# Humboldt County
# Grass Valley
# Sewer System

## Preliminary Environmental Assessment
## for
## Grass Valley
## Sewer System Replacement Project

**May 2022**

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## 1.0 SUMMARY

Farr West Engineering, on behalf of Humboldt County, is preparing a Preliminary Environmental Assessment (EA) for construction and installation of a Wastewater Treatment Facility (WWTF) and sanitary sewer collection system in Grass Valley, NV. The proposed project is necessary to address septic tanks that are impacting groundwater quality. The proposed improvements include the abandonment and cleanout of approximately 645 existing septic tanks, the installation of a sanitary sewer collection system (connected to existing residential and commercial sewer systems), a mechanical treatment facility, four (4) lift stations and three (3) rapid infiltration basins (RIBs) throughout the north end of Grass Valley, Nevada. The project covers an area of approximately 144 acres and lies within portions of Sections 10, 11, 12, 13, 14, and 15 of Township 35N, Range 37E. This Preliminary EA is required due to Humboldt County's application for federal financing of this project.

See Figure 4 for a map that depicts the Proposed Project Area for all construction activities. The proposed project locations are listed in Table 1**.**

**Table 1 Proposed Wastewater System Project Locations**

| Project Location | Township and Range | Section |
|---|---|---|
| WWTF | T35N, R37E | Section 10 or 15 |
| Rapid infiltration Basins | T35N, R37E | Section 10 or 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10 or 15, and 11, & 12 |

Some mitigation or avoidance measures may be necessary to avoid potential adverse environmental impacts within the proposed project area. Potential environmental impacts are outlined below and include land use, geology and soils, water quality, floodplains, biological resources, air quality, noise, and health and human safety. Avoidance and/or mitigation of these potential impacts are addressed in this Preliminary EA.

# 2.0 PURPOSE AND NEED FOR THE PROJECT

## 2.1 INTRODUCTION

Grass Valley, located in Pershing and Humboldt Counties, is a 30-mile-long valley, just south of Winnemucca, nestled between two mountain ranges. Humboldt County (County), the oldest county in Nevada, is a largely rural county created in 1856 by the Utah Territorial Legislature. The County is named after the Humboldt River and contains three (3) nationally protected areas; The Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area, under Bureau of Land Management (BLM) protection, The Humboldt National Forest, under United States Forest Service (USFS) protection, and the Sheldon National Wildlife Refuge, under United States Fish and Wildlife Service (USFWS) protection (Wikipedia, 2022). This project is located entirely within Humboldt County and lies outside of all nationally protected areas.

Grass Valley residents and businesses currently only have access to septic systems for wastewater treatment. The area is under jurisdiction of the County which does not own or operate a treatment facility in Grass Valley. The nearest treatment facility is owned and operated by the City of Winnemucca (City). The age of older septic systems could be estimated at 35-40 years, which exceeds the industry standard lifespan of 20-30 years. The capacities of the septic systems themselves have unknown constraints, however, the number of septic systems operating in the area are causing a strain on the aquifer by posing a threat to groundwater resources through contamination from septic leaching (Farr West Engineering, 2022).

## 2.2 PURPOSE AND NEED FOR ACTION

### 2.2.1 Health, Sanitation, and Security

The impacts to public health and groundwater quality caused by high nitrate levels are the primary and secondary reasons for the proposed project, respectively. In 1995 Humboldt County began a domestic well groundwater monitoring program after water samples in Grass Valley showed elevated levels of Nitrates and Total Dissolved Solids (TDS) in the groundwater. There are 7 monitoring wells in the area. The three newest monitoring wells were constructed after NDEP determined the preceding monitoring wells collected samples too far below the static groundwater level to accurately represent the quality of groundwater at the water table interface. Refer to the Preliminary Engineering Report (PER) for this project for more information on the Health, Sanitation, and Security.

The high density of septic systems operating in Grass Valley is a direct contributor to the high nitrate and TDS levels recorded in water samples. The federal Maximum Contaminant Level (MCL) for nitrate levels in groundwater is 10 milligrams/liter (mg/L). Nitrate levels exceeding this value can be linked to a variety of side effects including a lack of oxygen in the blood circulatory system with infants and pregnant women being the most at risk. The extent and severity of possible side effects will differ for each person affected. Water samples taken from Grass Valley have shown multiple instances of excess nitrate MCL as shown in Figure 1.

Although the elevated nitrate levels are the main concern regarding public health, the elevated TDS levels are worth noting. The MCL for TDS is 1,000 mg/L, typically an exceedance results in a poor aesthetic quality for drinking water. The TDS level results from water samples are shown in Figure 2.

**Figure 1 Nitrate Sample Levels**

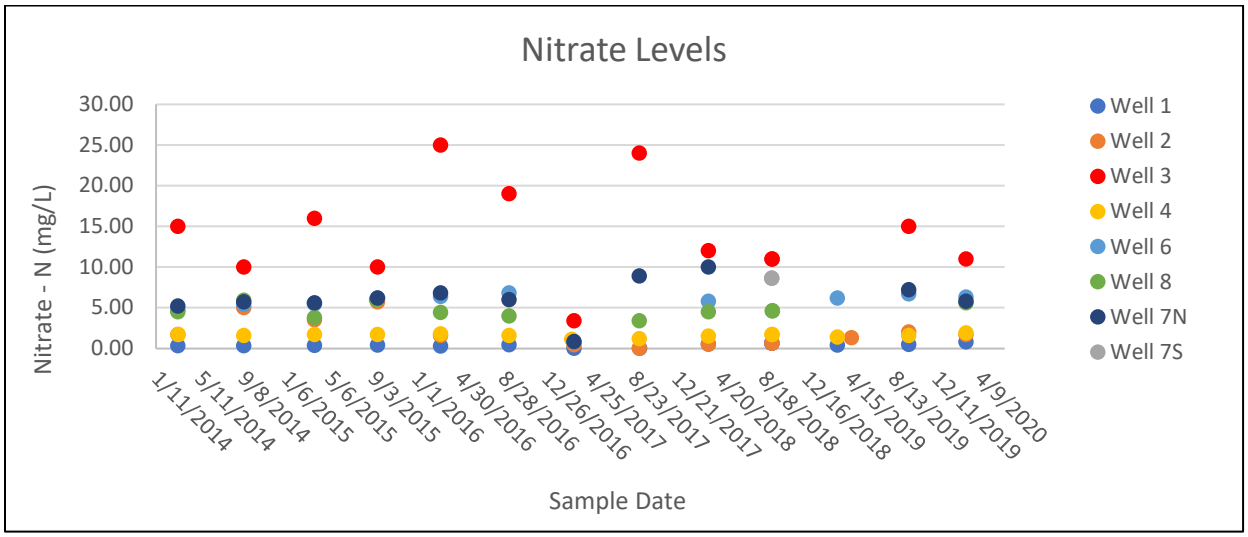
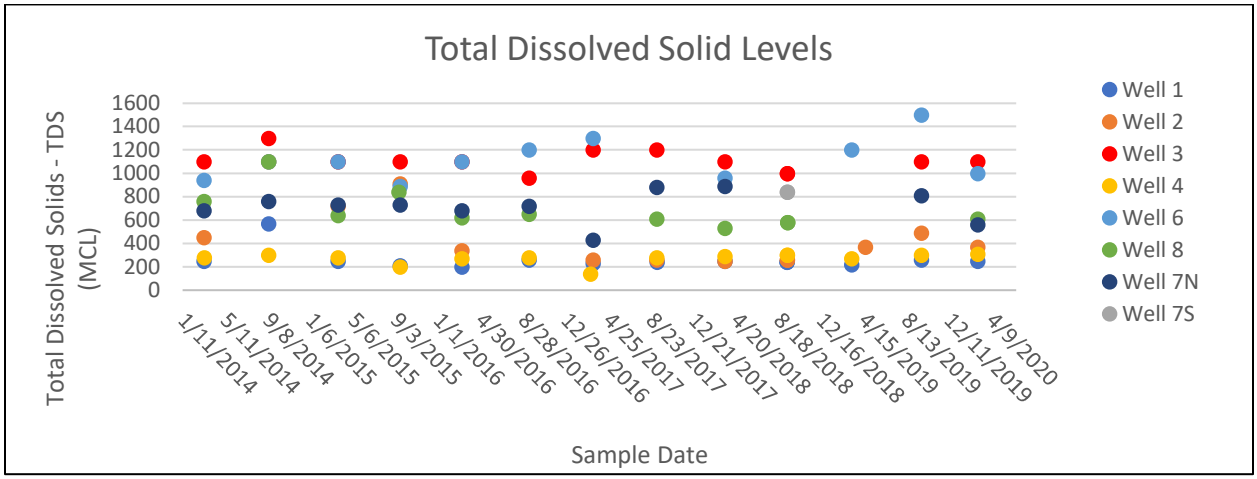



**Figure 2 TDS Sample Levels**




The wastewater systems undersized and aging septic system infrastructure poses increased threats to the groundwater supply through contamination. The proposed project will replace the infrastructure, eliminating system failures causing leaching into the groundwater which increase the Nitrate and TDS levels. The proposed project will have a beneficial effect on health and safety for the residents of Humboldt County and the surrounding communities and will protect groundwater quality in the aquifer.

### 2.2.2 Aging Infrastructure

As the age of individual septic systems continues to increase, there will be an increase of system failures, particularly when property owners neglect maintenance. Failures include:

- Inappropriate design or poor maintenance.
- Absorption field installed at sites with inadequate or inappropriate soils, excessive drain slopes.
- Failure to pump the septic tank generally at least every three to five years, resulting in solids in the tank to migrate into the drain field, clog the system and discharge excessive nitrates in the water.
- Cracked or leaky septic tank.

These conditions typically result in groundwater discharge with high concentrations of contaminants. A septic system failure could go undetected depending on its severity and the difficulty of inspecting for

seemingly small failures. The septic systems in the project area are located on private property which would require the landowner's consent to dig up the septic tank or leach field to inspect for failures.

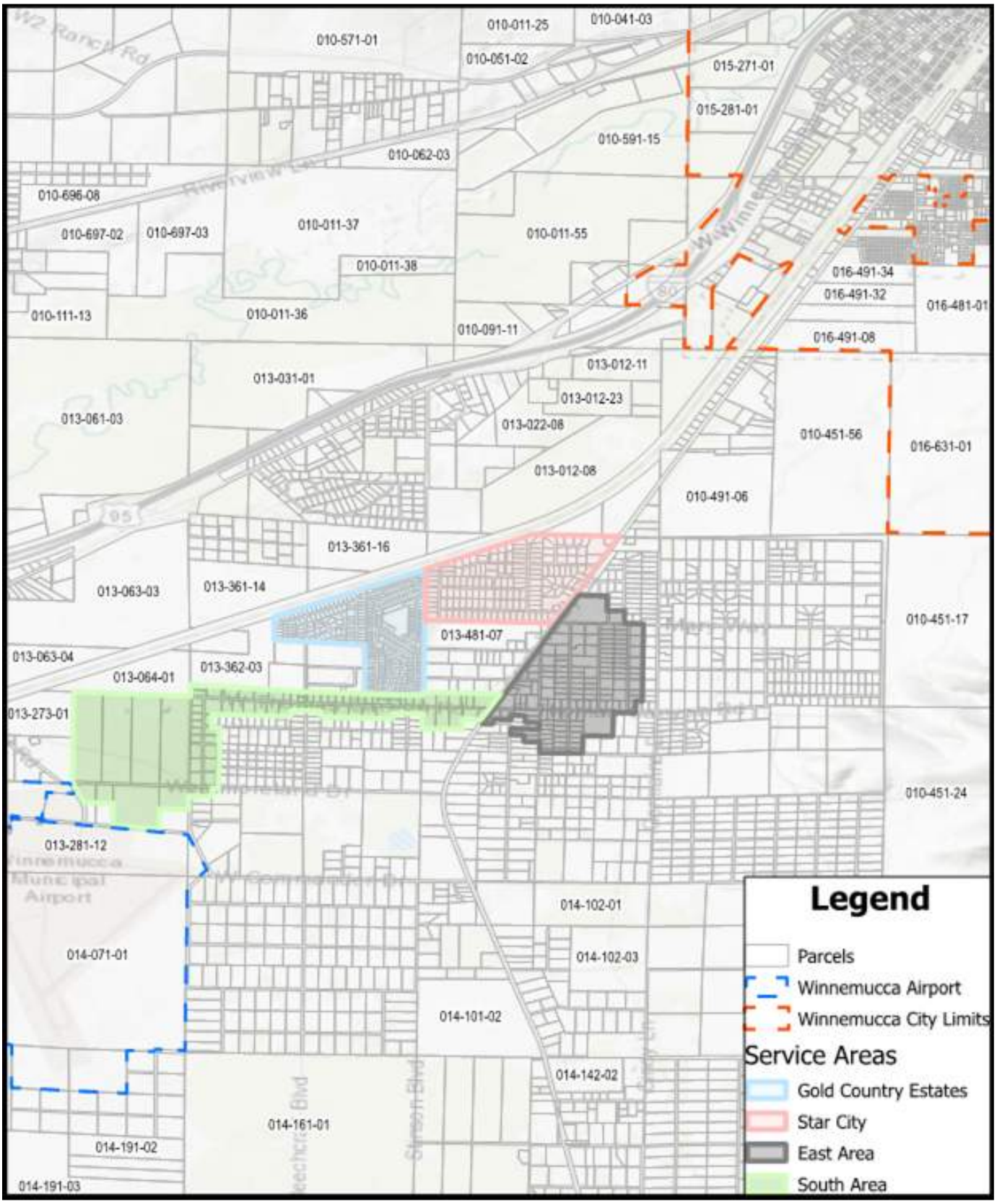
For more information on the Purpose and Need for the proposed project, see the Preliminary Engineering Report (PER) for this project.

## 3.0 PROJECT LOCATION

### Grass Valley

The project planning area is located west of the Sonoma Range and southeast of the Humboldt River, in an area known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. It also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. Grass Valley is dependent on septic systems for sewer services and has multiple operating water systems. Humboldt County owns and operates the water system servicing Star City The water system servicing Gold Country is privately owned and operated. The project area including subdivisions, utility service areas and City of Winnemucca boundary is shown in Figure 3.

**Figure 3 Project Area Map**



# 4.0 DESCRIPTION OF PROPOSED ACTION

## 4.1 PROPOSED ACTION

The project will include a sanitary sewer collection system, a mechanical wastewater treatment facility (WWTF), and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. Three lift stations are included in the construction of the collection system and one station connected to the WWTF to contend with elevations that prohibit a gravity-based design. The new WWTF is currently being scoped for location on Humboldt County APN 013-064-01 (Parcel A) or Humboldt County APN 013-273-06 (Parcel B). See Figure 4 for Parcel Locations.

The project design will consist of the following:

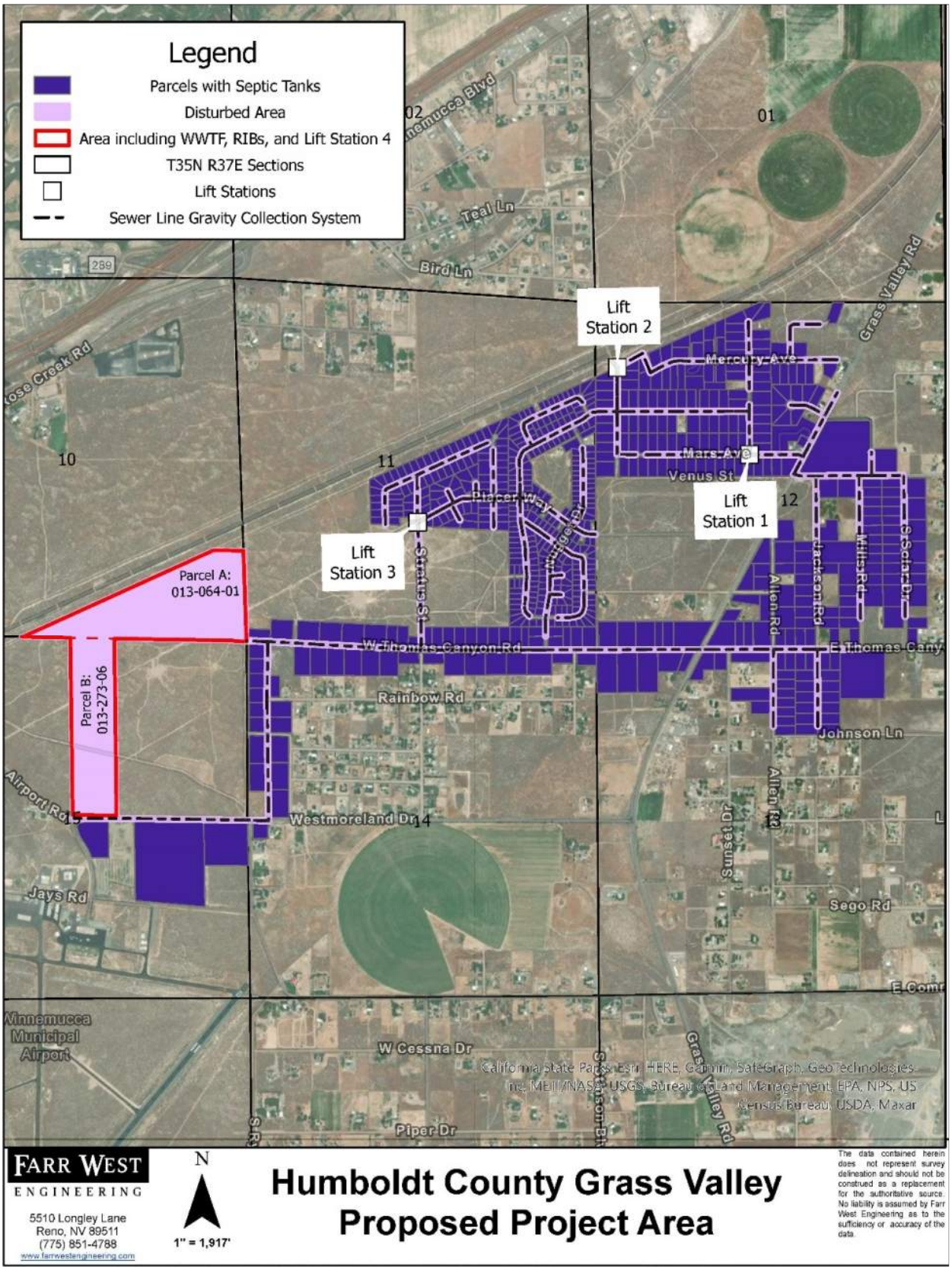
1. Wastewater Treatment Facility
2. Three (3) Rapid Infiltration Basins (RIBs)
3. Sanitary Sewer Collection System including:
    a. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
        - Approximately 45,092 LF of 8” PVC SDR 35
        - Approximately 6,026 LF of 10” PVC SDR 35
        - Approximately 5,552 LF of 12” PVC SDR 35
        - Approximately 2,344 LF of 15” PVC SDR 35
        - Approximately 2,403 LF of 18” PVC SDR 35
    b. Sewer laterals, approximately 645 connections
    c. Force mains, approximately 6,264 LF of 8” PVC C900
    d. Sewer manholes, approximately 188 consisting of:
        - Approximately 184 Type 1-A 48” Manholes
        - Approximately 4 Type III 48” Manholes
    e. Four lift stations consisting of the following:
        - Lift Station 1:
            - Located at the intersection of Saturn Street and Jupiter Street
            - Approximate Maximum flow rate: 215 GPM
            - Wet Well Storage Volume: 540 gal.
        - Lift Station 2:
            - Located at the North end of Venus Street
            - Approximate maximum flow rate: 331 GPM
            - Wet Well Storage Volume: 825 gal.
        - Lift Station 3:
            - Located at the intersection of Stratus Street and Placer Way
            - Approximate maximum flow rate: 540 GPM
            - Storage Volume: 1,350 gal.
        - Lift Station 4:
            - Located preceding the treatment facility
            - Approximate maximum flow rate: TBD
            - Storage Volume: TBD
    f. Abandonment and cleanout of existing septic tanks

The estimated average day volume to be generated by the planning area is 0.27 million gallons per day (MGD) with a potential maximum day volume of 0.405 MGD. Based on the calculated flow volumes, gravity sewer lines varying from 8, 10, 12, and 15-inch will be capable of sufficiently conveying the generated wastewater flows. An 8-inch force main will adequately convey the calculated wastewater flow

for all sections of force main. The wastewater would be carried through the 15-inch sewer main to an additional lift station located at the WWTF; this lift station will convey the wastewater to the mechanical treatment process. Following the mechanical treatment process, the treated effluent will be discharged into a RIB where it would filtrated back into the groundwater.

Figure 4 shows the proposed area for the sanitary sewer collection system, WWTF, RIB's and lift stations.

**Figure 4 Proposed Disturbed Area**



# 5.0 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

## 5.1 NO ACTION ALTERNATIVE

If no action is taken, the residents of Grass Valley will continue using their septic systems to collect wastewater. Action will not be taken to improve the groundwater quality or offset the high levels of nitrates in groundwater. This alternative will have a direct environmental impact as the quality of the water aquifer continues to be degraded, a social impact is also possible with a potential for health concerns from the ongoing exposure to the elevated nitrate levels. The No Action Alternative has an initial cost of zero (0) dollars but has potential to incur excessive future costs; the nitrate levels will ultimately need to be addressed. Cost for construction of a collection system and/or treatment facility will increase as inflation increases and depending on the extent and severity of the residences' exposure to the groundwater nitrates, corresponding legal ramifications could be encountered. This alternative does not support Humboldt County's Master Plan to alleviate the harmful impacts of nitrates on the water aquifer in Grass Valley, or to encourage commercial growth in the airport industrial park. The No Action alternative does not meet the needs of the community for safe drinking water or sustainable growth, would continue to pose threats to the environment, health and human safety and is therefore unacceptable and eliminated from consideration.

## 5.2 ALTERNATIVE 1 – CONNECT TO CITY SEWER

This alternative will consist of constructing a sewer collection system and construction of additional sewer lines to connect to the existing city sewer in Winnemucca to provide service to the project area. The nearest point of tie-in to the city sewer is located at the intersection of Potato Place and Potato Road, approximately 2 miles northeast of the project area. This alternative would require approximately 15,800 linear feet (LF) of additional force main to convey the wastewater from the planning area to the city sewer connection point. This alternative also proposes the construction of approximately 1,900 LF of 15-inch gravity sewer within the city boundary to accommodate the volume of flow from Grass Valley and prevent inhibiting the capacity of the existing collection system from future expansion. The operating capacity at Winnemucca's facility was given by the city manager as 1.5 MGD and the average daily flow treated during 2020 was recorded at 0.85 MGD leaving an available capacity of 0.65 MGD. The Winnemucca facility has the capability of treating the estimated 0.27 MGD to be generated by the planning area and continue operations below 75-percent capacity, allowing for some additional development in either area. Additional encroachment permits may be required for the construction to be completed in these areas.

For more information on why this alternative was eliminated from consideration, see the Preliminary Engineering Report for this proposed project.

## 5.3 ALTERNATIVE 3 – CONSTRUCT WASTEWATER TREATMENT PONDS

This alternative includes construction of the collection system, two treatment ponds with mechanical aeration, and RIBs. This alternative would also require approximately 2,400 LF of additional 15-inch gravity main to convey the wastewater to an aerated-facultative pond, also known as a partial-mix pond. After the wastewater has been treated, it would be discharged into a RIB where it would be infiltrated back into the groundwater.

A geomembrane or clay liner is required for treatment ponds to prevent seepage of untreated wastewater into the groundwater and avoid unnecessary negative environmental impacts. A plan for leak detection and timely corrective actions will be in place and include the use of monitoring wells. If maintenance or repair of a pond is required, it will be taken offline and the second pond in the system will be utilized for treatment.

For more information on why this alternative was eliminated from consideration, see the Preliminary Engineering Report for this proposed project.

# 6.0 ENVIRONMENTAL RESOURCES, IMPACTS, AND MITIGATION

## 6.1 EXISTING LAND USE/IMPORTANT FARMLAND/FORMALLY CLASSIFIED LANDS

### 6.1.1 Environmental Resources

Existing land uses within the proposed project area include residential, urban, and commercial activities. Parcels within the proposed project area are owned by the County and various private parties. There are no unique lands, forest lands, national natural landmarks, wilderness areas, national monuments, or national parks or trails located within the proposed project area, or area of interest. There are no wild and scenic rivers in Nevada. Because the proposed project is not within the immediate vicinity of any National/State Parks, monuments, wild and scenic rivers, etc.; formally classified lands were not considered further. The Nevada Natural Landmarks Map and Nevada Wilderness Areas Map are included in Appendix A of this report.

The existing septic tanks are located on private properties. Cleanup and abandonment of the septic tanks and construction and installation of a sewer collection system will require agreements, easements, and Rights-of-Way for work in these areas.

A soil survey of the proposed project area obtained from the National Resource Conservation Service (NRCS) shows three (3) soil types, two (2) of which support Farmland of Statewide importance if irrigated, and one (1) which can support prime farmland, if irrigated and reclaimed of excess salts and sodium (National Resource Conservation Service (NRCS), 2021). Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas (Matos, 2021). Farmland of Statewide importance, as defined by the U.S. Department of Agriculture, is land that is available for farming, but could currently be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water (U.S. Department of Agriculture, 1985).

Soil types that exist in the proposed project area are listed in Table 2. The full NRCS Soil report is included in Appendix A of this report.

**Table 2 Project Area Soil Types**

| Soil Type | % Of Area of Interest | Prime Farmland Capability |
|---|---|---|
| Benin Silt Loam (131) | 37.9% | Farmland of Statewide importance, if irrigated |
| Goldrun-Benin Complex, 0 to 15% Slopes (274) | 57.7% | Farmland of Statewide Importance, if irrigated |
| Rad Fine Sandy Loam, 0 to 2% slopes (461) | 4.4% | Prime Farmland if Irrigated and reclaimed of excess salts and sodium |

### 6.1.2 Environmental Impacts

**Land Use**

Temporary soil disturbance will occur due to septic tank abatement and sewer collection system and WWTF construction work. When completed, the disturbed areas will be returned to pre-disturbance slopes and will be covered with native surface material and re-seeded where appropriate.

The areas of Prime Farmland and Farmland of Statewide importance as identified by the NRCS Soil report are located only on previously disturbed and developed land, so impacts to farmland are not anticipated. Changes from septic systems to wastewater are anticipated to help preserve soil quality though elimination of Nitrate and TDS seeping into soil.

Changes to Land Use will occur from the addition of a WWTF to an open parcel. Table 3 summarizes the projects potential environmental impacts to related to land use

**Table 3 Environmental Impacts Related to Land Use**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Temporary Disturbances of residential land uses during construction<br>• Removal and disposal of treated septic sludge | • None | • Preservation of soil quality through elimination of Nitrate and TDS seeping into soil |

### 6.1.3 Mitigation

Mitigation may be required for treatment of septic sludge. While the disturbance in residential areas is all on previously disturbed land, Best Management Practices (BMPs) will be utilized to minimize erosions/disturbance in residential areas.

## 6.2 GEOLOGY AND SOILS

### 6.2.1 Environmental Resources

**Geology**

Grass Valley is in the Black Rock Desert-Humboldt subregion of the Great Basin. The geology of the region is very complex due to millions of years of movements and uplift in the earth's crust. The Humboldt River Basin is the only major river basin that is entirely within the state of Nevada. Precipitation supplies all the water that enters the basin; consequently, the variability in climate has significant impacts on the hydrology and hydrogeology of the area (Nevada Water Science Center, 2017).

**Seismicity**

The United States Geological Survey (USGS) seismic Hazard Map showing the Peak Ground Acceleration (PGA), expressed as percent of gravity, for the nation was assessed for the project area. PGA is equal to the amplitude of the largest absolute acceleration recorded at a site during an earthquake and is an important parameter for earthquake engineering (Earthquake Hazards, 2014). The MyHAZARDS – Nevada GIS web viewer from the University of Nevada, Reno shows the PGA surrounding the project area is 20%g, indicating a chance of slight shaking and movement that may occur near the project area within the next 50 years (University of Nevada, Reno (UNR), 2014). The USGS Seismic Hazard Map of Nevada is provided in Appendix A of this report.

**Soils**

**The NRCS soil survey shows three (3) major soil types in the project area, described in**

Table 4 below. The proposed project is not anticipated to have any effect on soil type, profile, or qualities. The full NRCS Report is included in Appendix A of this report.

**Table 4 Project Area Soil Properties and Qualities**

| Soil Type | Typical Profile | Properties and Qualities |
|---|---|---|
| Benin | **H1- 0 to 8 inches**: Silt loam<br>**H2 – 8 to 70 inches**: silty clay | **Slope**: 0 to 2 percent<br>**Depth to restrictive feature**: More than 80 inches<br>**Drainage class**: well drained<br>**Runoff Class**: Very High<br>**Capacity of the most limiting layer to transmit water (Ksat)**: Very low to moderately low<br>**Depth to water table**: More than 80 inches<br>**Frequency of flooding/ponding**: none<br>**Calcium carbonate, maximum content**: 10 percent<br>**Gypsum, maximum content**: 5 percent<br>**Maximum salinity**: Moderately Saline to Strongly Saline<br>**Sodium adsorption ratio, maximum**: 50.0<br>**Available water supply**: High (about 9.2 inches) |
| Goldrun | **H1- 0 to 7 inches:** fine sand<br>**H2 – 7 to 67 inches:** fine sand | **Slope:** 2 to 15 percent<br>**Depth to Restrictive feature:** More than 80 inches<br>**Drainage class**: Somewhat excessively drained<br>**Runoff Class:** Very Low<br>**Capacity of the most limiting layer to transmit water (Ksat):** High to very high<br>**Depth to water table:** More than 80 inches<br>**Frequency of flooding/ponding:** None<br>**Calcium carbonate, maximum content:** 1 percent<br>**Maximum salinity:** nonsaline to very slightly saline<br>**Sodium adsorption ratio, maximum:** 5.0<br>**Available water supply:** Low (about 4.8 inches) |
| Rad | **H1 – 0 to 6 inches:** fine sandy loam<br>**H2- 6 to 20 inches:** stratified fine sandy loam to silt loam<br>**H3 – 20 to 39 inches:** very fine sandy loam<br>**H4 – 39 to 60 inches:** stratified sandy loam to silt loam | **Slope**: 0 to 2 percent<br>**Depth to restrictive feature**: More than 80 inches<br>**Drainage class**: well drained<br>**Runoff Class**: Medium<br>**Capacity of the most limiting layer to transmit water (Ksat)**: Moderately low to moderately high<br>**Depth to water table**: More than 80 inches<br>**Frequency of flooding/ponding**: none<br>**Calcium carbonate, maximum content**: 5 percent<br>**Maximum salinity**: moderately saline to strongly saline<br>**Sodium adsorption ratio, maximum**: 40.0<br>**Available water supply**: High (about 10.5 inches) |

### 6.2.2 Environmental Impacts

**Geology**

The project involves surface level disturbances and should have no effect on geologic resources.

**Seismicity**

The project involves surface level disturbances and should have no effects related to faults. Seismicity in the project area is projected to be low and no impacts are anticipated. Humboldt County's Seismic Design Category falls under IRC - D1 and IBC - D. All construction will meet building standards based on seismic zone and soil type from the 2018 International Building Code with the Northern Nevada Amendment package.

**Soils**

The construction of RIBs would have associated ground disturbance from the earthwork required. The scope of this report does not cover geotechnical investigation for the proposed RIB locations; however, it is assumed there will not be difficulties resultant from the soil properties at the site. Construction is not anticipated to cause any unique direct or indirect environmental impacts aside from the ground disturbance related to the construction of the facility and RIBs.

The land requirement for the RIBs is heavily dependent on the infiltration rate of the soil at their proposed location; percolation testing, and soil samples are outside of the scope of this report, however, according to the NDEP, a typical RIB size for small to medium-sized systems is 0.5 to 5-acres per RIB. Final design for this project would include the necessary site soil testing and would yield an accurate RIB design regarding the size of individual basins and the required number of basins in the system, there would be a minimum of two basins.

The project will change the topography through the RIB sites as the work involves extensive surface earthwork and grading. At buried pipes, all surface levels will be put back to preconstruction grades. Disturbed soils will be replaced with native soils and pipeline trenches will be back filled with native soils and returned to pre-construction gradients. Soil disturbances for this project will require Nevada Division of Environmental Protection (NDEP) Bureau of Air Pollution Control (BAPC) and Bureau of Water Pollution Control (BWPC) permitting to avoid other impacts related to soil disturbance. Table 5 summarizes the projects potential impacts to geology and soils.

**Table 5 Environmental Impacts to Geology and Soils**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Temporary soil disturbance during construction<br>• Topographic changes due to RIB installation | • Improved soils due to eliminating septic leaching. | • Improved soils due to eliminating septic leaching. |

### 6.2.3 Mitigation

Temporary soil disturbance will be minimized using standard soil erosion BMPs. All contours disturbed will be returned to preconstruction grades following construction. This project is anticipated to have no permanent effect on geology, or seismic conditions in the project area.

To prevent erosion during and after construction, Best Management Practices (BMPs) will be implemented during construction depending upon conditions and need and may include but are not limited to:

- Soils and slopes at the site will be assessed,

- existing vegetation will be preserved wherever possible,
- impervious surfaces will be minimized,
- work to minimize exposed soil areas,
- development of a Storm Water Pollution Prevention Plan,
- salvage, stockpile, and reuse topsoil,
- install construction entrances and control dust,
- protect soils with vegetation, mulch, and binders,
- use sediment barriers including fiber rolls and silt fence,
- protecting culvert and ditch inlets and outlets,
- manage trash, materials, and supplies,
- project close-out including removing temporary sediment controls and final site stabilization.

The final design for the project will include the necessary soil testing for the RIBs and design may include project modifications to ensure unnecessary impacts to soils in the project area are avoided.

## 6.3 WATER QUALITY

### 6.3.1 Environmental Resources

**Water Resources**

The proposed project area is within the Nevada Division of Water Resources (NDWR) Hydrographic Groundwater Basin 71, Grass Valley, and is within Hydrographic Region 04, the Humboldt River Basin. Groundwater Basin 71 is an administratively designated Basin with a preferred water usage is environmental and temporarily stockwater. Most of the water rights within Basin 71 are used for Irrigation purposes (75%), followed by Municipal (14%), Mining and Milling (4%), Domestic (4%), Industrial (2%). The remaining 1% is divided between Commercial, Quasi-Municipal, and Stockwater use (State of Nevada Division of Water Resources, 2022). The water rights surrounding the project area are used mainly for irrigation, and some commercial (Snider, 2022). Additional water rights will likely be needed for operation of the WWTF. This will be determined in later design phases for the WWTF. The Hydrographic Area Summary Report is included in Appendix A.

**Sole Source Aquifers**

The EPA defines a sole source aquifer (SSA) as one where:

- The aquifer supplies at least 50% of the drinking water for its service area
- There are no reasonably available alternative drinking water sources should the aquifer become contaminated.

There are no SSA's in Nevada (United States Environmental Protection Agency, 2021) See map of EPA Region 9 SSA's in Appendix A.

**Water Quality**

The proposed project will have a positive impact on Grass Valley's drinking water aquifer and groundwater by reducing the high nitrate and TDS levels. Excess Nitrate and TDS levels in potable water supplies can lead to a life-threatening condition in humans called Methemoglobinemia (Nevada Division of Environmental Protection Bureau of Water Pollution Control, 2017).

The Rapid Infiltration (RI) process can infiltrate a much larger volume of wastewater on a much smaller land area than other land treatment concepts. Advantages of RIBs include:

- Gravity Distribution methods consume no energy
- No chemicals are required
- RI is a simple and economical method
- The process is not constrained by seasonal changes
- Effluent is of excellent quality
- The process is very reliable with sufficient resting periods
- RI provides a means for groundwater recharge, controlling groundwater levels, , and storage of renovated water in the aquifer
- The process is suitable for small plants where operator expertise is limited

Disadvantages include:

- As typically operated, RI systems receiving effluent from treatment ponds will not usually meet the stringent nitrogen levels required for discharge to drinking aquifers
- Requires long term commitment of a significant land area for treatment, with minimal secondary benefits such as are possible with other natural treatment systems (i.e., crop or forest production, habitat enhancement, etc.)
- Requires annual removal of accumulated deposits of organic matter on the infiltration surfaces in the basins
- May require occasional removal and disposal of the top few inches of soil to expose clean material
- clogging can occur when influent is received at high application rates from algal laden facultative lagoons and polishing ponds

(United States Environmental Protection Agency, 2003)

### 6.3.2 Environmental Impacts

The proposed sewer system improvement project will have a positive effect on water quality through reducing or eliminating septic leaching and producing wastewater that meets NDEP water quality standards.

During construction, there may be a temporary impact on water quality. Stormwater protection measures may be necessary to maintain water quality in the project area and will be the responsibility of the contactor. U.S. Environmental Protection Agency (EPA) regulations require stormwater discharge permits for certain activities that discharge stormwater to Waters of the United States (40 Code of Federal Regulations). In compliance with this regulation, the Nevada Division of Environmental Protection (NDEP) has issued several General Permits for stormwater discharges including construction permits for projects which will disturb 1 acre or more.

The objectives of NDEP's Construction Stormwater General Permit are to control and reduce pollution to waters of the State that meet the definition of Waters of the United States (WOUS) (Nevada Division of Environmental Protection, 2021). NDEP requires owner/operators to obtain a Construction Stormwater Permit if the project will discharge to a WOUS and meets the following conditions:

- Project will disturb one (1) or more acres, or
- Project will disturb less than one (1) acre but is part of a larger common plan for development or sale that will ultimately disturb one (1) acre or more.

- If NDEP determines that a project less than one (1) acre in size will impact receiving waters or its tributaries within a 1/4-mile radius of the project, the owner/operator of the project will also be required to obtain a construction stormwater permit

This project will disturb approximately a maximum total of 144 acres. An NDEP Construction Stormwater General Permit will be required. The contractor will be required to obtain a permit from NDEP and meet all requirements of the permit. Ultimately the project would have a positive impact on water quality by reducing or eliminating septic leaching and producing wastewater that meets NDEP water quality standards. Many disadvantages of RIBs will be avoided because wastewater is treated before entering the RIBs. Wastewater discharge from the RIBs will be tested and sampled to monitor water quality and ensure it meets discharge standards. While it is unlikely that the project would result in any violations of water quality standards, BMPs will be employed to prevent discharge into any nearby drainages or water bodies during construction. The proposed project is not anticipated to have a negative effect on the water quality in the Humboldt River Basin. Table 6 summarizes the projects potential impacts to water quality.

**Table 6 Environmental Impacts to Water Quality**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Improve groundwater quality | • Potential for reduced water quality during construction | • Improved Water Quality for the Residents of Grass Valley |

### 6.3.3 Mitigation

During construction activities, the construction contractor shall implement BMPs onsite to limit erosion and direct runoff from disturbed areas. Best Management Practices (BMPs) may include beams, sediment traps, or other accepted practices that are effective in limiting runoff and the release of sediment into water courses.

The construction contractor shall meet all current permit requirements and/or obtain appropriate project permits from the Nevada Department of Environmental Protection, Bureau of Water Pollution Control.

**NDEP Bureau of Water Pollution Control Permitting**

A Stormwater Pollution Prevention Plan will likely be required by NDEP. Permit requirements outline temporary and permanent erosion and sediment controls, locate stormwater discharge points; and describe best management practices to be implemented to prevent or reduce stormwater pollutant discharge associated with construction activities to the maximum extent practical.

To prevent erosion during and after construction, BMPs such as the following will be implemented during construction depending upon conditions and need:

- Soils and slopes at the site will be assessed,
- existing vegetation will be preserved wherever possible,
- impervious surfaces will be minimized,
- work to minimize exposed soil areas,
- development of a Storm Water Pollution Prevention Plan,
- salvage, stockpile, and reuse topsoil,
- install construction entrances and control dust,
- protect soils with vegetation, mulch, and binders,
- use sediment barriers including fiber rolls and silt fence,
- protecting culvert and ditch inlets and outlets,

- manage trash, materials, and supplies,
- project close-out including removing temporary sediment controls and final site stabilization.

## 6.4 FLOODPLAINS

### 6.4.1 Environmental Resources

The flood zones for the project area have been mapped by the Federal Emergency Management Agency (FEMA) and have been designated by the following panel numbers: 32013C4125C and *32013C4150C. Areas immediately adjacent to the Humboldt River are in Zone A. The entire project area lies outside of the FEMA designated flood zone. For reference, the following flood hazard zone designation is provided:

**High Risk Areas:**

Zone A: Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones (Department of Homeland Security, 2022)

*Panel not printed – no special flood hazard areas. See the project area FEMA National Flood Layers in Appendix A.

### 6.4.2 Environmental Impacts

The entire project area is outside of FEMA designated flood zones. No impacts to flood zones are anticipated and no mitigation is necessary. Best Management Practices (BMPs) should be considered in the design of the project so that flooding conditions are not negatively impacted. BMPs for managing Stormwater Runoff according to the EPA include:

- Reducing the volume of stormwater that enters the sewer system
- Reducing the maximum flow rate into the combined system by decreasing the stormwater volume and lengthening the duration of discharge.
- Improving water quality through volume reduction, filtering, and biological and chemical processes.

Table 7 summarizes the projects potential impacts to floodplains.

**Table 7 Environmental Impacts to Flood Plains**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • None | • None | • None |

### 6.4.3 Mitigation

No Mitigation is anticipated to be necessary.

## 6.5 BIOLOGICAL RESOURCES

### 6.5.1 Environmental Resources

Consultation with the Nevada Division of Natural Heritage (NDNH), Nevada Department of Wildlife (NDOW), and the U.S. Fish and Wildlife (USFWS) Information for Planning and Conservation (IPaC) program was completed. All three programs provided species lists and/or protection/avoidance guidance relating to wildlife that might occur within the project area. See Appendix B for correspondences with these agencies.

**Wildlife**

NDOW provided wildlife resource information in the vicinity of the project area and a four-mile buffer around the project area.

Occupied pronghorn antelope distribution was identified throughout the entire project area, and occupied mule deer distribution was identified outside the project area but within portions of the four-mile buffer area. No known occupied bighorn sheep or elk distributions exist in the vicinity of the project area.

Greater sage-grouse habitat in the vicinity of the project area has primarily been identified as 'Other Habitat', but 'General Habitat' also exists in the vicinity of the project area. Other and general sage grouse habitat exists in the vicinity of the project area, but not within the identified project area of disturbance. There are no known radiomarked greater sage-grouse tracking locations in the vicinity of the project area. There are no known greater sage-grouse lek sites in the vicinity of the project area.

Various raptor species may have distribution ranges that include the project area and four-mile buffer area. The following raptor species have been directly observed in the vicinity of the project area:

- American kestrel
- Barn Owl
- Burrowing owl
- Ferruginous hawk
- Golden eagle
- Great horned owl
- Long-eared owl
- Prairie falcon
- Red-tailed hawk
- Rough-legged hawk
- Swainson's hawk

Eleven (11) known raptor nest sites were identified within 10 miles of the project area. Raptors are protected by state and federal law, some mitigation measures may be necessary if nests are identified within the project area.

The following species have also been observed in the vicinity of the project area. Table 8 summarizes the NDOW species observed in the project area.

**Table 8 NDOW Species Observed in the Vicinity of the Project Area**

| Common Name | ESA | State | SWAP SoCP |
|---|---|---|---|
| Black-crowned night-heron | | Protected | |
| Blue-winged teal | | | |
| Brook trout | | | |
| Brown trout | | | |
| Cinnamon teal | | | |
| Common Raven | | Protected | |
| Cottontail (unknown) | | | |
| Coyote | | Unprotected | |

| | | | |
|---|---|---|---|
| Junco (unknown) | | | |
| Lahontan cutthroat trout | Threatened | | Yes |
| Little brown myotis | | | Yes |
| Long-nosed leopard lizard | | | Yes |
| Long-tailed weasel | | Unprotected | |
| Mourning dove | | | |
| Northern desert horned lizard | | | Yes |
| Quail (unknown) | | | |
| Rainbow trout | | | |
| Rock dove | | | |
| Western grebe | | Protected | |

*ESA: Endangered Species Act Status*

*State: State of Nevada Special Status*

*SWAP SoCP: Nevada State Wildlife Action Plan (2012) Species of Conservation Priority*

The full wildlife resource correspondence provided by NDOW is in Appendix B.

**Threatened, Endangered, and Candidate Species**

The NDNH has identified no endangered threatened, candidate, and/or at-risk taxa within the project area, however, habitat may be available for the sensitive species listed in Table 9. Correspondence from The NDNH is in Appendix B.

**Table 9 Sensitive Taxa with Potential Habitat**

| Common name | Scientific Name | Categorization |
|---|---|---|
| **Invertebrates** | | |
| Nevada Viceroy | *Limenitis archippus lahontani* | NDNH: Critically Imperiled |
| Rice's Blue | *Euphilotes pallescens ricei* | Nevada BLM: Sensitive Species |

The Endangered Species Act (ESA) requires federal agencies, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife. USFWS IPaC consultation identified 1 threatened, endangered, or candidate species that could be affected by the project, however, no critical habitats are identified within the project area. There are no refuge lands or fish hatcheries within the proposed project area. Table 10 identifies the Endangered Species Act Species that should be considered for this project. The USFWS IPaC Consultation is included in Appendix B.

**Table 10 Endangered Species Act Species**

| Common Name | Scientific Name | Status |
|---|---|---|
| Monarch Butterfly | *Danaus plexippus* | Candidate |

### Migratory Birds

USFWS IPaC analysis states various migratory bird species may reside within the project area and the 10-mile vicinity of the project area. It is not anticipated that migratory birds will be affected by construction since the construction will take place on ground level, and at existing streets and road shoulders. Should any migratory birds be identified in the project area, or any impacts to migratory birds be anticipated, additional conservation measures will be evaluated. Construction activities should avoid breeding periods and periods with a high likelihood of presence. Breading season and likelihood of presence time frames are listed in Table 11.

**Table 11 Migratory Bird Breeding Seasons**

| Common Name | Scientific name | Breeding Season | Greatest likelihood of presence in project area |
|---|---|---|---|
| Bald Eagle | *Haliaeetus leucocephalus* | Dec 1 to Aug 31 | March |
| Rufous Hummingbird | *Selasphorus rufus* | Apr 15 – Jul 15 | April |
| Willet | *Tringa semipalmata* | Apr 20-Aug 5 | May & June |

### Noxious Weeds

No plant species were listed on correspondence with wildlife agencies. Noxious weeds can threaten native plant species and may be established because of ground disturbing activities.

A noxious weed is a plant that has been defined as a pest by law or regulation. Nevada Department of Agriculture's (NDA) policy regarding noxious weed abatement is that if a plant is found likely to be "detrimental or destructive and difficult to control or eradicate" (Nevada Revised Statute 555.005-201), the NDA, with approval of the Board of Agriculture, will designate the plant as a noxious weed.

It is the NDA's policy to use the "Noxious Weed Tier System" to determine what action is to be taken consistent with existing statutes which include authority for: the promulgation of quarantine, abatement for eradication and/or control; holding and inspecting; establishing weed control districts; and for other regulatory activities. At the time, the NDA lists a species, it will also give a rating of A, B, or C. These ratings reflect the NDA's view of the statewide importance of the noxious weed, the likelihood that eradication or control efforts would be successful, and the present distribution of noxious weeds within the state. These lists will be in the Nevada Administrative Code (NAC 555.010).

The following defines the NDA weed ratings:

"A" Weeds normally limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the state.

"B" Weeds more widespread throughout the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur.

"C" Weeds generally widespread throughout the state; actively eradicated from nursery stock dealer premises; abatement at the discretion of the state quarantine officer.

Table 12 is the NDA weed list with weeds classified per rating.

**Table 12 Weeds Occurring in Nevada**

| CATEGORY | COMMON NAME | SCIENTIFIC NAME |
|---|---|---|
| Category A Weeds | African Rue | *Peganum harmala* |
| | Austrian fieldcress | *Rorippa austriaca* |
| | Austrian peaweed | *Sphaerophysa salsula / Swainsona salsula* |
| | Camelthorn | *Alhagi camelorum* |
| | Common crupina | *Crupina vulgaris* |
| | Dalmation Toadflax | *Linaria dalmatica* |
| | Dyer's woad | *Isatis tinctoria* |
| | Eurasian watermilfoil | *Myriophyllum spicatum* |
| | Giant Reed | *Arundo donax* |
| | Giant Salvinia | *Salvinia molesta* |
| | Goats rue | *Galega officinalis* |
| | Houndstongue | *Cynoglossum officinale* |
| | Hydrilla | *Hydrilla verticillata* |
| | Iberian Star thistle | *Centaurea iberica* |
| | Klamath weed | *Hypericum perforatum* |
| | Leafy spurge | *Euphorbia esula* |
| | Malta Star thistle | *Centaurea melitensis* |
| | Mayweed chamomile | *Anthemis cotula* |
| | Mediterranean sage | *Salvia aethiopis* |
| | Purple loosestrife | *Lythrum salicaria, L. virgatum and their cultivars* |
| | Purple Star thistle | *Centaurea calcitrapa* |
| | Rush skeletonweed | *Chondrilla juncea* |
| | Sow Thistle | *Sonchus arvensis* |
| | Spotted Knapweed | *Centaurea masculosa* |
| | Squarrose star thistle | *Centaurea virgata Lam. Var. squarrose* |
| | Sulfur cinquefoil | *Potentilla recta* |
| | Syrian Bean Caper | *Zygophyllum fabago* |
| | Yellow Starthistle | *Centaurea solstiltialis* |
| | Yellow Toadflax | *Linaria vulgaris* |
| Category B Weeds | Carolina Horse-nettle | *Solanum carolinense* |
| | Diffuse Knapweed | *Centaurea diffusa* |
| | Medusahead | *Taeniatherum caput-medusae* |
| | Musk Thistle | *Carduus nutans* |
| | Russian Knapweed | *Acroptilon repens* |
| | Sahara Mustard | *Brassica tournefortii* |

| CATEGORY | COMMON NAME | SCIENTIFIC NAME |
|---|---|---|
| | Scotch Thistle | *Onopordum acanthium* |
| | White Horse-nettle | *Solanum elaeagnifolium* |
| **Category C Weeds** | Black henbane | *Hyoscyamus niger* |
| | Canada Thistle | *Cirsium arvense* |
| | Green Fountain grass | *Pennisetum setaceum* |
| | Hoary cress | *Cardaria draba* |
| | Johnson grass | *Sorghum halepense* |
| | Perennial pepperweed | *Lepidium latifolium* |
| | Poison Hemlock | *Conium maculatum* |
| | Puncture vine | *Tribulus terrestris* |
| | Salt cedar (tamarisk) | *Tamarix spp* |

### 6.5.2 Environmental Impacts

**Wildlife**

Wildlife may be impacted by disturbances due to construction activity, however, this proposed action is not anticipated to trigger existing authorities, regulations, or laws that NDOW oversees.

**Threatened, Endangered, Candidate Species**

Threatened, Endangered, and Candidate Species, and/or their habitat, may be impacted by disturbances due to construction activity. No loss of critical habitat will occur because there is no critical habitat in the project area.

**Migratory Birds**

It is not anticipated that migratory birds will be affected by construction since the construction will take place on ground level, and at existing disturbed areas. Should any migratory birds be identified in the project area, or any impacts to migratory birds be anticipated, additional conservation measures will be evaluated. Construction activities should avoid breeding periods and periods with a high likelihood of presence. If construction is anticipated to occur during breeding seasons, a biological survey is recommended.

**Noxious Weeds**

Disturbed areas will be returned to pre-construction conditions. All pipeline construction will be in roadways and previously disturbed areas, so no new disturbance causing Noxious Weeds to invade is anticipated to occur. The area planned for construction of the new WWTF will be reseeded and regraded to prevent the invasion of Noxious Weeds.

Table 13 summarizes the projects potential impacts to Biological Resources.

**Table 13 Environmental Impacts to Biological Resources**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Loss of wildlife habitat to due construction of WWTF and RIBS | • Potential incidental wildlife death<br>• Potential incidental loss of wildlife habitat | • Potential incidental reduced wildlife diversity |

### 6.5.3 Mitigation

**Wildlife**

The Nevada Department of Wildlife makes the following recommendations regarding the protection of habitat and wildlife during construction:

- Avoid vegetation removal activities outside the migratory bird breeding season. If conducting vegetation disturbance activities during this time, we recommend that a qualified biologist survey for bird breeding behavior within 10 days of the disturbance. If breeding behavior is detected, please apply appropriate non-disturbance buffer, or contact NDOW or FWS for further direction,
- Avoid impacts to abandoned mines, caves, and roosting and foraging areas,
- Work crews take appropriate fire prevention and management measures (e.g., extinguishers, shovels, no smoking, spark arrestors, etc.) to prevent a fire from starting and spreading into adjacent wildlife habitat.
- Appropriate weed management plans be developed and implemented to monitor, prevent, and treat weeds from occupying the disturbance area and spreading into adjacent areas. Additionally, we recommend rehabilitating disturbed areas to prevent future weed infestations.

**Threatened, Endangered, Candidate Species**

Likewise, import, export, interstate, and foreign commerce of listed species are all generally prohibited. It is not anticipated that any threatened, endangered, or candidate species will be affected by construction since there is no critical habitat in the project area. Should any critical, endangered, or candidate species be identified in the project area, or any impacts be anticipated, additional conservation measures will be evaluated.

**Migratory Birds**

USFWS recommended general conservation measures related to migratory birds include:

- Educate all employees, contractors, and/or site visitors of relevant rules and regulations that protect wildlife. See the Service Webpage on Regulations and Policies for more information on regulations that protect migratory birds.
- Prior to removal of an inactive nest, ensure that the nest is not protected under the Endangered Species Act (ESA) or the Bald and Golden Eagle Protection Act (BGEPA). Nests protected under ESA or BGEPA cannot be removed without a valid permit.
- Do not collect birds (live or dead) or their parts (e.g., feathers) or nests without a valid permit.
- Provide enclosed solid waste receptacles at all project areas. Non-hazardous solid waste (trash) would be collected and deposited in the on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor.
- Report any incidental take of a migratory bird.

- Clearly delineating and maintaining project boundaries.

**Noxious Weeds**

Some mitigation may be required to prevent the spread of invasive weeds during and after construction of the proposed project. Mitigation may include the creation of a weed management plan to be developed and implemented by the contractor. The plan may include provisions like the following:

- Identify and flag all noxious and invasive weed populations present in the project area,
- Treat or contain any weed populations that may be impacted or disturbed by construction activity,
- Provide training to construction workers and equipment operators on the identification of weeds to be avoided,
- Certify that all construction material sources are weed-free,
- Minimize ground disturbance and vegetation removal as much as possible and practical,
- Rehabilitating or otherwise prevent the establishment of weeds in all areas of the job site.

## 6.6 WETLANDS

### 6.6.1 Environmental Resources

The National Wetlands Inventory (NWI) was consulted, and mapping obtained for the proposed project area. No wetlands were identified within in the project area. A map produced by the NWI mapper is found in Appendix A.

### 6.6.2 Environmental Impacts

No environmental impacts related to Wetlands are anticipated (U.S. Fish & Wildlife Service, 2021). Table 14 summarizes the projects potential impacts to Wetlands.

**Table 14 Environmental Impacts to Wetlands**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • None | • None | • None |

### 6.6.3 Mitigation

No mitigation is anticipated to be necessary.

## 6.7 AIR QUALITY

### 6.7.1 Environmental Resources

The Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (40 CFR part 50) for six principal pollutants ("criteria" air pollutants) which can be harmful to public health and the environment. The Clean Air Act identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Any county within the U.S. that is classified as a nonattainment area (an area that does not meet the national primary or secondary ambient air quality standard for NAAQS) is listed in the EPA Greenbook (EPA, 2022). Humboldt County does not contain any nonattainment level pollutants according to the EPA Greenbook.

### 6.7.2 Environmental Impacts

The Humboldt County Wastewater System Construction project may impact air quality by soil disturbance and equipment emissions during the construction phase. During Construction, the proposed project will disturb a maximum of approximately 144 total acres, much of which is previously disturbed. The project components will be constructed and installed in succession, so not all 144 acres will be disturbed at one time. However, it is likely that more than 5 acres will be disturbed at any one time, so a surface area disturbance permit should be obtained from the NDEP Bureau of Air Pollution Control (BAPC) by the construction contractor.

Temporary environmental impacts to air quality are anticipated during construction and operational phases of the project. Dust and other construction related contaminants will affect air quality near work areas and residential areas that are located within 500 meters of the work area. Table 15 summarizes the projects potential impacts to air quality.

**Table 15 Environmental Impacts to Air Quality**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Temporary dust during construction near the disturbance area | • None | • None |

### 6.7.3 Mitigation

An area of more than 5 acres is likely to be disturbed by this project, so a surface area disturbance permit will be obtained by the construction contractor from the NDEP BAPC. Any mitigation required in the terms of a BAPC permit will be followed.

In Accordance with NAC 445B.22037 fugitive dust will be always controlled during the project. This will be accomplished primarily by watering trucks. Areas left undisturbed for more than 90 days will be addressed by hydro-mulching or other methods approved under the permit.

Construction equipment emissions will have temporary effect on air quality during the construction phase. Examples of equipment and vehicles that potentially could be used during the project are listed below. Note that generally no more than three of these is in operation at the same time.

**Examples of equipment to be used on project**

- Side-dump haulers
- Motor graders
- A road roller machine
- Track excavators
- Wheel loaders
- Truck crane
- Asphalt Pavers
- Dozers
- Articulated Trucks
- Paddlewheel scrapers

## 6.8 CULTURAL AND HISTORICAL RESOURCES

### 6.8.1 Environmental Resources

The National Register of Historic Places (NRHP) and Nevada State Register of Historic Places (SRHP) lists historic districts, sites, buildings, structures, and objects all over the United States that have historical significance and are worthy of preservation. Consultation with the SHPO under Section 106 of the National Historic Preservation Act (February 2011) has been initiated on behalf of Humboldt County. Humboldt County has requested the assistance of the SHPO in identifying any additional historic properties that may be affected by the proposed project elements and requested that SHPO complete a check of The Nevada Cultural Resource Information System (NVCRIS) as part of initiating a Section 106 Consultation effort for a federal undertaking by a lead federal agency, should federal funding be secured by Humboldt County for this project.

Table 16 lists the properties in Humboldt County that are included on the State and National Registers of Historic Places (NRHP and SRHP) resources. None of the Resources are in or near the town of Grass Valley or within the project area.

**Table 16 Historic Properties in Humboldt County**

| SR # | Resource Name | Address | City/Town | Listed in NRHP | Within Project Area |
|---|---|---|---|---|---|
| 060141 | Golconda School | Jct. of Morrison and Fourth Sts. | Golconda | Yes | No |
| 810006 | Applegate-Lassen Trail | Trail extends from Rye Patch NW to state line | Sulphur | Yes | No |
| 150155 | Berry, George G., House | 451 W. Second St. | Winnemucca | No | No |
| 080148 | Cumley-Richardson House | 175 Museum Lane (Corner of Maple Avenue and Jungo Road) | Winnemucca | No | No |
| 810042 | Record, W.C., House | 146 W. 2nd St. | Winnemucca | Yes | No |
| 050137 | Winnemucca Hotel | 95 S. Bridge St. | Winnemucca | Yes | No |

### 6.8.2 Environmental Impacts

Historic resources are a nonrenewable resource that drives cultural and economic assets for the community. If not properly preserved, whether through development or erosion, the damage could be irreversible.

Based on the NRHP report, there are no recorded cultural resources in the direct project area. Absence of cultural resource information in a particular location does not indicate that cultural resources are lacking. Unidentified cultural resources may exist, and further inventory and research may be required.

Additional consultation was requested from the SHPO regarding potential impacts of the proposed project.

**Identification Effort for Historic Properties**

Humboldt County requested the assistance of the SHPO in identifying any additional historic properties that may be affected by the proposed project elements and requested the SHPO complete a check of the NVCRIS as part of the initiating a Section 106 Consultation effort. SHPO conducted the requested cursory review of the NVCIS, and identified no historic properties within the proejct area.

To complete Consultation under Section 106 the Federal Agency must determine if the previous inventory within the APE is adequate and inform the SHPO of their determination.

In addition, the Federal Agency must consult with Native American tribes concerning properties of religious or cultural significance. Efforts to consult directly with tribes seeking comment has not been initiated by the Federal Agency at this time. Notice of this proposed undertaking has been published by the Nevada State Clearinghouse.

Initial consultation with the SHPO is included in Appendix B.

Table 17 summarizes the projects potential impact on historic properties and cultural resources.

**Table 17 Environmental Impacts to Cultural Resources**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Possible visual effects due to building construction of WWTF | • Possible visual effects due to building construction and vegetation on earthen berm | • None |

### 6.8.3 Mitigation

Avoidance of cultural and historical properties is not anticipated to be necessary. No mitigation is anticipated to be necessary to protect cultural and historical resources within the project area. However, should an archaeological inventory of the direct APE indicate additional mitigation to protect cultural resources exit., mitigation options will be assessed, which may include but are not limited to archeologist consultation.

If previously unidentified cultural or archaeological resources are discovered during construction, all work shall cease. Humboldt County consultants shall consult with an archaeologist to determine the appropriate course of action before resuming construction.

## 6.9 ENVIRONMENTAL JUSTICE/SOCIO-ECONOMIC IMPACT

### 6.9.1 Environmental Resources

Humboldt County is in the rugged high desert region of north-central Nevada, bordered on the north by Oregon and by neighboring Nevada counties to the west, south, and east. The County's 9,626 square miles offer some of the most varied, spectacular scenery in the State and a wide array of recreational opportunities. The County's economy is derived in large part from its main industries: Mining, Agriculture and Agricultural Services, and Tourism and Construction. The County is in the rich gold mining center of the Western U.S. and is the leading agricultural county in the State of Nevada with over 100,000 acres under cultivation. Tourism is also a large part of the County's economic base due to the large numbers of visitors the gaming industry brings to the area and the draw of the beautiful wide-open spaces, historical sites, and great hunting and fishing (Humboldt County Personnel, 2005).

The U.S. Census and Nevada State Demographer provides population data for Humboldt County in its entirety but does not provide population data for the Grass Valley area specifically. According to the

Nevada State Demographer there were 17,202 residents in Humboldt County in 2021 with an average household size of 2.56 persons. Based on the number of developed lots within the project area, Star City has a potential population of 356 people, while Gold Country's potential population is 858 people. Furthermore, within the project area's eastern extent there are potentially 328 people and another 92 people northeast of the airport. The total estimated population within the project area is 1,634 people.

According to the 2020 Census Bureau estimates, the median household income (MHI) for Humboldt County is $66,123 and 66.2 percent of the population accounts for the workforce. The construction and extraction industry account for the bulk of employment in the county followed by office and administrative support and sales or sales related occupations, respectively (United States Census Bureau, 2021). There is no distinctive data for the MHI or occupations of Grass Valley residents.

The Humboldt County Wastewater System project, and alternatives thereof, have been proposed to improve the quality of drinking water for all residents in Humboldt County, particularly those in the Grass Valley area. The project will benefit the entire community and will have not disproportionately high or adverse human health or environmental effects to minority or low-income populations. No mitigation is expected to be required.

See the PER for additional information regarding Historical Growth and Future Growth Rate of the project area.

### 6.9.2 Environmental Impacts

The proposed project is expected to have a beneficial effect on socio-economic conditions for all Humboldt County residents regardless of socio-economic group. No disparate impacts related to environmental justice are anticipated. Table 18 summarizes the potential impacts to Social and Environmental Justice.

**Table 18 Environmental Impacts to Socio-Economic and Environmental Justice**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • None | • None | • Beneficial Effect on Socio-Economic conditions for all Humboldt County residents |

### 6.9.3 Mitigation

No mitigation is anticipated to be necessary.

## 6.10 NOISE

### 6.10.1 Environmental Resources

Anticipated noise will be related to temporary construction activities which are not expected to cause long term noise problems.

### 6.10.2 Environmental Impacts

Temporary impacts of the project construction include construction noise. Table 19 summarizes the projects potential impact on the auditory landscape.

**Table 19 Environmental Impacts due to Noise**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|

| | | |
|---|---|---|
| • Temporary construction noise and dust | • None | • None |

### 6.10.3 Mitigation

Mitigation and BMPs to reduce construction noise may be necessary. The following practices will be observed during construction:

- Construction activities will take place during normal working hours between 7:00 am and 5:00 pm.
- Quieter methods or equipment will be used when possible.
- All equipment will be required to have efficient mufflers.
- Only equipment of necessary size and power will be used.
- All equipment will be properly lubricated and well maintained.

## 6.11 HEALTH AND HUMAN SAFETY

### 6.11.1 Environmental Resources

**Electromagnetic Fields and Interference**

Electrical systems will be installed to power the WWTF. Infrastructure to support future fiber optic facilities may be included in the project design. A transmission tower will not be installed, however, an antenna for SCADA may be installed. Electromagnetic Fields (EMFs) are expected to increase slightly.

### 6.11.2 Environmental Impacts

Any EMF increases will be within FCC/OSHA exposure limits. Environmental consequences are not anticipated to be related to electromagnetic field (Schlesinger, 2022). No real effects are anticipated with the electrical systems installed in the WWTF. Table 20 summarizes the projects potential impact to Health and Human Safety.

**Table 20 Environmental Impacts to Health and Human Safety**

| Direct Effects | Indirect Effects | Cumulative Effects |
|---|---|---|
| • Increased Energy usage from the WWTF<br>• Slightly Increased EMFs | • None | • None |

### 6.11.3 Mitigation

The use of gravity in the project will maximize the flow of wastewater in an energy efficient way. The project will meet all OSHA requirements and Humboldt County building code standards for Health and Human Safety.

## 7.0 SUMMARY OF MITIGATION

Some mitigation or avoidance measures may be necessary to avoid potential adverse environmental impacts within the proposed project area. Potential mitigation measures are listed in Table 21. Mitigation measures are included for the following environmental resources:

- Land Use
- Geology and Soils
- Water Quality
- Biological Resources
- Air Quality
- Noise
- Health and Human Safety

**Table 21 Summary of Potential Mitigation Measures**

| Environmental Resource | Mitigation |
|---|---|
| Land Use | • Mitigation may be required for treatment of septic sludge.<br>• Best Management Practices (BMPs) will be utilized to minimize erosions/disturbance in residential areas. |
| Geology and Soils | • Temporary soil disturbance will be minimized using standard soil erosion BMPs.<br>• All contours disturbed along pipe routes will be returned to preconstruction grades following construction.<br>• To prevent erosion during and after construction, Best Management Practices (BMPs) will be implemented during construction depending upon conditions and need<br>• The final design for the project will include the necessary soil testing for the RIBs and design may include project modifications to ensure unnecessary impacts to soils in the project area are avoided. |
| Water Quality | • During construction activities, the construction contractor shall implement BMPs onsite to limit erosion and direct runoff from disturbed areas.<br>• The construction contractor shall meet all current permit requirements and/or obtain appropriate project permits from the Nevada Department of Environmental Protection, Bureau of Water Pollution Control. |
| Biological Resources | • Avoid vegetation removal activities outside the migratory bird breeding season.<br>• Avoid impacts to abandoned mines, caves, and roosting and foraging areas,<br>• Work crews take appropriate fire prevention and management measures to prevent a fire from starting and spreading into adjacent wildlife habitat. |

| | |
|---|---|
| | • Appropriate weed management plans be developed and implemented to monitor, prevent, and treat weeds from occupying the disturbance area and spreading into adjacent areas.<br>• Rehabilitating disturbed areas to prevent future weed infestations.<br>• Educate all employees, contractors, and/or site visitors of relevant rules and regulations that protect wildlife.<br>• Prior to removal of an inactive nest, ensure that the nest is not protected under the Endangered Species Act (ESA) or the Bald and Golden Eagle Protection Act (BGEPA). Nests protected under ESA or BGEPA cannot be removed without a valid permit.<br>• Do not collect birds (live or dead) or their parts (e.g., feathers) or nests without a valid permit.<br>• Provide enclosed solid waste receptacles at all project areas.<br>• Report any incidental take of a migratory bird.<br>• Clearly delineating and maintaining project boundaries.<br>• Identify and flag all noxious and invasive weed populations present in the project area,<br>• Treat or contain any weed populations that may be impacted or disturbed by construction activity,<br>• Provide training to construction workers and equipment operators on the identification of weeds to be avoided,<br>• Certify that all construction material sources are weed-free,<br>• Minimize ground disturbance and vegetation removal as much as possible and practical,<br>• Rehabilitating or otherwise prevent the establishment of weeds in all areas of the job site. |
| Air Quality | • a surface area disturbance permit will be obtained by the construction contractor from the NDEP BAPC. Any mitigation required in the terms of a BAPC permit will be followed.<br>• fugitive dust will be always controlled during the project. |
| Noise | • Some mitigation and BMPs to reduce construction noise may be necessary. |
| Health and Human Safety | • The use of gravity to maximize the flow of wastewater in an energy efficient way.<br>• The project will meet all OSHA requirements and Humboldt County building code standards for Health and Human Safety. |

## 8.0 PUBLIC INVOLVEMENT

Consultation with State Agencies and the public was sent on 05/18/2022. Notice of preparation of this EA was published on 05/25/2022 by the Nevada State Clearinghouse seeking public and agency comments. Copies of these letters can be found in Appendix B. This EA will be updated with all comments, once received.

Consultation with state and federal agencies will continue when funding is secured for the project. The lead federal agency will complete Environmental Review which will include additional opportunities for public comment.

## 9.0 CONCLUSIONS

Based on the information in this Preliminary Environmental Assessment, the proposed project would have no significant adverse effects on the environment. No mitigation beyond avoidance, best management practices, measures proposed in this EA, and permit requirements would be required. These actions would not have a significant effect on the quality of the human environment and do not require preparation of an environmental impact statement. An environmental review and issue decision document will be drafted by the lead federal agency, when one is identified.

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## APPENDIX A

This section includes the following exhibits:

- NV Natural Landmarks
- NV Wilderness Area
- Nevada Hazard Map
- Hydrographic Area Summary Report
- EPA Region 9 SSA
- NRCS Soil Report
- NWI Map
- FEMA Maps
- NV nonattainment level pollutants

## APPENDIX B

This section includes the following exhibits:

- NDOW correspondence
- IPaC report
- NDNH correspondence
- Copies of Agency Correspondence Letters
    - NDEP Bureau of Air Quality Planning
    - NDEP Bureau of Safe Drinking Water
    - Nevada Division of Water Resources
    - Nevada Bureau of Water Pollution Control
    - Nevada State Historic Preservation Office
    - Nevada State Clearing House

# Appendix A

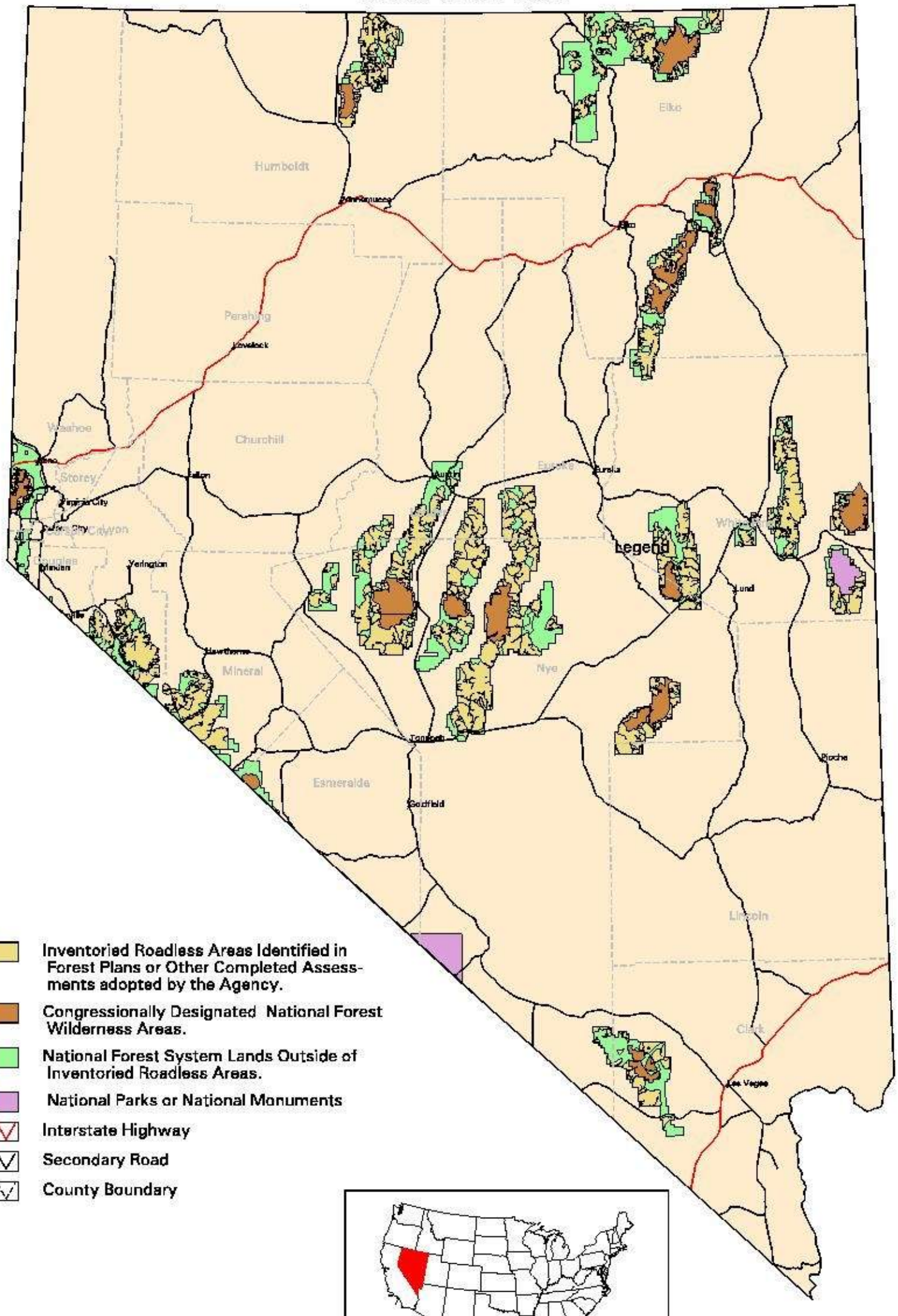

80
Ruby Marsh
Nevada
Carson
Ichthyosaur Site
Lunar Crater
Hot Creek
Springs and Marsh
Timber Mountain Caldera
Valley of Fire
California
15

# Inventoried Roadless Areas and Designated Wilderness Areas

**Working Draft - January 25, 2000**

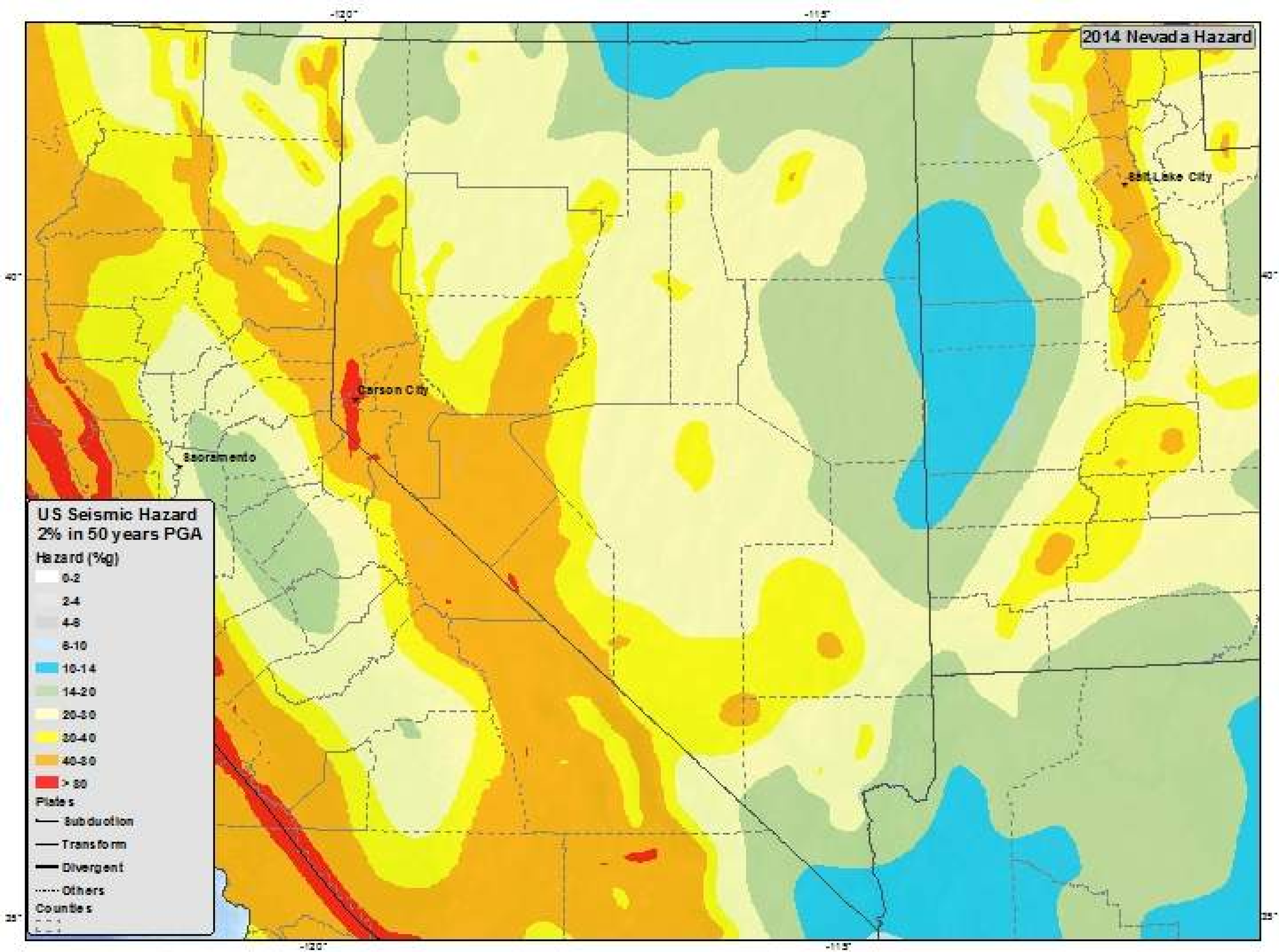
**USDA Forest Service - Region 4**

State of Nevada




- Inventoried Roadless Areas Identified in Forest Plans or Other Completed Assessments adopted by the Agency.
- Congressionally Designated National Forest Wilderness Areas.
- National Forest System Lands Outside of Inventoried Roadless Areas.
- National Parks or National Monuments
- Interstate Highway
- Secondary Road
- County Boundary

Basis: 1:2,000,000


2014 Nevada Hazard
Salt Lake City
Carson City
Sacramento
US Seismic Hazard
2% in 50 years PGA
Hazard (%g)
0-2
2-4
4-6
6-10
10-14
14-20
20-30
30-40
40-60
> 80
Plates
Subduction
Transform
Divergent
Others
Counties
-120°
-115°
40°
35°

Nevada Division of Water Resources

# Hydrographic Area Summary

**Hydrographic Area No.** 071 **Hydrographic Area Name** GRASS VALLEY

**Subarea Name**

**Hydrographic Region No.** 04 **Hydrographic Region Name** HUMBOLDT RIVER BASIN

**Area (sq. mi.)** 520

**Counties within the hydrographic area** Pershing, Humboldt

**Nearest Communities to Hydrographic Area** Winnemucca

**Designated (Y/N, Order No.)** Y, O-1247 **For All or Portion of Basin:** All

**Preferred Use (Order No., Description)** O-1247 ENV, temp STK **For All or Portion of Basin:** All

**State Engineer's Orders:** **For All or Portion of Basin:**

**State Engineer's Rulings:**

**Pumpage Inventory Status** Ongoing **Crop Inventory Status** None

**Water Level Measurement?** Y

**Yield Values**

**Perennial Yield (AFY)** 13000

**System Yield (AFY)** 20000

**Yield Reference(s)** USGS Recon. 29

**Yield Remarks**

**Source of Committed Data:** NDWR Database **Supplementally Adjusted?**

| Manner of Use | Underground | Geothermal | Other Ground Water |
|---|---|---|---|
| **Commercial** | 117.09 | 0.00 | 0.00 |
| **Construction** | 0.00 | 0.00 | 0.00 |
| **Domestic** | 1,422.87 | 0.00 | 0.00 |
| **Environmental** | 0.00 | 0.00 | 0.00 |
| **Industrial** | 1,122.48 | 0.00 | 0.00 |
| **Irrigation** | 29,575.02 | 0.00 | 0.00 |
| **Mining and Milling** | 1,447.94 | 0.00 | 0.00 |
| **Municipal** | 5,539.53 | 0.00 | 0.00 |
| **Power** | 0.00 | 0.00 | 0.00 |
| **Quasi-Municipal** | 380.62 | 0.00 | 0.00 |
| **Recreation** | 0.00 | 0.00 | 0.00 |
| **Stockwater** | 75.29 | 0.00 | 0.00 |
| **Storage** | 0.00 | 0.00 | 0.00 |
| **Wildlife** | 0.00 | 0.00 | 0.00 |
| **Other** | 0.00 | 0.00 | 0.00 |
| **Totals** | 39,680.84 | 0.00 | 0.00 |

**Related Reports**

**USGS Reconnaissance** 29 **USGS Bulletin** None

**Other References**

**Comments** Supplemental adjustment in process since 10/1/2011


CALIFORNIA
NEVADA
ARIZONA
Santa Margarita Aquifer, Scott's Valley
Fresno County Aquifer
Upper Santa Cruz & Avra Basin Aquifer
Campo/Cottonwood Creek Aquifer
Ocotillo-Coyote Wells Aquifer
Bisbee-Naco Aquifer

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Humboldt County, Nevada, East Part


January 6, 2022

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# Contents

# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

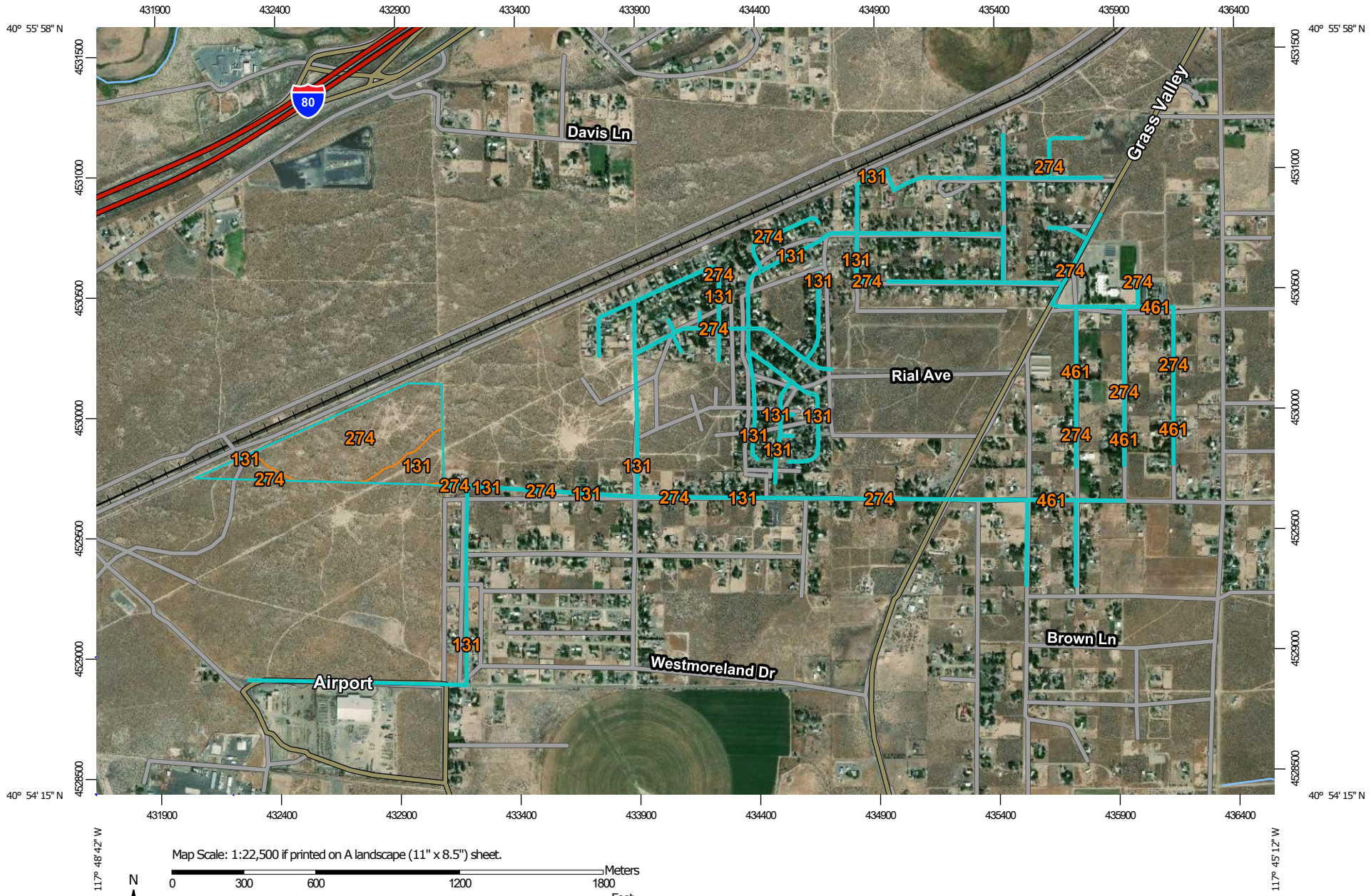
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:22,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 300 600 1200 1800

Feet: 0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Nevada, East Part
Survey Area Data: Version 15, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 15, 2014—Oct 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 131 | Benin silt loam 1/ | 24.2 | 23.6% |
| 274 | Goldrun-Benin complex, 0 to 15 percent slopes 1/ | 72.2 | 70.3% |
| 461 | Rad fine sandy loam, 0 to 2 percent slopes 1/ | 6.4 | 6.2% |
| **Totals for Area of Interest** | | **102.8** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Humboldt County, Nevada, East Part

## 131—Benin silt loam 1/

### Map Unit Setting

*National map unit symbol:* hyrx
*Elevation:* 4,160 to 5,000 feet
*Mean annual precipitation:* 6 to 8 inches
*Mean annual air temperature:* 47 to 49 degrees F
*Frost-free period:* 100 to 120 days
*Farmland classification:* Farmland of statewide importance, if irrigated

### Map Unit Composition

*Benin and similar soils:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Benin

#### Setting

*Landform:* Lake terraces
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Parent material:* Lacustrine deposits

#### Typical profile

*H1 - 0 to 8 inches:* silt loam
*H2 - 8 to 70 inches:* silty clay

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Very high
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 10 percent
*Gypsum, maximum content:* 5 percent
*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 50.0
*Available water supply, 0 to 60 inches:* High (about 9.2 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 4s
*Land capability classification (nonirrigated):* 7s
*Hydrologic Soil Group:* D
*Ecological site:* R024XY002NV - LOAMY 5-8 P.Z.
*Other vegetative classification:* LOAMY 5-8 P.Z. (024XY002NV_1)
*Hydric soil rating:* No

**Minor Components**

**Unnamed**

*Percent of map unit:* 10 percent

## 274—Goldrun-Benin complex, 0 to 15 percent slopes 1/

**Map Unit Setting**

*National map unit symbol:* hyyz
*Elevation:* 4,160 to 4,600 feet
*Mean annual precipitation:* 6 to 9 inches
*Mean annual air temperature:* 47 to 49 degrees F
*Frost-free period:* 90 to 120 days
*Farmland classification:* Farmland of statewide importance, if irrigated

**Map Unit Composition**

*Goldrun and similar soils:* 50 percent
*Benin and similar soils:* 35 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Goldrun**

**Setting**

*Landform:* Dunes
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Parent material:* Eolian deposits

**Typical profile**

*H1 - 0 to 7 inches:* fine sand
*H2 - 7 to 67 inches:* fine sand

**Properties and qualities**

*Slope:* 2 to 15 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat excessively drained
*Runoff class:* Very low
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 1 percent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 5.0
*Available water supply, 0 to 60 inches:* Low (about 4.8 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 4s

*Land capability classification (nonirrigated):* 7s
*Hydrologic Soil Group:* A
*Ecological site:* R024XY001NV - DUNES 6-10 P.Z.
*Hydric soil rating:* No

**Description of Benin**

**Setting**
*Landform:* Lake terraces
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Parent material:* Lacustrine deposits

**Typical profile**
*H1 - 0 to 8 inches:* silt loam
*H2 - 8 to 70 inches:* silty clay

**Properties and qualities**
*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Very high
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 10 percent
*Gypsum, maximum content:* 5 percent
*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 50.0
*Available water supply, 0 to 60 inches:* High (about 9.2 inches)

**Interpretive groups**
*Land capability classification (irrigated):* 4s
*Land capability classification (nonirrigated):* 7s
*Hydrologic Soil Group:* D
*Ecological site:* R024XY002NV - LOAMY 5-8 P.Z.
*Other vegetative classification:* LOAMY 5-8 P.Z. (024XY002NV_1)
*Hydric soil rating:* No

**Minor Components**

**Unnamed**
*Percent of map unit:* 15 percent

## 461—Rad fine sandy loam, 0 to 2 percent slopes 1/

**Map Unit Setting**
*National map unit symbol:* hz1l

*Elevation:* 4,200 to 4,600 feet
*Mean annual precipitation:* 8 to 10 inches
*Mean annual air temperature:* 47 to 49 degrees F
*Frost-free period:* 100 to 120 days
*Farmland classification:* Prime farmland if irrigated and reclaimed of excess salts and sodium

**Map Unit Composition**

*Rad and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rad**

**Setting**

*Landform:* Fan skirts
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Parent material:* Alluvium

**Typical profile**

*H1 - 0 to 6 inches:* fine sandy loam
*H2 - 6 to 20 inches:* stratified fine sandy loam to silt loam
*H3 - 20 to 39 inches:* very fine sandy loam
*H4 - 39 to 60 inches:* stratified sandy loam to silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Medium
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 5 percent
*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 40.0
*Available water supply, 0 to 60 inches:* High (about 10.5 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2c
*Land capability classification (nonirrigated):* 6c
*Hydrologic Soil Group:* C
*Ecological site:* R024XY017NV - SANDY 8-10 P.Z.
*Hydric soil rating:* No

**Minor Components**

**Unnamed**

*Percent of map unit:* 15 percent

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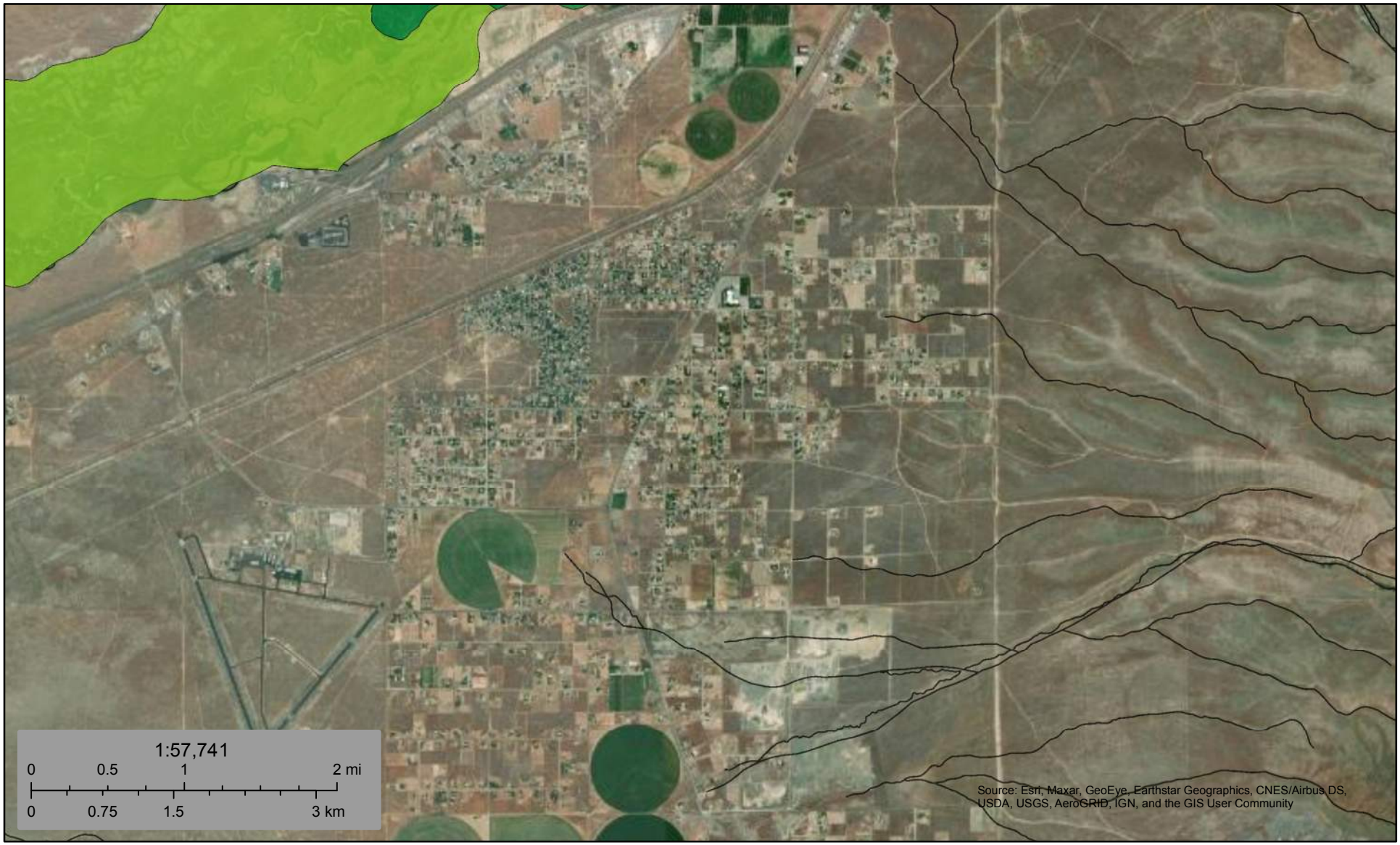
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

U.S. Fish and Wildlife Service
National Wetlands Inventory

# Humboldt GV Close




January 4, 2022

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

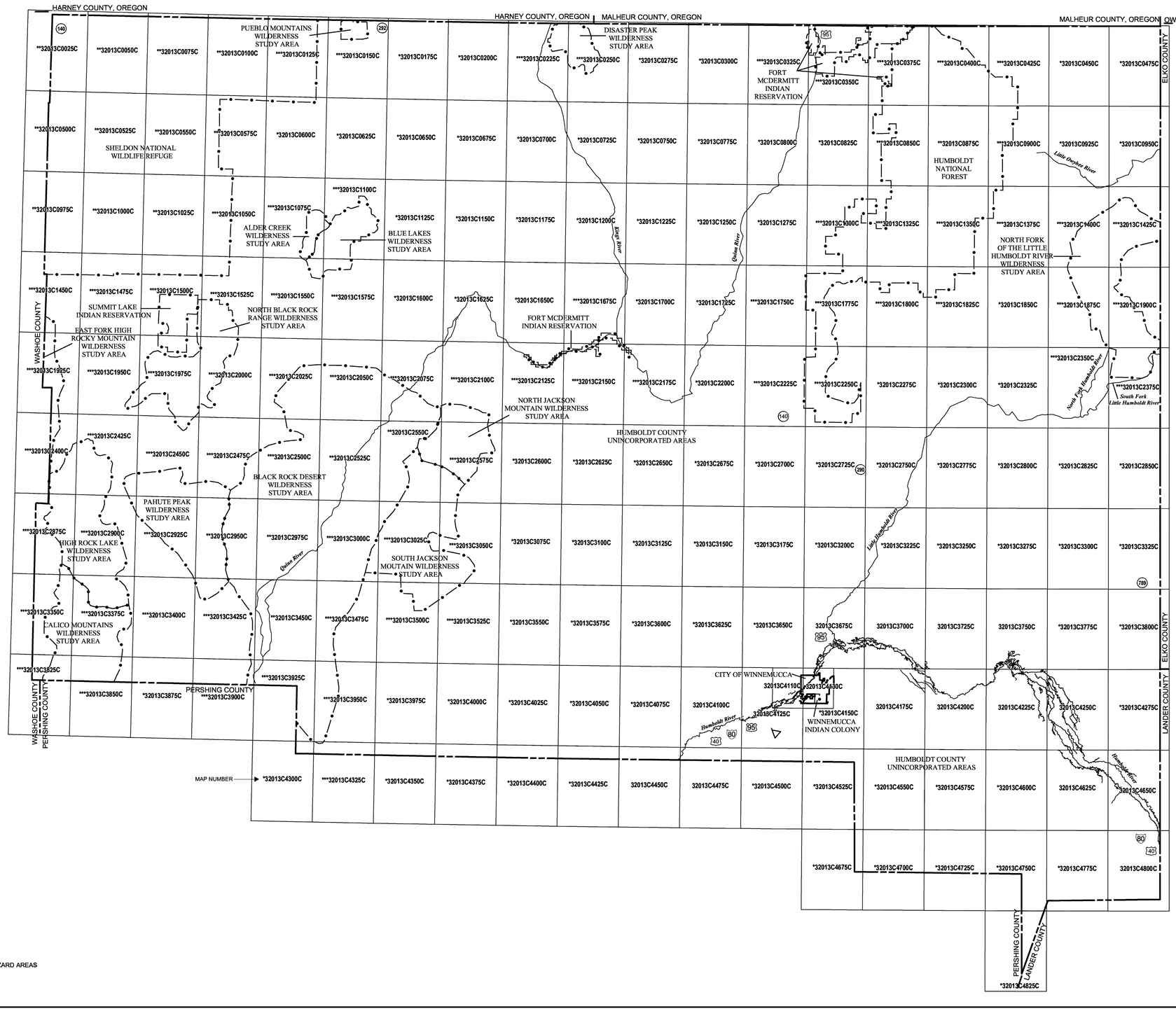
## LISTING OF COMMUNITIES

| COMMUNITY NAME | COMMUNITY NUMBER | LOCATED ON PANELS | INITIAL NFIP MAP DATE | INITIAL FIRM DATE | MOST RECENT FIRM PANEL DATE |
|---|---|---|---|---|---|
| HUMBOLDT COUNTY (UNINCORPORATED AREAS) | 320011 | 0025*, 0050*, 0075*, 0100*, 0125*, 0150*, 0175*, 0200*, 0225*, 0250*, 0275*, 0300*, 0325*, 0350*, 0375*, 0400*, 0425*, 0450*, 0475*, 0500*, 0525*, 0550*, 0575*, 0600*, 0625*, 0650*, 0675*, 0700*, 0725*, 0750*, 0775*, 0800*, 0825*, 0850*, 0875*, 0900*, 0925*, 0950*, 0975*, 1000*, 1025*, 1050*, 1075*, 1100*, 1125*, 1150*, 1175*, 1200*, 1225*, 1250*, 1275*, 1300*, 1325*, 1350*, 1375*, 1400*, 1425*, 1450*, 1475*, 1500*, 1525*, 1550*, 1575*, 1600*, 1625*, 1650*, 1675*, 1700*, 1725*, 1750*, 1775*, 1800*, 1825*, 1850*, 1875*, 1900*, 1925*, 1950*, 1975*, 2000*, 2025*, 2050*, 2075*, 2100*, 2125*, 2150*, 2175*, 2200*, 2225*, 2250*, 2275*, 2300*, 2325*, 2350*, 2375*, 2400*, 2425*, 2450*, 2475*, 2500*, 2525*, 2550*, 2575*, 2600*, 2625*, 2650*, 2675*, 2700*, 2725*, 2750*, 2775*, 2800*, 2825*, 2850*, 2875*, 2900*, 2925*, 2950*, 2975*, 3000*, 3025*, 3050*, 3075*, 3100*, 3125*, 3150*, 3175*, 3200*, 3225*, 3250*, 3275*, 3300*, 3325*, 3350*, 3375*, 3400*, 3425*, 3450*, 3475*, 3500*, 3525*, 3550*, 3575*, 3600*, 3625*, 3650*, 3675, 3700, 3725, 3750, 3775*, 3800*, 3825*, 3850*, 3875*, 3900*, 3925*, 3950*, 3975*, 4000*, 4025*, 4050*, 4075*, 4100, 4110, 4125, 4130, 4150*, 4175, 4200, 4225, 4250, 4275*, 4300*, 4325*, 4350*, 4375*, 4400*, 4425*, 4450, 4475, 4500*, 4525*, 4550*, 4575*, 4600*, 4625, 4650, 4675*, 4700*, 4725*, 4750*, 4775*, 4800, 4825* | 5/04/1987 | 5/04/1987 | 03/17/2010 |
| CITY OF WINNEMUCCA | 320012 | 4110, 4130, 4150* | 4/23/1976 | 9/4/1985 | 03/17/2010 |

*Panel Not Printed

**FIRM Panel dates For Printed Panels of Humboldt County, NV And Incorporated Areas**

| Panel | Effective Date | Panel | Effective Date | Panel | Effective Date |
|---|---|---|---|---|---|
| 3675C | MARCH 17, 2010 | 4125C | MARCH 17, 2010 | 4450C | MARCH 17, 2010 |
| 3700C | MARCH 17, 2010 | 4130C | MARCH 17, 2010 | 4475C | MARCH 17, 2010 |
| 3725C | MARCH 17, 2010 | 4175C | MARCH 17, 2010 | 4625C | MARCH 17, 2010 |
| 3750C | MARCH 17, 2010 | 4200C | MARCH 17, 2010 | 4650C | MARCH 17, 2010 |
| 4100C | MARCH 17, 2010 | 4225C | MARCH 17, 2010 | 4800C | MARCH 17, 2010 |
| 4110C | MARCH 17, 2010 | 4250C | MARCH 17, 2010 | | |




* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS
** PANEL NOT PRINTED - ALL ZONE D
*** PANEL NOT PRINTED - ZONE D/X PANEL

### ELEVATION DATUM

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242

## MAP REPOSITORIES

(Maps available for reference only, not for distribution.)

HUMBOLDT COUNTY
(UNINCORPORATED AREAS):
Planning & Zoning
50 West 5th Street
Winnemucca, NV 89445

CITY OF WINNEMUCCA
City of Winnemucca
90 West 4th Street
Winnemucca, NV 89445

### BASE MAP SOURCE

Base map information shown on this FIRM was provided in digital format by the USDA National Agriculture Imagery Program (NAIP). This information was photogrammetrically compiled at a scale of 1:12,000 from aerial photography dated 2006.

### NOTE TO USER

Future revisions to this FIRM Index will only be issued to communities that are located on FIRM panels being revised. This FIRM Index therefore remains valid for FIRM panels dated March 17, 2010 or earlier. Please refer to the "MOST RECENT FIRM PANEL DATE" column in the Listing of Communities table to determine the most recent FIRM Index date for each community.

### MAP DATES

This FIRM Index displays the map dates for each FIRM panel at the time that this Index was printed. Because this Index may not be distributed to unaffected communities in subsequent revisions, users may determine the most current map date for each FIRM panel by visiting the FEMA Map Service Center website at http://msc.fema.gov or by calling the Map Service Center at 1-800-358-9616.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

**MAP INDEX**

# FIRM

**FLOOD INSURANCE RATE MAP**

**HUMBOLDT COUNTY, NEVADA AND INCORPORATED AREAS**

(SEE LISTING OF COMMUNITIES TABLE)

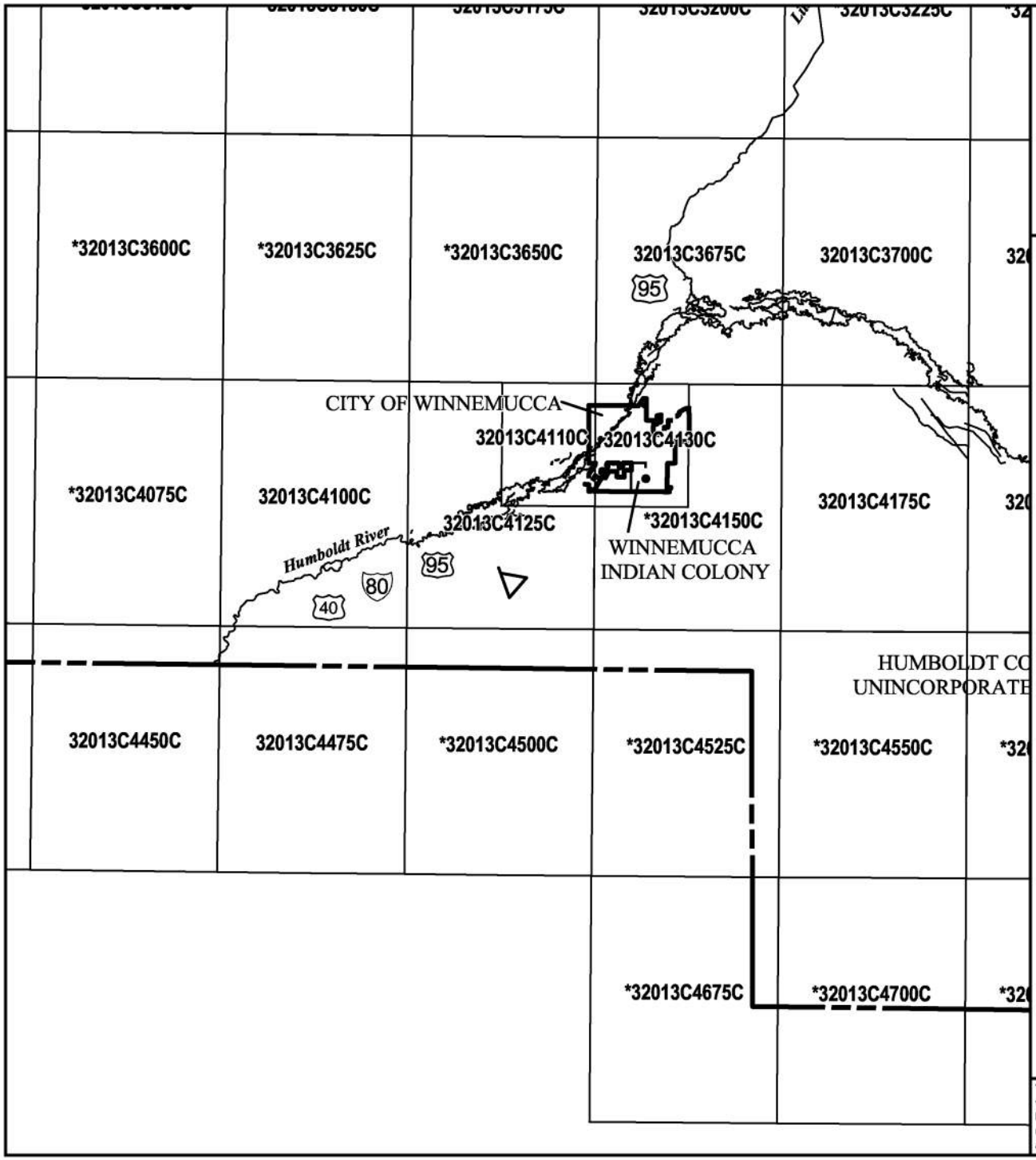
# MAP INDEX

**PANELS PRINTED:** 3675, 3700, 3725, 3750, 4100, 4110, 4125, 4130, 4175, 4200, 4225, 4250, 4450, 4475, 4625, 4650, 4800

**MAP NUMBER**
**32013CIND0A**

**EFFECTIVE DATE**
**MARCH 17, 2010**

Federal Emergency Management Agency




NFIP

NATIONAL FLOOD INSURANCE PROGRAM

MAP INDEX

# FIRM

**FLOOD INSURANCE RATE MAP**

**HUMBOLDT COUNTY, NEVADA**
**AND INCORPORATED AREAS**

(SEE LISTING OF COMMUNITIES TABLE)

# MAP INDEX

**PANELS PRINTED:** 3675, 3700, 3725, 3750, 4100, 4110, 4125, 4130, 4175, 4200, 4225, 4250, 4450, 4475, 4625, 4650, 4800

**MAP NUMBER**
**32013CIND0A**

**EFFECTIVE DATE**
**MARCH 17, 2010**

**Federal Emergency Management Agency**


f flood insurance is available in this community, contact
e National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 4125C

# FIRM

## FLOOD INSURANCE RATE MAP

## HUMBOLDT COUNTY, NEVADA

### AND INCORPORATED AREAS

**PANEL 4125 OF 4825**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| HUMBOLDT COUNTY | 320011 | 4125 | C |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**
**32013C4125C**

**EFFECTIVE DATE**
**MARCH 17, 2010**

Federal Emergency Management Agency

Change the State:
NEVADA GO

Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

| 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 | / / | Marginal | 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 Co, 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 Co, 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 (White Pine Co.), NV | 92 93 94 95 96 97 98 99 00 01 | 06/11/2002 | | Part | 2,165 | 32/033 |

# Appendix B

STATE OF NEVADA

**DEPARTMENT OF WILDLIFE**

6980 Sierra Center Parkway, Suite 120
Reno, Nevada 89511
Phone (775) 688-1500 • Fax (775) 688-1595

STEVE SISOLAK
*Governor*

TONY WASLEY
*Director*

BONNIE LONG
*Deputy Director*

JACK ROBB
*Deputy Director*

Emily Paris
Water Rights Technician
Farr West Engineering
5510 Longley Lane
Reno, Nevada 89511

May 17, 2022

Re: Humboldt County Wastewater Project

Dear Emily Paris:

I am 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 Humboldt County Wastewater Project located in Humboldt County, Nevada. In order to fulfill your request, a query 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. No warranty is made by the NDOW as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data. The absence of data does not imply the absence of species or associated habitat, and additional coordination may be necessary to adequately address species or habitat presence or limits to existing data. 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 provided by you on Tuesday, May 17, 2022. 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 pronghorn antelope distribution exists throughout the entire project area and four-mile buffer area. Occupied mule deer distribution exists outside of the project area within portions of the four-mile buffer area. No known occupied bighorn sheep or elk distributions exist in the vicinity of the project 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 in the vicinity of the project area has primarily been classified as Other habitat by the Nevada Sagebrush Ecosystem Program (http://sagebrusheco.nv.gov). General habitat also exists in the vicinity of the project area. Please refer to the attached map for details regarding greater sage-grouse habitat relative to the proposed project area. There are no known radio-marked greater sage-grouse tracking locations in the vicinity of the project area. There are no known greater sage-grouse lek sites in the vicinity of the project area.

**Raptors -** Various species of raptors, which use diverse habitat types, may reside in the vicinity of the project area. American kestrel, bald eagle, barn owl, burrowing owl, Cooper's hawk, ferruginous hawk, 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, Swainson's hawk, turkey vulture, and western screech owl have distribution ranges that include the project area and four-mile buffer area. Furthermore, the following raptor species have been directly

observed in the vicinity of the project area:

| | | |
|---|---|---|
| American kestrel | golden eagle | red-tailed hawk |
| barn owl | great horned owl | rough-legged hawk |
| burrowing owl | long-eared owl | Swainson's hawk |
| ferruginous hawk | prairie falcon | |

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 11 known or suspected raptor nest sites within ten miles of the project area:

| Active Date | Check Date | Township/Range/Section | Probable Use |
|---|---|---|---|
| | 4/29/1983 | | accipiter/buteo |
| | 4/25/1980 | | buteo |
| | 4/25/1980 | | buteo |
| | 1/1/1974 | | eagle |
| | 6/10/1975 | | falcon |
| | 1/1/1980 | | falcon |
| | 4/28/1983 | | ferruginous hawk |
| | 1/1/1999 | | ferruginous hawk |
| | 4/25/1980 | | northern goshawk |
| | 4/25/1980 | | owl |
| | 4/28/1983 | | owl |

* Nest Size – If a stick nest, the general size of the nest. For example, ravens and sharp-shinned hawks often build "small" nests, "medium"-sized nests could be larger accipiters or most buteos, "large"-sized nests could be larger buteos (e.g., large ferruginous hawk nests) or most eagle nests, and "extra large" nests are most often very large eagle nests.

**Other Wildlife Resources**

There are no big game and one small game water developments in the vicinity of the project area. The following species have also been observed in the vicinity of the project area:

| Common Name | ESA | State | SWAP SoCP |
|---|---|---|---|
| black-crowned night-heron | | Protected | |
| blue-winged teal | | | |
| brook trout | | | |
| brown trout | | | |
| cinnamon teal | | | |
| common raven | | Protected | |
| cottontail (unknown) | | | |
| coyote | | Unprotected | |
| junco (unknown) | | | |
| Lahontan cutthroat trout | Threatened | | Yes |
| little brown myotis | | | Yes |
| long-nosed leopard lizard | | | Yes |

| | | |
|---|---|---|
| long-tailed weasel | Unprotected | |
| mourning dove | | |
| northern desert horned lizard | | Yes |
| quail (unknown) | | |
| rainbow trout | | |
| rock dove | | |
| western grebe | Protected | |

ESA: Endangered Species Act Status
State: State of Nevada Special Status
SWAP SoCP: Nevada State Wildlife Action Plan (2012) Species of Conservation Priority

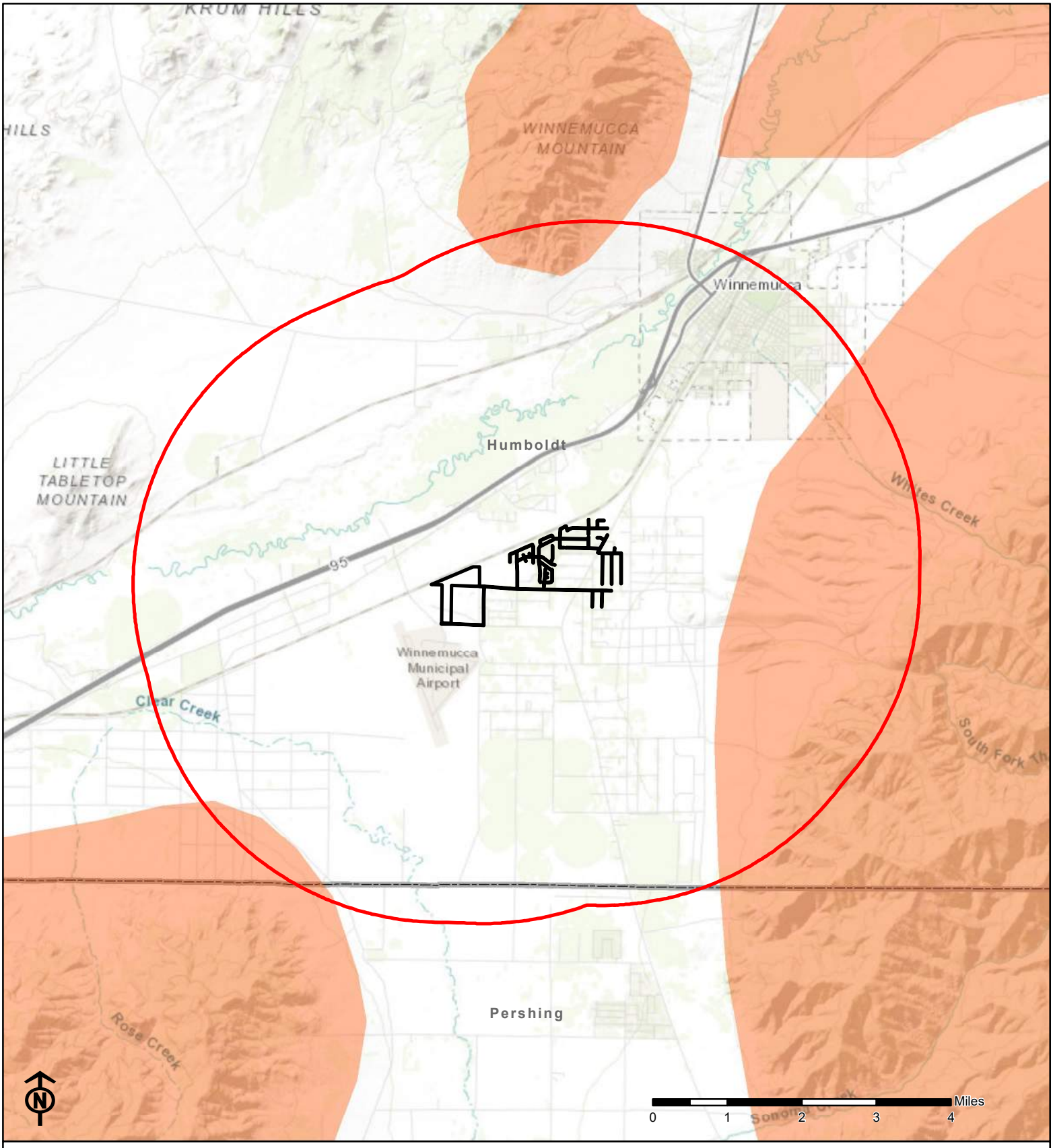
The proposed project area may also be in the vicinity of abandoned mine workings, which often provide habitat for state and federally protected wildlife, especially bat species, many of which are protected under NAC 503.030. To request data regarding known abandoned mine workings in the vicinity of the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

The above information 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 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.

Katie Andrle - Western Region Supervising Habitat Biologist (775.688.1145)

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 question regarding the results or methodology of this analysis, please do not hesitate to contact Jinna Larkin at (755) 688-1580.




Project Area

Four Mile Buffer Area Boundary

Mule Deer Distribution

# Humboldt County Wastewater Project
# Mule Deer Distribution

**May 17, 2022**

Projection: UTM Zone 11 North, NAD83

No warranty is made by the Nevada Department of Wildlife as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.

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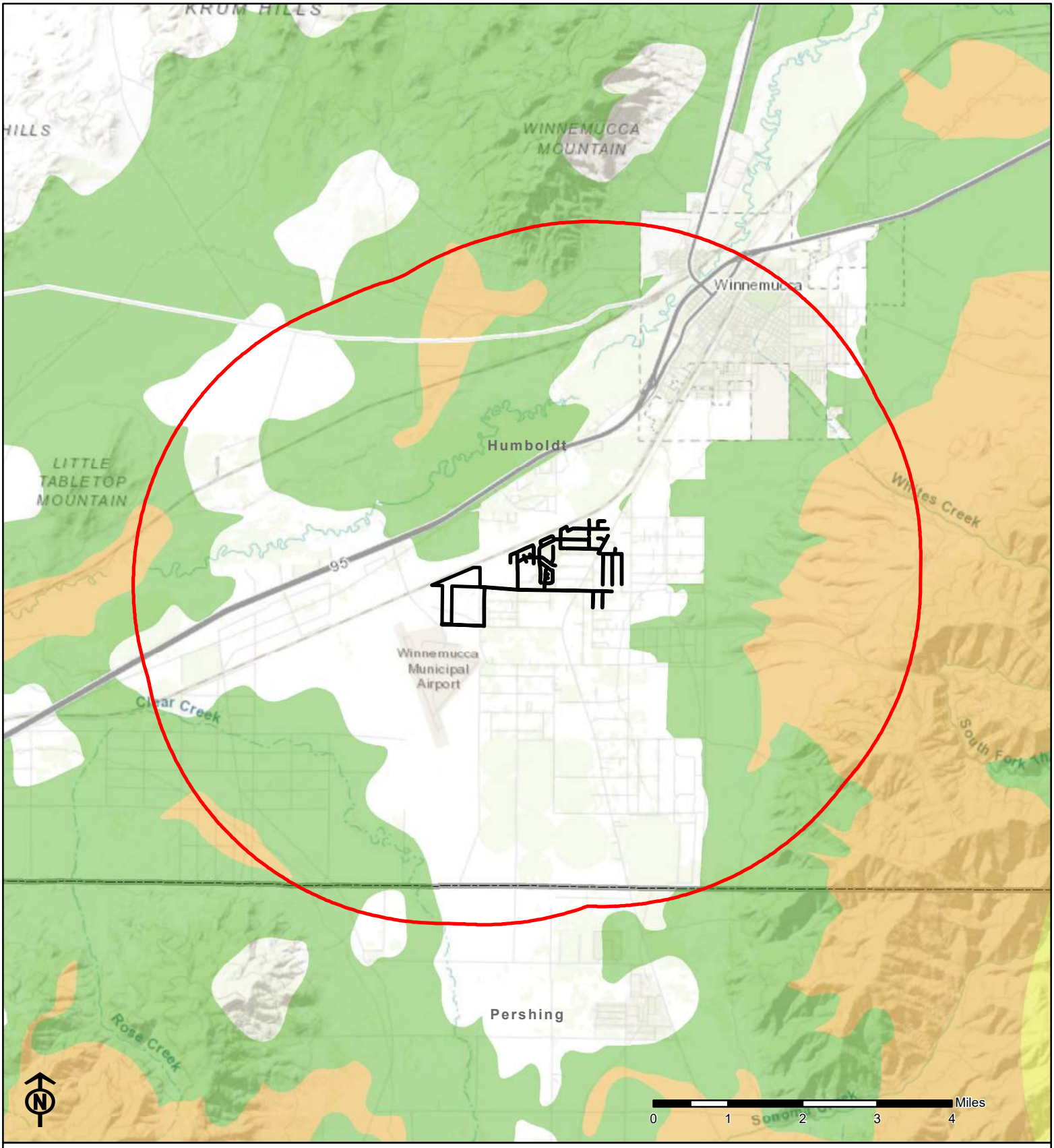


- Project Area
- Four Mile Buffer Area Boundary
- Priority Habitat
- General Habitat
- Other Habitat
- Bi-State Habitat

# Humboldt County Wastewater Project
# Greater Sage-Grouse Habitat

**May 17, 2022**

Projection: UTM Zone 11 North, NAD83



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# 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
http://www.fws.gov/reno/

In Reply Refer To: May 17, 2022
Project Code: 2022-0043876
Project Name: Humboldt County Grass Valley Sewer Project

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
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# 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: 2022-0043876
Event Code: None
Project Name: Humboldt County Grass Valley Sewer Project
Project Type: Wastewater Facility - New Construction
Project Description: The basis for design will include a sanitary sewer collection system, a mechanical treatment facility (WWTF), and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. There will be three lift stations included in the construction of the collection system and one station just prior to the WWTF to contend with elevations that prohibit a gravity-based design. The new WWTF is planned to be on Humboldt County APN 013-064-01 (Parcel A) or Humboldt County APN 013-273-06 (Parcel B). See Figure 4 for Parcel Locations.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.9185609,-117.79698008940846,14z


Counties: Humboldt 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.

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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*<br>No critical habitat has been designated for this species.<br>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.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# 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.

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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 |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Dec 1 to Aug 31 |
| Rufous Hummingbird *selasphorus rufus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8002 | Breeds Apr 15 to Jul 15 |

| NAME | BREEDING SEASON |
| --- | --- |
| Willet *Tringa semipalmata*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 5 |

## 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.

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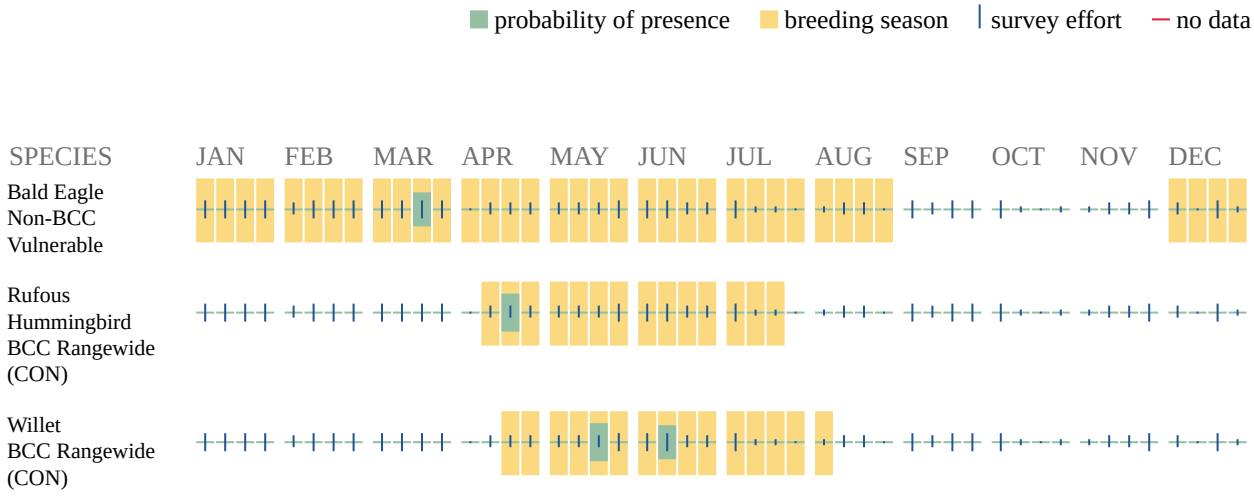


Additional information can be found using the following links:

- 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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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.

# Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

# IPaC User Contact Information

Agency: County of Humboldt
Name: Emily Paris
Address: 5510 Longley Lane
City: Reno
State: NV
Zip: 89511
Email eparis@farrwestengineering.com
Phone: 7753360404

NEVADA
DIVISION OF
NATURAL HERITAGE

# STATE OF NEVADA
## DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
# Nevada Division of Natural Heritage

Steve Sisolak
*Governor*

Bradley Crowell
*Director*

Kristin Szabo
*Administrator*

18 May 2022

Emily Paris
Farr West Engineering
5510 Longley Lane
Reno, NV 89511

RE: Data request received 18 May 2022

Dear Ms. Paris:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or At-Risk plant and animal taxa recorded within or near the Humboldt County Revised Wastewater System Installation Project areas in Humboldt Co. We searched our database and maps for the following, a 2-kilometer radius around the shape files provided, including:

Township 35N Range 37E Sections 10-15

There are no at-risk taxa recorded within the given area. However, habitat may be available for, the Nevada viceroy, *Limenitis archippus lahontani*, a Taxon determined to be Critically Imperiled by the Nevada Division of Natural Heritage, and the Rice's blue, *Euphilotes pallescens ricei*, a Nevada Bureau of Land Management Sensitive Species. The Nevada Department of Wildlife (NDOW) manages, protects, and restores Nevada's wildlife resources and associated habitat. Please contact Jinna Larkin, NDOW GIS Coordinator (775) 688-1580 to obtain further information regarding wildlife resources within and near your area of interest. Removal or destruction of state protected flora species 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
Biologist/Data Manager

FARR WEST
ENGINEERING

May 19, 2022

Sig Jaunarais
Planning Supervisor
Nevada Department of Environmental Protection
Bureau of Air Quality Planning
901 S. Stewart St., Suite 4003
Carson City, NV 89701

**Re: Humboldt County/Grass Valley Sewer System Replacement Project**

Dear Mr. Jaunarais;

Farr West Engineering, on behalf of Humboldt County, is preparing a Preliminary Environmental Assessment for the Grass Valley Sewer System Replacement Project. The project planning area is west of the Sonoma Range and southeast of the Humboldt River, known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. The project area also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. The Grass Valley community is dependent on septic systems for sewer services and has multiple operating water systems. The impacts to public health and groundwater quality caused by high nitrate levels are the primary needs for this project.

The proposed project includes construction of a sanitary sewer collection system, a mechanical treatment facility, and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems.

The new wastewater treatment facility (WWTF) is planned to be located northwest of Winnemucca Municipal Airport. The project will be located within portions of sections 10, 11, 12, 13, 14, and 15 Township 35N, Range 37E, including approximately 144 acres of possible disturbance, much of which is previously disturbed area. Actual disturbance will be less, the exact location of which will be dependent on placement of the WWTP facility. This Preliminary Environmental Assessment is required due to Humboldt County's application for federal financing of this project.

Enclosed is a Project Location Figure that depicts the project area for all construction activities proposed by this project.

Project components include:

1. Wastewater Treatment Facility
2. Approximately four (4) Rapid Infiltration Basins (RIBs)
3. Collection System including:
    a. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
        i. Approximately 45,092 LF of 8" PVC SDR 35
        ii. Approximately 6,026 LF of 10" PVC SDR 35
        iii. Approximately 5,552 LF of 12" PVC SDR 35
        iv. Approximately 2,344 LF of 15" PVC SDR 35

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v. Approximately 2,403 LF of 18" PVC SDR 35

b. Sewer laterals, approximately 631 connections
c. Force mains, approximately 6,264 LF of 8" PVC C900
d. Sewer manholes, approximately 188 consisting of:
    i. Approximately 184 Type 1-A 48" Manholes
    ii. Approximately 4 Type III 48" Manholes
e. Four Lift Stations
    i. Lift Station 1: Located at the intersection of Saturn Street and Jupiter Street
    ii. Lift Station 2: Located at the North end of Venus Street
    iii. Lift Station 3: Located at the intersection of Stratus Street and Placer Way
    iv. Lift Station 4: Located preceding the treatment facility
f. Abandonment and cleanout of approximately 631 existing septic tanks

The affected areas are located as follows:

| **Project Component** | **Township and Range** | **Section** |
|---|---|---|
| WWTF | T35N, R37E | Section 10, 15 |
| Rapid Infiltration Basins | T35N, R37E | Section 10, 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10, 11, 12 & 15 |

Humboldt County, Farr West, and partnering agencies, are committed to complying with federal requirements and Executive Orders that apply to state and federal financial assistance. I am contacting you to ensure this project complies with applicable regulations and policies under your agency's jurisdiction. We are also requesting information on the possible effects of the above proposed project in which the Bureau determines if the project will have any negative environmental impact and/or any other potential effects regarding air quality. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State, Local, and Federal government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or with to discuss the project, please contact Jessica Dugan of Farr West Engineering at (775) 997-7495.

Thank you,

Jessica L. Dugan, M.S., J.D.
Regulatory and Environmental Specialist

Encls: Project Location Figure
Cc: David Pulley, P.E.
Dave Mendiola, Humboldt County

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May 19, 2022

Brendon Grant
Supervisor, Professional Engineer IV, Vulnerability Assessment
Nevada Department of Environmental Protection
Bureau of Safe Drinking Water
901 S. Stewart Street, Suite 4001
Carson City, NV 89701

**Re: Humboldt County/Grass Valley Sewer System Replacement Project**

Dear Mr. Grant;

Farr West Engineering, on behalf of Humboldt County, is preparing a Preliminary Environmental Assessment for the Grass Valley Sewer System Replacement Project. The project planning area is west of the Sonoma Range and southeast of the Humboldt River, known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. The project area also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. The Grass Valley community is dependent on septic systems for sewer services and has multiple operating water systems. The impacts to public health and groundwater quality caused by high nitrate levels are the primary needs for this project.

The proposed project includes construction of a sanitary sewer collection system, a mechanical treatment facility, and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. The new wastewater treatment facility (WWTF) is planned to be located northwest of Winnemucca Municipal Airport.

The project will be located within portions of sections 10, 11, 12, 13, 14, and 15 Township 35N, Range 37E, including approximately 144 acres of possible disturbance, much of which is previously disturbed. Actual disturbance will be less, the exact location of which will be dependent on placement of the WWTP facility. This Preliminary Environmental Assessment is required due to Humboldt County's application for federal financing of this project.

Enclosed is a Project Location Figure that depicts the project area for all construction activities proposed by this project.

Project components include:

a. Wastewater Treatment Facility
b. Approximately four (4) Rapid Infiltration Basins (RIBs)
c. Collection System including:
a. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
    i. Approximately 45,092 LF of 8" PVC SDR 35
    ii. Approximately 6,026 LF of 10" PVC SDR 35
    iii. Approximately 5,552 LF of 12" PVC SDR 35

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iv. Approximately 2,344 LF of 15" PVC SDR 35
v. Approximately 2,403 LF of 18" PVC SDR 35

b. Sewer laterals, approximately 631 connections
c. Force mains, approximately 6,264 LF of 8" PVC C900
d. Sewer manholes, approximately 188 consisting of:
    i. Approximately 184 Type 1-A 48" Manholes
    ii. Approximately 4 Type III 48" Manholes
e. Four Lift Stations
    i. Lift Station 1: Located at the intersection of Saturn Street and Jupiter Street
    ii. Lift Station 2: Located at the North end of Venus Street
    iii. Lift Station 3: Located at the intersection of Stratus Street and Placer Way
    iv. Lift Station 4: Located preceding the treatment facility
f. Abandonment and cleanout of approximately 631 existing septic tanks

The affected areas are located as follows:

| Project Component | Township and Range | Section |
|---|---|---|
| WWTF | T35N, R37E | Section 10, 15 |
| Rapid Infiltration Basins | T35N, R37E | Section 10, 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10, 11, 12 & 15 |

Humboldt County, Farr West, and partnering agencies, are committed to complying with federal requirements and Executive Orders that apply to state and federal financial assistance. I am contacting you to ensure this project complies with applicable regulations and policies under your agency's jurisdiction. We are also requesting information on the possible effects of the above proposed project in which the Bureau determines if the project will have any negative environmental impact and/or any other potential effects regarding safe drinking water. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State, Local, and Federal government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or with to discuss the project, please contact Jessica Dugan of Farr West Engineering at (775) 997-7495.

Thank you,

Jessica L. Dugan, M.S., J.D.
Regulatory and Environmental Specialist

Encls: Project Location Figure
Cc: David Pulley, P.E.
Dave Mendiola, Humboldt County

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May 19, 2022

Adam Sullivan, P.E.
State Engineer
Nevada Division of Water Resources
901 S. Stewart St., Suite 2002
Carson City, NV 89701

**Re: Humboldt County/Grass Valley Sewer System Replacement Project**

Dear Mr. Sullivan;

Farr West Engineering, on behalf of Humboldt County, is preparing a Preliminary Environmental Assessment for the Grass Valley Sewer System Replacement Project. The project planning area is west of the Sonoma Range and southeast of the Humboldt River, known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. The project area also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. The Grass Valley community is dependent on septic systems for sewer services and has multiple operating water systems. The impacts to public health and groundwater quality caused by high nitrate levels are the primary needs for this project.

The proposed project includes construction of a sanitary sewer collection system, a mechanical treatment facility, and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. The new wastewater treatment facility (WWTF) is planned to be located northwest of Winnemucca Municipal Airport.

The project will be located within portions of sections 10, 11, 12, 13, 14, and 15 Township 35N, Range 37E, including approximately 144 acres of possible disturbance, much of which is previously disturbed. Actual disturbance will be less, the exact location of which will be dependent on placement of the WWTP facility. This Preliminary Environmental Assessment is required due to Humboldt County's application for federal financing of this project.

Enclosed is a Project Location Figure that depicts the area for all construction activities proposed by this project.

Project components include:

g. Wastewater Treatment Facility
h. Approximately four (4) Rapid Infiltration Basins (RIBs)
i. Collection System including:
a. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
    i. Approximately 45,092 LF of 8" PVC SDR 35
    ii. Approximately 6,026 LF of 10" PVC SDR 35
    iii. Approximately 5,552 LF of 12" PVC SDR 35
    iv. Approximately 2,344 LF of 15" PVC SDR 35

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v. Approximately 2,403 LF of 18" PVC SDR 35

b. Sewer laterals, approximately 631 connections
c. Force mains, approximately 6,264 LF of 8" PVC C900
d. Sewer manholes, approximately 188 consisting of:
    i. Approximately 184 Type 1-A 48" Manholes
    ii. Approximately 4 Type III 48" Manholes
e. Four Lift Stations
    i. Lift Station 1: Located at the intersection of Saturn Street and Jupiter Street
    ii. Lift Station 2: Located at the North end of Venus Street
    iii. Lift Station 3: Located at the intersection of Stratus Street and Placer Way
    iv. Lift Station 4: Located preceding the treatment facility
f. Abandonment and cleanout of approximately 631 existing septic tanks

The affected areas are located as follows:

| **Project Component** | **Township and Range** | **Section** |
|---|---|---|
| WWTF | T35N, R37E | Section 10, 15 |
| Rapid Infiltration Basins | T35N, R37E | Section 10, 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10, 11, 12 & 15 |

Humboldt County, Farr West, and partnering agencies, are committed to complying with federal requirements and Executive Orders that apply to state and federal financial assistance. I am contacting you to ensure this project complies with applicable regulations and policies under your agency's jurisdiction. We are also requesting information on the possible effects of the above proposed project in which the Division determines if the project will have any negative environmental impact and/or any other potential effects regarding water resources. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State, Local, and Federal government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or with to discuss the project, please contact Jessica Dugan of Farr West Engineering at (775) 997-7495.

Thank you,

Jessica L. Dugan, M.S., J.D.
Regulatory and Environmental Specialist

Encls: Project Location Figure
Cc: David Pulley, P.E.
Dave Mendiola, Humboldt County

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May 19, 2022

Katrina Pascual, P.E.
Branch Supervisor
Nevada Bureau of Water Pollution Control
901 S. Stewart St., Suite 2002
Carson City, NV 89701

**Re: Humboldt County/Grass Valley Sewer System Replacement Project**

Dear Ms. Pascual;

Farr West Engineering, on behalf of Humboldt County, is preparing a Preliminary Environmental Assessment for the Grass Valley Sewer System Replacement Project. The project planning area is west of the Sonoma Range and southeast of the Humboldt River, known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. The project area also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. The Grass Valley community is dependent on septic systems for sewer services and has multiple operating water systems. The impacts to public health and groundwater quality caused by high nitrate levels are the primary needs for this project.

The proposed project includes construction of a sanitary sewer collection system, a mechanical treatment facility, and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. The new wastewater treatment facility (WWTF) is planned to be located northwest of Winnemucca Municipal Airport.

The project will be located within portions of sections 10, 11, 12, 13, 14, and 15 Township 35N, Range 37E, including approximately 144 acres of possible disturbance, much of which is previously disturbed. Actual disturbance will be less, the exact location of which will be dependent on placement of the WWTP facility. This Preliminary Environmental Assessment is required due to Humboldt County's application for federal financing of this project.

Enclosed is a Project Location Figure that depicts the area for all construction activities proposed by this project.

Project components include:

j. Wastewater Treatment Facility
k. Approximately four (4) Rapid Infiltration Basins (RIBs)
l. Collection System including:
g. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
    i. Approximately 45,092 LF of 8" PVC SDR 35
    ii. Approximately 6,026 LF of 10" PVC SDR 35
    iii. Approximately 5,552 LF of 12" PVC SDR 35

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iv. Approximately 2,344 LF of 15" PVC SDR 35
v. Approximately 2,403 LF of 18" PVC SDR 35

h. Sewer laterals, approximately 631 connections
i. Force mains, approximately 6,264 LF of 8" PVC C900
j. Sewer manholes, approximately 188 consisting of:
    i. Approximately 184 Type 1-A 48" Manholes
    ii. Approximately 4 Type III 48" Manholes
k. Four Lift Stations
    i. Lift Station 1: Located at the intersection of Saturn Street and Jupiter Street
    ii. Lift Station 2: Located at the North end of Venus Street
    iii. Lift Station 3: Located at the intersection of Stratus Street and Placer Way
    iv. Lift Station 4: Located preceding the treatment facility
l. Abandonment and cleanout of approximately 631 existing septic tanks

The affected areas are located as follows:

| Project Component | Township and Range | Section |
|---|---|---|
| WWTF | T35N, R37E | Section 10, 15 |
| Rapid Infiltration Basins | T35N, R37E | Section 10, 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10, 11, 12 & 15 |

Humboldt County, Farr West, and partnering agencies, are committed to complying with federal requirements and Executive Orders that apply to state and federal financial assistance. I am contacting you to ensure this project complies with applicable regulations and policies under your agency's jurisdiction. We are also requesting information on the possible effects of the above proposed project in which the Division determines if the project will have any negative environmental impact and/or any other potential effects regarding water quality. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State, Local, and Federal government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or with to discuss the project, please contact Jessica Dugan of Farr West Engineering at (775) 997-7495.

Thank you,

Jessica L. Dugan, M.S., J.D.
Regulatory and Environmental Specialist

Encls: Project Location Figure
Cc: David Pulley, P.E.
Dave Mendiola, Humboldt County

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May 19, 2022

Rebecca Palmer
Nevada State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City, Nevada 89701-5248

**Re: Humboldt County/Grass Valley Sewer System Replacement Project**

Dear Ms. Palmer,

Farr West Engineering, on behalf of Humboldt County, is preparing a Preliminary Environmental Assessment for the Grass Valley Sewer System Replacement Project. The project planning area is west of the Sonoma Range and southeast of the Humboldt River, known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. The project area also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. The Grass Valley community is dependent on septic systems for sewer services and has multiple operating water systems. The impacts to public health and groundwater quality caused by high nitrate levels are the primary needs for this project.

The proposed project includes construction of a sanitary sewer collection system, a mechanical treatment facility, and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. The new wastewater treatment facility (WWTF) is planned to be located northwest of Winnemucca Municipal Airport.

The project will be located within portions of sections 10, 11, 12, 13, 14, and 15 Township 35N, Range 37E, including approximately 144 acres of possible disturbance, much of which is previously disturbed. Actual disturbance will be less, the exact location of which will be dependent on placement of the WWTP facility. This Preliminary Environmental Assessment is required due to Humboldt County's application for federal financing of this project.

Enclosed is a Project Location Figure that depicts the project area for all construction activities proposed by this project.

Project components include:

m. Wastewater Treatment Facility
n. Approximately four (4) Rapid Infiltration Basins (RIBs)
o. Collection System including:
a. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
    i. Approximately 45,092 LF of 8" PVC SDR 35
    ii. Approximately 6,026 LF of 10" PVC SDR 35
    iii. Approximately 5,552 LF of 12" PVC SDR 35
    iv. Approximately 2,344 LF of 15" PVC SDR 35

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v. Approximately 2,403 LF of 18" PVC SDR 35

b. Sewer laterals, approximately 631 connections
c. Force mains, approximately 6,264 LF of 8" PVC C900
d. Sewer manholes, approximately 188 consisting of:
    i. Approximately 184 Type 1-A 48" Manholes
    ii. Approximately 4 Type III 48" Manholes
e. Four Lift Stations
    i. Lift Station 1: Located at the intersection of Saturn Street and Jupiter Street
    ii. Lift Station 2: Located at the North end of Venus Street
    iii. Lift Station 3: Located at the intersection of Stratus Street and Placer Way
    iv. Lift Station 4: Located preceding the treatment facility
f. Abandonment and cleanout of approximately 631 existing septic tanks

The affected areas are located as follows:

| Project Component | Township and Range | Section |
|---|---|---|
| WWTF | T35N, R37E | Section 10, 15 |
| Rapid Infiltration Basins | T35N, R37E | Section 10, 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10, 11, 12 & 15 |

Humboldt County, Farr West, and partnering agencies, are committed to complying with federal requirements and Executive Orders that apply to state and federal financial assistance. I am contacting you to ensure this project complies with applicable regulations and policies under your agency's jurisdiction. We are also requesting information on the possible effects of the above proposed project in which the SHPO determines if the project will have any negative environmental impact and/or any other potential effects regarding State Cultural and Historic resources and Section 106 Consultation. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State, Local, and Federal government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or with to discuss the project, please contact Jessica Dugan of Farr West Engineering at (775) 997-7495.

Thank you,

Jessica L. Dugan, M.S., J.D.
Regulatory and Environmental Specialist

Encls: Project Location Figure
Cc: David Pulley, P.E.
Dave Mendiola, Humboldt County

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May 19, 2022

Nevada State Clearinghouse
901 S. Stewart St., Suite 5003
Carson City, NV 89701

**Re: Humboldt County/Grass Valley Sewer System Replacement Project- EA**

Dear Interested Public,

Farr West Engineering, on behalf of Humboldt County, is preparing an Environmental Assessment for the Grass Valley Sewer System Replacement Project. The project planning area is west of the Sonoma Range and southeast of the Humboldt River, known as Grass Valley, and includes two rural subdivisions south of the City of Winnemucca: Star City Properties and Gold Country Estates. The project area also includes commercial areas north of the Winnemucca Municipal Airport and an area south of Grass Valley Elementary between Mary Way and Johnson Lane. The Grass Valley community is dependent on septic systems for sewer services and has multiple operating water systems. The impacts to public health and groundwater quality caused by high nitrate levels are the primary needs for this project.

The proposed project includes construction of a sanitary sewer collection system, a mechanical treatment facility, and rapid infiltration basins (RIBs). The sanitary sewer collection system will be installed in the project area and connected to existing residential and commercial sewer systems. The new wastewater treatment facility (WWTF) is planned to be located northwest of Winnemucca Municipal Airport.

The project will be located within portions of sections 10, 11, 12, 13, 14, and 15 Township 35N, Range 37E, including approximately 144 acres of possible disturbance, much of which is previously disturbed. Actual disturbance will be less, the exact location of which will be dependent on placement of the WWTP facility. This Preliminary Environmental Assessment is required due to Humboldt County's application for federal financing of this project.

Enclosed is a Project Location Figure that depicts the project area for all construction activities proposed by this project.

Project components include:

a. Wastewater Treatment Facility
b. Approximately four (4) Rapid Infiltration Basins (RIBs)
c. Collection System including:
d. Gravity sewer mains, approximately 61,417 linear feet (LF) consisting of:
    i. Approximately 45,092 LF of 8" PVC SDR 35
    ii. Approximately 6,026 LF of 10" PVC SDR 35
    iii. Approximately 5,552 LF of 12" PVC SDR 35
    iv. Approximately 2,344 LF of 15" PVC SDR 35
    v. Approximately 2,403 LF of 18" PVC SDR 35
e. Sewer laterals, approximately 631 connections
f. Force mains, approximately 6,264 LF of 8" PVC C900

5510 Longley Lane • Reno, Nevada 89511 • (775) 851-4788 • Fax (775) 851-0766
421 Court Street • Elko, Nevada 89801 • (775) 738-2121 • Fax (775) 738-7955
www.farrwestengineering.com

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g. Sewer manholes, approximately 188 consisting of:
    vi. Approximately 184 Type 1-A 48" Manholes
    vii. Approximately 4 Type III 48" Manholes
h. Four Lift Stations
    viii. Lift Station 1: Located at the intersection of Saturn Street and Jupiter Street
    ix. Lift Station 2: Located at the North end of Venus Street
    x. Lift Station 3: Located at the intersection of Stratus Street and Placer Way
    xi. Lift Station 4: Located preceding the treatment facility
i. Abandonment and cleanout of approximately 631 existing septic tanks

The affected areas are located as follows:

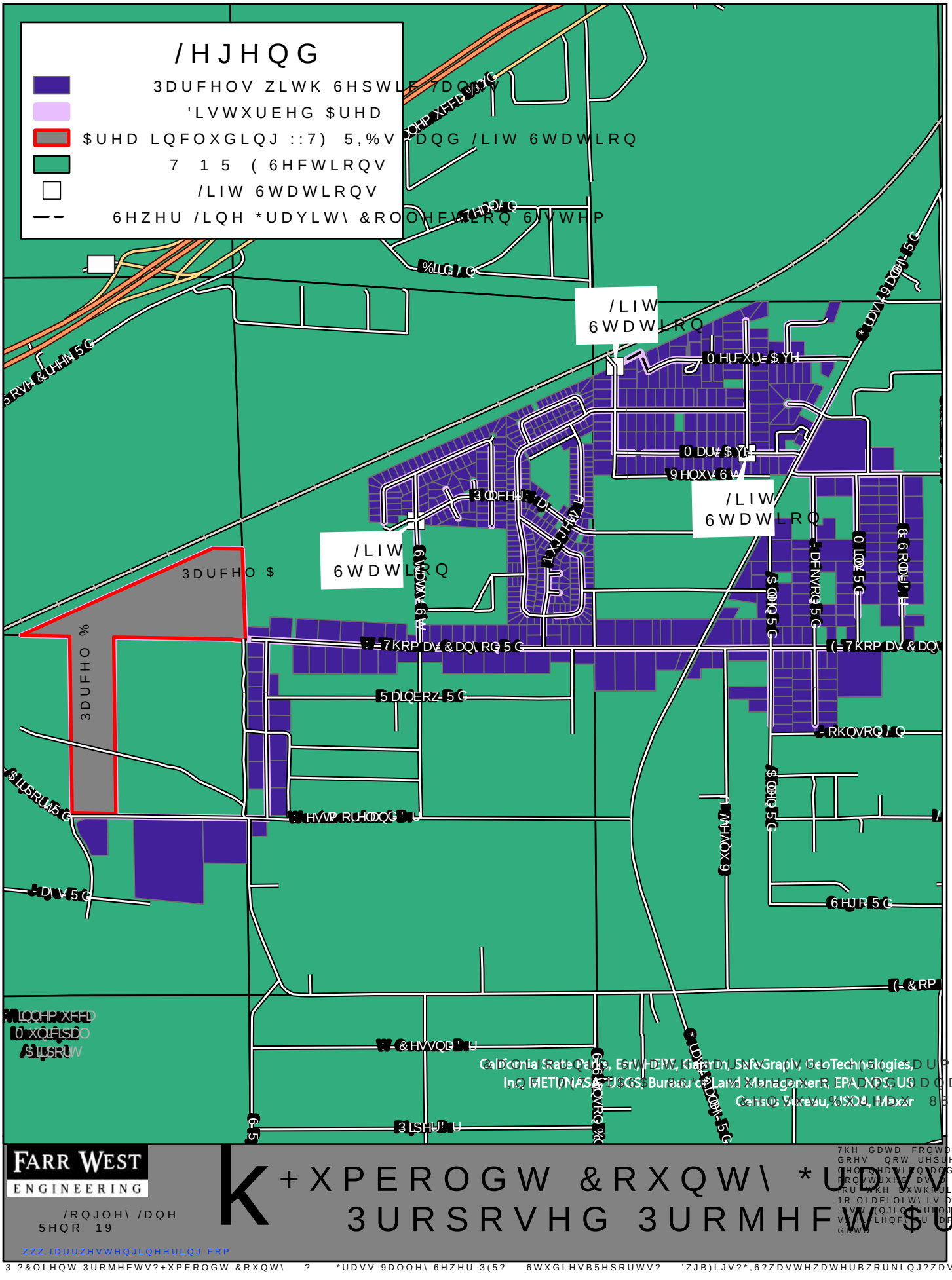
| **Project Location** | **Township and Range** | **Section** |
|---|---|---|
| WWTF | T35N, R37E | Section 10, 15 |
| Rapid Infiltration Basins | T35N, R37E | Section 10, 15 |
| Collection System | T35N, R37E | Sections 11, 12, 13, 14, & 15 |
| Lift stations | T35N, R37E | Sections 10, 11, 12 & 15 |

Humboldt County, Farr West, and partnering agencies, are committed to complying with federal requirements and Executive Orders that apply to state and federal financial assistance. Please distribute this information to any entity that might have an interest in the project. All responses and/or recommendations will be used to complete the Environmental Assessment. We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Jessica Dugan of Farr West Engineering at (775) 997-7495.

Thank you,

Jessica L. Dugan, M.S., J.D.
Regulatory and Environmental Specialist

Encls: Project Location Figure
Cc: David Pulley, P.E.
Dave Mendiola, Humboldt County




FARR WEST ENGINEERING

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