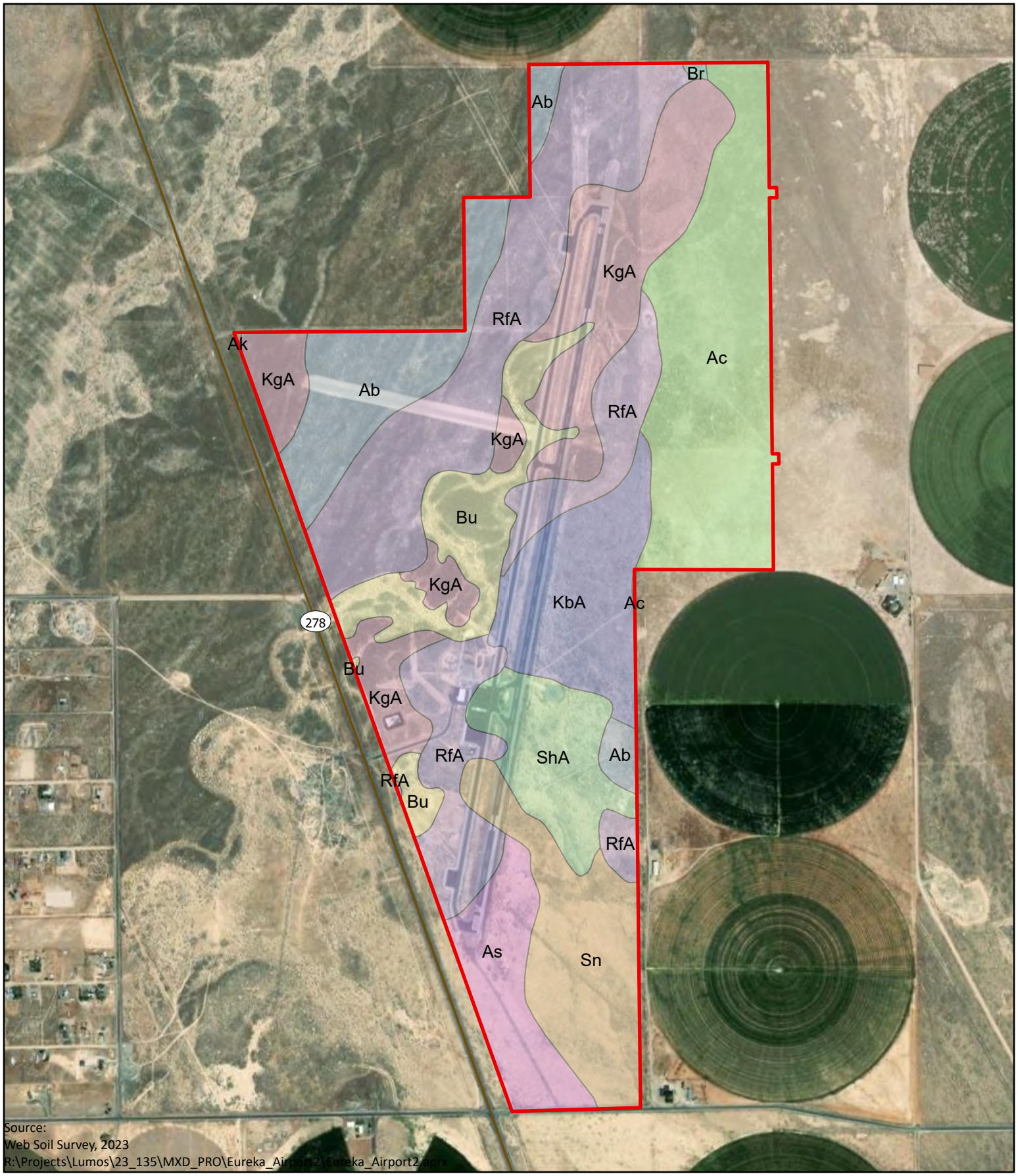
Date Saved: 9/1/2023

Attachment 2.
Land Use Map
Eureka Airport
Environmental Screening

Attachment 3

Soils Map



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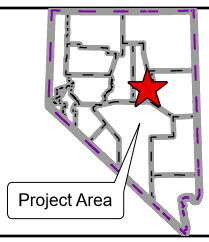

Parcel Boundary

Map Unit Symbol, Name

- Ab,Alhambra fine sandy loam
- Ac,Alhambra silt loam
- Ak,Alhambra-Kobeh complex
- As,Alhambra-Shipley complex
- Br,Bruffy silt loam
- Bu,Bruffy-Kobeh complex
- KbA,Kobeh sandy loam, 0-2% slopes
- KgA,Kobeh gravelly sandy loam, 0-2% slopes
- RfA,Rubyhill fine sandy loam, 0-2% slopes
- ShA,Shipley silt loam, 0-2% slopes
- Sn,Shipley complex

N

1 In = 1,250 Ft

Feet

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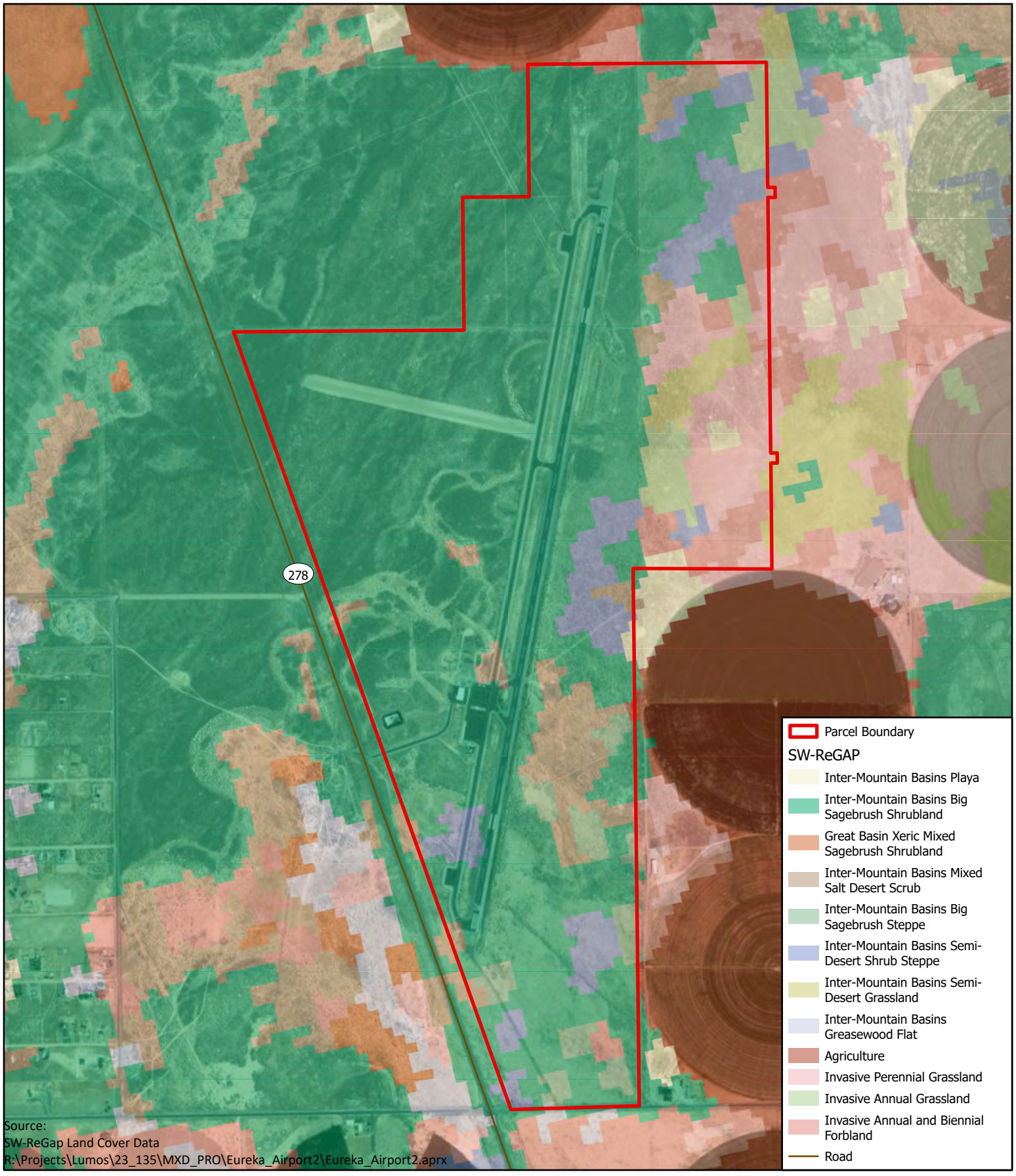
Date Saved: 8/24/2023

Attachment 3.
Soil Map
Eureka Airport
Environmental Screening

Attachment 4

Southwest ReGAP Map



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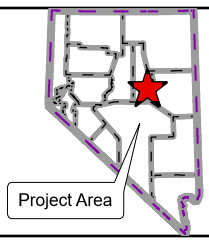

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Feet

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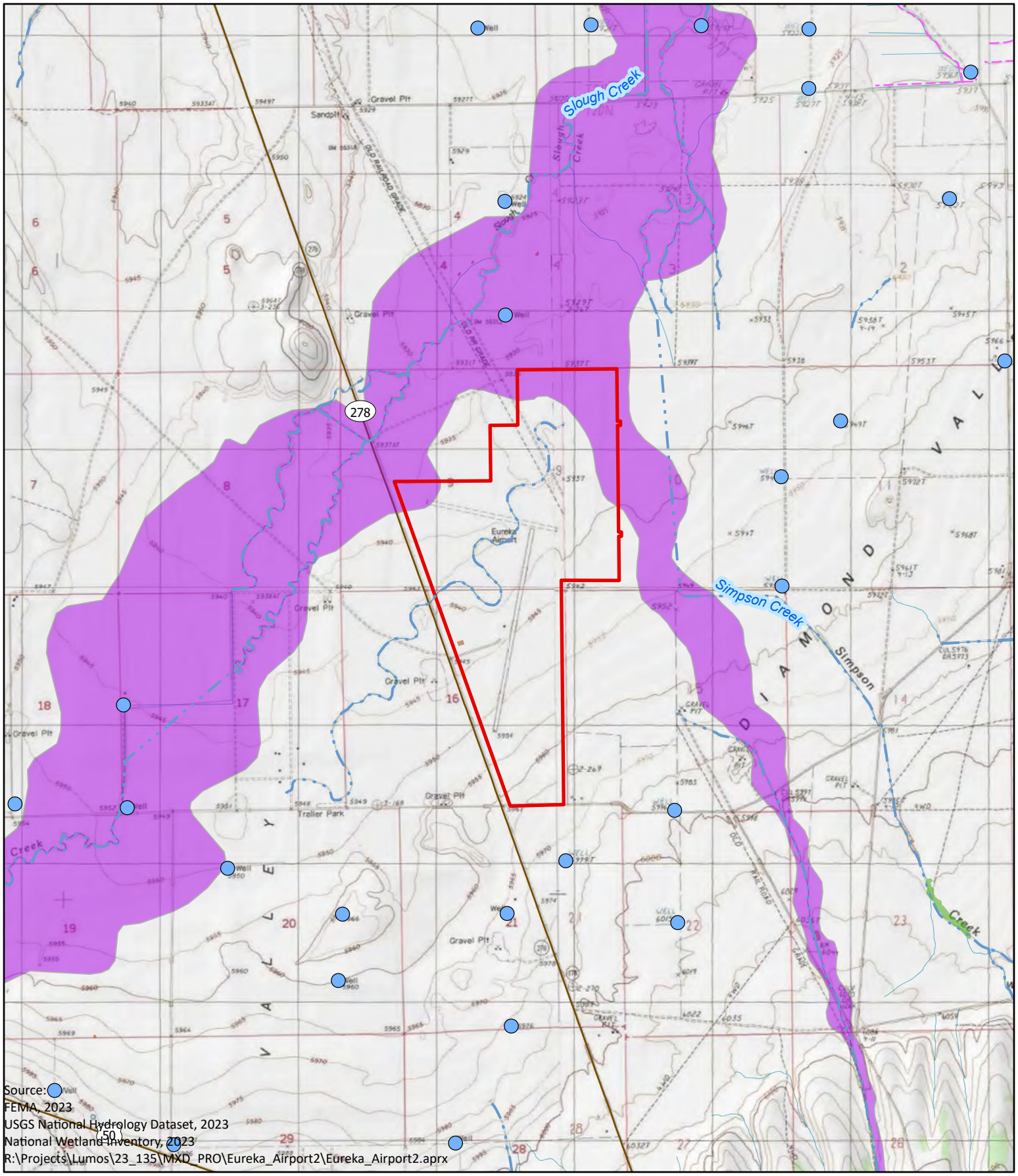
Date Saved: 8/24/2023

Attachment 4.
SW-ReGAP Map
Eureka Airport
Environmental Screening

Attachment 5

Water Resources Map



Attachment 5.
Water Resources Map
Eureka Airport
Environmental Screening

Attachment 6

State of Nevada Air Quality Status Report

Attachment 6. State of Nevada Air Quality Status Report

Status of Nevada Designated Areas

Nevada Areas by NAAQS

NOTE: As of 03/12/2021, these reports are no longer being updated. For the latest information, see the SIP Status Tools.

Jump to Nevada section for: CO (1971) Lead (1978) Lead (2008) NO2 (1971) Ozone-1Hr (1979) Ozone-8Hr (1997) Ozone-8Hr (2008) Ozone-8Hr (2015) PM-10 (1987) PM-2.5 (1997) PM-2.5 (2006) PM-2.5 (2012) SO2 (1971) SO2 (2010)

Nevada CO (1971) Areas

Return to map

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Design Value Annual (ppm) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Lake Tahoe Nevada Area	Maintenance	11/15/1990	Not Classified	33,259	2019		No Data	1 / 0		10/27/2003	02/13/2004 68 FR 69611
Las Vegas Area	Maintenance	11/15/1990	Serious	679,034	2019	2.8	Yes	6 / 6		09/18/2008	09/27/2010 75 FR 59090
Reno Area	Maintenance	11/15/1990	Moderate <= 12.7ppm	221,743	2019	1.6	Yes	4 / 3			08/04/2008 73 FR 38124

Nevada Lead (1978) Areas

Return to map

No designated areas for this pollutant.

Nevada Lead (2008) Areas

Return to map

No designated areas for this pollutant.

Nevada NO2 (1971) Areas

Return to map

No designated areas for this pollutant.

Nevada Ozone-1Hr (1979) Areas

Return to map

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Design Value Annual (ppm) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Reno Area	Nonattainment (NAAQS revoked)	01/06/1992	Marginal	421,407	2017-2019	0.089	Yes	3 / 2	06/02/2005 70 FR 22803	04/02/1997	

Nevada Ozone-8Hr (1997) Areas

Return to map

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Design Value Annual (ppm) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Las Vegas	Maintenance (NAAQS revoked)	09/13/2004	Subpart 2/Marginal	1,918,819	2017-2019	0.073	Yes	3 / 3	05/31/2011 76 FR 17343	04/11/2011	02/07/2013 78 FR 1149

Nevada Ozone-8Hr (2008) Areas

Return to map

No designated areas for this pollutant.

Nevada Ozone-8Hr (2015) Areas

Return to map

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Design Value Annual (ppm) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Las Vegas	Nonattainment	08/03/2018	Marginal	1,892,250	2017-2019	0.073	No	3 / 0			

Nevada PM-10 (1987) Areas

Return to map

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Average Estimated Exceedances (est. exc.) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Clark County; Las Vegas planning area	Maintenance	11/15/1990	Serious	1,951,248	2017-2019	0.7	Yes	3 / 3	10/04/2010 75 FR 45485		11/05/2014 79 FR 60078
Washoe County; Reno planning area	Maintenance	02/07/2001	Serious	421,404	2017-2019	0.0	Yes	3 / 2	05/19/2011 76 FR 21807	11/07/2014	01/07/2016 80 FR 76232

Nevada PM-2.5 (1997) Areas

Return to map

No designated areas for this pollutant.

Nevada PM-2.5 (2006) Areas

Return to map

No designated areas for this pollutant.

Nevada PM-2.5 (2012) Areas

Return to map

No designated areas for this pollutant.

Nevada SO2 (1971) Areas

Return to map

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Design Value Annual/24-Hr (ppb) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Central Steptoe Valley	Maintenance	11/15/1990		2,165		/		1 / 1		02/14/1995	06/11/2002 67 FR 17939

Nevada SO2 (2010) Areas

Return to map

No designated areas for this pollutant.

We have made our best effort to ensure that the data contained in these reports is accurate. We note that there may be brief delays in updating the reports as we receive new state submissions and we take rulemaking action on plans. In order to assist us in providing accurate information, we request that you contact us by clicking on the "Contact Us" link near the top of this page with any comments regarding or corrections to the posted information, including concerns about whether the entries reflect the most recent status.

Current and historical design value data can be found on the EPA Air Quality Design Values website and the EPA Green Book contains comprehensive nonattainment area, designation status, and historical information.

The level of the 1-hour NAAQS for sulfur dioxide is 75 parts per billion (ppb) calculated as the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations.

Nevada Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of March 31, 2023

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m^3) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:
NEVADA GO

Important Notes

Download National Dataset: dbf

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/ County FIPS Codes
NEVADA								
Carson City	Carbon Monoxide (1971)	Lake Tahoe, NV	92 93 94 95 96 97 98 99 00 01 02 03	02/13/2004	Not Classified	Part	10,342	32/510
Clark County	8-Hour Ozone (1997)-NAAQS revoked	Las Vegas, NV	04 05 06 07 08 09 10 11 12	02/07/2013	Marginal	Part	1,918,819	32/003
Clark County	8-Hour Ozone (2015)	Las Vegas, NV	18 19 20 21 22 23	/ /	Moderate	Part	1,892,250	32/003
Clark County	Carbon Monoxide (1971)	Las Vegas, NV	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09	09/27/2010	Serious	Part	679,034	32/003
Clark County	PM-10 (1987)	Clark County; Las Vegas planning area, NV	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13	11/05/2014	Serious	Part	1,951,248	32/003
Douglas County	Carbon Monoxide (1971)	Lake Tahoe, NV	92 93 94 95 96 97 98 99 00 01 02 03	02/13/2004	Not Classified	Part	10,401	32/005
Washoe County	1-Hour Ozone (1979)-NAAQS revoked	Reno, NV	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	421,407	32/031
Washoe County	Carbon Monoxide (1971)	Lake Tahoe, NV	92 93 94 95 96 97 98 99 00 01 02 03	02/13/2004	Not Classified	Part	12,516	32/031
Washoe County	Carbon Monoxide (1971)	Reno, NV	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07	08/04/2008	Moderate <= 12.7ppm	Part	221,743	32/031
Washoe County	PM-10 (1987)	Washoe County; Reno planning area, NV	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15	01/07/2016	Serious	Part	421,404	32/031
White Pine County	Sulfur Dioxide (1971)	Central Steptoe Valley, NV	92 93 94 95 96 97 98 99 00 01	06/11/2002		Part	2,165	32/033

Attachment 7

Biological Resources and Agency Correspondence

JOE LOMBARDO
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
6980 Sierra Center Parkway, Suite 120
Reno, Nevada 89511
Phone (775) 688-1500 • Fax (775) 688-1495

ALAN JENNE
Director
JORDAN GOSHERT
Deputy Director
MICHAEL SCOTT
Deputy Director

July 10, 2023

Alaina Russky
GIS Technician II
Resource Concepts INC
304 N. Minnesota St.
Carson City, Nevada 89703

Re: Eureka Airport ALP Update Project Standard Data Request

Dear Alaina Russky,

We are responding to your request for information from the Nevada Department of Wildlife (NDOW) on the known or potential occurrence of wildlife resources in the vicinity of the Eureka Airport ALP Update Project located in Eureka County. In order to fulfill your request an analysis was performed using the best available data from the NDOW's wildlife occurrences, raptor nest sites and ranges, greater sage-grouse leks and habitat, and big game distributions databases. These data should be considered sensitive and may contain information regarding the location of sensitive wildlife species or resources. All appropriate measures should be taken to ensure that the use of this data is strictly limited to serve the needs of the project described on your GIS Data Request Form. Abuse of this information has the potential to adversely affect the existing ecological status of Nevada's wildlife resources and could be cause for the denial of future data requests.

To adequately provide wildlife resource information in the vicinity of the proposed project the NDOW delineated an area of interest that included a four-mile buffer around the project area you provided on April 28, 2023. Wildlife resource data was queried from the NDOW databases based on this area of interest. The results of this analysis are summarized below.

Big Game – Occupied mule deer and pronghorn antelope distributions exist within the project area and surrounding 4-mile buffer area. No known occupied elk and bighorn sheep distributions exist within the project area or surrounding 4-mile buffer area. Please refer to the attached maps for details regarding big game distributions relative to the proposed project area.

Greater Sage-Grouse – Greater sage-grouse habitat within the project area or surrounding 4-mile buffer area has been classified as other, general, and priority habitat by the Nevada Sagebrush Ecosystem Program (https://sagebrusheco.nv.gov/). Greater sage-grouse activity in the project area and/or surrounding 4-mile buffer has been documented by 1 tracking locations generated by at least 1 radio-marked birds. There are 3 known sage-grouse leks within the project area and/or surrounding 4-mile buffer.

Lek Name	Township/Range/Section	Last Survey	Status
Four Eyed Nicks		2022	Active
Simpson Creek 2	21 0200N 0540E 017	2022	Active
Simpson Creek 4	21 0200N 0530E 026	2022	Unknown

Raptors – Various species of raptors, which use diverse habitat types, may reside in the vicinity of the project area. American kestrel, Cooper's hawk, Swainson's hawk, bald eagle, barn owl, burrowing owl, ferruginous hawk, flammulted owl, golden eagle, great horned owl, long-eared owl, merlin, northern goshawk, northern harrier, northern saw whet owl, osprey, peregrine falcon, red-tailed hawk, rough-legged hawk, sharp-shinned hawk, short-eared owl, turkey vulture, and western screech owl have distribution ranges that include the project area and/or surrounding 10-mile buffer.

Raptors have been observed within the 10-mile buffer surrounding the project area, but there are no recorded raptor sightings directly within the project area.

Raptor species are protected by State and Federal laws. In addition, bald eagle, burrowing owl, California spotted owl, ferruginous hawk, flammulated owl, golden eagle, northern goshawk, peregrine falcon, prairie falcon, and short-eared owl are NDOW species of special concern and are target species for conservation as outlined by the Nevada Wildlife Action Plan. Per the *Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance* (United States Fish and Wildlife Service 2010).

We have queried our raptor nest database to include raptor nest sites within ten miles of the proposed project area. There are 60 known raptor nests within the project area and/or surrounding 10-mile buffer.

Other Wildlife Resources – No water developments are present within the project area. No known Lahontan cutthroat trout (LCT) wastershed(s) are present within the project area.

The proposed project area may also be in the vicinity of abandoned mine workings, which often provide habitat for state and federally protected wildlife, especially bat species, many of which are protected under NAC 503.030. To request data regarding known abandoned mine workings in the vicinity of the project area please contact the Nevada Division of Minerals (http://minerals.state.nv.us/).

The information provided is based on data stored at our Reno Headquarters Office and does not necessarily incorporate the most up to date wildlife resource information collected in the field. Please contact the Habitat Division Supervising Biologist at our regional offices to discuss the current environmental conditions for your project area and the interpretation of our analysis. Furthermore, it should be noted that the information detailed above is preliminary in nature and not necessarily an identification of every wildlife resource concern associated with the proposed project. Consultation with the Supervising Habitat biologist will facilitate the development of appropriate survey protocols and avoidance or mitigation measures that may be required to address potential impacts to wildlife resources.

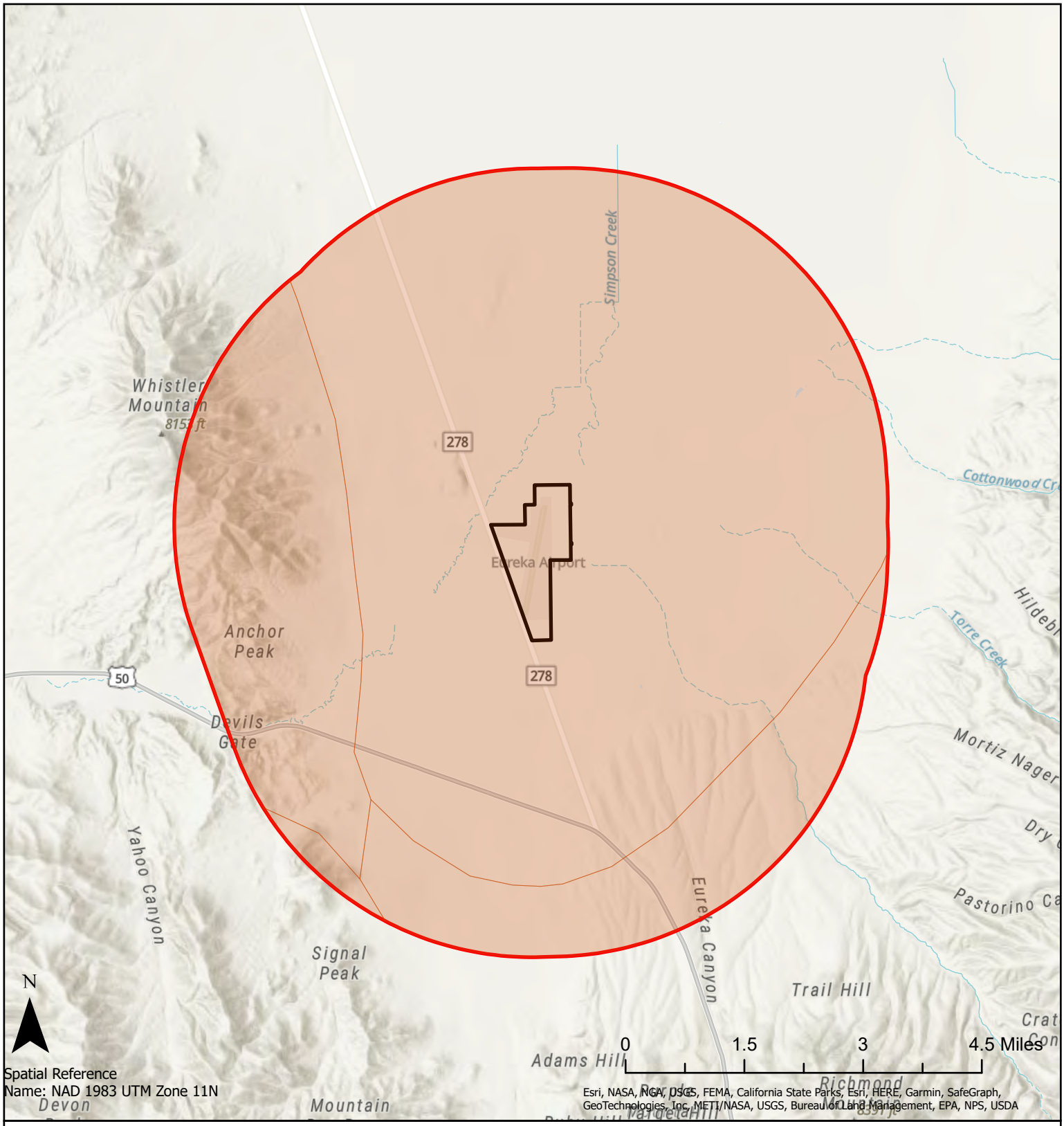
Federally listed Threatened and Endangered species are also under the jurisdiction of the United States Fish and Wildlife Service. Please contact them for more information regarding these species.

If you have any questions regarding the results or methodology of this analysis, please do not hesitate to contact us as (775) 688-1500 or via email at NDOWdata@ndow.org.

Appendix A: Raptor Nest Table

Nest Type	Nest Substrate	Nest Size	Last Visit Date	Last Occupied Species	Last Occupied Date
Stick nest			05/05/2014	Common raven	05/05/2014
Stick nest			05/05/2014	Common raven	05/05/2014
Stick nest			05/22/1996	Coopers hawk	05/22/1996
Stick nest			05/09/1974	Ferruginous hawk	
Stick nest			05/20/1997	Ferruginous hawk	05/20/1997
Stick nest			04/17/2006	Ferruginous hawk	04/17/2006
Stick nest			05/22/1996	Ferruginous hawk	05/22/1996
Stick nest			05/10/1976	Ferruginous hawk	05/10/1976
Stick nest			06/23/1976	Ferruginous hawk	06/23/1976
Stick nest			07/24/2016	Ferruginous hawk	07/24/2016
Stick nest			06/17/1992	Ferruginous hawk	06/17/1992
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			05/29/1996	Ferruginous hawk	05/29/1996
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			05/26/1977	Ferruginous hawk	05/26/1977
Stick nest			06/15/1992	Ferruginous hawk	06/15/1992
Stick nest			05/26/1977	Ferruginous hawk	05/26/1977
Stick nest			06/15/1992	Ferruginous hawk	06/15/1992
Stick nest			05/26/1977	Ferruginous hawk	05/26/1977
Stick nest			04/30/2015	Ferruginous hawk	04/30/2015
Stick nest			04/30/2015	Ferruginous hawk	04/30/2015
Stick nest			06/13/1992	Ferruginous hawk	06/13/1992
Stick nest			06/23/1976	Ferruginous hawk	06/23/1976
Stick nest			05/20/2013	Golden eagle	05/20/2013
Stick nest			05/20/2013	Golden eagle	05/20/2013
Stick nest	cliff	extra large	06/20/2019	Golden eagle	06/20/2019
			05/05/2014	Golden eagle	05/05/2014
Stick nest				Northern goshawk	
Stick nest			05/05/2014	Prairie falcon	05/05/2014
			06/08/2009	Prairie falcon	06/08/2009
			01/01/1977	Prairie falcon	01/01/1977
Stick nest			05/05/2014	Red-tailed hawk	05/05/2014
Stick nest				Swainsons hawk	
Stick nest			06/15/1992		06/15/1992
Stick nest			06/17/1992		

Stick nest			06/01/1960		
Stick nest			05/20/2013		
Stick nest			05/20/2013		
Stick nest			05/20/2013		
Stick nest			01/01/1977		
Stick nest			06/17/1992		
Stick nest			06/17/1992		
Stick nest			01/01/1978		
Stick nest			06/17/1992		
Stick nest			06/17/1992		
Stick nest			01/01/1977		
Stick nest			06/17/1992		
Stick nest			06/17/1992		
Stick nest			06/17/1992		
Stick nest			06/17/1992		
Stick nest			06/17/1992		
Burrow			07/07/1994		
Stick nest			05/05/2014		
Stick nest			05/20/2013		



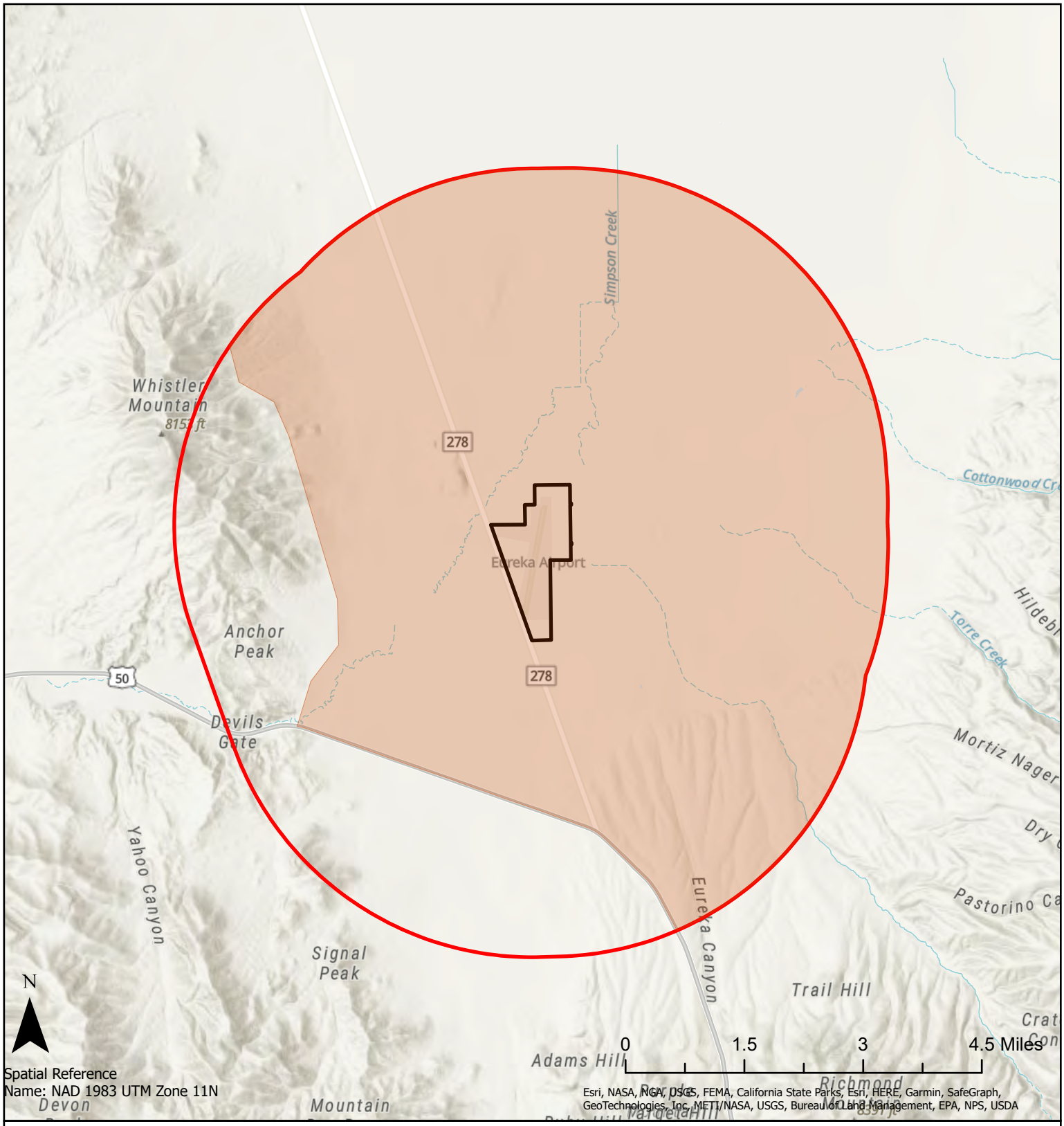
Spatial Reference
Name: NAD 1983 UTM Zone 11N

Legend

- Mule Deer Distribution
- Project Area 4-mile Buffer
- Project Area

Mule Deer Distribution near the Eureka Airport ALP Update Project

July 10, 2023



Spatial Reference
Name: NAD 1983 UTM Zone 11N

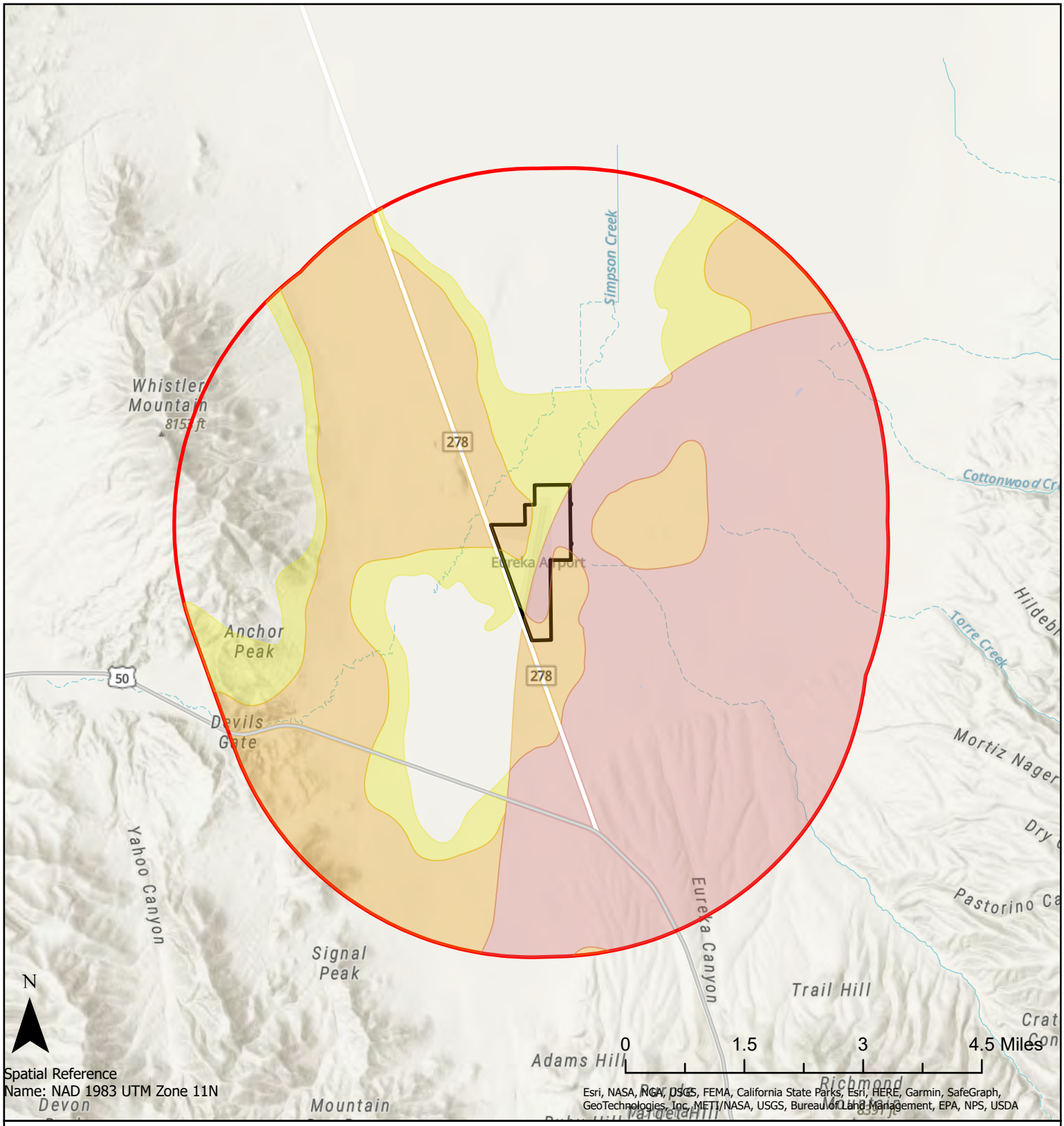
Legend

- Pronghorn Antelope Distribution
- Project Area 4-mile Buffer
- Project Area

Pronghorn Antelope Distribution near the Eureka Airport ALP Update

July 10, 2023

NEVADA DEPARTMENT OF WILDLIFE



Legend

- Priority Habitat
- General Habitat
- Other Habitat
- Bi-State Habitat
- Project Area 4-mile Buffer
- Project Area

Greater Sage-Grouse Habitat near the Eureka Airport ALP Update

July 10, 2023

NEVADA DEPARTMENT OF WILDLIFE

NEVADA
DIVISION OF
NATURAL HERITAGE

STATE OF NEVADA
Department of Conservation & Natural Resources
Joe Lombardo, *Governor*
James A. Settelmeyer, *Director*
Kristin Szabo, *Administrator*

03 May 2023

Alaina Russky
Resource Concepts Inc.
340 N. Minnesota St.
Carson City, NV 89703

RE: Data request received 25 April 2023

Dear Ms. Russky:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or at-risk plant and animal taxa recorded on or near the Eureka Airport Project area in Eureka County. We searched our database and maps around the shapefile footprint provided including a five-kilometer radius around:

Township 20N Range 53E Sections 09, 10, and 16

There are no at-risk taxa recorded within the given area. However, habitat may be available for: the Lahontan beardtongue, *Penstemon palmeri* var. *macranthus*, a Nevada Bureau of Land Management (BLM) Sensitive Species; the pygmy rabbit, *Brachylagus idahoensis*, a Nevada BLM Sensitive Species; the Ferruginous Hawk, *Buteo regalis*, a Nevada BLM Sensitive Species; and the Golden Eagle, *Aquila chrysaetos*, a Nevada BLM Sensitive Species. The Nevada Department of Wildlife (NDOW) manages, protects, and restores Nevada's wildlife resources and associated habitat. Please contact NDOW at (775) 688-1500, or NDOWdata@ndow.org to obtain further information regarding wildlife resources within and near your area of interest. Removal or destruction of state protected flora species (NAC 527.010) requires a special permit from Nevada Division of Forestry (NRS 527.270).

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow
Aquatic Biologist/Data Manager

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301

In Reply Refer To: May 03, 2023
Project Code: 2023-0077611
Project Name: Eureka Airport Master Plan Update - Environmental Resource Evaluation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

PROJECT SUMMARY

Project Code: 2023-0077611
Project Name: Eureka Airport Master Plan Update - Environmental Resource Evaluation
Project Type: Airport - Maintenance/Modification
Project Description: Evaluate the on-site and relevant resources in and around the Eureka Airport parcel in Eureka County, Nevada - these resources are those evaluated by FAA Order 1050.1F.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.59633,-116.00434593463106,14z

Counties: Eureka County, Nevada

ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15

NAME	BREEDING SEASON
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

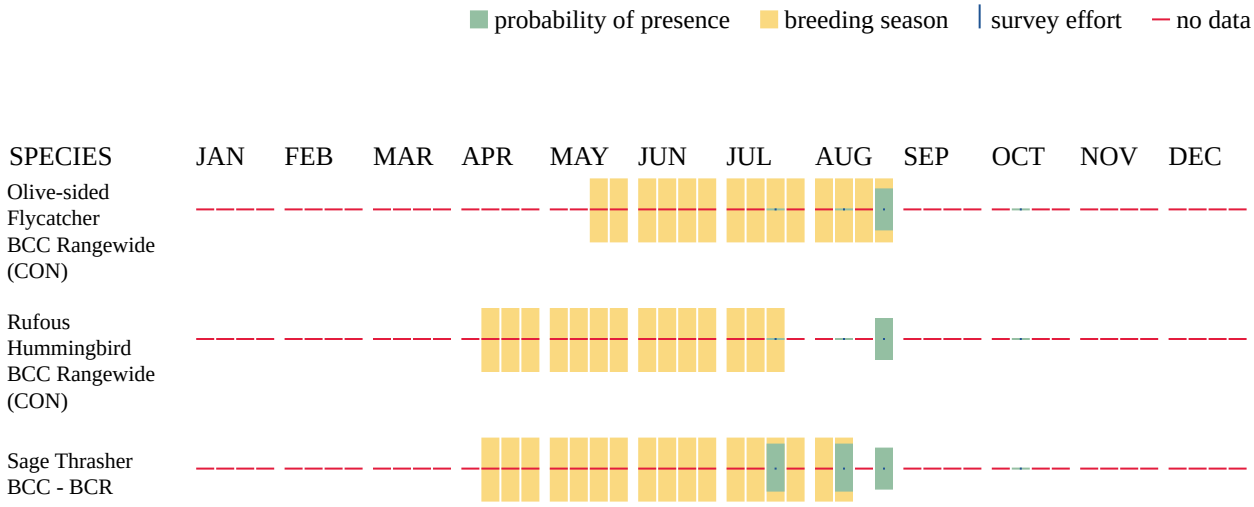
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles)

potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPAC USER CONTACT INFORMATION

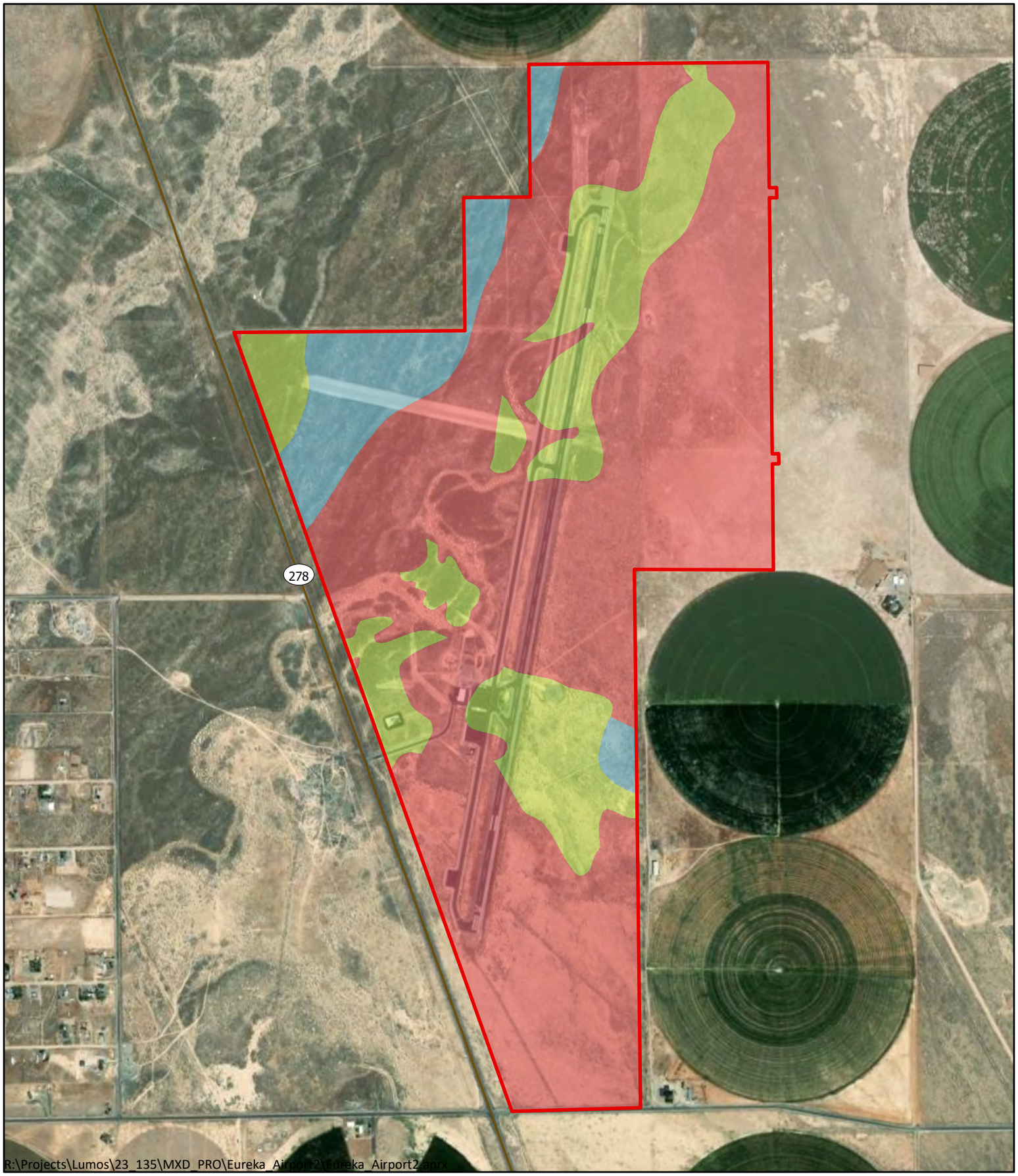
Agency: Resource Concepts, INC.
Name: Erin Smith
Address: 340 N. Minnesota St.
City: Carson City
State: NV
Zip: 89703
Email erin@rci-nv.com
Phone: 7753014168

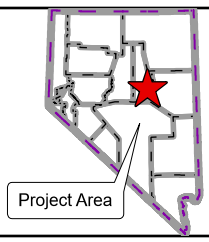
LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Aviation Administration

Attachment 8

NRCS Farmland Classification Map





Farmland of statewide importance

Farmland of statewide importance, if irrigated

Prime farmland if irrigated and reclaimed of excess salts and sodium

Project Area

N

1 In = 1,250 Ft

Feet

0 1,250

Date Saved: 8/24/2023

Attachment 8.
Farmlands Map
Eureka Airport
Environmental Screening

Attachment 9

Adjacent EPA Reporting Sites

Attachment 9. Adjacent EPA-Reporting Sites

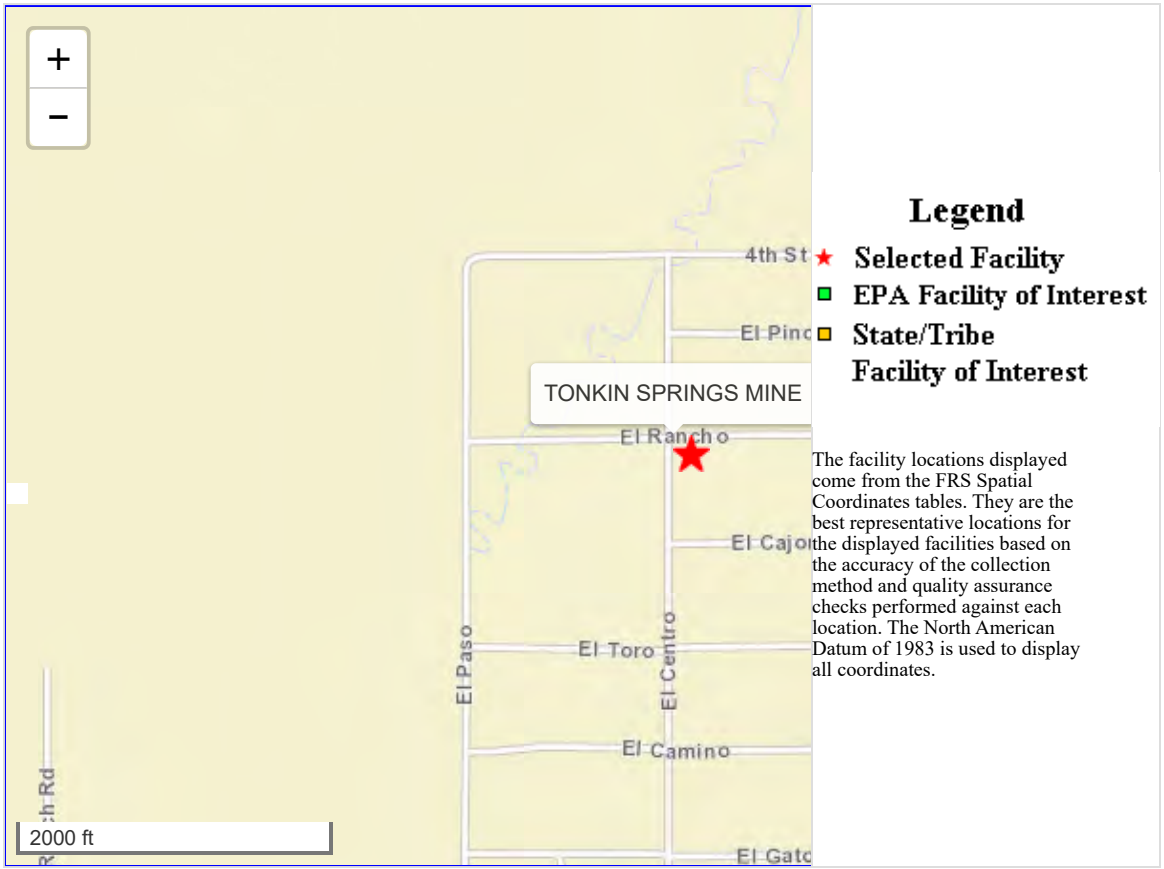
Related Topics: Envirofacts

FRS

FRS Facility Detail Report

TONKIN SPRINGS MINE

EPA Registry Id: 110045554066
15 MILES JD RANCH RD
EUREKA, NV 89316



Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error

Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	TONKIN SPRINGS MINE	NVR000087403	VSQG (Y)	RCRAINFO		

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

Facility Codes and Flags

EPA Region:	09
Duns Number:	
Congressional District Number:	02
Legislative District Number:	
HUC Code/Watershed:	16060005 / DIAMOND-MONITOR VALLEYS
US Mexico Border Indicator:	
Federal Facility:	NO
Tribal Land:	NO

Alternative Names

No Alternative Names returned.

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OPERATOR	MCEWEN MINING, INC.		RCRAINFO	
OWNER	MCEWEN MINING INC		RCRAINFO	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
RCRAINFO	212221	GOLD ORE MINING.	

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	1595 MEADOW WOOD LN STE 3	RENO	NV	89502	RCRAINFO

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
REGULATORY CONTACT	JAMES SMITHSON	775-825-8932	RCRAINFO	

Query executed on: AUG-29-2023

Last updated on September 24, 2015

Attachment 10

Eureka County Superfund Sites

Attachment 10.

Superfund Site Search Results

Found **9** site(s) that match your search criteria listed below.

Search Criteria:

Active, Archived, or All :	***All Sites***
County:	*EUREKA*
State:	*Nevada*

To conduct another search, return to the **Search Superfund Site Information** page.
Download Excel file containing values for all search criteria

Displaying sites 1 through 9

EPA ID	Site Name	City	County	State	National Priorities List Status	Superfund Alternative Approach
NVD000626531	BARRICK GOLD STRIKE MINE - BLM	EUREKA	EUREKA	NV	Not NPL	No
NVN000909500	EUREKA SMELTER	EUREKA	EUREKA	NV	Not NPL	No
NVN000902077	GEDDES - BERTRAND MINE	EUREKA	EUREKA	NV	Not NPL	No
NVD980419626	GOLD CREEK CORP	EUREKA	EUREKA	NV	Not NPL	No
NVD980419618	GOLD CREEK SITE	EUREKA	EUREKA	NV	Not NPL	No
NVD980817738	MT HOPE MINES INC	EUREKA	EUREKA	NV	Not NPL	No
NVN000909415	TOWN OF EUREKA	EUREKA	EUREKA	NV	Not NPL	No
NV6141190581	UNIVERSAL GAS INC.	EUREKA	EUREKA	NV	Not NPL	No
NVD046630893	WESTERN-WINDFALL	EUREKA	EUREKA	NV	Not NPL	No

Displaying sites 1 through 9

APRIL 25, 2023

Attachment 11

Eureka County Census Data

Please note that new Connecticut county level geographies are not availabe within the map.

An official website of the United States government

United States Census Bureau

Attachment 11. Eureka County Census Data

QuickFacts

Eureka County, Nevada

QuickFacts provides statistics for all states and counties, and for cities and towns with a ***population of 5,000 or more***.

Table

All Topics	Eureka County, Nevada
Population Estimates, July 1, 2022, (V2022)	**1,863**
PEOPLE	
Population	
Population Estimates, July 1, 2022, (V2022)	**1,863**
Population Estimates, July 1, 2021, (V2021)	1,909
Population estimates base, April 1, 2020, (V2022)	1,853
Population estimates base, April 1, 2020, (V2021)	1,853
Population, percent change - April 1, 2020 (estimates base) to July 1, 2022, (V2022)	0.5%
Population, percent change - April 1, 2020 (estimates base) to July 1, 2021, (V2021)	3.0%
Population, Census, April 1, 2020	1,855
Population, Census, April 1, 2010	1,987
Age and Sex	
Persons under 5 years, percent	3.6%
Persons under 18 years, percent	22.5%
Persons 65 years and over, percent	18.1%
Female persons, percent	45.8%
Race and Hispanic Origin	
White alone, percent	90.0%
Black or African American alone, percent (a)	1.6%
American Indian and Alaska Native alone, percent (a)	3.7%
Asian alone, percent (a)	1.3%
Native Hawaiian and Other Pacific Islander alone, percent (a)	0.2%
Two or More Races, percent	3.3%
Hispanic or Latino, percent (b)	15.0%
White alone, not Hispanic or Latino, percent	77.2%
Population Characteristics	
Veterans, 2017-2021	93
Foreign born persons, percent, 2017-2021	3.1%
Housing	
Housing units, July 1, 2021, (V2021)	967
Owner-occupied housing unit rate, 2017-2021	77.5%
Median value of owner-occupied housing units, 2017-2021	$150,400
Median selected monthly owner costs -with a mortgage, 2017-2021	$1,463
Median selected monthly owner costs -without a mortgage, 2017-2021	$280
Median gross rent, 2017-2021	$909
Building permits, 2021	NA
Families & Living Arrangements	
Households, 2017-2021	555
Persons per household, 2017-2021	2.88
Living in same house 1 year ago, percent of persons age 1 year+, 2017-2021	89.6%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	8.5%
Computer and Internet Use	
Households with a computer, percent, 2017-2021	90.3%
Households with a broadband Internet subscription, percent, 2017-2021	

Education	
High school graduate or higher, percent of persons age 25 years+, 2017-2021	95.1%
Bachelor's degree or higher, percent of persons age 25 years+, 2017-2021	11.1%
Health	
With a disability, under age 65 years, percent, 2017-2021	16.5%
Persons without health insurance, under age 65 years, percent	⚠ 7.7%
Economy	
In civilian labor force, total, percent of population age 16 years+, 2017-2021	50.0%
In civilian labor force, female, percent of population age 16 years+, 2017-2021	41.0%
Total accommodation and food services sales, 2017 ($1,000) (c)	1,730
Total health care and social assistance receipts/revenue, 2017 ($1,000) (c)	NA
Total transportation and warehousing receipts/revenue, 2017 ($1,000) (c)	5,243
Total retail sales, 2017 ($1,000) (c)	4,739
Total retail sales per capita, 2017 (c)	$2,419
Transportation	
Mean travel time to work (minutes), workers age 16 years+, 2017-2021	25.0
Income & Poverty	
Median household income (in 2021 dollars), 2017-2021	$68,307
Per capita income in past 12 months (in 2021 dollars), 2017-2021	$26,443
Persons in poverty, percent	⚠ 10.0%

BUSINESSES

Businesses	
Total employer establishments, 2020	35
Total employment, 2020	1,524
Total annual payroll, 2020 ($1,000)	181,595
Total employment, percent change, 2019-2020	-16.4%
Total nonemployer establishments, 2019	127
All employer firms, Reference year 2017	33
Men-owned employer firms, Reference year 2017	S
Women-owned employer firms, Reference year 2017	S
Minority-owned employer firms, Reference year 2017	S
Nonminority-owned employer firms, Reference year 2017	S
Veteran-owned employer firms, Reference year 2017	S
Nonveteran-owned employer firms, Reference year 2017	S

GEOGRAPHY

Geography	
Population per square mile, 2020	0.4
Population per square mile, 2010	0.5
Land area in square miles, 2020	4,175.69
Land area in square miles, 2010	4,175.68
FIPS Code	32011

About datasets used in this table

Value Notes

⚠ Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable.] Click the Quick Info ⓘ icon to the left of each row in TA learn about sampling error.

In Vintage 2022, as a result of the formal request from the state, Connecticut transitioned from eight counties to nine planning regions. For more details, please see the Vintage 2022 release notes available here: Release Notes.

The vintage year (e.g., V2022) refers to the final year of the series (2020 thru 2022). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2017-2021 ACS 5-year estimates to other ACS estimates. For more information, please visit the 2021 5-year ACS Comparison Guidance page.

Fact Notes

(a)	Includes persons reporting only one race
(b)	Hispanics may be of any race, so also are included in applicable race categories
(c)	Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

D	Suppressed to avoid disclosure of confidential information
F	Fewer than 25 firms
FN	Footnote on this item in place of data
NA	Not available
S	Suppressed; does not meet publication standards
X	Not applicable
Z	Value greater than zero but less than half unit of measure shown
-	Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open ende
N	Data for this geographic area cannot be displayed because the number of sample cases is too small.

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, Stat Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

Attachment 12

USEPA EJScreen 20-mile Radius

EJScreen Report (Version 2.11)

20 miles Ring Centered at 39.604478,-116.003866, NEVADA, EPA Region 9

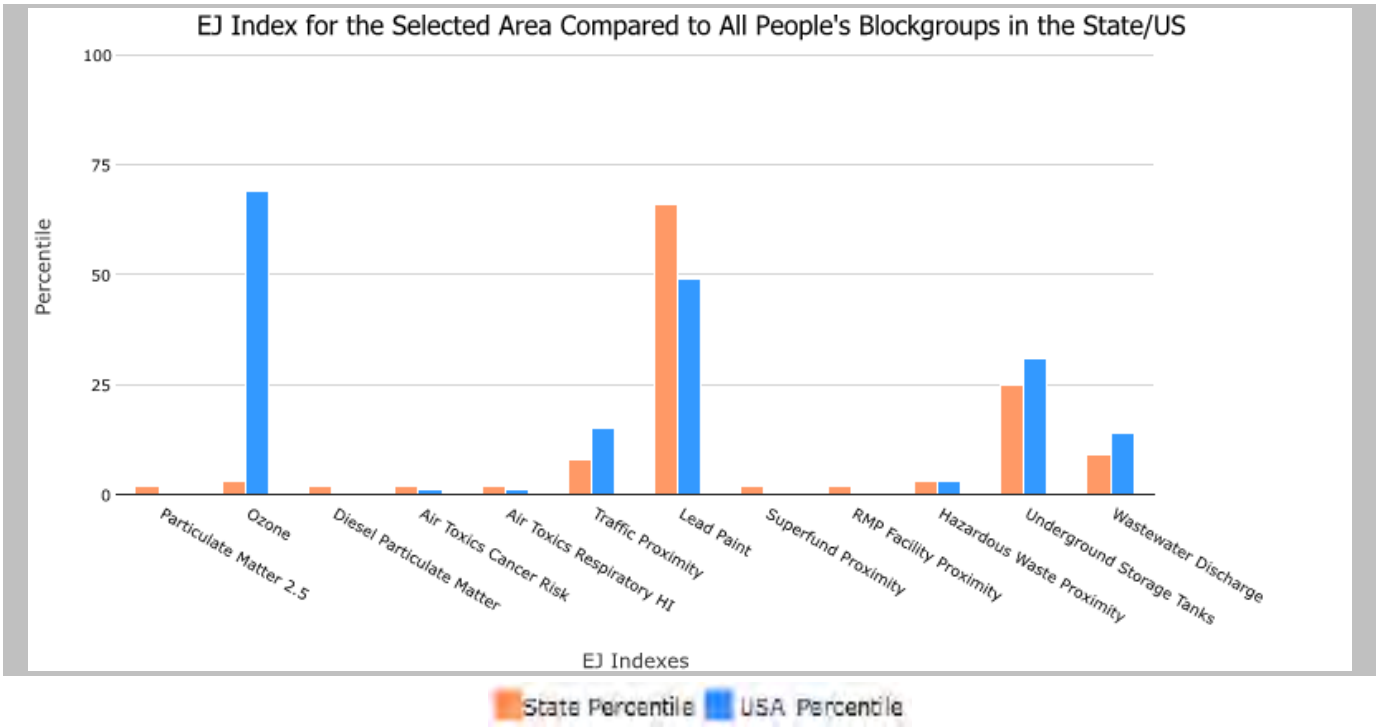
Approximate Population: 1,234

Input Area (sq. miles): 1256.38

Eureka Airport

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	2	0
Ozone EJ index	3	69
Diesel Particulate Matter EJ index*	2	0
Air Toxics Cancer Risk EJ index*	2	1
Air Toxics Respiratory HI EJ index*	2	1
Traffic Proximity EJ index	8	15
Lead Paint EJ index	66	49
Superfund Proximity EJ index	2	0
RMP Facility Proximity EJ index	2	0
Hazardous Waste Proximity EJ index	3	3
Underground Storage Tanks EJ index	25	31
Wastewater Discharge EJ index	9	14

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

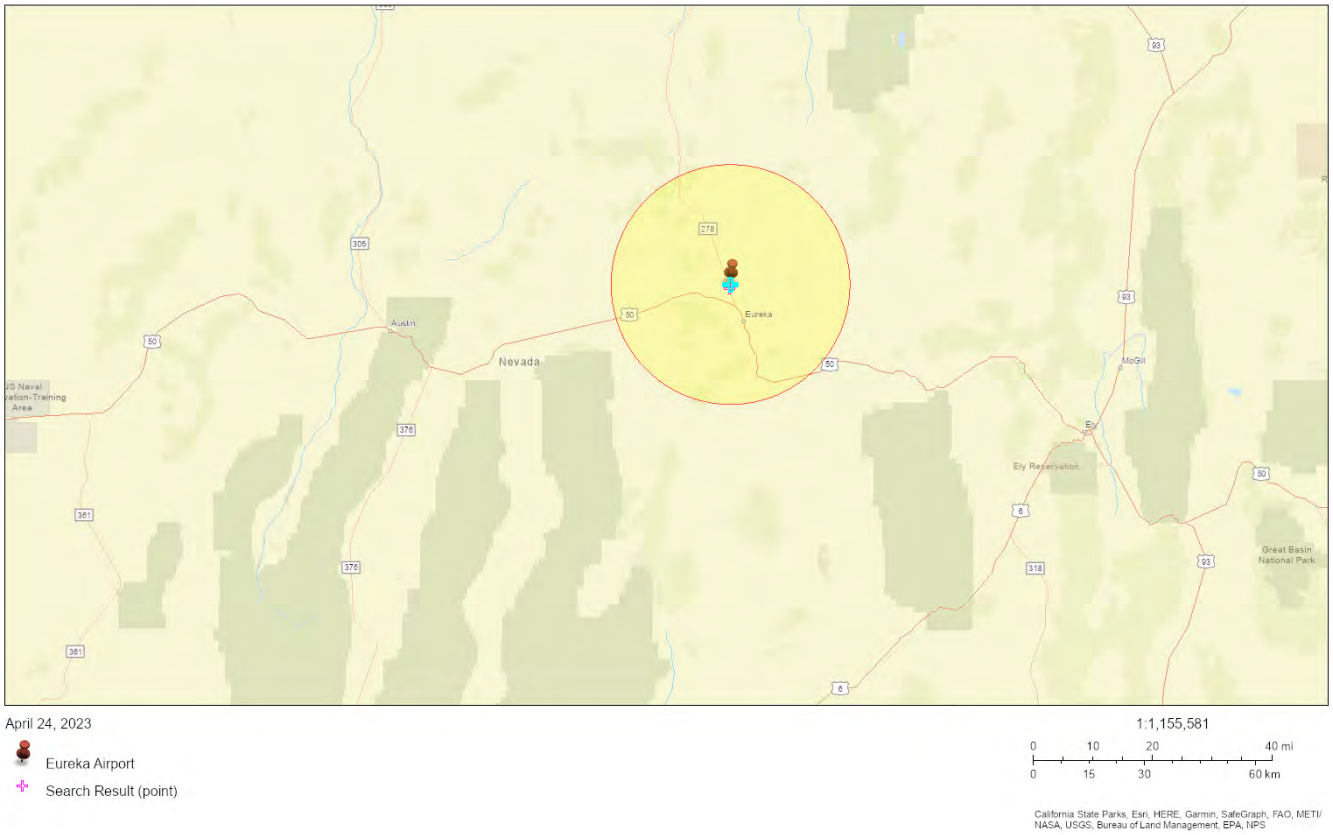
EJScreen Report (Version 2.11)

20 miles Ring Centered at 39.604478,-116.003866, NEVADA, EPA Region 9

Approximate Population: 1,234

Input Area (sq. miles): 1256.38

Eureka Airport



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.11)

20 miles Ring Centered at 39.604478,-116.003866, NEVADA, EPA Region 9

Approximate Population: 1,234

Input Area (sq. miles): 1256.38

Eureka Airport

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 (µg/m^3)	4.94	7.12	1	8.67	0
Ozone (ppb)	52.8	57.6	2	42.5	90
Diesel Particulate Matter* (µg/m^3)	0.0122	0.439	1	0.294	<50th
Air Toxics Cancer Risk* (lifetime risk per million)	10	25	4	28	<50th
Air Toxics Respiratory HI*	0.1	0.34	3	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	13	700	6	760	11
Lead Paint (% Pre-1960 Housing)	0.24	0.05	91	0.27	52
Superfund Proximity (site count/km distance)	0.0036	0.014	1	0.13	0
RMP Facility Proximity (facility count/km distance)	0.016	0.42	2	0.77	0
Hazardous Waste Proximity (facility count/km distance)	0.023	2	2	2.2	3
Underground Storage Tanks (count/km^2)	0.0012	3.3	21	3.9	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.11	13	74	12	85
Socioeconomic Indicators					
Demographic Index	23%	41%	20	35%	38
Supplemental Demographic Index	12%	16%	42	15%	48
People of Color	7%	52%	3	40%	17
Low Income	39%	32%	64	30%	67
Unemployment Rate	0%	7%	0	5%	0
Limited English Speaking Households	0%	6%	0	5%	0
Less Than High School Education	7%	13%	37	12%	44
Under Age 5	9%	6%	78	6%	78
Over Age 64	15%	16%	55	16%	48
Low Life Expectancy	17%	20%	13	20%	22

EJScreen Report (Version 2.11)

20 miles Ring Centered at 39.604478,-116.003866, NEVADA, EPA Region 9

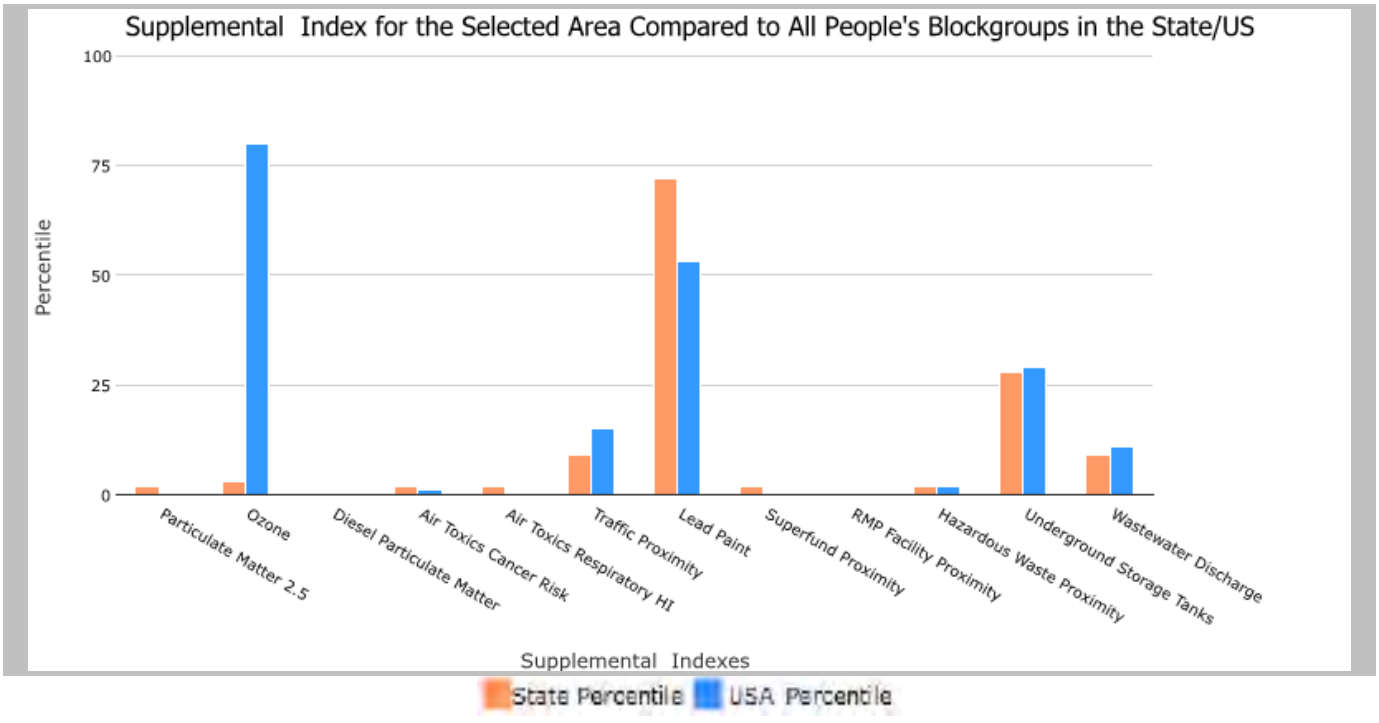
Approximate Population: 1,234

Input Area (sq. miles): 1256.38

Eureka Airport

Selected Variables	State Percentile	USA Percentile
Supplemental Indexes		
Particulate Matter 2.5 Supplemental Index	2	0
Ozone Supplemental Index	3	80
Diesel Particulate Matter Supplemental Index*	0	0
Air Toxics Cancer Risk Supplemental Index*	2	1
Air Toxics Respiratory HI Supplemental Index*	2	0
Traffic Proximity Supplemental Index	9	15
Lead Paint Supplemental Index	72	53
Superfund Proximity Supplemental Index	2	0
RMP Facility Proximity Supplemental Index	0	0
Hazardous Waste Proximity Supplemental Index	2	2
Underground Storage Tanks Supplemental Index	28	29
Wastewater Discharge Supplemental Index	9	11

Supplemental Indexes - The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on low-income, limited English speaking, less than high school education, unemployed, and low life expectancy populations with a single environmental indicator.



This report shows the values for environmental and demographic indicators, EJScreen indexes, and supplemental indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. For additional information, see: www.epa.gov/environmentaljustice.

Attachment 13

BLM Socioeconomic Profile

Bureau of Land Management (BLM) Socioeconomic Profile

Selected Geographies:

Eureka County, NV

Comparison Geography:

Nevada

Report Date:

July 17, 2023

BLM Socioeconomic Profile

Eureka County, NV

About the BLM Socioeconomic Profile (SEP) Tool

What is the BLM Socioeconomic Profile (SEP) Tool?

The BLM Socioeconomic Profile (SEP) tool delivers an easily understood report that provides an overview of socioeconomic conditions using indicators relevant to public land management. The report includes accurate and reliable county-level indicators. This tool also explains the context necessary to understand how these indicators describe the relationship between activities authorized on BLM-managed lands and surrounding communities.

How to use this report

This report is intended for multiple audiences for a variety of uses. BLM staff can use these reports to:

- Develop socioeconomic baselines for National Environmental Policy Act (NEPA) analyses.
- Facilitate community engagement between the BLM, surrounding communities, and stakeholders by improving the BLM's and the public's understanding of baseline socioeconomic conditions and the extent to which the BLM contributes to those conditions.
- Learn about the economic and demographic conditions and trends near BLM-managed lands.
- Run consistent reports over time, and to track changes on individual or multiple BLM units.

Where do these data come from?

The BLM Socioeconomic Profile (SEP) tool adapted two existing Headwaters Economics on-line tools: the Economic Profile System (EPS) and Populations at Risk (PAR).

EPS and PAR use data from the Bureau of Labor Statistics, Census Bureau, U.S. Department of Commerce, and other reliable public sources. These tools are currently used by federal land managers, state and local elected officials, planners, city managers, journalists, and researchers throughout the country.

Headwaters Economics recommends that citations from SEP use the cited data source that is provided at the bottom of each Data and Graphics section. For example, poverty rates may be cited using: U.S. Department of Commerce. 2018. Census Bureau, American Community Survey Office, Washington, D.C.

More specifics on data sources can be found at the SEP webpage. Also see the "Additional Resources" section of the report for links to key data resources and suggestions for supplementing the data in this report.

What are the limitations of this report?

This report, and the reports available through EPS and PAR, provide valuable information on historical and existing economic and demographic conditions for a defined area. However, these reports do not:

- Contain information or modelling capabilities to conduct social or economic impact analyses.
- Contain information or modelling capabilities to conduct economic efficiency analysis and/or cost-benefit analysis.
- Evaluate many of the social and economic issues and values related to public land management, particularly perspectives and values of affected individuals and communities.
- Contain sub-county demographic or economic data (*with the exception of the EPS Demographics and PAR reports*).
- Provide specific data on the use of resources on BLM-managed lands (e.g., recreational visits or livestock grazing) or estimates of the economic contribution of activities on BLM-managed lands to the regional economy.

Need technical assistance?

For technical questions, contact Patty Hernandez Gude at eps@headwaterseconomics.org or telephone 406-599-7425.

BLM Socioeconomic Profile

Eureka County, NV

Table of Contents

Click the links above for quick access to report sections.

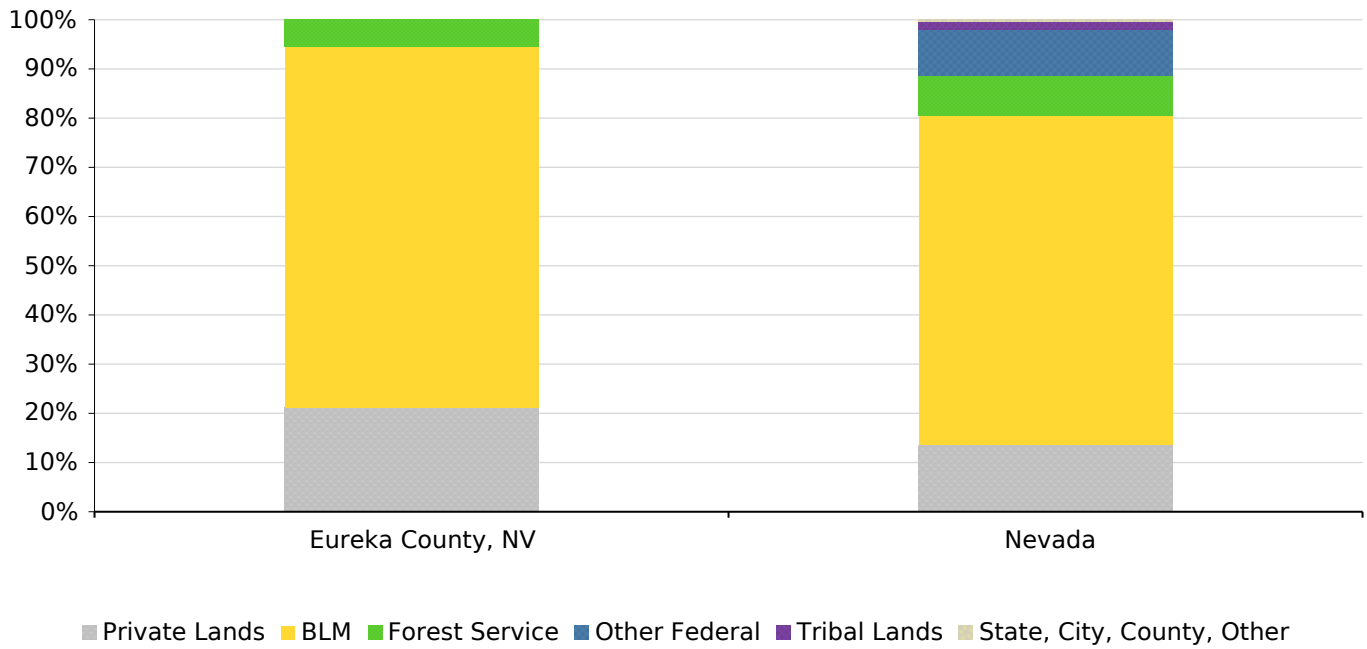
BLM Socioeconomic Profile

Eureka County, NV

Land Ownership

Land Ownership, Acres	Eureka County, NV	Nevada
Total Area	2,675,173	70,664,589
Private Lands	565,004	9,576,613
Federal Lands	2,110,168	59,661,755
BLM	1,966,064	47,278,730
Forest Service	144,104	5,745,411
Other Federal	0	6,637,614
Tribal Lands	0	1,243,958
State, City, County, Other	0	182,230
Percent of Total		
Private Lands	21.1%	13.6%
Federal Lands	78.9%	84.4%
BLM	73.5%	66.9%
Forest Service	5.4%	8.1%
Other Federal	0.0%	9.4%
Tribal Lands	0.0%	1.8%
State, City, County, Other	0.0%	0.3%

Land Ownership, Percent of Land Area



Based on data from the following source(s): U.S. Geological Survey, Gap Analysis Program. 2018. Protected Areas Database of the United States (PADUS) version 2.0

Land Ownership

What is described in this section?

This section reports total acreage for the selected geographies and by land ownership type (i.e., private land, public land (federal and non-federal), and tribal land). The table shows this information and further subdivides Federally-managed lands into those managed by the BLM, the U.S. Forest Service, and other federal agencies. The graphic depicts the relative occurrence of each land ownership type for each selected geography.

No publicly available federal database contains summary statistics on the area of land by ownership. For this report, these statistics were calculated using Geographic Information System (GIS) tools and these two existing datasets:

U.S. Census Bureau's TIGER/Line County Boundaries: this annually updated dataset contains geospatial data on administration boundaries, such as state and county, for the U.S. (see: https://www.census.gov/geo/maps-data/data/tiger-line.html)

U.S. Geological Survey's Protected Areas Database (PAD-US): this dataset contains geospatial data that inventories "public parks and other protected open space." This translates to all non-private lands in the U.S. PAD-US differentiates by land ownership. (See https://gapanalysis.usgs.gov/padus/)

Although every attempt was made to use the best available GIS land ownership dataset, these data sometimes have errors or become outdated. Please report any inaccuracies to eps@headwaterseconomics.org.

These data are not specific to socioeconomics. For NEPA analyses it is common for land area estimates to be included to describe other aspects relevant to the impact analysis. The source of those estimates may differ from the data sources listed above.

Why is this relevant to the BLM?

Land ownership patterns provide important context for understanding the potential socioeconomic impacts of BLM management decisions in a given area. This context is a starting point that can be used to highlight several socioeconomic considerations. Some examples are:

Different land owners and managers have different interests, objectives, and constraints. Understanding these differences can improve understanding of potential challenges that may arise when considering different land management decisions. The BLM can use this information to ensure relevant entities are identified and targeted during the scoping and public comment periods of the NEPA process.

In areas with a high proportion of public lands (including non-federal), public land management actions can have a relatively large effect on economic activity and quality of life in local communities.

In areas with significant tracts of federal lands, state and local governments may rely heavily on federal land payments and revenue sharing (e.g., payments associated with federal mineral revenues and timber sales) and state and local tax revenues (e.g., severance and ad valorem taxes and sales and lodging taxes) generated from activities on federal lands. For more information on federal land payments see the section covering this topic at the end of this report.

In areas with relatively few public lands, it is likely that public lands play a relatively minor role in the local economy. However, those public lands may still serve important roles such as providing public access to recreation areas for which there are few substitutes.

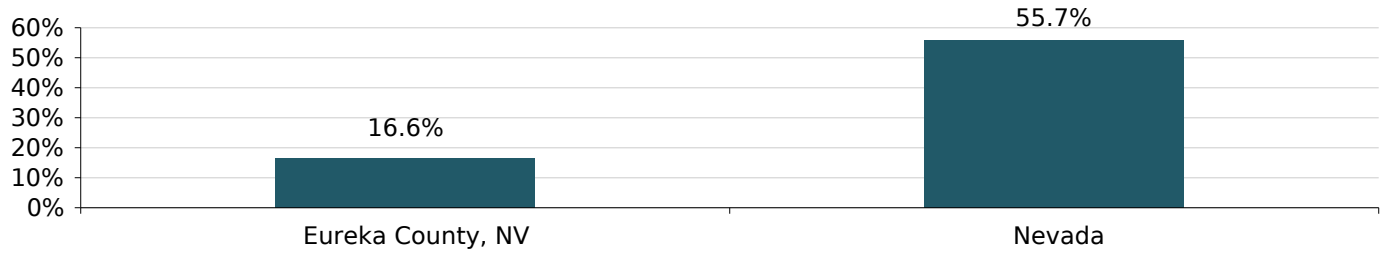
BLM Socioeconomic Profile

Eureka County, NV

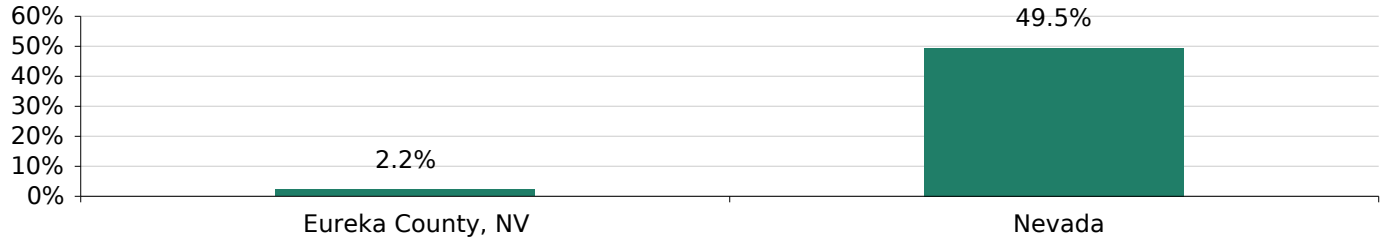
Overview

	Eureka County, NV	Nevada
Population		
Population, 2000	1,632	2,018,741
Population, 2021	1,903	3,143,991
Employment		
Employment, 2000	4,561	1,254,358
Employment, 2021	4,662	1,875,709
Per Capita Income		
Per Capita Income, 2000 (2022 $s)	$44,659	$54,344
Per Capita Income, 2021 (2022 $s)	$53,575	$65,030

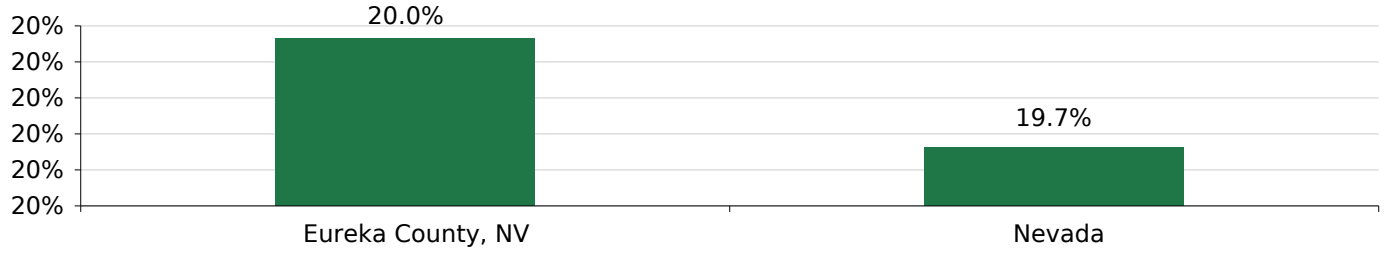
Population, Percent Change, 2000 to 2021



Employment, Percent Change, 2000 to 2021



Per Capita Income, Percent Change, 2000 to 2021



Based on data from the following source(s): U.S. Department of Commerce. 2022. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

BLM Socioeconomic Profile

Eureka County, NV

Overview

What is described in this section?

This section shows population, employment, and per capita income in 2000 and the most recent year data are available. The graphs show how these indicators have changed since 2000.

Population estimates reported in this section come from the Census Bureau's Population Estimates Program (PEP). These estimates include the total resident population (citizens and non-citizens). PEP produces estimates on July 1 of every year by adjusting decennial census base counts using existing data series such as births, deaths, Federal tax returns, Medicare enrollment, and immigration.

Employment estimates for the most recent year are reported by the Department of Commerce Bureau of Economic Analysis (BEA). The BEA employment estimates represent "the number of jobs, full-time plus part-time, by place of work" and include "wage and salary jobs, sole proprietorships [i.e., self-employed], and general partners [i.e., partners which can include corporations and other legal entities]." Jobs by Industry are shown in the next section of this report.

Per capita income is a common measure of the financial well-being of an area, and is calculated by dividing total personal income by total population. Total personal income estimates are reported by the BEA by place of residency and include wages and salaries, supplements to wages and salaries, and proprietors' income (i.e. labor earnings), as well as non-labor income (i.e. dividends, interest, and rent; and transfer payments). All income figures in this report are adjusted for inflation for the year reported (i.e. shown in real terms).). Note that these estimates of income differ from those developed through the Census Bureau's American Community Survey and should not be compared with those estimates (which are also found in the EPS reports called "Demographics.")

Why is this relevant to the BLM?

Population, employment, and per capita income are three of the most basic indicators for describing the socioeconomic context of an area. Presented together these indicators provide initial insight into the magnitude, trends, and relationships between the population, the economy, and individual wealth within a defined region. For example, while there are exceptions, areas with population, employment, and per capita income growing faster than surrounding areas are likely attracting or retaining people due to certain factors such as employment opportunities, potential for higher earnings, and potential for improved quality of life.

This context serves as a starting point for understanding how people in an area may interact with, or be affected by, BLM decisions. For example, an area with a small population and relatively low growth rates may be more sensitive to land management decisions that have the potential to meaningfully affect local economic activity or demographics. Conversely, an area with a large population and a high number of employment opportunities is unlikely to be highly dependent on BLM-managed lands from an economic activity perspective. However, there may be higher demands on BLM-managed lands near larger population and economic centers and a higher likelihood of conflict between diverse stakeholders.

Trends in one area that substantially deviate from those in surrounding areas suggest additional research may be useful to better understand causes and what role public land management decisions might have in the area. Additional research would also be useful when trends for these indicators within one area appear at odds.

BLM Socioeconomic Profile

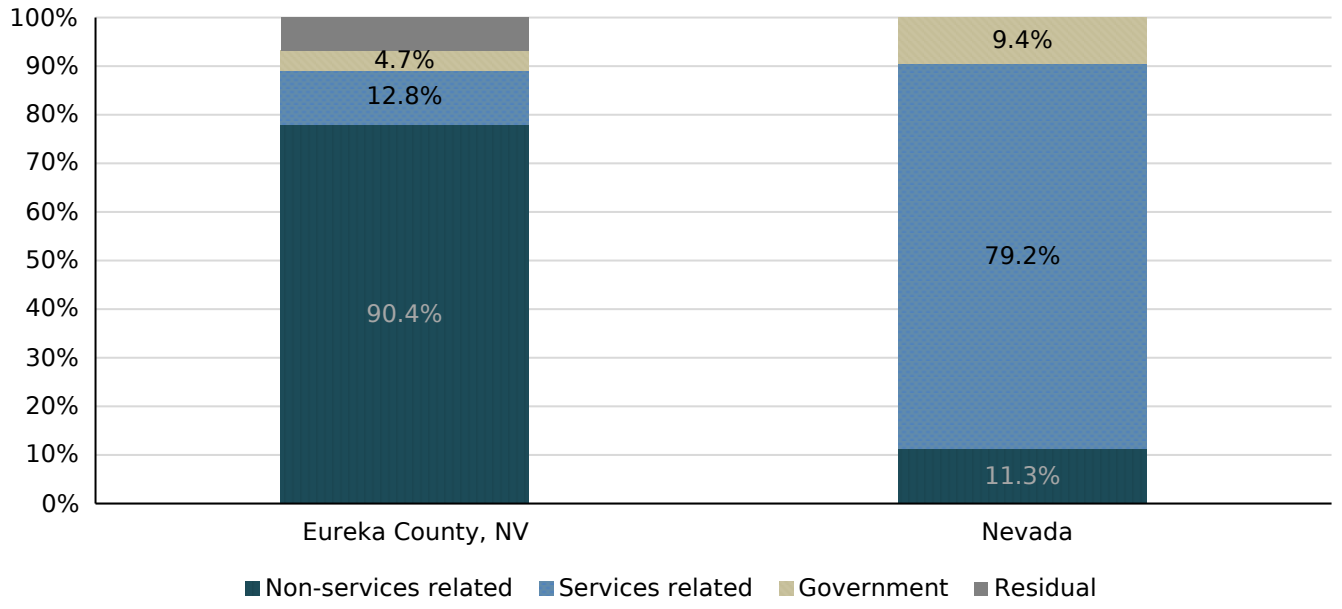
Eureka County, NV

Jobs by Industry (2021)

	Eureka County, NV	Nevada
Total number of jobs	4,662	1,875,709
Non-services related	~4,213	212,324
Farm	140	5,028
Forestry, fishing, & ag. services	na	1,937
Mining (including fossil fuels)	~3,975	18,132
Construction	~63	120,249
Manufacturing	~35	66,978
Services related	~598	1,486,244
Utilities	77	4,526
Wholesale trade	7	43,982
Retail trade	~21	185,306
Transportation and warehousing	~224	137,427
Information	4	21,137
Finance and insurance	na	103,909
Real estate and rental and leasing	na	110,419
Professional and technical services	~59	109,638
Management of companies	0	32,573
Administrative and waste services	~68	132,423
Educational services	7	21,845
Health care and social assistance	10	160,792
Arts, entertainment, and recreation	6	55,322
Accommodation and food services	57	276,961
Other services, except public admin.	~58	89,984
Government	218	177,141
Residual	-367	0

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Jobs by Industry, Percent of Total, 2021



Based on data from the following source(s): U.S. Department of Commerce. 2022. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Jobs by Industry (2021)

What is described in this section?

This section shows employment by industry based on data reported by the U.S. Department of Commerce Bureau of Economic Analysis (BEA) for the most recent published year. The BEA employment estimates represent “the number of jobs, full-time plus part-time, by place of work” and include “wage and salary jobs, sole proprietorships [i.e., self-employed], and general partners [i.e., partners which can include corporations and other legal entities].”

For this report, employment is grouped into three broad categories:
(1) Non-services related industries (construction, utilities, farming, mining, and manufacturing, and natural resource industries).
(2) Services related industries.
(3) Government (federal military and civil services, state and local government employment, and government enterprise).

Some employment data are withheld by the BEA to avoid the disclosure of potentially confidential information. In many cases, Headwaters Economics is able to use supplemental data from the U.S. Department of Commerce to estimate these data gaps. These values are indicated with tildes (~). When an estimate is not possible, a value of “na” is reported. Residual employment is also accounted for in this section. Residual employment is the number of jobs remaining after accounting for reported or estimated jobs in the three categories above.

Why is this relevant to the BLM?

These employment data illustrate the various sectors that currently exist in a regional economy. The Jobs by Industry “snapshot” helps identify drivers of the local economy and the level of economic diversity. Further inferences can be drawn by comparing the proportion of employment in a sector across geographies. For example, if the farm sector accounts for 10 percent of the jobs in one county, but 1 to 3 percent in several adjacent counties, it is reasonable to conclude that the farm sector plays a particularly important role in that county.

These data can also describe the relative contribution of activities authorized on BLM-managed lands to the regional economy, particularly for non-services industries. For example, if 10 percent of total employment in a specific county is in the mining industry and there are several large mining operations (including oil and gas) authorized on BLM-managed lands in that county, then one can conclude that mineral activities on public lands constitutes an important driver for the regional economy. These types of comparisons can be drawn for all activities that occur on BLM-managed lands. In the case of recreation, there is no stand-alone sector, but comparisons to various service related industries affected by visitor expenditures provide some insight.

Socioeconomic baseline sections in NEPA documents often include employment by industry. It is appropriate to include this information when an issue has been identified related to how jobs or the regional economy will be affected by the federal action under review. These data provide context and baseline employment data that are necessary to interpreting employment impacts.

BLM Socioeconomic Profile

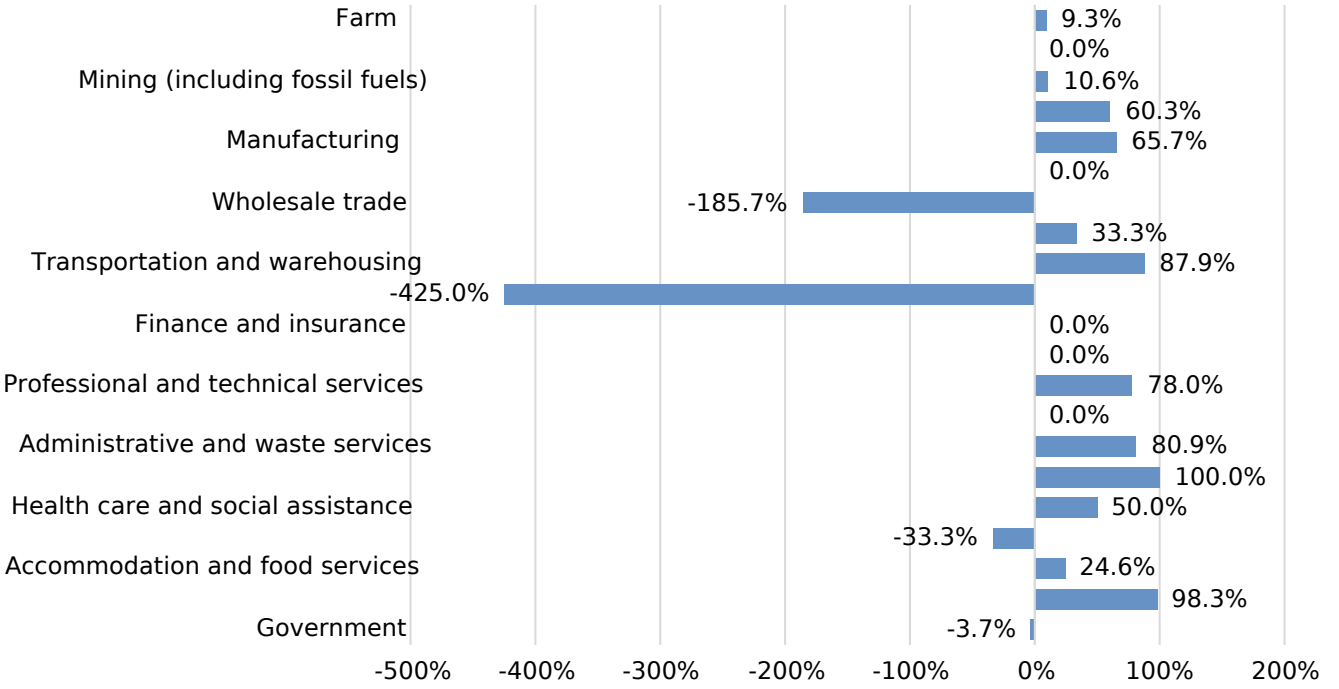
Eureka County, NV

Jobs by Industry (Change from 2001 to 2021)

	Eureka County, NV	Nevada
Total change in jobs	407	590,399
Non-services related	~497	39,879
Farm	13	-283
Forestry, fishing, & ag. services	na	524
Mining (including fossil fuels)	~423	6,072
Construction	~38	12,907
Manufacturing	~23	20,659
Services related	~356	508,901
Utilities	~0	-74
Wholesale trade	-~13	5,831
Retail trade	~7	49,143
Transportation and warehousing	~197	94,934
Information	-~17	-914
Finance and insurance	na	39,324
Real estate and rental and leasing	na	52,009
Professional and technical services	~46	46,154
Management of companies	0	23,276
Administrative and waste services	~55	50,807
Educational services	7	15,804
Health care and social assistance	~5	85,483
Arts, entertainment, and recreation	-2	13,940
Accommodation and food services	14	-6,239
Other services, except public admin.	~57	39,423
Government	-8	41,619
Residual	-438	0

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Percent Change in Jobs by Industry, 2001 to 2021, Eureka County, NV



Based on data from the following source(s): U.S. Department of Commerce. 2022. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Jobs by Industry (Change from 2001 to 2021)

What is described in this section?

This section compares current employment by industry, as presented in the *Jobs by Industry* section and as discussed in its accompanying study guide, to 2001 employment levels as reported by the BEA. To maintain consistency across reporting periods, current and historic employment estimates are reported based on the 2001 North American Industrial Classification System (NAICS).

As discussed in the previous study guide, employment sectors have been grouped into three broad categories:
(1) Non-services related industries (construction, utilities, farming, mining, and manufacturing, and natural resource industries).
(2) Services related industries.
(3) Government (federal military and civil services, state and local government employment, and government enterprise).

Some employment data are withheld by the BEA to avoid the disclosure of potentially confidential information. In many cases, Headwaters Economics is able to use supplemental data from the U.S. Department of Commerce to estimate these data gaps. These estimates are indicated with tildes (~). When an estimate is not possible, a value of “na” is reported. Residual employment is also accounted for in this section.

Why is this relevant to the BLM?

While current employment levels can provide a snapshot of economies, comparing how employment has changed over time can provide insight into how local economies have changed, which industries may be growing or declining, and whether local economies are becoming more or less diverse.

BLM management decisions can affect employment opportunities, especially in natural resource dependent industries. Changes in employment levels are particularly of interest when they have occurred in sectors where a high percentage of local employment is concentrated. If a meaningful change in employment is shown in one of these concentrated employment sectors, additional investigation into the driving factor(s) is recommended. Changes in employment may be largely attributable to national or local market factors (for example, a decline in home construction nationally would reduce the demand for timber and decrease employment in the forestry sector or an increase in oil prices could lead to increased oil and gas development and higher employment in the mining sector). Alternately, observed changes in local employment in certain sectors may be attributable to BLM land management decisions, such as the authorization of a large development project that affects public land use.

It may also be relevant to consider changes in employment in industries that may not seem dependent on natural resources. For example, unlike other natural resource dependent industries, employment associated with recreation is not captured in a single economic sector. Instead, recreationists who spend money in hotels, restaurants, ski resorts, gift shops, and elsewhere support employment in retail trade; passenger transportation; arts, entertainment, and recreation; and accommodations and food sectors. If employment in one of these sectors has meaningfully changed, it may be appropriate to consider the possible link to changes in recreational use on BLM management lands.

When management decisions could impact employment in counties surrounding BLM managed lands, socioeconomic baseline reports should explain how local employment opportunities have changed over time.

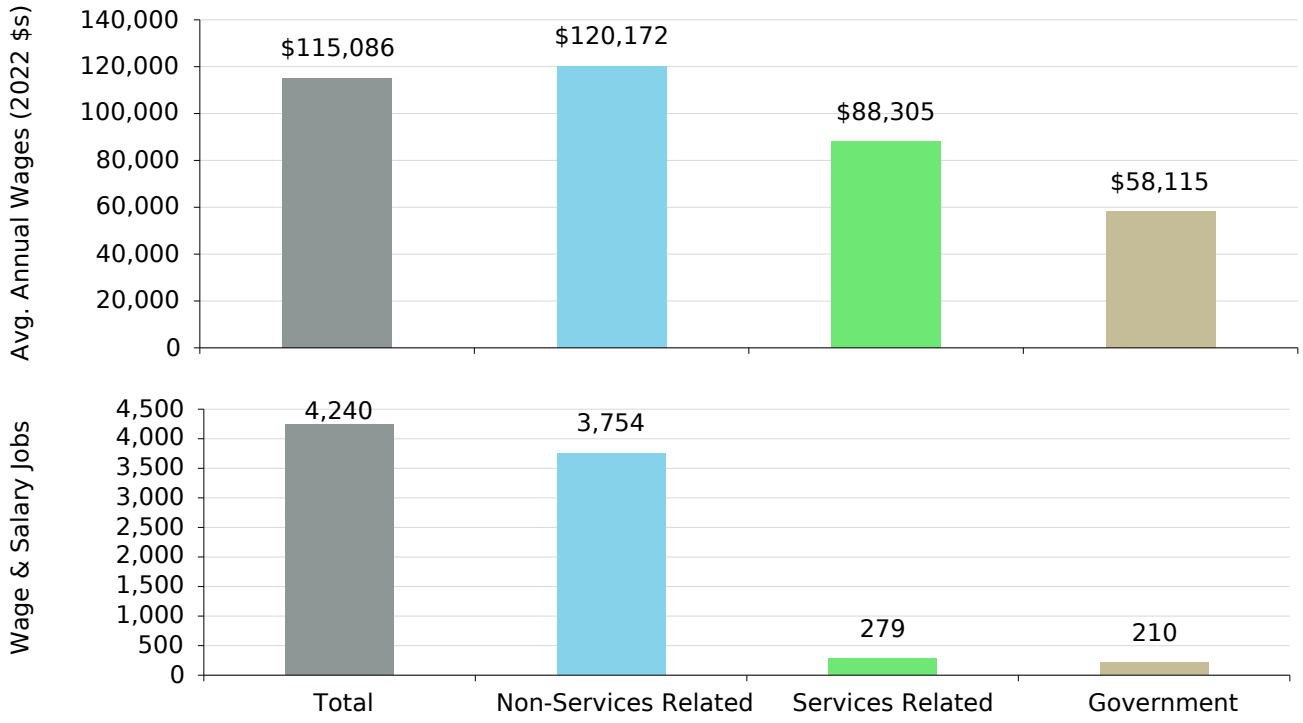
BLM Socioeconomic Profile

Eureka County, NV

Wages by Industry

Employment and Wages in 2021, Aggregated Region	Wage & Salary Employment	% of Total Wage & Salary Employment	Avg. Annual Wages (2022 $s)	Nevada Avg. Annual Wages (2022 $s)
Total	4,240		$115,086	$64,220
Private	4,030	95.0%	$118,055	$63,384
Non-Services Related	3,754	88.5%	$120,172	$77,546
Natural Resources and Mining	3,738	88.2%	$120,475	$96,181
Agriculture, forestry, fishing & hunting	55	1.3%	$36,578	$46,570
Mining (incl. fossil fuels)	3,683	86.9%	$121,728	$113,496
Construction	5	0.1%	$37,764	$74,892
Manufacturing (Incl. forest products)	11	0.3%	$54,666	$75,660
Services Related	279	6.6%	$88,305	$60,950
Trade, Transportation, and Utilities	150	3.5%	$83,532	$55,668
Information	0	0.0%	na	$121,692
Financial Activities	15	0.4%	$43,849	$93,701
Professional and Business Services	61	1.4%	$165,222	$81,445
Education and Health Services	0	0.0%	na	$64,873
Leisure and Hospitality	42	1.0%	$16,908	$39,276
Other Services	10	0.2%	$64,401	$48,359
Unclassified	1	0.0%	$16,848	$99,619
Government	210	5.0%	$58,115	$70,792
Federal Government	6	0.1%	$68,052	$85,252
State Government	9	0.2%	$72,888	$67,783
Local Government	195	4.6%	$57,127	$68,771

Wages & Employment by Major Industry, Eureka County, NV, 2021



Based on data from the following source(s): U.S. Department of Labor. 2022. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.

Wages by Industry

What is described in this section?

This section focuses on average annual wages by industry for wage and salary jobs in the aggregated region. It is important to note that the aggregated region is not broken out by county, whereas earlier industry and job numbers were given on a county by county basis. For this report, industries are separated into government and private sectors. Private sector industries are further classified as Non-Services Related or Services Related. The table shows:

Wages and Salary Employment: The number of filled jobs, whether full or part-time, temporary or permanent, by place of work. Major exclusions include self-employed workers, most agricultural workers on small farms, all members of the Armed Forces, elected officials in most states, most employees of railroads, some domestic workers, most student workers at schools, and employees of certain small nonprofit organizations.

Percent of Total Employment: The share of total wages and salary employment attributable to each sector.

Average Annual Wages: The average annual wage for each sector in the aggregated region (total annual wages and salaries divided by total wage and salary employment). Wages include bonuses, stock options, severance pay, profit distributions, cash value of meals and lodging, tips and other gratuities, and, in some states, employer contributions to certain deferred compensation plans such as 401(k) plans. Employer contributions to other benefits (such as health insurance and pensions) are not included.

These data are from the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW). Other sections of this report use different data that is from the BEA. BEA data are different because it includes proprietors, accounts for the value of benefits, and is summarized into slightly different industry categories.

Depending on the counties selected, some data may not be available due to disclosure restrictions that prevent the BLS from publishing identifiable information provided by respondents. Industry level totals for states and the U.S. include the undisclosed data suppressed at the county level.

Why is this relevant to the BLM?

While total employment is often used as a key economic indicator, it is also important to consider the wages associated with different types of jobs available in an area and how these jobs relate to BLM management decisions. This information can be particularly useful when evaluating a project on BLM-managed lands that is likely to affect specific industries.

Particularly in rural areas, some of the highest wage jobs are in the manufacturing and natural resource dependent industries (e.g., forestry, oil and gas drilling and support services, and mining) that are often associated public lands. Usually, these high wage industries employ fewer people than other sectors. Some services-related industries also offer high wages (e.g., information, financial activities, and professional and business services). Furthermore, even if the average wages for a given sector are relatively low, that sector may still be an important driver of the local economy if it supports a significant share of the total jobs in the area. Finally, wages provide a good counter-part to the per capita income figure. In some areas per capita income can be high (sometimes driven by a high proportion of non-labor income) while wages are low. A good indicator of an overall strong local economy is when both per capita income and wages are relatively high.

These data can provide a more complete picture of the effects of activities authorized on BLM-managed lands, especially when compared to the employment changes reported in the *Jobs by Industry* sections. For example, the BLM is analyzing the authorization of a new mine or a timber sale. Wage data for *Mining (incl. fossil fuels)* and *Agriculture, forestry, fishing & hunting* sectors, respectively, can provide useful baseline information for these likely affected sectors.

BLM Socioeconomic Profile

Eureka County, NV

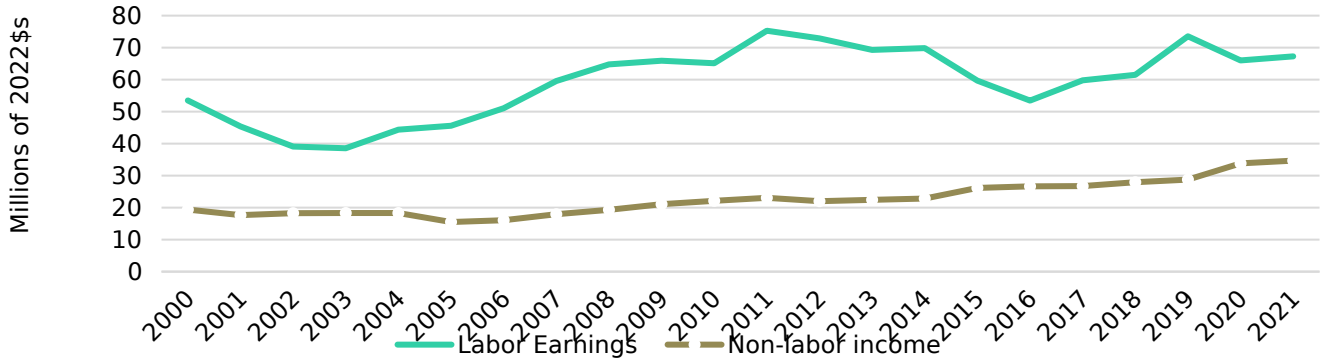
Non-labor Income

Non-Labor Income in 2021	Eureka County, NV	Nevada
Personal Income (thous. of 2022 $s)	101,953	204,452,904
Non-Labor Income	34,684	91,809,670
Dividends, Interest, Rent	13,207	45,829,899
Age-Related Transfer Payments	10,987	19,070,492
Hardship-Related Payments	4,001	15,626,728
Other Transfer Payments	6,489	11,282,550
Labor Earnings	67,269	112,643,233

Percent of Total Personal Income

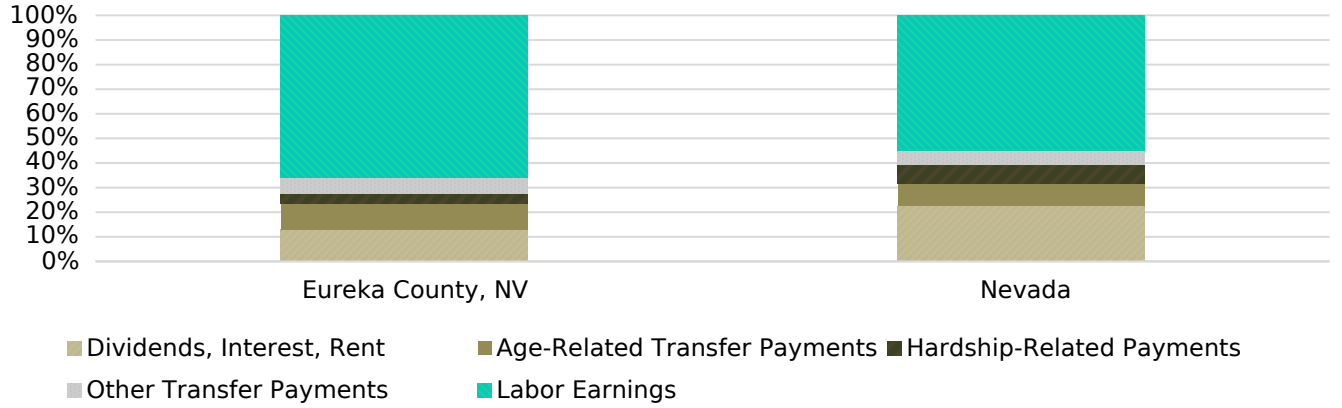
Non-Labor Income	34.0%	44.9%
Dividends, Interest, Rent	13.0%	22.4%
Age-Related Transfer Payments	10.8%	9.3%
Hardship-Related Payments	3.9%	7.6%
Other Transfer Payments	6.4%	5.5%
Labor Earnings	66.0%	55.1%

Components of Personal Income, Eureka County, NV



Non-labor income accounted for 52 percent of real personal income growth ($29M) between 2000 and 2021.

Non-Labor & Labor Income, Percent of Total Personal Income, 2021



Based on data from the following source(s): U.S. Department of Commerce. 2022. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Non-labor Income

What is described in this section?

This section describes the components of non-labor income and how they have changed over time, as reported by the Bureau of Economic Analysis (BEA).

The table reports total personal income (by place of residence) for the most recent year available and divides this income into labor earnings (e.g., wages and salary, including benefits and proprietor's income) and non-labor income. Non-labor income includes:

Dividends, Interest, and Rent: This is generally considered to be income generated by investments.

Age-Related Transfer Payments: These include Medicare and Social Security benefits.

Hardship-Related Transfer Payments: These include Medicaid, Food Stamps (SNAP), Supplemental Security Income (SSI), Unemployment Insurance, and other income maintenance benefits.

Other Transfer Payments: These include all transfer payment not included in the other categories, including veterans' benefits, government-provided education and training subsidies, Workers' Compensation Insurance, railroad retirement and disability, and other government retirement and disability payments.

The line graph in the middle of the page shows the change in labor and non-labor income since 2000. The bar graph at the bottom of the page shows the relative contribution of each type of income to total personal income.

Why is this relevant to the BLM?

Non-labor income can represent a significant proportion of total personal income, particularly in rural areas and small cities – and the proportion has grown rapidly in many areas over the last three decades. Some populations may rely more on investment income, others on retirement benefits, and still others on welfare-related income streams.

A high proportion of non-labor income, and rapid growth in non-labor income that exceeds state or national averages, might indicate that a place is attractive to retirees. The in-migration of people who bring investment and retirement income with them is often associated with a high quality of life, good health care facilities, and affordable housing. Non-labor income can also be important to places with struggling economies, either as a source of income maintenance for the poor or as a more stable form of income in areas with declining industries and employment opportunities. Income maintenance payments can also be important to households living in seasonal recreation based economies. The natural amenities in these communities may support a high quality of life, but the high cost of living and limited employment opportunities during the off-season can make it difficult for some residents to maintain a stable life style. Sometimes non-labor income is a high percent of total personal income simply because labor income is small. This would be an indicator of hardship because of the lack of a robust labor market. In contrast, growth in both non-labor and labor income is generally seen as a sign of a strong local economy.

Non-labor income may be relevant to public land decisions because the data provide insight on the people that reside in the area. If investment income is significant and growing, understanding the role public lands play in attracting and retaining these types of individuals is relevant. If age-related transfer payments are significant and growing, it may be important to consider whether public land resources are meeting the needs of an aging population. If poverty-related transfer payments are significant and growing, it may be an indicator that environmental justice issues related to public lands management should be considered.

BLM Socioeconomic Profile

Eureka County, NV

Migration and Natural Population Change

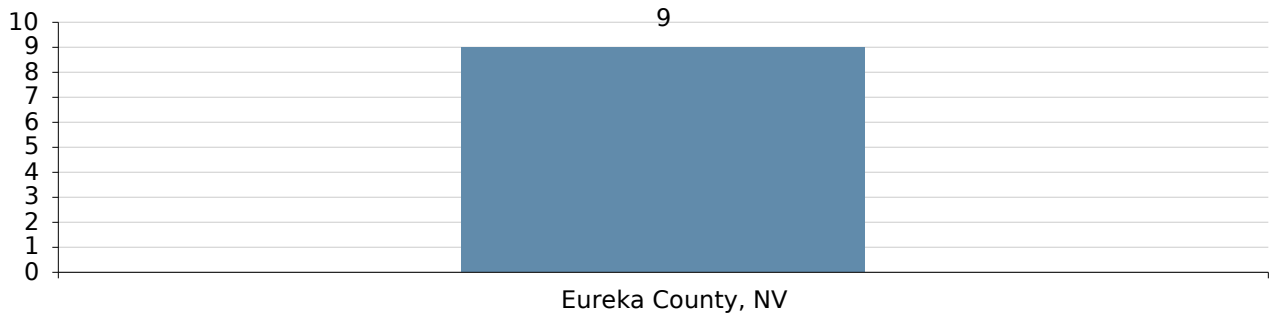
	Eureka County, NV	Nevada
Average Annual Population Change, 2010-2022	9	40,947
From Natural Change	3	10,795
From Net Migration	5	29,942
From Residual	0	210

Factors Contributing to Population Change*, 2010-2022

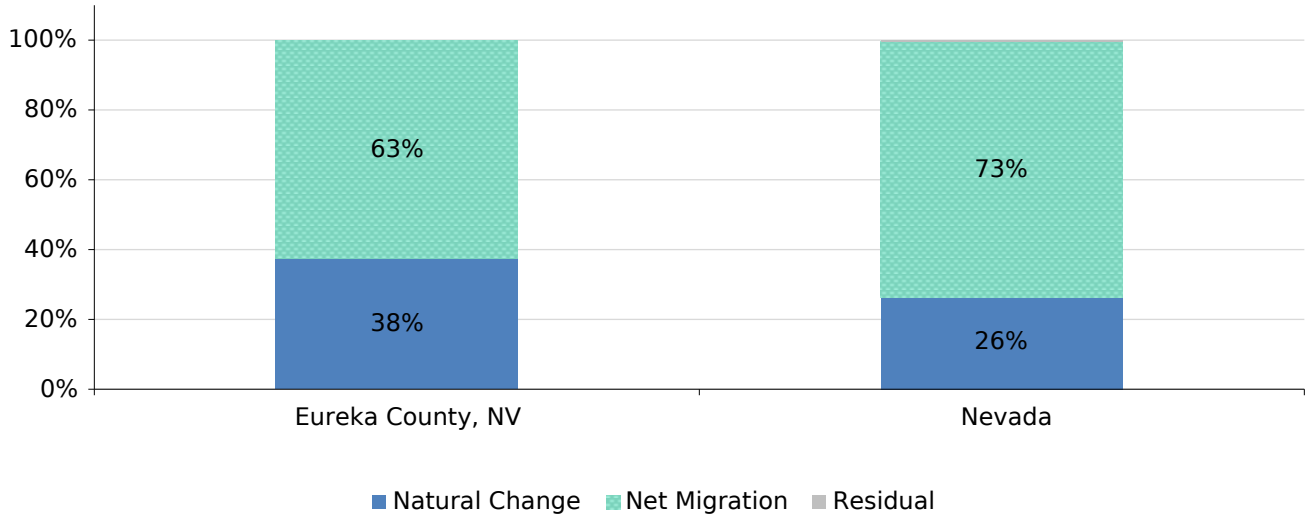
Natural Change	37.5%	26.4%
Net Migration	62.5%	73.1%
Residual	0.0%	0.5%

The residual is a minor statistical correction made by the U.S. Census, and represents change in the population that cannot be attributed to any specific demographic component of population change.

Average Annual Population Change, 2010-2022



Factors Contributing to Population Change*, 2010-2022



* The absolute value of the individual component of population change divided by the sum of the absolute values of the three components (natural change, net migration, and the residual).

Based on data from the following source(s): U.S. Department of Commerce. 2023. Census Bureau, Population Division, Washington, D.C.

Migration and Natural Population Change

What is described in this section?

This section reports average annual population change, and factors contributing to that change, from the U.S. Census Bureau's Population Estimates Program (PEP). Factors that affect population change include natural causes, such as births and deaths, and the migration of residents in or out of a geographic region. Overall population change is equal to the sum of natural change and migration. This includes migration by both international and domestic residents. These data represent the average annual change since 2000. Given the estimates are annualized it is possible that changes in certain years may differ in a meaningful way from the averages reported here.

The average annual population change is provided in both tabular and graphic form. The bottom graphic shows the relative role of natural change and net migration in the overall change in population. The percentages in the bottom graph convey the amount of overall population change that can be attributable to each factor.

The PEP makes a minor statistical correction called a "residual" to ensure state and county population estimates sum to the national total. The residual represents the change in the population that cannot be attributed to any specific demographic component of population change.

Why is this relevant to the BLM?

Understanding a community and its sense of place includes considering if people are attracted to, or moving away, from it. Identifying population trends (i.e., population growth or decline), and the factors contributing to these changes over time, can provide a starting point. If an area has experienced substantial growth that is primarily attributable to in-migration, for example, this may be an indication that desirable jobs opportunities are increasing, that the area supports a high quality of life, or both. Similarly, if the population of an area is declining due to out-migration, it would be important to understand the potential reasons, such as the loss of employment opportunities in specific industries, youth leaving for education or new opportunities, or elderly people leaving for better medical facilities.

Recognizing how and why populations surrounding BLM-managed lands are changing can be relevant to a wide range of BLM management decisions. Decisions affecting job opportunities and the livelihoods of surrounding residents, recreation access and opportunities, scenic quality, or demands placed on public services and local infrastructure are just a few examples of management decisions that may have different implications depending on local population trends. If a BLM management decision could affect the factors that have been driving population change in recent years, then this information should be included in a socioeconomic baseline.

For more detailed information about demographics for a given area (including sub-county areas), create an EPS Demographics report at https://headwaterseconomics.org/eps.

BLM Socioeconomic Profile

Eureka County, NV

Poverty (Identifying Environment Justice Populations)

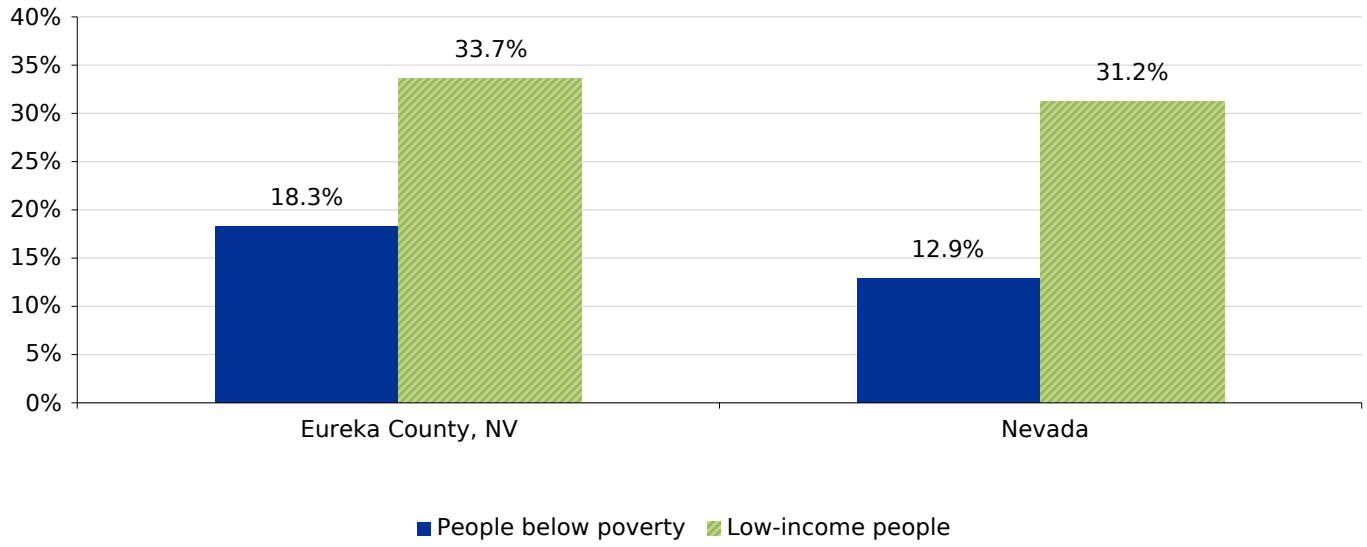
Poverty, 2021*	Eureka County, NV	Nevada
People	1,598	3,018,139
Families	˙448	728,429
People below poverty	**293**	388,814
Families below poverty	**43**	66,571
Low-income people	˙538	942,152

Percent of Total

People below poverty	¨**18.3%**	12.9%
Families below poverty	¨**9.6%**	9.1%
Low-income people	¨**33.7%**	31.2%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Individuals & Families Below Poverty, 2021*



* ACS 5-year estimates used. The 2021 estimate is based on data collected between 2017 and 2021.

Based on data from the following source(s): U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C.

BLM Socioeconomic Profile

Eureka County, NV

Poverty (Identifying Environment Justice Populations)

What is described in this section?

This section includes people and families living in poverty and low-income people as reported by the Census' American Community Survey (ACS) 5-year estimates. The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is living in poverty. The BLM follows the EPA (https://www.epa.gov/ejscreen/overview-socioeconomic-indicators-ejscreen) in defining low-income individuals as those who live at or below 200% of the poverty threshold. For more information, see the BLM Environmental Justice Implementation IM (https://www.blm.gov/policy/im2022-059) and attachment.

The official definition of poverty uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps).

The Census Bureau defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption. Families are identified based on responses to a census question on "relationship to the householder." If an individual or group of individuals (such as housemates) are not living with family members, their individual incomes are compared with their applicable individual poverty threshold.

Poverty and income status cannot be determined for people in institutional group quarters (i.e., correctional facilities, nursing homes, and mental hospitals), college dorms, military barracks, and living situations without conventional housing (excluding shelters). Additionally, poverty status cannot be determined for unrelated individuals under the age of 15 (i.e., foster children) because income questions are asked of people age 15 and older.

Why is this relevant to the BLM?

The BLM is required to identify low-income populations that may constitute environmental justice populations and to consider whether BLM management decisions may result in disproportionately high and adverse human health or environmental effects to these populations (see Executive Order 12898). The Presidential Memorandum released with E.O. 12898 directed all federal agencies to analyze environmental justice (EJ) as part of their NEPA reviews. The BLM Environmental Justice Implementation IM sets thresholds and minimum requirements for this EJ analysis.

A low-income population is either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native Americans) who experience common conditions of environmental exposure or effect. A location has a low-income population if 50% or more of its residents are low-income; the percentage of low-income residents is the same or higher than that of a reference area; or other data indicate a low-income population is present.

Because affordability factors into decisions about where to live and about what goods and services to purchase, households with limited financial resources have a lower capacity to reduce their exposure to health and environment hazards. Low-income households may also have different natural resource consumption patterns, relying more heavily on public lands for subsistence resources and uses such as hunting, fishing, gathering edible plants, and collecting forest products and materials to heat their homes. While some people engage in these activities for recreation, many low-income households depend on this harvesting to provide for themselves and their families. Low-income households are also more sensitive to fee increases for uses of public lands.

Low-income populations identified in this section could be affected by a BLM management decision. However, depending on the decision, it may be more appropriate to consider demographic data at the sub-county level. Furthermore, while these data help to identify the presence of a low-income population, further analysis is required to determine potential impacts to that population. This analysis will not identify low-income populations that are affected by a potential BLM decision but do not all live in the same place. For additional information and best practices on scale and content of EJ scoping and analysis, see the BLM EJ IM and attachment.

BLM Socioeconomic Profile

Eureka County, NV

Minorities (Identifying Environment Justice Populations)

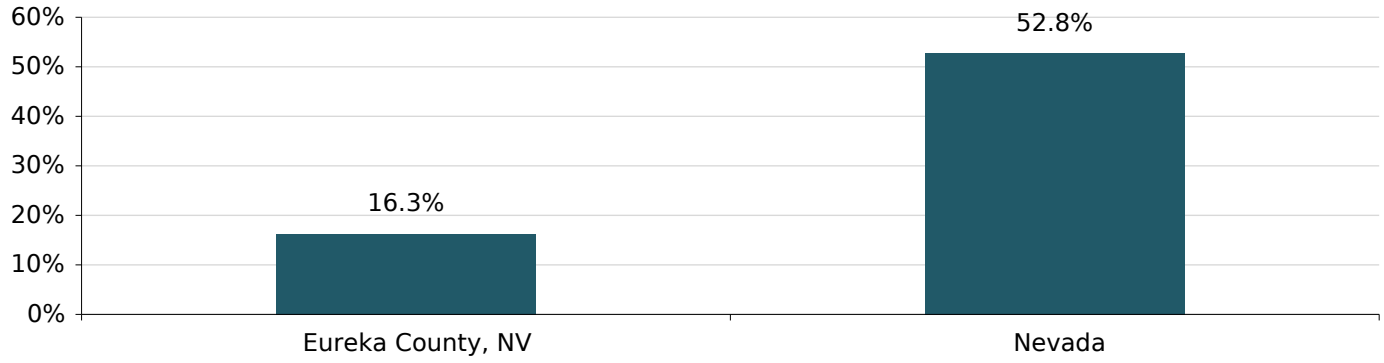
Race and Ethnicity, 2021*	Eureka County, NV	Nevada
Total Population	1,603	3,059,238
White alone	1,467	1,799,601
Black or African American alone	¨1	284,412
American Indian alone	¨82	37,850
Asian alone	¨18	255,094
Native Hawaii & Other Pacific Is. alone	¨0	21,810
Some other race alone	¨35	345,215
Two or more races	¨0	315,256
Hispanic or Latino (of any race)	174	897,415
Not Hispanic or Latino	1,429	2,161,823
Not Hispanic & White alone	1,342	1,442,883
Total Minority Population	261	1,616,355

Percent of Total

White alone	91.5%	58.8%
Black or African American alone	¨0.1%	9.3%
American Indian alone	¨5.1%	1.2%
Asian alone	¨1.1%	8.3%
Native Hawaii & Other Pacific Is. alone	¨0.0%	0.7%
Some other race alone	¨2.2%	11.3%
Two or more races	¨0.0%	10.3%
Hispanic or Latino (of any race)	˙10.9%	29.3%
Not Hispanic or Latino	89.1%	70.7%
Not Hispanic & White alone	83.7%	47.2%
Total Minority Population	16.3%	52.8%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Minority Population, Percent of Total, 2021*



* ACS 5-year estimates used. The 2021 estimate is based on data collected between 2017 and 2021.

Based on data from the following source(s): U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C.

BLM Socioeconomic Profile

Eureka County, NV

Minorities (Identifying Environment Justice Populations)

What is described in this section?

This section reports the size of minority populations as reported by the Census' ACS 5-year estimates.

Race: ACS respondents can self-identify race as "White," "Black or African American," "American Indian and Alaska Native," "Asian" and "Native Hawaiian or Other Pacific Islander".

Some Other Race: This includes all other responses not included above. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the "Some other race" write-in space are included in this category.

Two or More Races: This includes people who either checked two or more race response check boxes, provided multiple write-in responses, or submitted some combination of check boxes and write-in responses.

Ethnicity: ACS respondents identify themselves as either Hispanic or Latino or Not Hispanic or Latino. The terms Hispanic and Latino are generally used to denote people living in the United States with cultural ties to Latin America or other Spanish speaking countries. Individuals self-identifying as having a Hispanic, Latino, or Spanish heritage can do so by selecting from categories listed on the Census questionnaire "Mexican, Mexican American, or Chicano;" "Puerto Rican;" "Cuban," or "other Spanish, Hispanic, or Latino." People who identify as being of Spanish, Hispanic, or Latino culture can be of any race or combination of races.

For the purpose of environmental justice, the BLM defines a minority individual as a person whose race is not White or a person who is Hispanic or Latino (or both). Thus the "**Total Minority Population**" is calculated by subtracting those who identify as both "Not Hispanic or Latino" and "White alone" from "Total Population."

Why is this relevant to the BLM?

Understanding the values, beliefs, and attitudes of minority populations is important to public land managers working to meet the needs of the public, or when evaluating potentially adverse impacts on populations. Minority populations also have a higher likelihood of being exposed to health and environmental risks than non-minority populations.

The BLM is required to identify minority populations that may constitute environmental justice populations and to consider whether BLM management decisions may result in disproportionately high and adverse human health or environmental effects to these populations (see Executive Order 12898). The Presidential Memorandum released with E.O. 12898 directed all federal agencies to analyze environmental justice (EJ) as part of their NEPA reviews. The BLM Environmental Justice Implementation IM (https://www.blm.gov/policy/im2022-059) sets thresholds and minimum requirements for this EJ analysis. E.O. 12898 uses the terms "minority" and "low-income" to identify two sets of populations whose members have been regularly excluded from important decision-making processes in ways that adversely impact their health and environment and have created a disproportionate distribution of environmental amenities and burdens. The BLM uses the term "minority" in that context, while recognizing that it is often inaccurate demographically and hides significant differences between groups of people and their experiences.

The Council on Environmental Quality (CEQ) guidance on Environmental Justice states that minority EJ populations are considered to be present when (a) the minority population of the affected area exceeds 50% or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (typically the county or state). The BLM uses 110% as the threshold for meaningfully greater. For more detail, see the BLM EJ IM and attachment.

Minority EJ populations could be affected by a BLM management decision. Depending on the decision, it may be more appropriate to consider sub-county level data. Furthermore, while these data help identify the presence of a minority population, further analysis is required to determine potential impacts to that population. This analysis will not identify populations that are potentially affected by a BLM decision but do not all live in the same place.

BLM Socioeconomic Profile

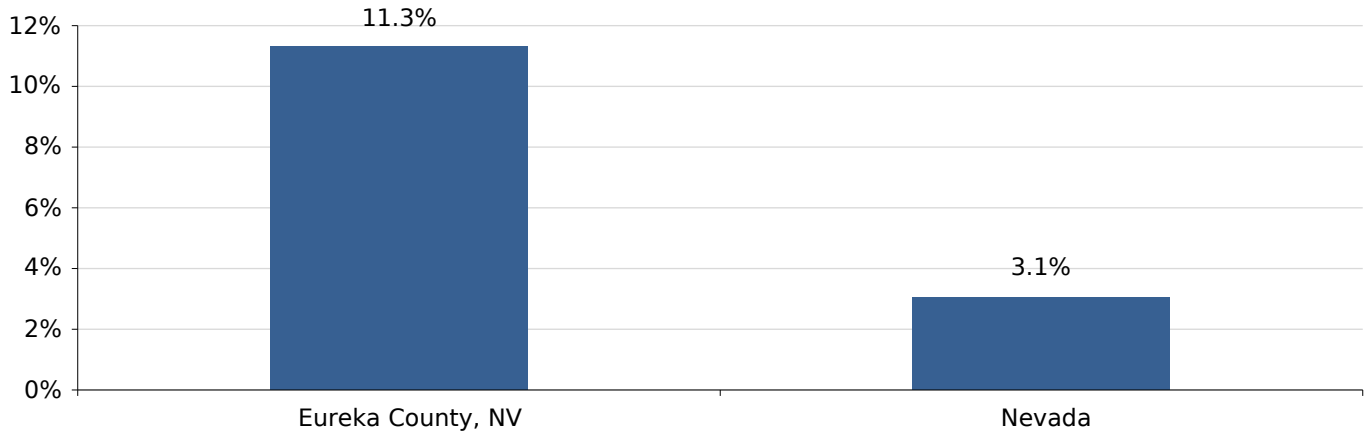
Eureka County, NV

Other Socioeconomic Indicators

	Eureka County, NV	Nevada
Unemployment		
Avg. Annual Unemployment Rate, 2022	2.9%	5.4%
Median Age		
Median Age, 2010*	40.5	35.9
Median Age, 2021*	42.5	38.3
Housing		
Total Housing Units, 2021*	955	1,269,846
Occupied	58.1%	89.9%
Vacant	41.9%	10.1%
Seasonal, recreational, occasional	11.3%	3.1%
Commuting		
Workers 16 years and over, 2021*	587	1,406,731
Worked in county of residence	77.3%	94.6%
Mean travel time to work (minutes)	23	23
Education		
Total Population 25 yrs or older	1,012	2,116,718
Bachelor's degree or higher	11.1%	26.1%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Seasonal, Recreational Housing, 2021*



* ACS 5-year estimates used. The 2021 estimate is based on data collected between 2017 and 2021.

Based on data from the following source(s): U.S. Department of Labor. 2023. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.; U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C.

Other Socioeconomic Indicators

What is described in this section?

This section summarizes additional indicators that can provide insight into the socioeconomic characteristics of an area and that may be relevant to BLM management decisions.

Annual **unemployment rate** is reported for the most recent year. The Bureau of Labor Statistics estimates this rate by dividing the number of people who are jobless, looking for jobs, and available for work by the size of the labor force. Only persons 16 years and over in the civilian non-institutional population are included in this statistic.

Four additional topics from Census Bureau's American Community Survey (ACS) 5-year estimates are provided.

Median Age: The age that divides the population (including those who live in group quarters) into two numerically equal groups (i.e., half the people are younger than this age and half are older).

Housing: A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied as separate living quarters (or, if vacant, intended for occupancy). Group quarters such as college residence halls, nursing facilities, military barracks, and correctional facilities are not included in housing unit counts. Vacant units classified as "Seasonal, Recreational, or Occasional Use" refers to units used, or intended for use, only in certain seasons or for weekends or other occasional use throughout the year.

Commuting: Includes individuals 16 years and older that worked during the prior week by county of residence. For these workers, the percent that worked in that county as well as mean travel time are summarized.

Education: Population count of those 25 years or older (including the group quarters population) and the proportion of that population that has completed a bachelor's degree or higher.

Why is this relevant to the BLM?

These indicators are used to provide context about an area that may be affected by public land management decisions.

The rate of unemployment provides information on the strength of the local economy and the availability of workers. This baseline indicator is useful for understanding potential impacts of BLM decisions that could affect economic activity and employment opportunities. Note that this statistic does not include discouraged workers who are unemployed but not looking for work because few opportunities for paid employment exist, as is the case in many remote Alaska villages, for example.

The other four topics in this section provide insight into the types of communities surrounding BLM-administered land and how the area may be affected by BLM project-level decisions. For example, a relatively high or low median age may be an indication of a certain type of community (for example, retirement or university towns). Similarly, high vacancy rates due to seasonal, recreational, or occasional use (i.e., "second homes") often indicate the desirability of a place for recreation and tourism. Information on vacancy rates and commuting patterns can be useful for evaluating potential impacts associated with BLM project-level decisions. Areas with low vacancy rates could struggle to accommodate any population influxes connected with new projects on BLM managed land. High in-commuting rates may indicate the presence of a "bedroom" community in an adjacent county and/or the presence of a regional service center. This scenario can separate tax revenues from demands for services, complicating fiscal planning for local governments. Education is often correlated with the capacity and resiliency of a community and its ability to respond to potential changes in the local economy.

BLM Socioeconomic Profile

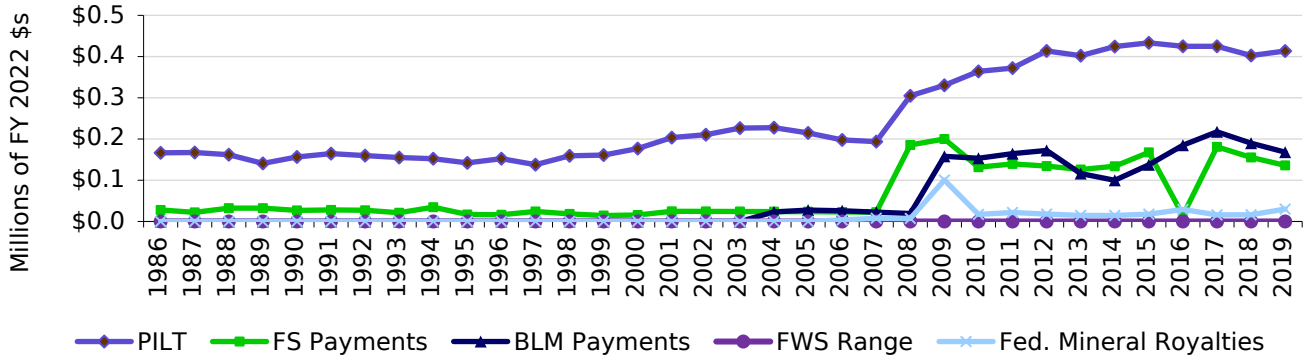
Eureka County, NV

Federal Land Payments by Geography of Origin

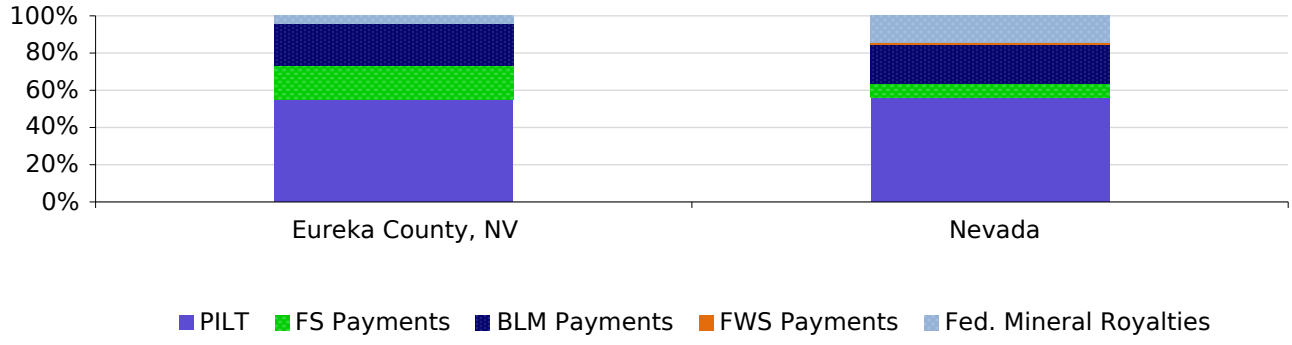
	Eureka County, NV	Nevada
Total Federal Land Payments to State and Local Gov., FY 2019 (FY 2022 $s)	747,727	54,781,855
PILT	413,454	30,819,793
Forest Service Payments	136,063	4,122,924
BLM Payments	168,145	12,048,204
USFWS Refuge Payments	0	84,740
Federal Mineral Revenue Payments	30,064	7,706,194
Percent of Total		
PILT	55.3%	56.3%
Forest Service Payments	18.2%	7.5%
BLM Payments	22.5%	22.0%
USFWS Refuge Payments	0.0%	0.2%
Federal Mineral Revenue Payments	4.0%	14.1%

This page shows payments disbursed directly to state and local governments. States may share a portion of their payments with counties. These state "pass through" disbursements are not reported here. For more information see https://headwaterseconomics.org/wp-content/uploads/EPS_Federal_Land_Payments_Documentation.pdf.

Components of Federal Land Payments per Fiscal Year, Eureka County, NV



Components of Federal Land Payments, FY 2019, Eureka County, NV



Based on data from the following source(s): U.S. Department of Interior. 2020. Payments in Lieu of Taxes (PILT), , Washington, D.C.; U.S. Department of Agriculture. 2020. Forest Service, , Washington, D.C.; U.S. Department of Interior. 2018. Bureau of Land Management, , Washington, D.C.; U.S. Department of Interior. 2020. U.S. Fish and Wildlife Service, , Washington, D.C.; U.S. Department of Interior. 2020. Office of Natural Resources Revenue, , Washington, D.C.

Federal Land Payments by Geography of Origin

What is described in this section?

This section describes federal payments made to compensate state and local governments for non-taxable federal lands within their borders. Payments are funded by federal appropriations (e.g., Payments in Lieu of Taxes (PILT) and Secure Rural School programs) and from receipts received by federal agencies from activities on federal public lands (e.g., timber, grazing, and minerals). Some payments are made to state governments while others are made directly to the counties. For payments made to states, some funds may be passed on to the county of origin, but this process differs across states.
The table reports both the total payments received and the share of each payment type for the fiscal year (Oct. 1 – Sept. 30) available. The five components of federal payments include:

PILT: These payments compensate county governments for non-taxable federal lands within their borders. PILT payments are calculated by the Department of Interior based on a complex formula that factors in a county's population, revenue sharing payments it receives under other laws, and the amount of Federal land within the affected county. PILT payments are subject to a population cap and are affected by congressional appropriations. See: https://www.doi.gov/pilt.

Forest Service Payments: These payments are based on USFS receipts and must be used for county roads and local schools. They include the 25% Fund, the Secure Rural Schools and Community Self-Determination Act, and the Bankhead-Jones Farm Tenant Act.

BLM Payments: These payments are based on a portion of receipts generated on BLM-administered lands, including grazing fees collected under the Taylor Grazing Act and timber receipts generated on Oregon and California Railroad Revested (O&C) grant lands. BLM also makes payments to counties with O&C lands under the Secure Rural Schools and Community Self-Determination Act. See Table 3-30 in BLM's Public Land Statistics for more information (https://www.blm.gov/about/data/public-land-statistics).

USFWS Refuge Payments: These payments are equal to a portion of receipts collected from activites on National Wildlife Refuges, a percentage of the market value of the land, or a minimum per acre amount, whichever is greater. USFWS payments are paid directly to the counties where USFWS lands are located.

Federal Mineral Royalties, Bonus Bids, and Rents: The U.S. Office of Natural Resources Revenue (ONRR) collects revenues associated with federal "leasable" minerals (i.e., oil, natural gas, coal, and certain non-energy solid minerals) and geothermal energy. These revenues include lease sale revenues (i.e., bonus bids, fees, and first year's rent), annual rents on mineral leases, and production royalties. ONRR distributes 49% of the revenues collected back to the state of origin. The exception is revenues associated with geothermal leasing and production, which are paid directly to counties.

Government distributions of federal land payments may be underreported for counties due to data limitations from USFWS, ONRR, and some states that make discretionary distributions of mineral payments and some BLM payments. As noted above, federal mineral payments are largely distributed to states. States' distributions of these revenues to counties are not tracked in this report.

Why is this relevant to the BLM?

These programs can represent a significant portion of local government revenue in rural counties with large federal land holdings.

These data can be used to describe the potential fiscal impact of changes in authorized activities on BLM-managed lands or changes in land ownership. For example, BLM decisions related to land exchange, disposal, or acquisition have implications on PILT payments (and also state and local property taxes). Furthermore, exploring the proportion of total annual county revenues provided by PILT payments offers insight into the importance of this revenue stream for the county.

Data Sources: U.S. Department of Interior. 2020. Payments in Lieu of Taxes (PILT), , Washington, D.C.; U.S. Department of Agriculture. 2020. Forest Service, , Washington, D.C.; U.S. Department of Interior. 2018. Bureau of Land Management, , Washington, D.C.; U.S. Department of Interior. 2020. U.S. Fish and Wildlife Service, , Washington, D.C.; U.S. Department of Interior. 2020. Office of Natural Resources Revenue, , Washington, D.C.; reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/eps.

BLM Socioeconomic Profile

Eureka County, NV

Additional Resources

What is the BLM Socioeconomic Profile (SEP) Tool?

The SEP tool relies largely on federal data published by the Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS), and Census Bureau (Census). The advantages of these sources include complete U.S. coverage, annual updates, and consistent methodologies across time and space. Below are links to the programs that collect and manage the data used in this report.

- **Census**
  This report includes data from two Census programs. Population counts often differ between the programs due to different methods and reporting periods.
  Population Estimates Program
  https://www.census.gov/programs-surveys/popest.html
  American Community Survey
  https://www.census.gov/programs-surveys/acs

- **BEA**
  Regional Economic Accounts
  https://www.bea.gov/data/economic-accounts/regional
  Methodologies and definitions (in particular, see Local Area Personal Income)
  https://www.bea.gov/resources/methodologies

- **BLS**

  Quarterly Census of Employment and Wages (QCEW)

  https://www.bls.gov/cew/
  Local Area Unemployment Statistics
  https://www.bls.gov/lau/

Economic Profile System (EPS)

The 14 reports available through EPS provide easy access to more detailed information on demographics, economics, and land use. Of particular note are the demographic and industry-specific reports.
EPS's Agriculture report can provide additional perspective on the farm sector within a given area, such as the number of farms by crop and livestock type, farm business income and expenses, and wage and employment by farm type. This information can be useful, for example, when the BLM is evaluating a management decision that could affect livestock grazing. The Mining (including Oil & Gas) report provides additional detail on employment, income, and wages associated with different types of mineral activities in a given area. The Timber and Tourism reports are other EPS industry reports with additional information related to specific activities occurring on BLM-managed lands. The EPS Demographics report provides sub-county data such as demographics for cities, towns, and places.

Other Resources

There are numerous other sources of economic, demographic, and social data that could supplement the information available in the SEP and EPS reports. Examples include:

- Other government sources such as the Energy Information Administration and USDA's Census of Agriculture.
- State and local sources that may have data available that either fills in gaps or provides more accuracy at small geographic scales. Such sources of data include state and local employment departments, city and county governments (e.g., building departments, departments of motor vehicles, or county tax assessors), local and state Chambers of Commerce, and local and state economic development commissions. As noted in the *Federal Land Payments by Geography of Origin* section, the ONRR distributes 49% of the collected federal mineral revenues back to the state of origin (with the exception of revenues associated with geothermal leases). Federal mineral payments can represent significant revenues for counties. Because these reports do not track for how states distribute federal mineral revenues to counties, additional research should be conducted for areas with high leasable mineral production from public lands. Reviewing state and county budgets, or contacting these entities, can provide the information and data needed to understand these revenue streams.
- Other secondary data sources including industry associations or advocacy groups and academic literature.

Attachment 14

Population at Risk Report

Populations at Risk

Selected Geographies:

Eureka County, NV

Benchmark Geography:

Nevada Non-Metro

Report Date:

July 18, 2023

Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions: **headwaterseconomics.org**.

Populations at Risk

Populations at risk are more likely to experience adverse social, health, and economic outcomes due to their race, age, gender, poverty status, and other socioeconomic measures.

Free and easy-to-use
Quickly create reports of current socioeconomic data in convenient formats, including Excel and PDF.

Available nation-wide
Build reports for geographies from states to census tracts. Aggregate multiple geographies into custom study areas.

Updated continuously
Make use of reliable, published government data. The Populations at Risk report always shows the latest available data and trends.

headwaterseconomics.org/par

Economic Profile System

The Economic Profile System (EPS) generates reports on a range of topics including local economics, demographics, and income sources while providing historic context and trends.

Free and easy-to-use
Like Populations at Risk, EPS is free, updated continuously, and easy-to-use.

Integrates federal data sources
Access data from many sources, including the Census, Bureaus of Economic Analysis, Labor Statistics, and others.

Widely used
For more than a decade, EPS has been used by researchers, economic developers, grant writers, elected officials, cities, planners, federal agencies, reporters, and others.

headwaterseconomics.org/eps

Populations at Risk

Eureka County, NV

Table of Contents

Click the links above for quick access to report sections.

Populations at Risk

Eureka County, NV

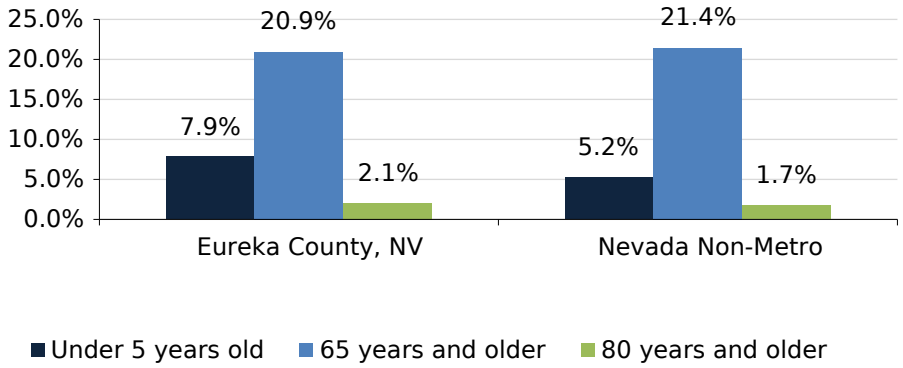
Young & Elderly Populations

	Eureka County, NV	Nevada Non-Metro
Total Population, 2021*	1,603	286,329
Under 5 years old	126	14,982
65 years and older	335	61,275
80 years and older	**33**	4,983
Percent of Total, 2021*		
Under 5 years old	7.9%	5.2%
65 years and older	20.9%	21.4%
80 years and older	**2.1%**	1.7%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
Under 5 years old	0.7	-1.1
65 years and older	6.7	6.2
80 years and older	1.5	0.4

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

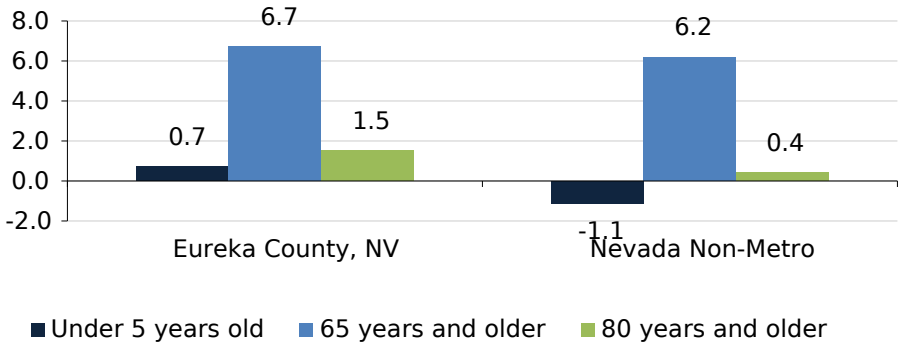
Population by Group, Percent of Total, 2021*

- Eureka County, NV has the largest share of people under 5 years old (7.9%).
- Eureka County, NV has the largest share of people 80 years and older (2.1%).



Population by Group, Change in Percentage Points, 2010*-2021*

- The largest change in the share of people under 5 years old occurred in Nevada Non-Metro, which went from 6.4% to 7.9%.
- The largest change in the share of people 80 years and older occurred in Eureka County, NV, which went from 0.5% to 2.1%.



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Young & Elderly Populations

What do we measure on this page?

This page describes the number of people by specific age category.

The "Under 5 years old" category includes individuals younger than 5 years old. The "65 years and older" category includes individuals age 65 and older and the "80 years and older" category includes individuals age 80 and older. The "80 years and older" category is a subset of the "65 years and older" category.

Why is it important?

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.[1]

Children's developing bodies makes them particularly sensitive to health problems and environmental stresses.[1]

Childhood lays the foundations for lifelong health. Poor health during childhood increases the likelihood of problems throughout adulthood.[2]

Because so many factors of a child's life are determined during pregnancy, infancy, and early childhood, children in poverty are an especially vulnerable population. Lack of adequate care through the early phases of life is more prevalent in poor populations.[2]

Children spend more time outside and have a faster breathing rate than adults, so they are more at risk for respiratory problems related to ground level ozone, airborne particulates, wildfire smoke, and allergens. Allergens are associated with climate change due to changing plant communities and longer pollen seasons.[3, 4]

Because their immune systems are not fully developed, children are more sensitive to infectious diseases. Natural disasters can breach public water supplies, compromise sanitation, and spread illness. Children are more vulnerable to these hazards compared to adults.[3]

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

Age is the single greatest risk factor related to illness or death from extreme heat.[4]

The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.[3]

The likelihood of chronic disease increases with age.[1, 5]

Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.[3, 6]

Superscript numbers refer to references provided at the end of the report.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Populations at Risk

Eureka County, NV

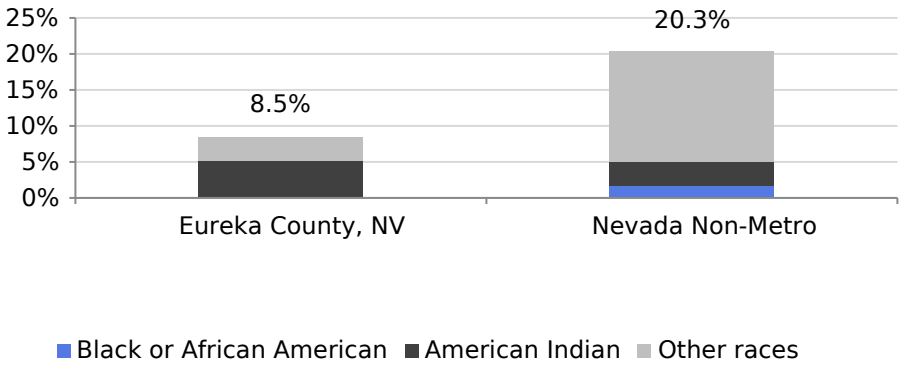
Race & Ethnicity

	Eureka County, NV	Nevada Non-Metro
Total Population, 2021*	1,603	286,329
White alone	1,467	228,178
All other races	**136**	58,151
Black or African American	**1**	4,797
American Indian	**82**	9,556
Other races	**53**	43,798
Hispanic ethnicity	174	53,001
Non-Hispanic ethnicity	1,429	233,328
Percent of Total, 2021*		
White alone	91.5%	79.7%
All other races	**8.5%**	20.3%
Black or African American	**0.1%**	1.7%
American Indian	**5.1%**	3.3%
Other races	**3.3%**	15.3%
Hispanic ethnicity	10.9%	18.5%
Non-Hispanic ethnicity	89.1%	81.5%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

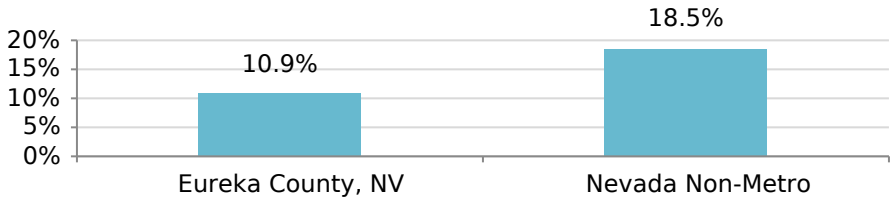
Non-White Population by Race, Percent of Total, 2021*

- Nevada Non-Metro has the largest share of non-whites (20.3%).



Hispanic Population, Percent of Total, 2021*

- Nevada Non-Metro has the largest share of hispanics (18.5%).



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Race & Ethnicity

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.[1]

Research consistently has found race-based environmental inequities across many variables, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.[7, 1]

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.[1]

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.[8, 4]

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.[1,9]

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.[5]

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.[10]

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.[5]

Hispanics have higher rates of diabetes and asthma.[5]

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.[2] They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Populations at Risk

Eureka County, NV

Educational Attainment

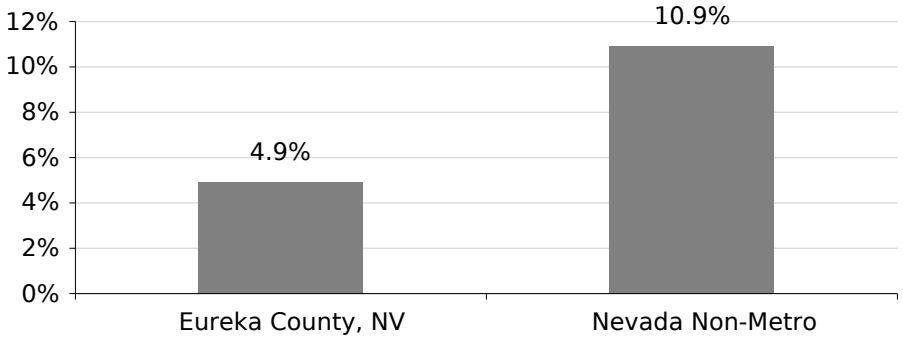
	Eureka County, NV	Nevada Non-Metro
Total Population 25 years or older, 2021*	1,012	206,447
No high school degree	**50**	22,560
No high school degree, percent	**4.9%**	10.9%
No high school degree, change in percentage points**, 2010*-2021*	-6.9	-3.8

**For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

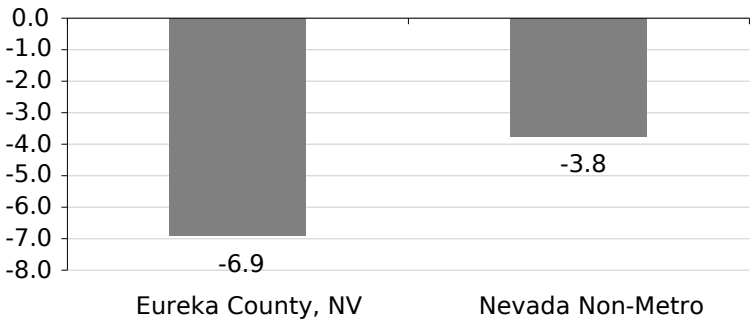
Population with Less than High School Education, Percent of Total, 2021*

- Nevada Non-Metro has the largest share of people with less than a high school education (10.9%).



Population with Less than High School Education, Change in Percentage Points, 2010*-2021*

- The largest change in the share of people with less than a high school degree occurred in Eureka County, NV, which went from 11.8% to 4.9%.



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Educational Attainment

What do we measure on this page?

This page describes levels of educational attainment, which refers to the highest degree or level of schooling completed by people 25 years and over.

Why is it important?

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.[5]

A study in California found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.[4]

Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.[7]

The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.[5]

Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Populations at Risk

Eureka County, NV

Language Proficiency

	Eureka County, NV	Nevada Non-Metro
Population 5 years or older, 2021*	1,477	271,347
Speak English "not well"***	**0**	4,843
Speak English "not well"***, percent	**0.0%**	1.8%
Speak English "not well"***, change in percentage points**, 2010*-2021*	**0.0**	-0.9

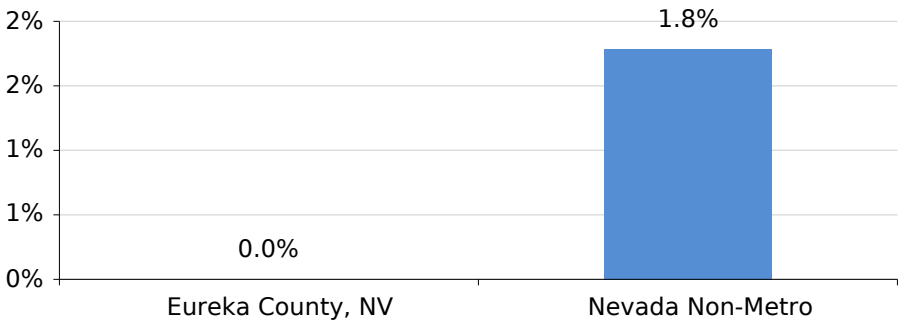
**For example, if the value is 3% in 2010* and 4.5% in 2015*, the reported change in percentage points is 1.5.

*** Includes "not well" and "not well at all".

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

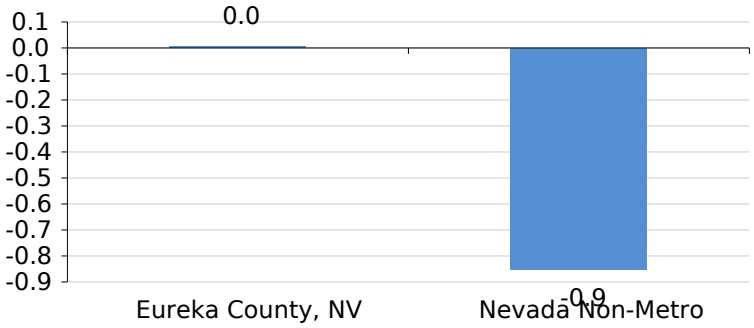
People Who Speak English "Not Well", Percent of Total, 2021*

- Nevada Non-Metro has the largest share of people who speak English "not well" (1.8%).



People Who Speak English "Not Well", Change in Percentage Points, 2010*-2021*

- The largest change in the share of people who speak English "not well" occurred in Nevada Non-Metro, which went from 2.6% to 1.8%.



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Language Proficiency

What do we measure on this page?

This page reports the results of self-rated English-speaking ability questions in the American Community Survey.

Why is it important?

Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.

A person's ability to take action during an emergency is compromised by language and cultural barriers.[4]

Poor English skills can make it harder to follow directions or interact with agencies.[4]

Lack of language skills can also instill lack of trust for government agencies.

In many industries, poor English skills can make it harder for people to get higher wage jobs.[1]

Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.[1]

Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.[1] However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Populations at Risk

Eureka County, NV

Individuals in Poverty

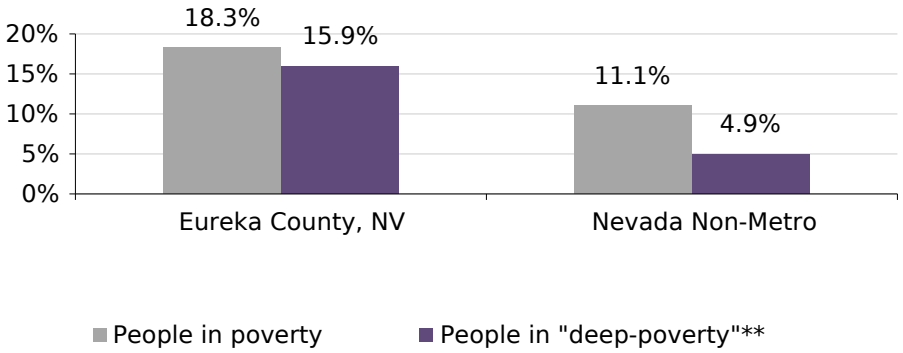
	Eureka County, NV	Nevada Non-Metro
Total population for whom poverty status is determined, 2021*	1,598	279,147
People in poverty	**293**	30,889
People in "deep-poverty"**	254	13,625
Both in poverty and over 65	**49**	6,080
Percent of Total, 2021*		
People in poverty	**18.3%**	11.1%
People in "deep-poverty"**	15.9%	4.9%
Both in poverty and over 65	**3.1%**	2.2%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
People in poverty	2.2	-0.6
People in "deep-poverty"**	12.9	0.0
Both in poverty and over 65	1.1	0.9

** Deep poverty is defined by the Census as earning less than half of the federal poverty level.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

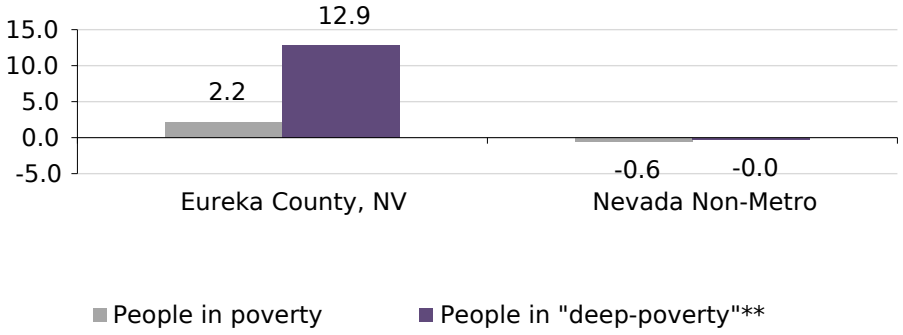
People in Poverty, Percent of Total, 2021*

- Eureka County, NV has the largest share of people in "deep poverty" (15.9%).



People in Poverty, Change in Percentage Points, 2010*-2021*

- The largest change in the share of people in "deep poverty" occurred in Eureka County, NV, which went from 3.0% to 15.9%.



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Individuals in Poverty

What do we measure on this page?

This page describes the number of people living below the poverty line, those in deep poverty, and individuals 65 and older in poverty. Poverty status is determined for all people except those institutionalized, in military group quarters, in college dormitories, and unrelated individuals less than 15 years old. The total population in the poverty table is slightly smaller than the overall population.

Following the Office of Management and Budget's Directive 14, the Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Low income is one of the strongest predictors for compromised health and ability to recover from disruptions.[1] This is true across many types of risk, including general health as well as risks from extreme weather, climate change, and environmental stresses.

Natural disasters disproportionally impact the poor because of factors such as inadequate housing, social exclusion, a diminished ability to evacuate, lack of property insurance, and more acute emotional stress.[2,11] Low-income people also are more likely to be overlooked during emergency response following disasters.[11]

Low-income people are more likely to live or work in areas with greater exposure to environmental hazards such as particulate matter or ozone. They also are more likely to work outdoors, with greater exposure to climate-related risks.[2]

The relationship between lower income and poor health outcomes is most pronounced for the poorest. Additional income for the poorest tends to improve health outcomes more than for those in other income groups.[12]

A lack of resources is only part of the reason for poor health outcomes. Income inequality within a community also is associated with poor health outcomes.[12]

Residents living in low-income neighborhoods tend to have worse physical and mental health -such as asthma, depression, diabetes, heart conditions, and emotional stress- compared to higher-income areas.[1,5]

People with lower income have higher rates of preventable hospitalizations, usually related to insufficient access to primary health care.[5]

The poor are least likely to have health insurance [5,10], and poor health outcomes related to environmental risks like air pollution are exacerbated for those who do not have health insurance.[2]

Those who are disabled and living in poverty have even greater risk from environmental hazards.

Lack of mobility makes evacuation difficult.[1,2]

In 2009, households with at least one person with a disability had a 20 percent higher chance of living in inadequate housing compared to households without a disabled person.[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
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Populations at Risk

Eureka County, NV

Families in Poverty

	Eureka County, NV	Nevada Non-Metro
Total families for whom poverty status is determined, 2021*	448	73,404
Families in poverty	**43**	5,192
Families with children in poverty	**23**	3,252
Single mother families in poverty	0	1,464
Percent of Total, 2021*		
Families in poverty	**9.6%**	7.1%
Families with children in poverty	**5.1%**	4.4%
Single mother families in poverty	**0.0%**	2.0%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
Families in poverty	-0.3	-1.5
Families with children in poverty	**0.1**	-1.6
Single mother families in poverty	**0.0**	-1.5

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
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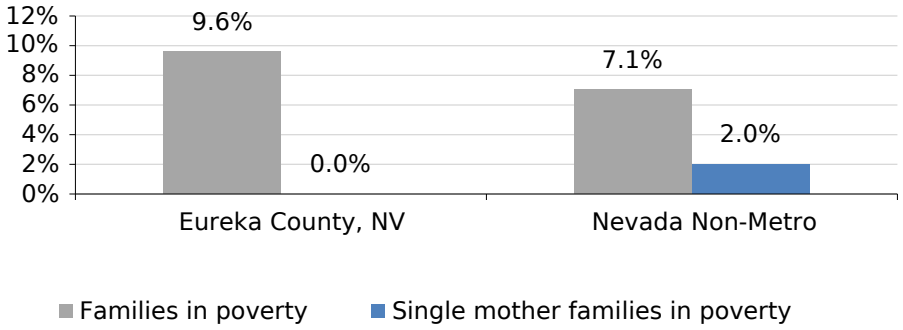
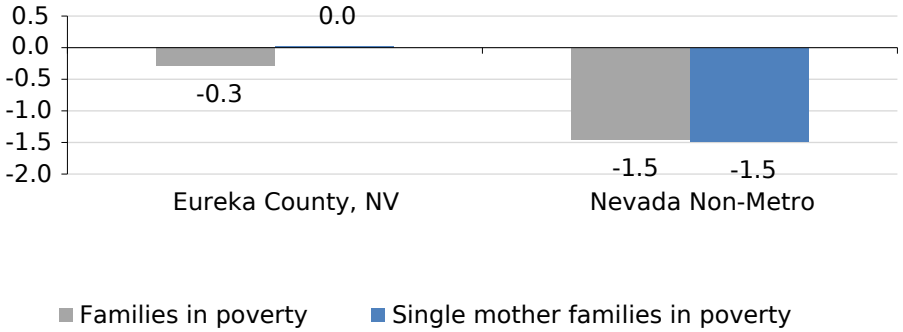
Families in Poverty, Percent of Total, 2021*

- Nevada Non-Metro has the largest share of single mother families in poverty (2.0%).



Families in Poverty, Change in Percentage Points, 2010*-2021*

- The largest change in the share of single mother familes in poverty occurred in Nevada Non-Metro, which went from 3.5% to 2.0%.



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.[1]

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.[11, 2]

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.[2] Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.[5]

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.[1, 2] Furthermore, those in high-crime areas may not want to open their windows.[2]

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.[1]

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.[12]

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.[2]

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.[11]

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Populations at Risk

Eureka County, NV

Households Receiving Public Assistance

	Eureka County, NV	Nevada Non-Metro
Total Households, 2021*	555	111,976
Households receiving:		
Supplemental Security Income (SSI)	**7**	5,070
Cash public assistance income	**32**	2,352
Food Stamp/SNAP	**10**	10,664
Percent of Total, 2021*		
Supplemental Security Income (SSI)	**1.3%**	4.5%
Cash public assistance income	**5.8%**	2.1%
Food Stamp/SNAP	**1.8%**	9.5%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
Supplemental Security Income (SSI)	0.3	1.4
Cash public assistance income	5.2	0.3
Food Stamp/SNAP	1.2	3.8
Median Household Income (MHI), 2021* (2022 $s)	$73,772	na
Change in MHI, 2010*-2021* (2022 $s)	**-$8,627**	na

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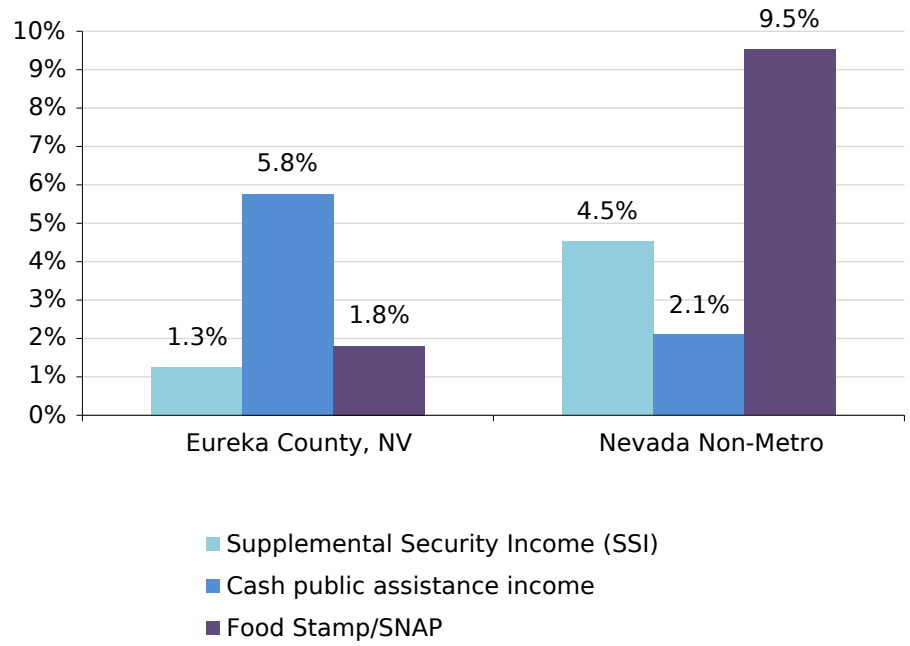
Percent of Households Receiving Earnings, by Source, 2021*

- Nevada Non-Metro has the largest share of households receiving Supplemental Security Income (4.5%).
- Eureka County, NV has the largest share of households receiving cash public assistance (5.8%).
- Nevada Non-Metro has the largest share of households receiving Food Stamps/SNAP (9.5%).



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CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Households Receiving Public Assistance

What do we measure on this page?

This page describes the number of households receiving public assistance.

Supplemental Security Income, or SSI, provides financial assistance to people with limited income who are aged, blind, or disabled. Unlike Social Security benefits, which are determined by the recipient's lifetime earnings, SSI benefits are not based on prior work.[13]

Cash public assistance can be from the Federal program, Temporary Assistance for Needy Families (TANF), or various state-level cash assistance programs. It does not include separate payments received for hospital or other medical care (vendor payments) or SSI or noncash benefits such as the Supplemental Nutrition Assistance Program.

The Supplemental Nutrition Assistance Program, or SNAP, (formerly known as food stamps), provides benefits to those who are unemployed, have no or low incomes, are elderly, are disabled with low incomes, or are homeless. The income threshold for SNAP varies with household size and other factors. SNAP benefits can be used to purchase grocery items such as breads, cereals, fruits, vegetables, meats, and dairy products.[14]

Median income can be used to identify areas of high or low income, but care should be taken to consider regional differences in cost of living.

Why is it important?

The number of households receiving public assistance are indicative of households living in poverty or with insufficient resources.

In 2011, families receiving public assistance spent 77 percent of their household budget to meet the basic necessities of housing, food, and transportation.[15]

Payments associated with economic hardship are associated with lower household income and educational attainment, higher poverty and unemployment. They are often high in communities that are losing population.[16]

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Populations at Risk

Eureka County, NV

Labor Participation

	Eureka County, NV	Nevada Non-Metro
Total Population 16 to 64 years, 2021*	839	171,803
People that did not work	280	46,989
People that did not work, percent	33.4%	27.4%
People that did not work, change in percentage points**, 2010*-2021*	12.7	1.4

**For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.

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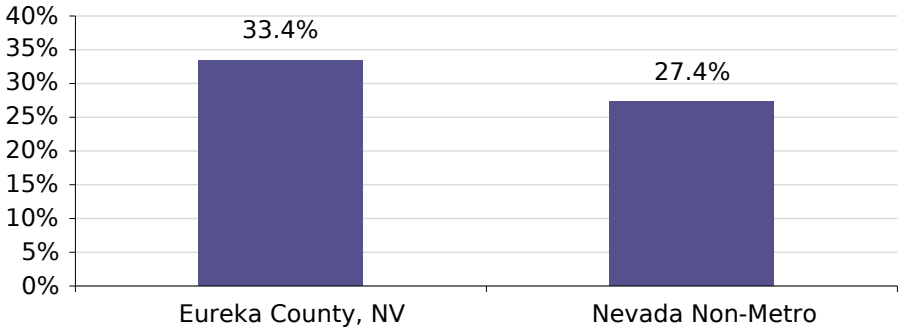
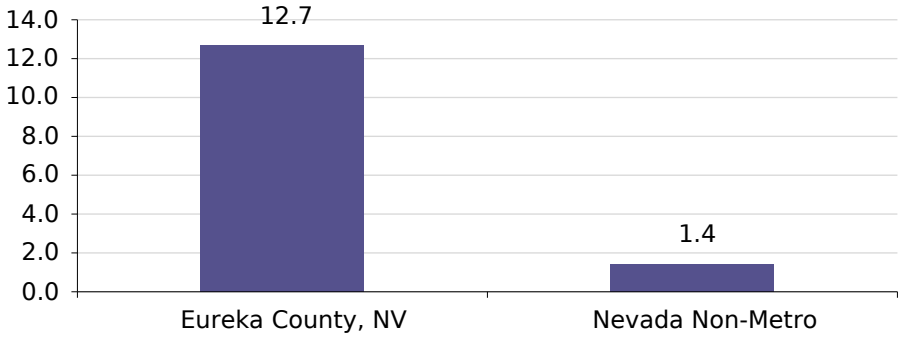
People that Did Not Work, Percent of Population (16-64 Years), 2021*

- Eureka County, NV has the largest share of the population that did not work (33.4%).



People that Did Not Work, Change in Percentage Points, 2010*-2021*

- The largest change in the share of the population that did not work occurred in Eureka County, NV, which went from 20.7% to 33.4%.



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Labor Participation

What do we measure on this page?

This page shows the share of the working age population that did not work. This value differs from the unemployment rate, which is more narrowly defined as the share of individuals who did not work and were actively seeking work.

Why is it important?

In general, robust participation in the labor force is indicative of vibrant local and regional economic development.[17] Not working can limit access to health insurance and health care, and has been linked with impaired health. Low labor force participation may indicate a high proportion of discouraged workers no longer seeking employment, but it can also indicate a high proportion of students or retirees.

Low labor force participation is closely associated with high unemployment, although labor force participation can be low in places like retirement destinations that are otherwise economically successful.[18]

Compared to labor force participation, unemployment figures may under-represent the magnitude of economic burden, because they do not include those who have stopped seeking work, those who are involuntarily employed part-time, or people with disabilities that prevent them from working.[17]

Unemployed people are a subset of those who are not in the labor force. Research relating work status to social outcomes focuses on the unemployed.

Unemployment is strongly linked with adverse health outcomes such as cardiovascular disease, suicide, compromised mental health, and alcohol use. Unemployed people have higher rates of hospitalizations, medication use, and health care visits.[19]

Being without a job limits lifestyle choices and is linked with behaviors that contribute to poor health, such as disrupted social relationships, unhealthy diet, increased alcohol use, and greater stress.[17,19]

High, persistent joblessness within a community, places an additional burden on social services, and resources may be more scarce because they are spread thinly.[17]

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Populations at Risk

Eureka County, NV

Housing Affordability

	Eureka County, NV	Nevada Non-Metro
Total owner-occupied, mortgaged homes, 2021*	81	47,558
Mortgage cost >30% of household income	**24**	13,232
Total renter-occupied units, 2021*	125	30,712
Rent >30% of household income	**59**	11,215
Percent of Total, 2021*		
Mortgage cost >30% of household income	**29.6%**	27.8%
Rent >30% of household income	**47.2%**	36.5%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
Mortgage cost >30% of household income	17.4	-10.1
Rent >30% of household income	44.6	-4.1
Median Monthly Housing Costs in 2022 $s		
Mortgage cost, 2021*	$1,580	na
Change in mortgage cost, 2010*-2021*	**$170**	na
Gross rent, 2021*	$982	na
Change in gross rent, 2010*-2021*	**$193**	na

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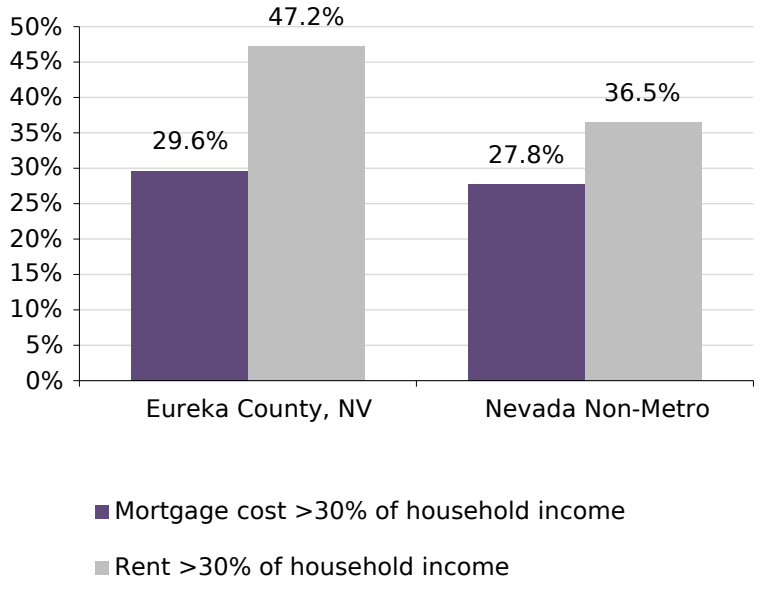
Housing Costs as a Percent of Household Income, 2021*

- Eureka County, NV has the largest share of unaffordable housing for homeowners, with 29.6% spending over 30% of household income on mortgage costs.
- Eureka County, NV has the largest share of unaffordable housing for renters, with 47.2% spending over 30% of household income on rental costs.



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Housing Affordability

What do we measure on this page?

This page describes whether housing is affordable for homeowners and renters.

The use of the ratio of income to housing costs was formalized in the US Housing and Development Act. The 30 percent threshold was established in 1981, is used currently to determine rent prices for most rent assistance programs.[20]

"Mortgage cost" is defined as the sum of payment for mortgages, real estate taxes, insurances, utilities, fuels, mobile home costs, and/or condominium fees.

"Gross rent" is defined as the amount of the contract rent plus the estimated average monthly cost of utilities and fuels if these are paid for by the renter.

Why is it important?

The government considers families with housing costs exceeding 30 percent of income to be "housing-cost burdened." [20,21] Families who are housing cost burdened may need to make financial sacrifices in other aspects of their life, which may lead to negative health and social outcomes.

The 30 percent ratio reflects both housing cost and income. In areas with high housing prices, even families with high incomes can approach or exceed the 30 percent threshold.

High housing costs may create financial difficulty in paying for other necessities such as food, health care, and transportation.[21] Thus families may have to sacrifice, compromise, or delay other essential needs.[1]

Families living in affordable housing are more stable and less likely to move frequently. This stability is linked to several positive health outcomes in children and young adults, such as improved emotional and behavioral problems, fewer pregnancies, reduced drug use, and a lower risk for depression.[1]

Housing costs do not affect all income groups equally. For low-income families, the money that remains after household expenses may not be sufficient to cover their needs. But for high wage-earners, paying a high proportion of their income for housing may not pose any financial burden.[20]

Housing cost burden is more common for renters. In 2006, 46 percent of U.S. renters had housing costs that exceeded 30 percent of their income.[20] Cost-burden renters are especially prevalent in large cities.[22] The high proportion of household costs for renters has further increased over the past 25 years.

To live in more affordable housing, some people may opt to live outside of metropolitan areas, which lowers housing cost but increases transportation cost.

In 2006, housing cost burden was more prevalent for racial and ethnic minorities and was lowest for whites.[20]

Financial insecurity for a home -such as foreclosure, eviction, or uncertainly about one’s ability to afford housing- is a source of emotional stress.[23] This effect is heightened by people’s emotional attachment to their home and their neighborhood.[24]

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Populations at Risk

Eureka County, NV

Rental & Mobile Homes

	Eureka County, NV	Nevada Non-Metro
Total Occupied Housing Units, 2021*	555	111,976
Rental Units	125	30,712
Mobile Homes	299	23,164
Percent of Total, 2021*		
Rental Units	22.5%	27.4%
Mobile Homes	53.9%	20.7%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
Rental Units	-12.6	2.7
Mobile Homes	4.1	**0.0**
Median Home Value (MHV), 2021* (2022 $s)	$162,432	na
Change in MHV, 2010*-2021* (2022 $s)	**$45,141**	na

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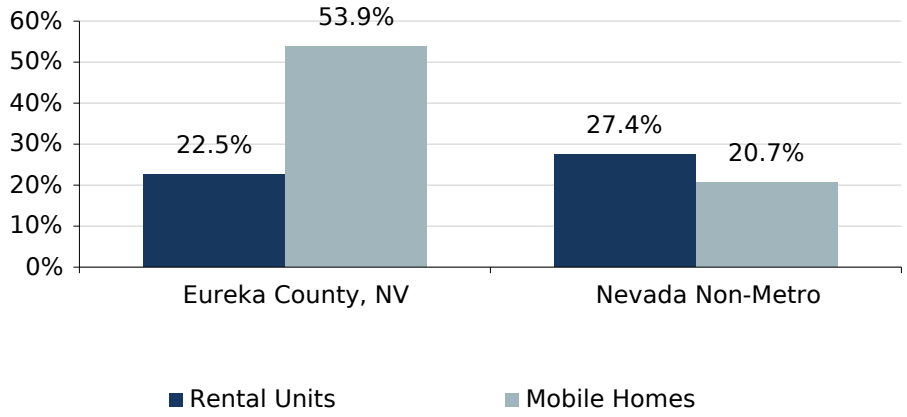
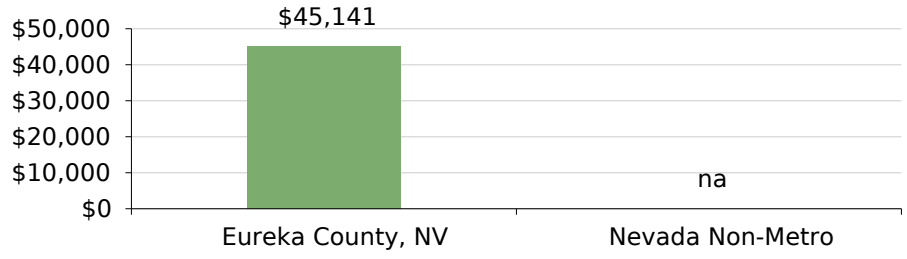
Rental Units and Mobile Homes as a Percent of Total Housing Units, 2021*

- Nevada Non-Metro has the largest share of rental units (27.4%).
- Eureka County, NV has the largest share of mobile homes (53.9%).



Change in Median Home Value, 2010*-2021* (2022 $s)



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CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Rental & Mobile Homes

What do we measure on this page?

This page reports the numbers of housing units that are either rental units or mobile homes, and provides median home value.

Why is it important?

In general, home ownership contributes to well-being and stability. However, each type of living situation has its own risks and health concerns.

Home ownership is often associated with mental health benefits such as high self-esteem, a sense of control over one's living situation, and financial stability.[23]

The financial stress associated with losing one's home is heightened by people's emotional attachment to their home and their neighborhood.[24]

Homeowners typically pay a greater overall housing cost, but renters pay a larger proportion of their income. The high proportion of household costs for renters has further increased over the past 25 years.[25]

Rental homes are generally not maintained as well as those that are owned. Substandard housing conditions like dampness, mold, and exposure to toxic substances or allergens are linked with compromised health outcomes.[23]

Areas with high-density residences, such as urban areas, tend to have a greater proportion of renters.[1] High density living conditions and large, multistory apartment buildings exacerbate heat-related health stresses.[4]

Mobile homes are more likely to be damaged in extreme weather, which poses a risk for both the structure and the occupants.[4,11]

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Populations at Risk

Eureka County, NV

Potentially Vulnerable Households

	Eureka County, NV	Nevada Non-Metro
Total Occupied Households, 2021*	555	111,976
People > 65 years & living alone	**58**	13,922
Single female households	**17**	9,083
with children < 18 years	**10**	5,642
Households with no car	**34**	4,309
Percent of Total, 2021*		
People > 65 years & living alone	**10.5%**	12.4%
Single female households	**3.1%**	8.1%
with children < 18 years	**1.8%**	5.0%
Households with no car	**6.1%**	3.8%
Change in Percentage Points, 2010*-2021*		
For example, if the value is 3% in 2010* and 4.5% in 2021*, the reported change in percentage points is 1.5.		
People > 65 years & living alone	7.4	-0.8
Single female households	0.4	0.1
with children < 18 years	1.8	0.0
Households with no car	3.9	-84.7

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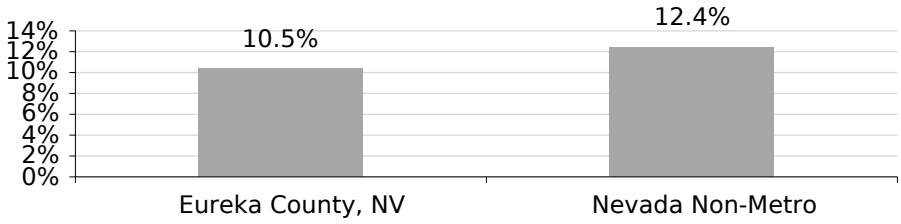
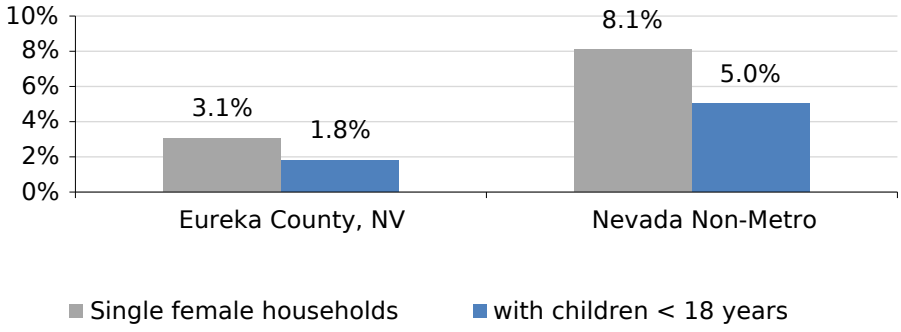
People > 65 Yrs and Living Alone as a Percent of Total Households, 2021*

- Nevada Non-Metro has the largest share of households with people over 65 living alone (12.4%).



Single Female Households as a Percent of Total Households, 2021*

- Nevada Non-Metro has the largest share of single female households (8.1%).
- Nevada Non-Metro has the largest share of single female households with children (5.0%).



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Potentially Vulnerable Households

What do we measure on this page?

This page describes household types that are associated with increased hardship, including the elderly living alone, single female households, single female households with children, and households without a car.

Why is it important?

Older adults are more likely to have compromised health and are less able to overcome disease. Living alone exacerbates health risks, and many health outcomes are worsened by social isolation.

- Social isolation is strongly linked to poor health such as premature death, smaller chances of survival after a heart attack, depression, and greater levels of disability from chronic diseases.[2]
- People 65 and older are particularly vulnerable to heat-related illness,[4] which is exacerbated by social isolation.

Households headed by women face challenges related to income, education, and food security. These factors make it more difficult to respond to health, environmental, or climate risks.

- Female-headed households are more likely to be living in poverty. This is most prevalent among black, Hispanic, and Native American households.[26]
- In 2014, 35 percent of female-headed households were food insecure, compared to 14 percent of all households.[27] Single mothers may be burdened by providing basic needs such as food and housing, which can make the urgency of other risks seem less important.[28]
- Single-mother families are disproportionally exposed to hazardous levels of air pollution.[4]
- Single mothers tend to be less educated and less affluent than the general population, which puts them at greater risk during natural disasters.[28]

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

- People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.[29]
- Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.[30]
- During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.[4]
- During heat waves, people without a car are less able to go to community cooling centers or cooler areas.[4]
- Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.[31]

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Populations at Risk

Eureka County, NV

Potentially Vulnerable People

	Eureka County, NV	Nevada Non-Metro
Total civilian noninstitutionalized population, 2021*	1,598	279,031
People w/ disabilities	269	45,654
People w/o health insurance	**145**	25,301
Percent of Total, 2021*		
Percent of people w/ disabilities	16.8%	16.4%
Percent of people w/o health insurance	**9.1%**	9.1%

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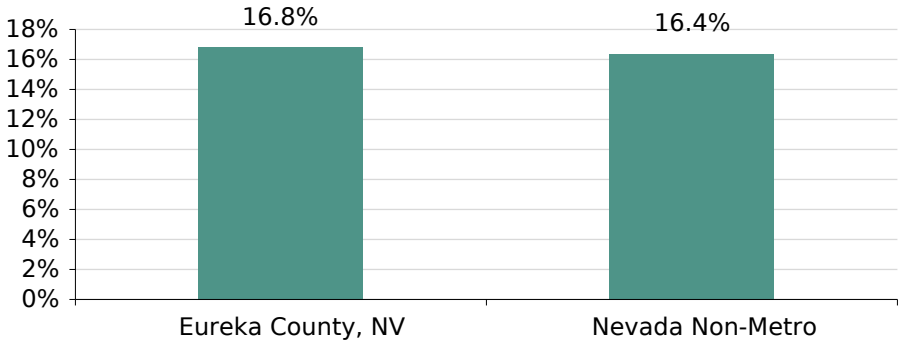
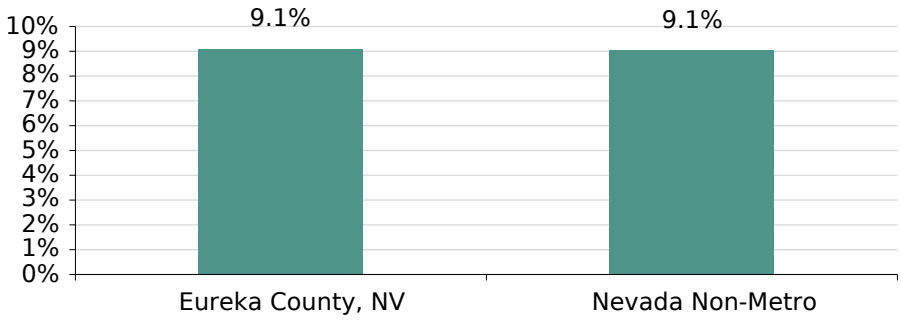
People with Disabilities, Percent of Total, 2021*

- Eureka County, NV has the largest share of the noninstitutionalized population that is disabled (16.8%).



People without Health Insurance, Percent of Total, 2021*

- Eureka County, NV has the largest share of the noninstitutionalized population without health insurance (9.1%).



* ACS 5-year estimates used. 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Potentially Vulnerable People

What do we measure on this page?

This page describes groups of people that are associated with increased hardship, including people with disabilities and people without health insurance.

Why is it important?

Disabled people are subject to health complications that make environmental risks more consequential.

Disabled people are less likely to have health insurance, compared to the non-disabled population.[5]

Being confined to a bed raises heat mortality.[2]

Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.[3]

People who lack health insurance are disadvantaged by several different mechanisms. They may avoid or delay diagnoses, treatment, and/or medication and thus may increase their odds of poor health. They do not have a regular place of care, and they are not benefitting from the standard of care that is afforded many Americans.

Households living in poverty are more likely to be uninsured. More than one quarter of uninsured households live in poverty.[10]

People with lower educational attainment are more likely to be uninsured.[5]

People without health insurance are less likely to have a regular source of care, and less likely to receive preventive, primary, and specialty care services.[32,33] This risk is particularly evident among racial and ethnic minorities.[5]

People without health insurance are more likely to use the hospital emergency department for standard health care needs.[5]

About 25% of uninsured adults report having either delayed or gone without care in the past year because of costs.[33]

Uninsured people are more likely to skip medications due to the costs, and some providers are less likely to prescribe medications to uninsured patients.[34,34]

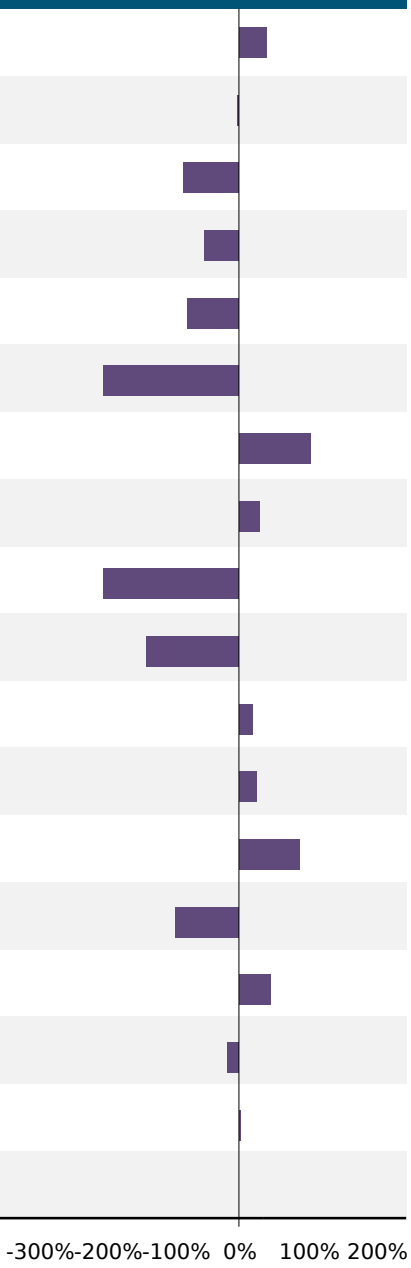
People who do not have health insurance suffer greater health consequences from air pollution compared to those with insurance.[4]

Populations at Risk

Eureka County, NV

Benchmarks

Indicators 2021*	Eureka County, NV	Nevada Non-Metro	Percent Difference Eureka County, NV vs. Nevada Non-Metro
Percent of Population under 5	7.9%	5.2%	
Percent of Population over 65	20.9%	21.4%	
Percent of Population Non-White (all other races)	**8.5%**	20.3%	
Percent of Population Hispanic	10.9%	18.5%	
Percent of Population without a High School Diploma	**4.9%**	10.9%	
Percent of Population that speak English "Not Well"	**0.0%**	1.8%	
Percent of Population in "Deep Poverty"	15.9%	4.9%	
Percent of Families Below Poverty	**9.6%**	7.1%	
Percent of Families that are Single Mother Households and Below Poverty	**0.0%**	2.0%	
Percent of Households Receiving Food Stamps (SNAP)	**1.8%**	9.5%	
Percent of Population that "Did Not Work"	33.4%	27.4%	
Percent of Rentals where Gross Rent Exceeds 30% of Household Income	**47.2%**	36.5%	
Percent of Housing that are Mobile Homes	53.9%	20.7%	
Percent of Households that are Single Female with Children under 18	**1.8%**	5.0%	
Percent of Households with No Car	**6.1%**	3.8%	
Percent of Population over 65 and Living Alone	**10.5%**	12.4%	
Percent of Population with Disabilities	16.8%	16.4%	
Percent of Population without Health Insurance	**9.1%**	9.1%	



High Reliability: Data with coefficients of variation (CVs) < 12% are in black to show that the sampling error is small.
Medium Reliability: Data with CVs between 12 & 40% are in orange. These values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

* ACS 5-year estimates: 2021 represents average characteristics from 2017-2021; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Benchmarks

What do we measure on this page?

This page shows a quick comparison for most of the indicators covered in this report to highlight how the region differs from the selected benchmark geography.

The percent, or relative, difference between the selected geography and the benchmark is calculated by dividing the difference between the values by the arithmetic mean of the values.

Why is it important?

These indicators are all measures of a population more likely to experience adverse outcomes from disruptions due to extreme weather events, climate change, pollution, or limited health care access.

Particularly high percentages for any of these indicators may highlight populations that are at higher risk and in need of outreach from disaster planning, public health, or social service organizations.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

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Appendix B – Cost Estimates

Eureka Airport
ALP Update
Engineer's Opinion of Probable Construction Cost (OPCC)
Date: 1/12/2024
JN: 10938.000

Runway 18/36 Alternative 1A					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 300,000	$ 300,000
2	Install Obstacle Lights and Markers	EA	9	$ 1,500	$ 13,500
3	Reroute Fence Line - 6' Chain Link	LF	1,200	$ 95	$ 114,000
4	Remove Asphalt Concrete	SF	87,000	$ 3	$ 261,000
5	Install Composite Runway Section	SF	130,140	$ 15	$ 1,952,100
6	Install Composite Taxiway Section	SF	52,500	$ 15	$ 787,500
7	Install Composite Roadway Section	SF	100,240	$ 10	$ 1,002,400
8	Reroute Power Poles	EA	8	$ 4,500	$ 36,000
9	Install Drainage Culvert - 24" RCP	LF	100	$ 400	$ 40,000
10	Pavement Markings	LS	1	$ 25,000	$ 25,000
11	Furnish and Provide Traffic Control	LS	1	$ 60,000	$ 60,000

Sub Total = $ 4,591,500

Contingency (15%) = $ 688,800

Construction Total = $ 5,280,300

Runway 18/36 Alternative 1A					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 459,150	$ 459,150
2	Construction Administration	LS	1	$ 459,150	$ 459,150

Sub Total = $ 918,300

Project Total = $ 6,198,600

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Runway 18/36 Alternative 1B					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 200,000	$ 200,000
2	Install Obstacle Lights and Markers	EA	9	$ 1,500	$ 13,500
3	Reroute Fence Line	LF	1,200	$ 95	$ 114,000
4	Remove Asphalt Concrete	SF	87,000	$ 3	$ 261,000
5	Install Composite Runway Section	SF	130,140	$ 15	$ 1,952,100
6	Install Composite Taxiway Section	SF	52,500	$ 15	$ 787,500
7	Drainage Culvert - 24" RCP	LF	100	$ 400	$ 40,000
8	Pavement Markings	LS	1	$ 20,000	$ 20,000

Sub Total = $ 3,388,100

Contingency (15%) = $ 508,300

Construction Total = $ 3,896,400

Runway 18/36 Alternative 1B					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 338,810	$ 338,810
2	Construction Administration	LS	1	$ 338,810	$ 338,810

Sub Total = $ 677,620

Project Total = $ 4,574,020

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Runway 18/36 Alternative 2					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 200,000	$ 200,000
2	Install Obstacle Lights and Markers	EA	9	$ 1,500	$ 13,500
3	Reroute Fence Line	LF	1,200	$ 95	$ 114,000
4	Remove Asphalt Concrete	SF	192,000	$ 3	$ 576,000
5	Install Composite Runway Section	SF	174,740	$ 15	$ 2,621,100
6	Install Composite Taxiway Section	SF	102,130	$ 15	$ 1,531,950
7	Drainage Culvert - 24" RCP	LF	100	$ 400	$ 40,000
8	Pavement Markings	LS	1	$ 20,000	$ 20,000
9	Avigation Easement	AC	9	$ 5,000	$ 42,500

Sub Total = $ 5,116,550

Contingency (15%) = $ 767,500

Construction Total = $ 5,884,050

Runway 18/36 Alternative 2					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 511,655	$ 511,655
2	Construction Administration	LS	1	$ 511,655	$ 511,655

Sub Total = $ 1,023,310

Project Total = $ 6,907,360

General Note:

This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Runway 18/36 Alternative 3					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 200,000	$ 200,000
2	Install Obstacle Lights and Markers	EA	9	$ 1,500	$ 13,500
3	Reroute Fence Line	LF	1,200	$ 95	$ 114,000
4	Remove Asphalt Concrete	SF	64,500	$ 3	$ 193,500
5	Composite Runway Section	SF	109,500	$ 15	$ 1,642,500
6	Composite Taxiway Section	SF	42,000	$ 15	$ 630,000
7	Drainage Culvert - 24" RCP	LF	100	$ 400	$ 40,000
8	Pavement Markings	LS	1	$ 20,000	$ 20,000

Sub Total = $ 2,853,500

Contingency (15%) = $ 428,100

Construction Total = $ 3,281,600

Runway 18/36 Alternative 3					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 285,350	$ 285,350
2	Construction Administration	LS	1	$ 285,350	$ 285,350

Sub Total = $ 570,700

Project Total = $ 3,852,300

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Crosswind Alternative 1					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 75,000	$ 75,000
2	Install Obstacle Lights and Markers	EA	7	$ 1,500	$ 10,500
3	Install Non-Lighted Runway End Markers	EA	4	$ 200	$ 800
4	12" Gravel Runway	SF	180,000	$ 2	$ 360,000
5	Drainage Culvert - 24" RCP	LF	150	$ 400	$ 60,000
6	Avigation Easement	AC	7	$ 5,000	$ 32,500.00

Sub Total = $ 506,300

Contingency (15%) = $ 76,000

Construction Total = $ 582,300

Crosswind Alternative 1					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 50,630	$ 50,630
2	Construction Administration	LS	1	$ 50,630	$ 50,630

Sub Total = $ 101,260

Project Total = $ 683,560

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Crosswind Alternative 2					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 75,000	$ 75,000
2	Install Obstacle Lights and Markers	EA	7	$ 1,500	$ 10,500
3	Install Non-Lighted Runway End Markers	EA	4	$ 200	$ 800
4	12" Gravel Runway	SF	130,800	$ 2	$ 261,600
5	Avigation Easement	AC	7	$ 5,000	$ 32,500.00

Sub Total = $ 347,900

Contingency (15%) = $ 52,200

Total = $ 400,100

Crosswind Alternative 2					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 34,790	$ 34,790
2	Construction Administration	LS	1	$ 34,790	$ 34,790

Sub Total = $ 69,580

Project Total = $ 469,680

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Crosswind Alternative 3					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 75,000	$ 75,000
2	Install Obstacle Lights and Markers	EA	7	$ 1,500	$ 10,500
3	Install Non-Lighted Runway End Markers	EA	4	$ 200	$ 800
4	12" Gravel Runway	SF	99,000	$ 2	$ 198,000
5	Avigation Easement	AC	1	$ 5,000	$ 2,500.00

Sub Total = $ 284,300

Contingency (15%) = $ 42,700

Total = $ 327,000

Crosswind Alternative 3					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 28,430	$ 28,430
2	Construction Administration	LS	1	$ 28,430	$ 28,430

Sub Total = $ 56,860

Project Total = $ 383,860

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Landside Alternative 1					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 100,000	$ 100,000
2	Tie-Down Anchor	EA	5	$ 600	$ 3,000
3	Install Security Fence with Two Gates	LF	1,700	$ 125	$ 212,500
4	Relocate BLM Retardant Tanks	LS	1	$ 25,000	$ 25,000
5	Install Composite Apron Section	SF	35,600	$ 15	$ 534,000
6	Install Composite Roadway Section	SF	14,225	$ 10	$ 142,250
7	Relocate Power Lines Underground - 4" NVE Conduit	LF	1,300	$ 12	$ 15,600
8	Concrete pad - Subgrade and Base	SF	16,875	$ 10	$ 168,750
9	Hangar - 75x75 (PEMB, OSDS, Water Connection)	EA	3	$ 600,000	$ 1,800,000
10	Pavement Markings	LS	1	$ 15,000	$ 15,000

Sub Total = $ 3,016,100

Contingency (15%) = $ 452,500

Construction Total = $ 3,468,600

Landside Alternative 1					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 301,610	$ 301,610
2	Construction Administration	LS	1	$ 301,610	$ 301,610

Sub Total = $ 603,220

Project Total = $ 4,071,820

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.

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Landside Alternative 2					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization/Demobilization	LS	1	$ 100,000	$ 100,000
2	Tie-Down Anchor	EA	11	$ 600	$ 6,600
3	Install Security Fence with Three Gates	LF	1,770	$ 130	$ 230,100
4	Relocate BLM Retardant Tanks	LS	1	$ 25,000	$ 25,000
5	Relocate Fueling System	LS	1	$ 40,000	$ 40,000
6	Install Composite Apron Section	SF	92,500	$ 15	$ 1,387,500
7	Install Composite Roadway Section	SF	21,000	$ 10	$ 210,000
8	Relocate Power Lines Underground - 4" NVE Conduit	LF	1,300	$ 12	$ 15,600
9	Concrete pad - Subgrade and Base	SF	18,000	$ 10	$ 180,000
9	Hangar - 60x60 (PEMB, OSDS, Water Connection)	EA	3	$ 400,000	$ 1,200,000
10	Hangar - 100x60 (PEMB, OSDS, Water Connection)	EA	1	$ 600,000	$ 600,000
11	Pavement Markings	LS	1	$ 15,000	$ 15,000

Sub Total = $ 4,009,800

Contingency (15%) = $ 601,500

Construction Total = $ 4,611,300

Landside Alternative 2					
Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Engineering Design	LS	1	$ 400,980	$ 400,980
2	Construction Administration	LS	1	$ 400,980	$ 400,980

Sub Total = $ 801,960

Project Total = $ 5,413,260

General Note:
This preliminary estimate of probable construction cost is the Engineer's best judgement as a professional engineer generally familiar with this type of construction. However, since the Engineer has no control over market conditions, the Engineer does not guarantee that proposals, bids, or actual construction cost will not vary from this estimate.