Initial Study for Tulelake Wastewater System Improvements

Tulelake, CA

Initial Study

Prepared for:
City of Tulelake
November 2025



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PROJECT DESCRIPTION

1. **Project title:**
   City of Tulelake Wastewater System Improvements

2. **Lead agency name and address:**
   City of Tulelake
   591 Main Street
   Tulelake, California 96134

3. **Contact person and phone number:**
   Jose Perez
   Public Works Director
   (541) 884-4666
   tulelakepublicworks@cot.net

   City of Tulelake
   1000 Dean Callas Way
   Tulelake, California 96134

4. **Project Location:**
   The proposed project components are located at various locations throughout the incorporated areas of Tulelake, California, Siskiyou County. Total area of impact is approximately 7.3 acres. Some of these sites are located on public city property. Sewer lines are proposed on Sixth Alley from Modoc Avenue to F Street, Fifth Alley from Modoc Avenue to F Street, Fourth Alley from C Street to F Street, and the alley of Park St from G Street to Ridgeview St. Manholes are proposed at sixteen locations on public city property including the intersection of Modoc Avenue and Sixth Alley, intersection of E Street and Sixth Alley, intersection of F Street and Sixth Alley, intersection of Modoc Avenue and C Street, intersection of D Street and Fifth Alley, intersection of E Street and Fifth Alley, intersection of F Street and Fifth Alley, intersection of Siskiyou Street and C Street, intersection of Park Street and G Street, intersection of Park Street alley and G Street and to the east of Ridgeview Street. Two proposed lift stations are located at the intersection of Siskiyou Street and C Street and Park Street and G Street. A headworks screening facility is located on one parcel (APN 050-051-010) adjacent to the Tulelake Waste Water Treatment Plant located east of Dean Callas Way. The project area is owned by the City of Tulelake and is in Township 48 North, Range 04 East, Section 35 of the Mount Diablo Meridian.

5. **Project sponsor's name and address:**
   Rabe Consulting / Andrea Rabe
   421 Commercial Street, Klamath Falls, Oregon 97601
   (541)-891-1237
   andrea@rabeconsulting.com

6. **General Plan designation:**
   The City of Tulelake does not currently have a Land Use Element and is in the process of updating the General Plan.

7. **Zoning:**
   Mixed Use (MU) and Public Agency (PA)

8. Description of project:

The City of Tulelake proposes improvements to the wastewater system. This proposed project includes the planning and design to install approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. These plans will improve the City of Tulelake wastewater collection system.

9. Surrounding land uses and setting:

The subject properties are located throughout the city of Tulelake in Siskiyou County, California. Tulelake lies south of the Oregon-California border, with the Tule Lake Wildlife Refuge located west of the city. The city of Tulelake lies in the Tule Lake Basin, on the outskirts of the Klamath Lake Basin (USDA NRCS 2019b). Lost River runs north/south along the west side of Tulelake and flows into Tule Lake.

The proposed project consists of seven subject properties: four sewer lines, sixteen manholes, two lift stations, and one proposed headworks screening facility. The manholes are interspersed at the street intersections of the sewer line sites. The installation of approximately 900 feet of 8" PVC sewer collection piping will be located on Sixth Alley and extend from Modoc Avenue to F Street. The installation of 1300 feet of 8" PVC sewer collection piping is located on Fifth Alley and extend from Modoc Avenue to F Street. The installation of 1400 feet of 8" PVC sewer collection piping is located on Fourth Alley and will extend from C Street to F Street. 1300 feet of 8" PVC sewer collection piping will be located on Park Alley and extend from G Street to Ridgeview Street. Additional manholes are located adjacent to proposed lift stations at the intersection of C Street and Siskiyou Street and the intersection of Park Street and G Street. The headworks screening facility is located in the Water Pumping Facility public works yard located east of Dean Callas Way.

The properties are regular in shape including rectangular (sewer line, headworks screening facility), triangular (lift station), and circular (manholes) components.

The area of potential impact is approximately 7.3 acres.

The area surrounding the subject property is zoned as residential, agricultural, and commercial. The sewer line installation sites are surrounded by residential neighborhoods, predominantly single-family homes. The lift station and manhole site at Park Street and G Street is bordered by residential properties to the north and west, agricultural fields and open land to the east, and the Tulelake Butte Valley Fairgrounds RV Park to the south. The lift station and manhole at C Street and Siskiyou Street is bordered by residential properties to the north and east, Tulelake State Preschool to the south, and a field and tennis court to the west. The headworks screening facility is bordered by residential properties to the west, Tulelake High School to the north, agricultural fields to the south, and effluent treatment ponds to the east.

10. Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

The project would comply with various regulations and require approval from agencies. California State Water Resources Control Board, City of Tulelake Land Use Element and Zoning

Codes, California Building Codes, Fire Code, City Policies, Municipal Code, and other applicable state regulations. Tulelake is under the jurisdiction of the North Coast Regional Water Quality Control Board, Siskiyou County Environmental Health Division, and the Siskiyou County Air Pollution Control District.

FIGURE 1



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated" as indicated by the checklist on the following pages

☐Aesthetics	☐Agricultural/Forest Resources	☐Air Quality
☐Biological Resources	☐Cultural Resources	☐Energy
☐Geology and Soils	☐Greenhouse Gas Emissions	☐Hazards/Hazardous Materials
☐Hydrology/Water Quality	☐Land Use/ Planning	☐Minerals
☐Noise	☐Population and Housing	☐Public Services
☐Recreation	☐Transportation/Traffic	☐Utilities/Service Systems
☐Mandatory Findings of Significance		

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- € I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- € I find that although he proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- € I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- € I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jenny Coelho	11/25/2025
Signature	Date
Jenny Coelho	City of Tulelake
Printed Name	Lead Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

The section identifies the potential environmental impacts of this project by answering questions from Appendix G of the CEQA Guidelines, the Environmental Checklist Form. The environmental issues evaluated in this chapter include:

- Aesthetics
- Agricultural/Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance

All analyses take account the entire action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Impacts are categorized as follows:

No Impact: when adequately supported if referenced information sources show that the impact simply does not apply to projects like the one involved. A No Impact Answer is explained where it is based on project-specific factors as well as general standards.

Less Than Significant Impact: The impact would not result in the substantial adverse change in the environment. This impact level does not require mitigation measures.

Less Than Significant with Mitigation Incorporated: An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382). However, the incorporation of mitigation measures that are specified after analysis would reduce the project-related impact to a less than significant level.

Potentially Significant Impact: An impact that is "potentially significant" but for which mitigation measures cannot be immediately suggested or the effectiveness of potential mitigation measures cannot be determined with certainty, because more in-depth analysis of the issue and potential impact is needed. In such cases, an EIR is required.

ENVIRONMENTAL CHECKLIST

Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☐	X

Affected Environment

The subject properties are dispersed throughout alleys, streets, and a yard located within the city limits of Tulelake, California in Siskiyou County. The City of Tulelake is situated in a relatively flat area at an elevation of 4,045 feet. The city is located in what once was the center lakebed of Tule Lake, which stretched west to Sheepy Peak Ridge, to 13 miles east. This lake was relatively shallow and comprised over 100,000 acres before it was drained and approximately 60,000 acres converted into farmland and the current city. Scenic resources within the viewshed of the project areas range from primarily residential or commercial uses to open agricultural landscapes.

The sewer lines are located at sixth alley, fifth alley, fourth alley, and under the Tulelake-Butte Valley Fairgrounds. These subject properties are bordered by residential properties including single family homes, and mobile homes. The sewer line located in Tulelake-Butte Valley Fairgrounds is bordered by the fairgrounds center including a track and associated buildings to the east and agricultural fields to the west.

The lift station properties are located at the intersection of C Street and Siskiyou Street and the intersection of G Street and Park Street. These subject properties are bordered by residential properties to the north and east, agricultural fields to the west, and Tulelake-Butte Valley Fairgrounds to the south.

The subject property containing the headways screening facility located in the southwestern portion of the Tulelake Waste Water Plant. The facility is bordered by three effluent treatment ponds to the east, an existing wastewater building to the north, residential properties to the west, and agricultural fields to the south.

Discussion

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. The project sites are in relatively flat areas throughout the city. The facility components would be no taller than the adjacent structures or are installed underground. The city of Tulelake has not designated any scenic vistas in the vicinity of the project area. Therefore, the proposed project would not have a substantial adverse effect on scenic vistas. This impact is considered less than significant.

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?*

No Impact. The project site is located within the vicinity of one State Scenic Highway: Volcanic Legacy Scenic Byway (California Highway 139) runs northwest/southeast through Oregon and California (America's Scenic Byways). The proposed project would not substantially damage scenic resources, including trees and is not located near any rock outcroppings or historic buildings (COHP 2018). Therefore, no significant impacts to scenic resources would occur with implementation of the proposed project.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*

No Impact. Development of the proposed project would result in minimal changes to project sites as most components will be installed underground. The headworks screening facility is above ground located adjacent to an existing wastewater management building, so there will be no adverse change to the landscape. The project would not result in a significant visual change, as most of its components would be replaced within the existing footprint and be limited to subterranean improvements and upgrades. Therefore, no significant impacts to the existing visual character would occur with implementation of the proposed project.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Impact. Streetlights, vehicle head and taillights, and lighting associated with the existing properties are the existing sources of light and glare in the project area. The proposed project would upgrade the water system and does not include the construction of new lighting sources. Therefore, no impact to day or nighttime views would occur.

Mitigation Measures

None required due to no negative impacts.

Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, no non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12223(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	X
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	X
e) Involve other changes in the existing environment which, due to their location or nature, could result in	☐	☐	☐	X

conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Affected Environment

The project site is classified by the California Soil Resource (CSR) as having an erosion factor of 5 and being very poorly drained (CSR 2021). Soils are classified as the Tulebasin: a mucky, silty, clay loam with lacustrine deposits derived from igneous and sedimentary rock (WSS 2021). Due to the poor drainage, this soil would not be suitable for woodland or farmlands under its natural conditions.

According to the Web Soil Survey, the subject property has a high flooding and ponding rating. This can be attributed to the history of the area. The city of Tulelake is built on the former lakebed of Tule Lake. Prior to being drained, the lake once spanned west to Sheepy Peak Ridge, to approximately 13 miles east. Approximately 60,000 acres of the lake was converted to farmland and the current location of the city of Tulelake.

Discussion

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?*

No Impact. The proposed project area is in an area categorized as 'Urban and Built-Up Land' (CDOC 2021d). This classification is defined as land occupied by structures with a building density of at least 1 unit to 1.5 acres, or residential, industrial, and commercial zones (CDOC 2021d). The property is located in a Mixed Use and Public Agency zoned area within city limits. According to the Web Soil Survey, 185 – Tulebasin mucky silty clay loam, the soil within the project area, is Prime Farmland if irrigated and drained. A small portion of the headworks screening facility is located in 183 – Tulana silt loam, 0 to 1 percent slopes which has a farmland classification of Prime Farmland if irrigated and drained. As the area is not irrigated and drained, there is no prime farmland conversion. The proposed project upgrades the existing wastewater system, therefore there will be no impact to farmland.

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. The project site is not zoned for agricultural use and is not under a Williamson Act contract. Therefore, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact. The project area contains no forest or timberland and is not zoned for forest land, timberland, or timberland production. There will be no impact.

d) *Result in the loss of forest land or conversion of forest land to no-forest use?*

No Impact. See response (c) above.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The proposed project would not involve other changes in the existing environment, which could result in the conversion of farmland to non-agricultural use. The proposed project is not growth inducing; it is proposed to serve existing community needs for wastewater systems.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Air Quality				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☐	X
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	X	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	X

Affected Environment

The project site is located in the Northeast Plateau Air Basin region (County of Siskiyou California 2021). The state air quality is overseen by the California Air Resources Board district with regulatory oversight of local air quality control districts. The local air quality control district is the Siskiyou County Air Pollution Control District (SCAPCD). According to SCAPCD, the primary sources of air pollution are wildfires, managed burning and disposal, wood burning stoves, unpaved road dust, farming operations, and motor vehicles.

The SCAPCD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs and regulates agricultural and non-agricultural burning. Other SCAPCD responsibilities include monitoring air quality, preparing air quality plans, and responding to citizen air quality complaints (County of Siskiyou California 2021).

Currently, the Siskiyou County is in attainment/unclassified for ozone and particulate matter (PM10 and PM2.5) as of November 17, 2025 (EPA 2025).

Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. Siskiyou County SCAPCD monitors and reports the air quality of the county through the air quality monitor site located in Yreka, California. This district monitors local air quality and has jurisdiction over the project area and enforces air quality plans. This project is not expected to conflict with or obstruct implementation of the air quality plan in Siskiyou County, therefore there will be no impact from the project.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

No Impact. As discussed in response (a), based on project-related emission estimates, the proposed project would not result in substantial impacts to the levels of any criteria pollutants either during operation or construction of the proposed project.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Sensitive receptors adjacent to the project site include neighboring businesses and their customers, residential areas adjacent to the project properties, Tulelake Basin Elementary School, and Tulelake High School. As described in response (a) above, the proposed project would generate short-term construction emissions from particulate matter. Implementation of Mitigation Measure AIR-1 would reduce potential impacts related to particulate matter and fugitive dust to a level below significance.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates and fugitive dust as well as a small quantity of construction equipment pollutants (i.e. diesel-fueled vehicles and equipment). As described in response (a) above, impacts would be of short duration.

During the operation phase of the project, there are no associated emissions impacts. Sensitive receptors are not expected to be exposed to substantial long-term pollutant concentrations, and no significant air quality impacts would result from the proposed project.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact. The project would not generate emissions adversely affecting a substantial number of people. As described in responses (a)-(c) above, project construction would be short in nature and generate minimal airborne particulates that could be exposed to sensitive receptors with implementation of Mitigation Measure AIR-1.

Mitigation Measures

Mitigation Measure AIR-1: The following controls shall be implemented at the construction site to control construction emissions:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per week. The use of dry power sweeping shall be prohibited.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points regarding maximum idling time.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- The contractor shall post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Siskiyou County Air Pollution District's office phone number shall also be visible to ensure compliance with applicable regulations.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Biological Resources Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	X
e) Conflict with any local policies or ordinances protecting biological	☐	☐	☐	X

	resources, such as a tree preservation policy or ordinance?				
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X

Affected Environment

The proposed water system improvement project will be located on single family dwelling and commercial zoned lots in the city of Tulelake, California. The subject properties are in existing developed areas. The subject property for the headworks screening facility is occupied by the City of Tulelake Wastewater Plant public works yard.

The area where the city of Tulelake is situated was once the lakebed of Tule Lake. The lake has since been drained and is a national wildlife refuge located approximately 1.5 miles south of the city. The Lost River, located northwest of the city, flows into Tule Lake. Due to the project site's proximity to the river and lake, a search was conducted on California Natural Diversity Database (CNDDB). On March 24, 2025, and November 17, 2025, a 9-quad search was conducted on CNDDB website to determine which species of concern may be present in or near the project area. The project is located within the Tulelake quadrangle of the CNDDB. There are 6 sensitive status plant species and 26 sensitive status wildlife species that are known in the general area of the project according to the CNDDB results. These species include: golden eagle, Swainson's hawk, western snowy plover, prairie falcon, lesser sandhill crane, greater sandhill crane, purple martin, bank swallow, tricolored blackbird, black tern, California gull, American white pelican, greater sage-grouse, Columbian sharp-tailed grouse, long-billed curlew, short-eared owl, white-faced ibis, shortnose sucker, Lost River sucker, blue chub, Crotch's bumble bee, desert bighorn sheep, gray wolf, American badger, Townsend's big-eared bat, Dussen's twisted moss, dotted onion, Columbia yellow cress, wheat sedge, squareastern phlox, and Newberry's cinquefoil.

On March 25, 2025, and on November 17, 2025, an IPaC report was obtained from USFWS. The project code is 2025-0073665 and the project name is City of Tulelake Wastewater System Improvements. The project area does not contain any areas designated as federal or state critical habitat and there are 10 listed species that are known in the general project area including: gray wolf, California condor, yellow-billed cuckoo, northwestern pond turtle, Lost River sucker, shortnose sucker, monarch butterfly, Suckley's cuckoo bumble bee, Greene's tuctoria, and slender Orcutt grass. Based on the habitat requirements for specific species, it was determined that the project area does not provide suitable habitat for sensitive status plant or wildlife species known to occur in the general vicinity of the project area.

Discussion

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. The project area is located on Mixed Use and Public Agency zoned lots within owned by the City of Tulelake. The sites are previously disturbed and developed with residential properties, Tulelake-Butte Valley Fairgrounds, and the Tulelake Waste Water Plant and management area. The project area is not located within preferred habitat of the listed species. Therefore, the proposed project will have no impact on listed species.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

No Impact. As described in (a) above, the site is not located in a riparian habitat or other sensitive natural community. A query completed on the U.S. Fish and Wildlife National Wetlands Mapper shows the site is not located in a riparian habitat or other sensitive natural community. Therefore, there will be no impact to any riparian habitat from the proposed project.

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. As described above in (a) and (b), the site is not located in a wetland and will not have an adverse effect on a wetland, marsh, vernal pool, etc. Therefore, there is no impact.

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

No Impact. As described in previous responses (a)-(c), the site is not located in an area that would interfere with the movement of any native resident or migratory fish or wildlife species, corridors, or impede the use of native wildlife nursery sites. Therefore, there is no impact.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact. As described in previous responses, the site is not located in an area that would conflict with any local policies or ordinances protecting biological resources.

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The project site is not located within any lands covered by the Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Chapter 6 of the Siskiyou County General Plan Update addresses biological resources. Habitat and wildlife corridors were mapped by CDFW, Caltrans, and a team of Federal, State, local, Tribal, and non-governmental organizations. These areas are of high conservation

priority. There are no habitat corridors located within the City of Tulelake due to the high level of development. Additionally, there are no national wild and scenic rivers within the vicinity of the project area. No impact would occur.

Mitigation Measures

None required due to no negative impacts.

Cultural Resources

Would the project:

	Potentially significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	X
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	X
d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resource Code § 5020.1 (k)?	☐	☐	☐	X

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code §5024.1 in applying the criteria set forth in subdivision (c) of Public Resource Code §5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	X

Affected Environment

CEQA Guidelines Section 15064.5(3) states, 'Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources…" A search was completed on the California State Park's California Historical Resources list on March 25, 2025 and November 17, 2025. The Historical Resources listed in Tulelake include: Canby's Cross-1873, Captain Jack's Stronghold, Guillem's Graveyard, Hospital Rock Army Camp Site, and Thomas-Wright Battle Site. All of these sites are at least 5 miles away from the City of Tulelake. No historic properties, buildings, structures, objects, etc. have been identified, noted, or recorded on or around the project area.

AB 52 (enacted July 1, 2015) established that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

Public Resources Code Section 21074 (a) (1) (A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

1. Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision © of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB52 also establishes a formal consultation process for California cities, counties, and tribes regarding tribal cultural resources. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project."

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities

The City of Tulelake is in the ancestral territory of the Shasta, Karuk, Klamath and Modoc peoples. Tribal consultation letters describing the project proposal and project location were sent to the Confederated Tribes of Siletz Indians of Oregon; Confederated Tribes of the Grand Ronde Community of Oregon; Elk Valley Rancheria, California; Karuk Tribe; Klamath Tribes; Pit River Tribe, California; and Quartz Valley Indian Community of the Quartz Valley Reservation of California on June 6, 2025. Tribal consultation letters were sent to Karuk Tribe and Modoc Nation on June 9, 2025. On June 11, 2025, the Modoc Nation responded to the project notification letter expressing support for the project. They request to be notified immediately of any inadvertent discoveries. On June 12, 2025, Klamath Tribes responded to the project notification letter stating that Klamath Tribes has no concerns with the project. They request a monitor to be on site during any ground disturbing activities and to contact the Klamath Tribe Culture and Heritage Department for consultation if any inadvertent discoveries occur. As of November 17, 2025, no additional tribal responses have been received.

The State Historic Preservation Office (SHPO) was provided a project notification letter on June 6, 2025. As of November 17, 2025, we have not received a reply from SHPO.

Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. The project area contains no recorded resources listed in the California Office of Historic Preservation's *Historic Properties Directory,* the *National Register of Historic Place,* or the *California Register of Historical Resources.* Previous and existing sewer construction and maintenance have disturbed the project area. The proposed sewer lines and system improvement will replace the current utilities, therefore introducing no new disturbance to the subterrain. Implementation of Mitigation Measure CULT-1, described in the Mitigation Measures of this section, would eliminate inadvertent impacts from construction activities.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No Impact. The project site contains no recorded archaeological resources as defined in CEQA Guidelines Section 15064.5(3)(c) and CEQA Section 21083.2. See section (a) above for further information about the property. Implementation of Mitigation Measure CULT-2, described below in

the Mitigation Measures section, would eliminate potential impacts to unidentified archaeological resources.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact. No recorded human remains have been identified within the project site from previous disturbance. See section (a) above for property disturbance information. The property has had ground disturbing activities in the past. Implementation of Mitigation Measure CULT-3, described in the Mitigation Measures of this section, would ensure that potential impacts to human remains would be reduced.

d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resource Code § 5020.1 (k)?*

No Impact. The project area is not listed, nor eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resource Code § 5020.1 (k).

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code §5024.1 in applying the criteria set forth in subdivision (c) of Public Resource Code §5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe?

No Impact. The City of Tulelake is the lead agency and has not determined a resource or resources within the project area to be a significant resource to a California Native American tribe. According to the U.S. Department of Housing and Urban Development's Tribal Directory Assessment Tool (TDAT) the following Tribes have interests in Siskiyou County: Confederated Tribes of Siletz Indians of Oregon; Confederated Tribes of the Grand Ronde Community of Oregon; Elk Valley Rancheria, California; Karuk Tribe; Klamath Tribes; Pit River Tribe, California; and Quartz Valley Indian Community of the Quartz Valley Reservation of California.

Mitigation Measures

Mitigation Measure CULT-1: If prehistoric or historical archaeological deposits or features are discovered during project activities, all work within 25 feet of the discovery shall be redirected until a qualified archaeologist assess the situation and provides recommendations. Adverse effects to archaeological deposits should be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for the California Register of Historical Resources eligibility. If the resources are not eligible, avoidance is not necessary. If the resources are eligible, they will need to be avoided by adverse effects or such effects must be mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparation of a report of

findings; accessing recovered archaeological materials at an appropriate curation facility; and public outreach, such as brochures or displays at libraries and museums. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the City and the Northwest Information Center.

Mitigation Measure CULT-2: If archaeological deposits are identified during project activities, a qualified archaeologist shall first determine whether such deposits are historical resources as defined in Section 15064.5. If the deposit qualifies as a unique archaeological resource, it will need to be avoided by adverse effects or such effects must be mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparation of a report of findings; accessing recovered archaeological materials at an appropriate curation facility; and public outreach, such as brochures or displays at libraries and museums. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the City and the Northwest Information Center.

Mitigation Measure CULT-3: In the event that human remains are encountered, work within 25 feet of the discovery shall be redirected at the County Coroner notified immediately. At the same time, a qualified archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel should not collect or move any human remains and associated materials. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the City and the Northwest Information Center.

Energy

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	X	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	X

Affected Environment

The CEQA Guidelines Appendix F states that energy consuming equipment and processes, which will be used during construction or operation, such as energy requirements of the project by fuel type and end use; energy conservation equipment and design features; energy supplies that would serve the project; and total estimated daily vehicle trips to be generated by the project and the additional energy consumed per trip by mode; shall be taken into consideration when evaluating energy impacts.

The proposed project would follow policies and regulations set forth by the Siskiyou County in the General Plan.

Discussion

a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less than Significant Impact. As described above, the project is located within city limits on developed lots. Energy used during construction will be non-renewable in the form of diesel-powered vehicles and equipment. Construction will comply with policies and regulations set forth in the Siskiyou County General Plan; therefore, there will be no significant impact.

b) *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

No Impact. As described, the project would not conflict or obstruct a state or local plan for renewable energy or energy efficiency. The state of California Energy Commission adopted Senate

Bill 350 – Clean Energy and Pollution Reduction Act. The proposed project will not conflict or obstruct implementation of SB 350. No impact would occur.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Geology and Soils Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Proilo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii. Strong seismic ground shaking?	☐	☐	☐	X
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv. Landslides?	☐	☐	☐	X
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	X	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems	☐	☐	☐	X

	where sewers are not available for the disposal of wastewater?				
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	X

Affected Environment

The project area is situated in the Modoc Plateau geomorphic province, between the Saddle Blanket Fault Zone to the immediate east, the Gillem Fault system to the immediate west, and the Big Crack Fault to the south. The Gillem-Big Crack fault system is a 30-km long, approximately 15-km wide zone of north striking extensional faults (CDC 2021c, USGS 2021b). Though these fault systems surround the city of Tulelake, the area is not very seismically active, with no known earthquakes originating from them. An initial review of the California Earthquake Hazards Zone Application shows that the project areas are not within an Earthquake Fault Zone (CDC 2021b).

The project site does not lie within an Alquist-Priolo Special Studies Zone.

The city of Tulelake is situated in the Tule Lake subbasin of the Upper Klamath River Groundwater Basin. Tulelake sump is located southwest of the city and all that remains of the Tulelake waterbody.

Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Proilo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

No Impact. Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace. The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. The nearest fault is the Gillem-Big Crack fault system approximately 10 miles to the southwest. No active or potentially active faults have been mapped at the project site; therefore, potential for fault rupture at the site is low.

ii. Strong seismic ground shaking?

No Impact. The project site and the entire Tulelake basin is in a seismically inactive region.

iii. Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. The soils in the project area are poorly drained, with a rare flood frequency and a ponding frequency of 0 (California Soil Resource 2021). For liquefaction to occur, the soils must be loose, granular sediment, there must be saturation of the sediment, and strong shaking. As discussed above, the soil is Tulebasin mucky, silty, clay-loam with poorly drained soils typical of lake basins (USGS 2021a). The project will adhere to California Building Code Seismic Design Standards, Chapter 16: *Structural Design*. Therefore, no impacts will occur.

iv. Landslides?

No Impact. The project area is situated on a 0-1% slope. Landslides are not prominent in the area and are not considered a significant threat to county inhabitants and/or visitors to the region.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Implementation of the proposed waterline replacements include excavation activities which would result in soil disturbance. Excavated materials would be stabilized and stockpiled during construction; post-construction, the excavated areas would be returned to pre-project conditions. BMPs such as dissipation devices stationed at discharge points, erosion control measures, and sediment mobilization will be utilized to minimize opportunity for soil erosion.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. As discussed above (a)(iii), the soils on site are classified as a Tulebasin mucky, silty, clay-loam with poorly drained soils typical of lake basins (USGS 2021a). The project area is situated on a 0-1% slope. Landslides are not prominent in the area and are not considered a significant threat to county inhabitants and/or visitors to the region.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact. Expansive soil is not present within the project area.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. Septic tanks and alternative wastewater disposal systems would not be installed on the project site where sewers are not available for the disposal of wastewater. The project includes improvements to the City of Tulelake's wastewater system and ensures the soils can support the

infrastructure. Therefore, implementation of the proposed project would not result in impacts to soils associated with the use of such wastewater treatment systems.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. There is no known unique paleontological resource, site, or unique geologic feature in project area. Therefore, no impacts will occur.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Greenhouse Gas Emissions Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	X	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	X

Affected Environment

California adopted Assembly Bill (AB) 32 and Senate Bill (SB) 97 to establish Greenhouse Gas reduction targets. These bills have determined that Greenhouse Gas emissions relate to global climate change and are a source of adverse environmental impacts. The County of Siskiyou has not established significant criteria for greenhouse gas emissions generated by a project and many regulatory agencies are sorting through suggested threshold and/or making project-by-project analyses. This approach is consistent with that suggested by California Air Pollution Control Officers Association (CAPCOA) and its technical advisory entitled *CEQA and Climate Change: Addressing Climate Change through the California Environmental Quality Act Review (*CAPCOA 2008*):*

"In the absence of regulatory standards for GHG (Greenhouse Gas) emissions or other specific data to clearly define what constitutes a 'significant project', individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice."

The impact that GHG emissions have on global climate change does not depend on whether the emissions were generated by stationary, mobile, or area sources, or whether they were generated in one region or another. Thus, consistency with the state's requirements for GHG emissions reductions is the best metric for determining whether the proposed zoning text amendment would contribute to global warming.

The proposed project will use heavy equipment (i.e., diesel powered machinery) during construction. The project will not contribute greenhouse gas emissions during the operation phase.

Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. As discussed in the Air Quality section above, there would be some impact during construction due to the use of heavy equipment (i.e. diesel powered), and airborne particles (i.e. dust). Also mentioned above, this would be for a short duration until the project is complete. This would include combustion emissions during construction from various sources. During site preparation and construction of the project, Green House Gases would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates Green House Gasses such as carbon dioxide, methane, and nitrous oxide. Furthermore, methane is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Therefore, there would be additional greenhouse gas emissions from the project during the construction phase.

Implementation of Mitigation Measure GHG-1 would ensure that the proposed project would not generate greenhouse gas emissions that may have a significant impact on the environment, based on any applicable threshold of significance.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Mitigation Measures

Mitigation Measure GHG-1: To the extent feasible, the following measures shall be incorporated into the design and construction of the project:

- On-site idling of construction equipment shall be minimized (no more than 5 minutes maximum);
- Biodiesel shall be used as an alternative fuel to diesel for at least 15 percent of the construction vehicles/equipment used if there is a biodiesel station within 5 miles of the project site;
- At least 10 percent of building materials shall be local to the extent feasible; and
- At least 50 percent of construction waste or demolition materials shall be recycled.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Hazards and Hazardous Materials Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	X	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	X
f) Impair implementation of or physically interfere with an adopted	☐	☐	☐	X

	emergency response plan or emergency evacuation plan?				
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	X

Affected Environment

The Resource Control and Recovery Act of 1974 (RCRA) establish a framework for the generation, transportation, treatment, storage, and disposal of hazardous waste as well as the management of non-hazardous wastes. The Siskiyou County Environmental Health Division (SCEH) regulates hazardous waste generation through enforcement of RCRA and California Code of Regulations 22 CCR 66261.3. The project consists of wastewater system improvements including installing sewer line, lift stations, and a headways screening facility. The project will not generate or manage any long-term hazardous materials.

A search was conducted on EnviroMapper for hazardous sites within the project vicinity. The following four sites were found within ½ mile of the project site:

- Mountain Valleys Health Centers DBA Tulelake Health Center (498 Main St; 0.05 mi from subject property), EPA ID: 110070418349. Site of interest dealing with hazardous waste activities. Currently in compliance.
- Caltrans 02-2H1804 (RT 161 EB/SB PM 18-3 to 19.4; 0.05 mi from subject property), EPA ID: 110070585224. Site of interest dealing with hazardous activities. Currently in compliance.
- Tulelake High School (400 G St; 0.15 mi from subject property), EPA ID: 110002930847. Site of interest. Currently in compliance.
- Simplot Soilbuilders (South Highway 139; 0.4 mi from subject property), EPA ID: 110008262209. Site of interest. Currently in compliance.

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No Impact. The proposed land use would be for Tulelake's wastewater system. Proper management and normal operations of the city wastewater system would not introduce potentially hazardous materials; therefore, project operations present no significant impact.

While gas and diesel fuel would typically be used by construction vehicles, Best Management Practices (BMPs) would be utilized to ensure that no construction-related fuel hazards occur. Use, storage, transport and disposal of hazardous materials (including any hazardous wastes) during construction activities would be performed in accordance with existing local, state, and federal hazardous materials regulations. Therefore, implementation of the proposed project would not create an impact to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. Construction activities would include the use of ordinary equipment, fuels and fluids. In the unlikely event of a spill, fuels would be required to be controlled and disposed of in accordance with county and State regulations. Implementation of Mitigation Measure HAZ-1 would ensure that handling of materials during construction activities would not create a hazard to the public or the environment, thereby eliminating potential impacts.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The proposed project areas are within one-quarter mile of Tulelake High School, Tulelake State Preschool, and Tulelake Basin Elementary School. The proposed project infrastructure operations would not introduce hazardous emissions. As stated above (a), construction vehicles will use gas and diesel fuel, but the utilization of BMPs will ensure that no construction-related hazards will occur. Furthermore, materials will be handled, stored, and disposed of in accordance with applicable standards established by the Department of Toxic Substances, the Environmental Protection Agency, and the Occupational Safety and Health Administration which will adequately reduce risk. Implementation of Mitigation Measure GHG-1 would minimize the emission of hazardous emissions, thereby eliminating potential impacts.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The project areas are not located within any site included on a list of hazardous materials sites. The Department of Toxic Substances Control's Hazardous Waste and Substances Site List (Cortese) confirms there are no hazardous sites within the City of Tulelake; therefore, there will be no impact from the proposed project.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project site is not located within an airport land use plan, or within two miles of a public airport or public use airport. The proposed project would not result in a safety hazard for people residing or working in the project area; therefore, there is no impact from the proposed project.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project is the construction of wastewater system improvements throughout Tulelake. Proposed building and improvements would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. Due to the project's location within city limits, there is an extremely low possibility of it exposing people or property to a significant risk of loss, injury, or death involving wildland fires.

Mitigation Measures

Mitigation Measure HAZ-1: Project construction plans shall include emergency procedures for responding to hazardous materials releases for materials that will be brought onto the site as part of construction activities. The emergency procedures for hazardous materials releases shall include the necessary personal protective equipment, spill containment procedures, and training of workers to respond to accidental spills/releases. All use storage, transport and disposal of hazardous materials (including any hazardous wastes) during construction activities shall be performed in accordance with existing local, state, and federal hazardous materials regulations.

Hydrology and Water Quality

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	X	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
I. Result in a substantial erosion or siltation on- or off-site;	☐	☐	X	☐
II. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	X	☐
III. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	X	☐

IV. Impede or redirect flood flows?	☐	☐	☐	X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	X	☐

Affected Environment

The city of Tulelake lies south of the Oregon-California border, with the Tule Lake Wildlife Refuge located west of the city. The city lies in the Tule Lake Basin, on the outskirts of the Klamath Lake Basin (USDA NRCS 2021b). Lost River runs north/south along the west side of Tulelake and flows into Tule Lake. The city is situated on what was once a shallow lake stretching from Sheepy Peak Ridge to the west, and approximately 13 miles east. Tule Lake was drained to create approximately 60,000 acres of agricultural farmlands and development.

Water quality is regulated by the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES), which controls the discharge of pollutants to water bodies from point and non-point sources.

Groundwater is regulated by the Sustainable Groundwater Management Act (SGMA), which was signed into legislation in 2014. This act requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. The Tule Lake basin is categorized as a medium priority basin (CDWR 2021). The Siskiyou County Flood Control and Water Conservation District, the Siskiyou County Board of Supervisors, the Tulelake Irrigation District, and the City of Tulelake serves on the Groundwater Sustainability Agency (GSA). Together, the GSAs developed Groundwater Sustainability Plans (GSP) for the Tule Lake subbasin which was released on December 19, 2021. The GSP assesses the current and projected future conditions of the basins and establishes management, monitoring activities and long-term goals.

The project site is not within a critical aquifer.

The project area is in an area of minimal flood hazard, according to the Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer (NFHL) Viewer.

Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The project includes improvements and updates to an existing wastewater system. The proposed project will not violate water quality standards or discharge requirements.

Short-Term Construction Impacts. Construction of the proposed project would cause disturbances to the ground surface from earthwork, including excavating and grading.

Materials used during construction could have chemicals that are potentially harmful to aquatic resources and water quality. Accidents or improper use of these materials could release contaminants to the environment. Additionally, oil and other petroleum products used to maintain and operate construction equipment could be accidentally released.

b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

No Impact. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge as it would not draw on groundwater as a source of water supply. Therefore, no impacts would occur.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

i. *Result in a substantial erosion or siltation on- or off-site?*

Less Than Significant Impact. The proposed project will not result in substantial erosion or siltation on- or off-site. The proposed project would include cutting and filling ground materials. During construction, BMPs would be implemented, consistent with the General Permit, so that on-site and off-site erosion and sedimentation would be controlled to the extent practicable. The headwaters screening facility will increase the impervious surface, but the amount would be small and designed to maximize water infiltration on the subject property. Therefore, this impact is considered less than significant.

ii. *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?*

Less Than Significant Impact. The proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Several components of the project would include no new impervious surfaces as the sewer lines and lift stations will be installed underground. The headwaters screening facility would include minimal new impervious surface. Therefore, this impact is considered less than significant.

iii. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Less Than Significant Impact. The proposed project includes improvements to the wastewater system. It does not involve the creation of water and rather focuses on the distribution throughout the city. Therefore, the proposed project would not create or contribute runoff water which would exceed the capacity of the existing system, nor would it provide substantial additional sources of polluted runoff. This impact is considered less than significant.

iv. Impede or redirect flood flows?

No Impact. The proposed project would not significantly impede or redirect flood flows. See response iii. above.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. There are no impacts related to flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation as the project is located inland from the coast, in an area with an average rainfall of 11 inches, and averages 23 inches of snow per year. According to the Federal Emergency Management Agency's National Flood Hazard Layer Viewer, the project area is located in an area of minimal flood hazard. Therefore, no impacts would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The proposed project would not conflict with or obstruct implementation of a water quality control plan or the Tule Lake Subbasin Groundwater Sustainability Plan.

Mitigation Measures

None required due to no negative impacts.

Land Use and Planning

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X

Affected Environment

The project properties are dispersed throughout the city limits of Tulelake. The sewer lines and lift stations will be installed underground. The headworks screening facility will be installed adjacent to an existing wastewater building and three effluent treatment ponds.

The areas surrounding the subject property are zoned as Mixed Use and Public Agency.

The headworks screening facility is located on tax lot 050-051-010 is 30.80 acres. The tax lot includes three effluent treatment ponds, an existing wastewater building, and the Tulelake Volunteer Fire Department. The property exhibits vegetation including grass lawn and two trees surrounding the existing wastewater building.

Discussion

a) Physically divide an established community?

No Impact. The proposed project would not physically divide an established community. The Property is located within city limits and most components would be installed underground, therefore not introducing any obstructions to an established community. The headworks screening facility is located in a parcel that is currently used for wastewater management. Therefore, the proposed project has no impact on physically dividing a community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project would not impact nor conflict with any land use plan, policy, or regulation. The current zoning for the properties is for commercial and residential use. The wastewater system improvements are essential utility infrastructure for the city. Therefore, the project does not conflict and causes no impact.

Mitigation Measures

None required due to no negative impacts.

Mineral Resources

Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	X

Affected Environment

Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil-bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel and earth are also considered minerals by the Department of Conservation when extracted by surface mining operations.

There are no known mineral resources within the project site or in the area around the site (CDC Mineral Land Classification 2021a).

Discussion

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The proposed project is not located on or immediately adjacent to a mineral resource as there are no known mineral resources in the project area.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed project would not result in the loss of availability of any locally important mineral resource recovery site.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Noise Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	X	☐	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	X	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

Affected Environment

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120-140 dB corresponding to the threshold of pain.

Existing Ambient Noise Environment

The proposed project encompasses commercial, residential, and Public Agency space within city limits of the City of Tulelake. The primary contributors to the noise environment in the space include vehicle traffic on Highway 139, railroad traffic, sounds emanating from surrounding neighborhoods, including

voices, noises from adjacent businesses, and naturally occurring sounds such as wind and wind-generated rustling. Generally, intermittent short-term noises do not significantly contribute to longer-term noise averages.

Siskiyou County

The Siskiyou County General Plan Noise Element identifies land use compatibility standards for exterior community noise for a variety of land use categories for project planning purposes. For example, for residential land uses, an exterior noise level of 60 dBA Ldn (Day-Night Average Sound Level) is identified as being "acceptable" requiring no special noise insulation or noise abatement features unless the proposed development is itself considered a source of incompatible noise for a nearby land use. The Noise Element also describes the noise level for outdoor areas, such as farms and passively used open space areas, as 50 dBA Ldn. These outdoor noise levels are intended to "assure that a 45 dBA Ldn indoor level will be achieved by the noise attenuation with regular construction materials."

City of Tulelake

Limitations and standards on noise are generally enforced through a noise ordinance or a jurisdiction's municipal code. There is no adopted Noise Ordinance for City of Tulelake; thus, limits on noise are not regulated by the City of Tulelake Municipal Code. However, the County of Siskiyou Code of Ordinances Section 10-13.10 states, "*The best management practices shall be used throughout all phases of work to control dust, noise, and traffic, erosion and release of contaminants, so as to avoid adverse impacts on the public health, welfare, and safety and so as to avoid noise and/or the discharge of contaminants to the soil, water or atmosphere so as to avoid any violation of any applicable rules, regulations, ordinances, statutes, or other applicable law*."

Significant noise sources in the City of Tulelake include traffic on major roadways (Highway 139), railroad operations, and localized noise sources from commercial businesses. Ambient noise levels in areas away from major transportation routes are generally low. The noise environment of the project area, outside of major thoroughfares and railroads, is considered typical of commercial areas and public parks, corresponding to the 50dBA Ldn outdoor noise level.

Discussion

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant with Mitigation Incorporated. Construction noise can be created from on-site and off-site sources. On-site noise sources would principally consist of the operation of heavy-duty diesel and gasoline-powered construction equipment. Off-site noise sources would include vehicles commuting to and from the job site, as well as from trucks transporting material to the construction area. These sources are described below:

Construction of the proposed project would require excavation and earthwork activities that could generate noise levels that exceed established thresholds. Although these activities could result in infrequent periods of high noise, this noise would not be sustained and would occur only during the temporary construction period. No pile driving or other construction activity that would generate

high noise levels or ground borne vibration would occur within the project site. Short term noise levels would be reduced to the extent practicable by the mitigation measures presented below. Implementation of Mitigation Measures NOISE-1 through NOISE-4 would reduce potential impacts to less-than significant levels.

The operation phase of the project would not create substantial noise impacts as it operates as a wastewater system and has standard utility-related noise emissions.

b) Generation of excessive ground borne vibration or ground borne noise levels?

Less Than Significant Impact. Construction of the proposed project would require excavation and earthwork activities. Although these activities could result in infrequent periods of high noise, this noise would not be sustained and would occur only during the temporary construction period. No pile driving or other construction activity that would generate very high noise levels or ground borne vibration would occur on the project site. Therefore, this impact is considered less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. As described in response (a) above, the proposed project is not located within the vicinity of a private airstrip or an airport land use plan, or within two miles of a public airport or public use airport.

Mitigation Measures

Mitigation Measure NOISE-1: During construction, the City shall require the contractor to ensure that all equipment is maintained in proper working order, including proper muffling.

Mitigation Measure NOISE-2: During construction, the contractor shall locate portable equipment as far as possible from adjacent residences.

Mitigation Measures NOISE-3: During construction, the contractor shall store and maintain equipment as far as possible from adjacent residences.

Mitigation Measures NOISE-4: If construction-related noise exceeds City standards for non-transportation sources, the City shall require the contractor to implement additional appropriate noise-reducing measures, including but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around construction noise sources.

Population and Housing

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

Affected Environment

The proposed project would be located on various lots throughout the city including commercially and residentially developed areas. The affected area would be the surrounding areas which includes primarily single family homes, open agricultural fields, and businesses.

The subject properties will improve the wastewater system of the City of Tulelake, providing wastewater services to residents.

Discussion

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project would not result in new housing and rather upgrades existing wastewater infrastructure. There would be no increase in population resulting from the project. Therefore, there will be no impact to population growth in the area from the proposed project.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project would not displace any people or housing; therefore, there will be no impact from the project.

Mitigation Measures

None required due to no negative impacts.

Public Services

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X
Other public facilities?	☐	☐	☐	X

Affected Environment

The project site is in a suburban area served by the existing public services:

Police Protection. Police protection to the project site is provided by the City of Tulelake Police Department. The city is currently served by three sworn officers for the population of 878 residents of Tulelake. The Tulelake Police Department is located at 470 C Street in Tulelake.

Fire Protection. The Tulelake area is serviced by a Volunteer Fire Department located at 1 Ray Oehlerich Way in Tulelake.

Schools. The project site is located within the boundaries of the Tulelake School District. Tulelake Basin Elementary School is located at 461 2nd Street, Tulelake High school is located at 850 Main Street, and Tulelake Basin Joint Unified is located at 400 G Street.

Parks. There is the current Tulelake Veterans Park located at 334 Main Street. Another Park located on First Street from B Street to C Street, includes a tennis court, jungle gym, and a shaded picnic area with restroom facilities. The Tulelake Fairgrounds located at 800 Main Street includes a racetrack and baseball field. The High schools (mentioned above), have a paved track and two baseball fields, and the elementary school (mentioned above), has three baseball fields and a dirt track.

Discussion

a) *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire Protection, Police Protection, Schools, Parks, other public facilities?*

Less Than Significant Impact/No Impact. The proposed project would improve the site through improvements to wastewater system components. Since the project would not increase the population in the area, there would be no increased demand for emergency services or community amenities. Therefore, impacts are considered less than significant to fire and police protection services.

Implementation of the proposed project would not result in any local or regional population increase. Therefore, the project would not require construction of new schools, or result in schools exceeding their capacities.

The proposed project is not expected to result in impacts to other public facilities.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Recreation Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	X

Affected Environment

There is the current Tulelake Veterans Park located at 334 Main Street (north of proposed project site). Another park located on First Street from B Street to C Street (approximately 0.15 miles from project site), includes a tennis court, jungle gym, and a shaded picnic area with restroom facilities. The Tulelake Fairgrounds located at 800 Main Street (adjacent to the project site) includes a racetrack and baseball field. The High schools (mentioned above), have a paved track and two baseball fields, and the elementary school (mentioned above), has three baseball fields and a dirt track.

Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project would have no impact on existing neighborhood and regional parks or other recreational facilities since the project is an improvement to existing infrastructure.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The project is an improvement to wastewater system components and does not include any recreational facilities. Potential adverse effects on the environment have been addressed in this Initial Study.

Mitigation Measures

None required due to no negative impacts.

Transportation/Traffic

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	X	☐
b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☐	X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
d) Result in inadequate emergency access?	☐	☐	☐	X

Affected Environment

Highway 139 provides regional access to the City of Tulelake. Local access is provided via Main Street.

The project does not require road repair or construction of a new road.

Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No Impact. The proposed project would improve the existing wastewater system infrastructure. Most project components will be installed underground, therefore not interfering with roadways. The headwaters screening facility site is located at an existing wastewater management area and therefore will not present new conflicts. Therefore, the proposed project has no impact as there will be no conflict with a program, plan, ordinance or policy addressing the circulation system.

b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

No Impact. Section 15064.3 of the CEQA Guidelines establishes specific considerations for evaluating a project's transportation impacts. The CEQA Guidelines identify vehicle miles traveled (VMT), which is the amount and distance of automobile travel attributable to a project, as the most appropriate measure of transportation impacts. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Vehicle miles traveled exceeding an applicable threshold of significance for land use projects may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area, compared to existing conditions, should be presumed to have a less than significant transportation impact.

The project is not located within one-half mile of either an existing major transit stop, or a stop along an existing high-quality transit corridor.

c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

No Impact. The project would not change or alter the current boundaries of the subject property proposed for the project. The new infrastructure would not substantially increase hazards for vehicles or users due to a design feature or incompatible uses.

d) *Result in inadequate emergency access?*

No Impact. The proposed project would not result in inadequate emergency vehicle access to the lot or the surrounding areas. The infrastructure will be underground or on an established water management lot.

Mitigation Measures

None required due to no negative impacts.

Utilities and Service Systems

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	X	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	X	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	X	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	X	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	X

Affected Environment

The project consists of waterline replacements, meter vault improvements, and the installation of a new water tank. The project will enhance the city's water distribution system components.

Water. The city's water system facilities include 3 active wells, one storage tank 100k, booster pumps, an elevated storage tank, and a distribution system. The city obtains water from Well #3 which provides an abundant supply of high-quality water. The water from the well is chlorinated before it is delivered to customers and sampled for the presence of coliform bacteria twice a month. The City of Tulelake owns and operates the Tulelake Wastewater Treatment Facility. The California Regional Water Quality Control Board North Coast Region encompasses Tulelake. The Board adopted Waste Discharge Requirements and the National Pollution Discharge Elimination System (NPDES) which regulate the discharge limits.

Wastewater. The City of Tulelake Wastewater Treatment Plant was upgraded in 2016. The upgrade consisted of two, lined treatment ponds fed by two S&L pumps, with the treatment ponds being supplied with a new Triple Point Aerators (air supply). The waste is recycled and pumped to two new effluent storage ponds where it is pumped to a feed line that supplies water for agricultural irrigation for farm cover crops.

Other Utilities. City of Tulelake garbage is provided by Siskiyou County Integrated Solid Waste Management Regional Agency.

Discussion

a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less Than Significant Impact. The proposed project itself is the modification of existing wastewater facilities and the replacement of outdated, inefficient system components. The project would not impact water utility systems. The new sewer lines will include cumulatively 4,900 feet of 8" PVC sewer collection piping within the distribution system. The C Street sewer lift station and Park Street sewer lift station will be replaced with new lift stations at existing locations. The headworks screening facility will improve existing wastewater management systems. The project does not introduce an increased demand for electric power or natural gas as the facilities already exist and are being upgraded. The project would not impact telecommunication facilities because there is no increased demand for relocation. Therefore, the project has a less than significant impact.

b) *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less Than Significant Impact. The Tulelake Well is known to have a good, static level and recovers quickly. Since 2011, the well has dropped approximately 15 feet, even in the drought years. The well is reported to recover quickly, with little variability from season to season. The project will not have a significant impact on the water supply.

c) *Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less Than Significant Impact. The projected wastewater generation resulting from implementation of the proposed project would be proportionally small and would not exceed the current capacity of existing facilities. This impact is considered less than significant.

d) *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less Than Significant Impact. Operation of the proposed project is not anticipated to generate solid waste. Construction of the proposed project would generate construction waste. However, the amount of construction waste would not be substantial and would not result in a substantial reduction in the capacity of a landfill. Therefore, this impact is considered less than significant.

e) *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Less Than Significant Impact. The operation of the proposed project would not generate solid waste. Therefore, there is no impact from the project.

Mitigation Measures

None required due to no negative impacts.

Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	X	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.)	☐	☐	X	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	X	☐	☐

Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce

the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation Incorporated. As described in the sections above, all environmental effects were determined to be less than significant or reduced below levels of significance with mitigations. Implementation of the mitigation measures recommended in this Initial Study would ensure that construction and operation of the proposed project would not substantially degrade the quality of the environment; reduce the habitat, population, or range of a plant or animal species; or eliminate important examples of California history or prehistory.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.)*

Less Than Significant Impact. The impacts of the proposed project are individually limited and not cumulatively considerable. The proposed project would improve the water system distribution and storage system. All environmental impacts that could occur as a result of the project would be reduced to less than significant levels through implementation of the mitigation measures recommended in this Initial Study. Therefore, the project creates a less than significant impact.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less than Significant with Mitigation Incorporated. During project construction, the proposed project could result in environmental effects, such as short-term construction noise, air quality, and hazardous materials impacts. Implementation of the mitigation measures recommended in this Initial Study would ensure that construction of the proposed project would not cause adverse effects on human beings.

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REFERENCES

America's Scenic Byways. California. Retrieved 2025, from https://scenicbyways.info/state/CA.html.

California Air Resources Board. 2021. Area Designations Maps/State and National. Retrieved 2025, from https://ww2.arb.ca.gov/desig/adm/adm.htm.

California Department of Conservation.

2021a. CGS Information Warehouse: Mineral Lands Classification. Retrieved 2025, from https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc.

2021b. EQ Zapp: California Earthquake Hazards Zone Application. Retrieved 2025, from https://www.conservation.ca.gov/cgs/geohazards/eq-zapp

2021c. Fault Activity Map of California 2010. Retrieved 2025, from http://maps.conservation.ca.gov/cgs/fam/.

2021d. Siskiyou County. Retrieved 2025, from https://www.conservation.ca.gov/dlrp/fmmp/Pages/Siskiyou.aspx.

California Department of Fish and Wildlife. (n.d.). *California Department of Fish and Wildlife BIOS*. Retrieved 2025, from https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data#43018410-cnddb-quickview-tool

California Department of Water Resources. 2021. Sustainable Groundwater Management Act Basin Prioritization Dashboard. Retrieved 2025, from https://gis.water.ca.gov/app/bp-dashboard/p2/.

California Fire. 2021. Wildland Hazard & Building Codes. Retrieved 2025, from http://frap.fire.ca.gov/webdata/maps/siskiyou/fhszs_map.47.pdf.

California Office of Historic Preservation. (n.d.). *Siskiyou*. Retrieved 2025, from https://ohp.parks.ca.gov/?page_id=21526

California Soil Resource. 2021. SoilWeb. Retrieved 2025, from https://casoilresource.lawr.ucdavis.edu/gmap/.

California State Parks. (n.d.). California Historical Resources. Retrieved 2025, from https://ohp.parks.ca.gov/ListedResources/

City of Tulelake. 2021. City Administration. Retrieved 2025, from http://www.cityoftulelake.com/departments/city-administration. Website accessed July 2024

Public Works Department. Retrieved 2025, from http://www.cityoftulelake.com/departments/public-works-department.

Department of Toxic Substances Control. (n.d.). *Hazardous Waste and Substances Site List (Cortese).* Retrieved 2025, from https://dtsc.ca.gov/dtscs-cortese-list/

Environmental Protection Agency. 2025. California Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants. Retrieved 225, from https://www3.epa.gov/airquality/greenbook/anayo_ca.html

Environmental Protection Agency. 2025. Sole Source Aquifers. Retrieved 2025, from https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b

Environmental Protection Agency. (n.d.). EnviroMapper. Retrieved 2025, from https://geopub.epa.gov/myem/efmap/index.html

FEMA. (n.d.). *FEMA Flood Maps*. Retrieved 2025, from https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

Fish and Wildlife Service. (n.d.). *National Wetlands Inventory*. Retrieved 2025, from https://www.fws.gov/wetlands/data/mapper.html

Siskiyou County. 2024. Siskiyou County General Plan Update. Retrieved 2025, from https://siskiyou2050.com/images/docs/SkyGP_BR_06_BioRes_PRD.pdf#:~:text=This%20section%20describes%20the%20existing%20conditions%20and%20regulatory,vegetation%20communities%2C%20special%20status%20species%2C%20and%20critical%20habitats.

State of California & Governor's Office of Planning and Research. (2008). *CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*. Retrieved 2025, from https://opr.ca.gov/docs/june08-ceqa.pdf

U.C. Davis. (n.d.). *California Soil Resource Lab*. Retrieved 2025, from https://casoilresource.lawr.ucdavis.edu/soilweb-apps/

United States Climate Data. 2021. Tulelake, California. Retrieved 2025, from https://www.usclimatedata.com/climate/tulelake/california/united-states/usca1166.

United States Department of Agriculture Natural Resources Conservation Service. 2021a. Web Soil Survey. Retrieved 2025, from https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

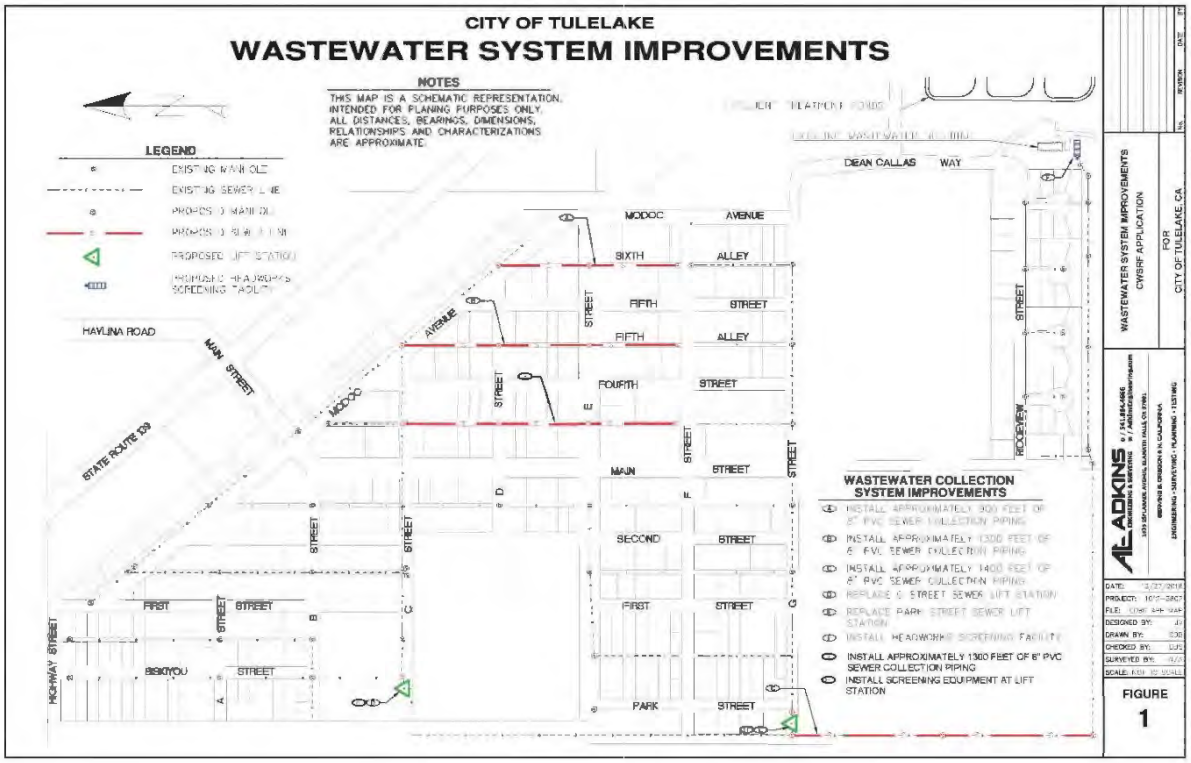
Quaternary Fault and Fold Database of the United States: Gillem-Big Crack Fault system (Class A) No. 3. 2019b. Retrieved 2025, from https://earthquake.usgs.gov/cfusion/qfault/show_report_AB_archive.cfm?fault_id=3&section_id=.

Safe Drinking Water Information System. (n.d.). Water System Facilities. CA Drinking Water Watch. Retrieved 2025, from https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemFacilities.jsp?tinwsys_is_number=4716&tinwsys_st_code=CA

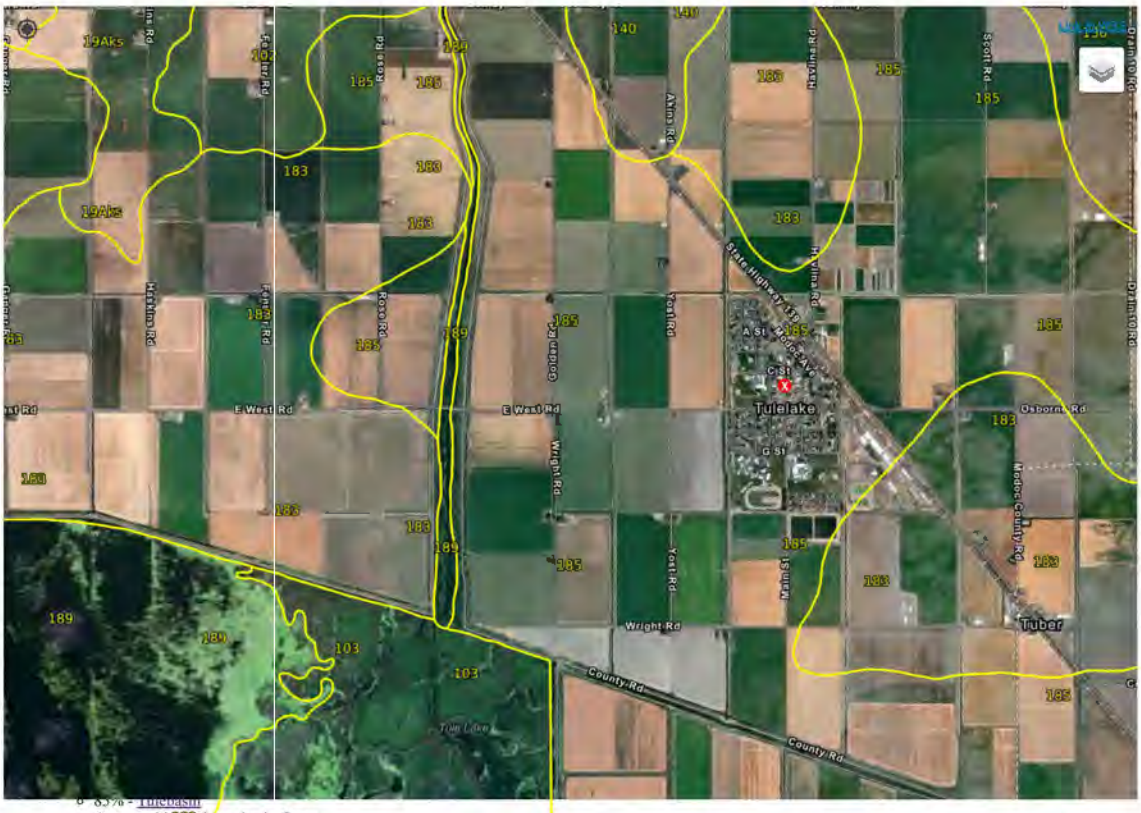
USDA & Natural Resources Conservation Service. (n.d.). *Web Soil Survey*. Retrieved 2025, from https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Appendix A – Site Maps




CITY OF TULELAKE
WASTEWATER SYSTEM IMPROVEMENTS
NOTES
THIS MAP IS A SCHEMATIC REPRESENTATION, INTENDED FOR PLANING PURPOSES ONLY. ALL DISTANCES, BEARINGS, DIMENSIONS, RELATIONSHIPS AND CHARACTERIZATIONS ARE APPROXIMATE.
LEGEND
EXISTING MANHOLE
EXISTING SEWER LINE
PROPOSED MANHOLE
PROPOSED FORCE MAIN
PROPOSED LIFT STATION
PROPOSED HEADWORKS SCREENING FACILITY
DEAN CALLAS WAY
MODOC AVENUE
SIXTH ALLEY
FIFTH STREET
FIFTH ALLEY
FOURTH STREET
MAIN STREET
SECOND STREET
FIRST STREET
PARK STREET
HAYLINA ROAD
MAIN STREET
STATE ROUTE 139
HIGHWAY 139
BEKKYOU STREET
RIDGEVIEW
WASTEWATER COLLECTION SYSTEM IMPROVEMENTS
INSTALL APPROXIMATELY 900 FEET OF 8" PVC SEWER COLLECTION PIPING
INSTALL APPROXIMATELY 1300 FEET OF 8" PVC SEWER COLLECTION PIPING
INSTALL APPROXIMATELY 1400 FEET OF 8" PVC SEWER COLLECTION PIPING
REPLACE C STREET SEWER LIFT STATION
REPLACE PARK STREET SEWER LIFT STATION
INSTALL HEADWORKS SCREENING FACILITY
INSTALL APPROXIMATELY 1300 FEET OF 8" PVC SEWER COLLECTION PIPING
INSTALL SCREENING EQUIPMENT AT LIFT STATION
WASTEWATER SYSTEM IMPROVEMENTS
CWSRF APPLICATION
FOR
CITY OF TULELAKE, CA
ADKINS
FIGURE
1

Appendix B – Agriculture and Forestry Resource



- 85% - Tulebasin
  Geomorphic Position: basin floors
- 5% - Poe
  Horizon data n/a | View Similar Data
- 5% - Laki
  Horizon data n/a | View Similar Data
- 2% - Capjac
  Geomorphic Position: basin floors
- 2% - Tulana
  Geomorphic Position: basin floors
  Horizon data n/a | View Similar Data

▼▲ Map Unit Data

- Map Unit Key: 486651 [Graphical Summary]
- National Map Unit Symbol: jbdf
- Order of Mapping: ?
- Map Unit Type: Consociation ?
- Farmland Class: Prime farmland if irrigated and drained
- Available Water Storage (0-100cm): 40.16 cm
- Flood Frequency (Dominant Condition): Rare
- Flood Frequency (Maximum): Rare
- Ponding Frequency: 0
- Drainage Class (Dominant Condition): Very poorly drained ?
- Drainage Class (Wettest Component): Very poorly drained ?
- Proportion of Hydric Soils: 89% ?
- Min. Water Table Depth (Annual): 69 cm
- Min. Water Table Depth (April-June): 69 cm
- Min. Bedrock Depth: n/a

▼▲ Survey Metadata

▼▲ Soil Profiles

- Soil Sketch ?
- Org. Matter ?

Lat: 41.9516
Lon: -121.4371

...nity Maps Contributors, Maxar, California State Parks, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

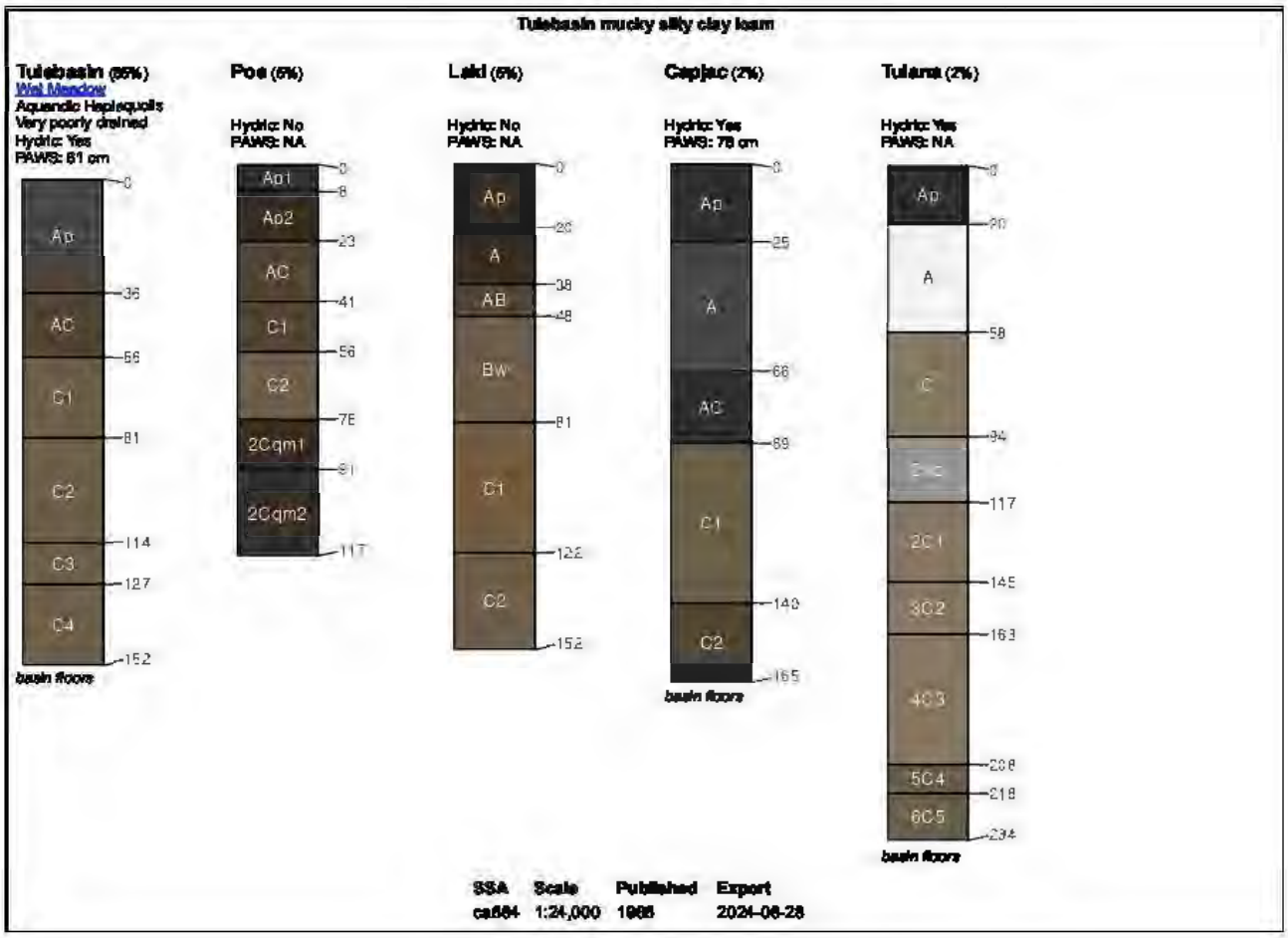
- Clay
- Sand
- AWC
- Ksat
- pH
- Kf Factor
- EC
- SAR
- CaCO3
- Gypsum
- CEC @ pH7
- Linear Ext.

- **▼▲ Soil Taxonomy**
- **▼▲ Land Classification**
- **▼▲ Hydraulic and Erosion Ratings**
- **▼▲ Forest Productivity**
- **▼▲ Soil Suitability Ratings**
- **▼▲ Details**

SoilWeb Help

OK

×


Tulebasin mucky silty clay loam
Tulebasin (55%)
Wet Meadow
Aquandic Haplaquolls
Very poorly drained
Hydric: Yes
PAWS: 81 cm
Ap
AC
C1
C2
C3
C4
basin floors
Poe (5%)
Hydric: No
PAWS: NA
Ap1
Ap2
AC
C1
C2
2Cqm1
2Cqm2
Laki (5%)
Hydric: No
PAWS: NA
Ap
A
AB
BW
C1
C2
Capjac (2%)
Hydric: Yes
PAWS: 78 cm
Ap
A
AC
C1
C2
basin floors
Tulana (2%)
Hydric: Yes
PAWS: NA
Ap
A
C
2C1
3C2
4C3
5C4
6C5
basin floors
SSA Scale Published Export
ca564 1:24,000 1986 2024-08-28

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 Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

Install Approx 900 ft of PVC pipe (A)



March 25, 2025

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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3

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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

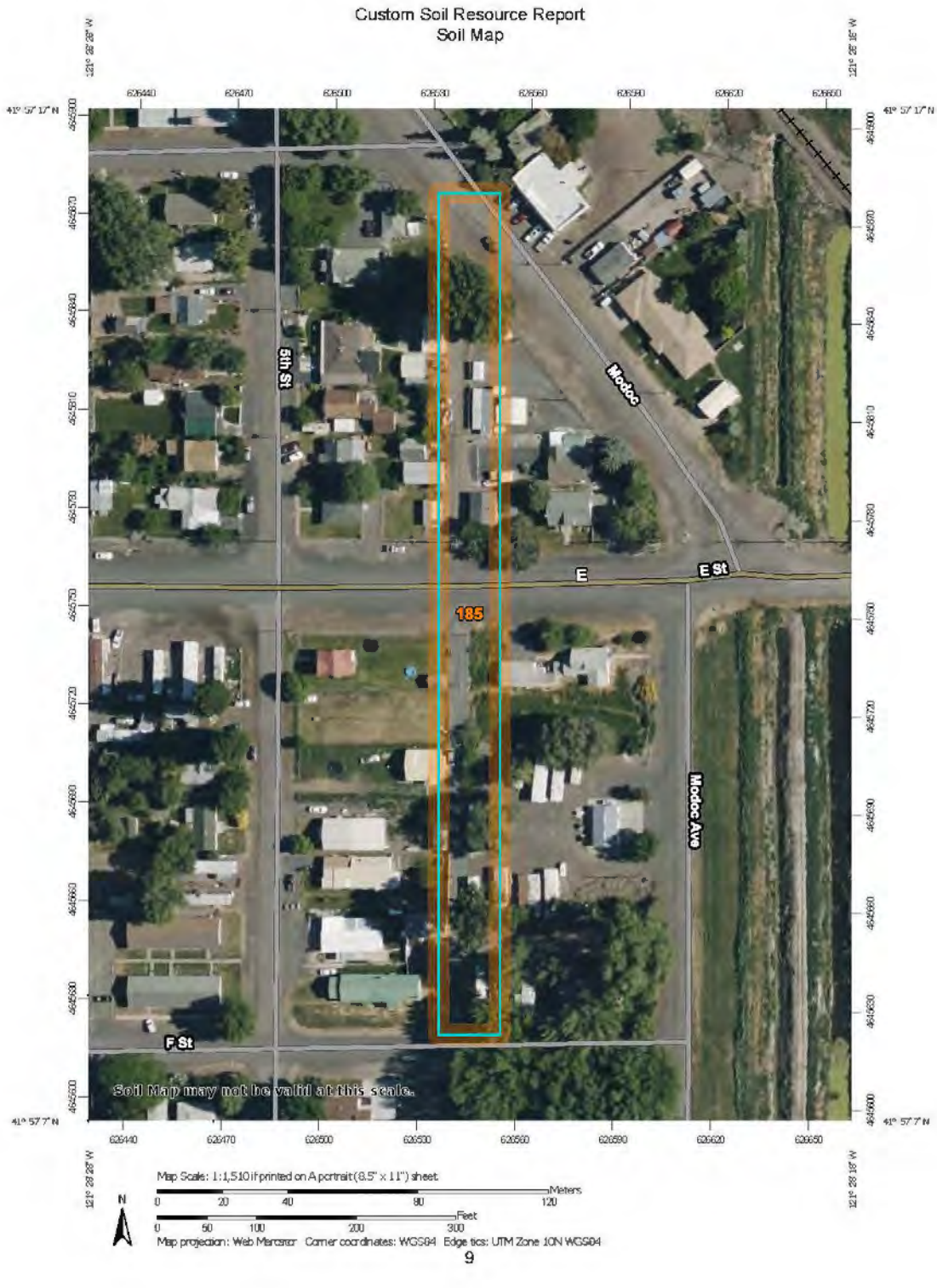
Custom Soil Resource Report

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

7

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
5th St
Modoc
E
E St
185
Modoc Ave
F St
Soil Map may not be valid at this scale.
Map Scale: 1:1,510 if printed on A portrait (8.5" x 11") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
9

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
185	Tulebasin mucky silty clay loam	1.2	100.0%
Totals for Area of Interest		1.2	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.

Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

185—Tulebasin mucky silty clay loam

Map Unit Setting

National map unit symbol: jbdf
Elevation: 4,030 to 4,050 feet
Mean annual precipitation: 11 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 65 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Tulebasin and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tulebasin

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 14 inches: mucky silty clay loam
H2 - 14 to 32 inches: silty clay
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG915CA - Wet Meadow
Hydric soil rating: Yes

Minor Components

Poe

Percent of map unit: 5 percent
Hydric soil rating: No

Laki

Percent of map unit: 5 percent
Hydric soil rating: No

Capjac

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tulana

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

United States Department of Agriculture

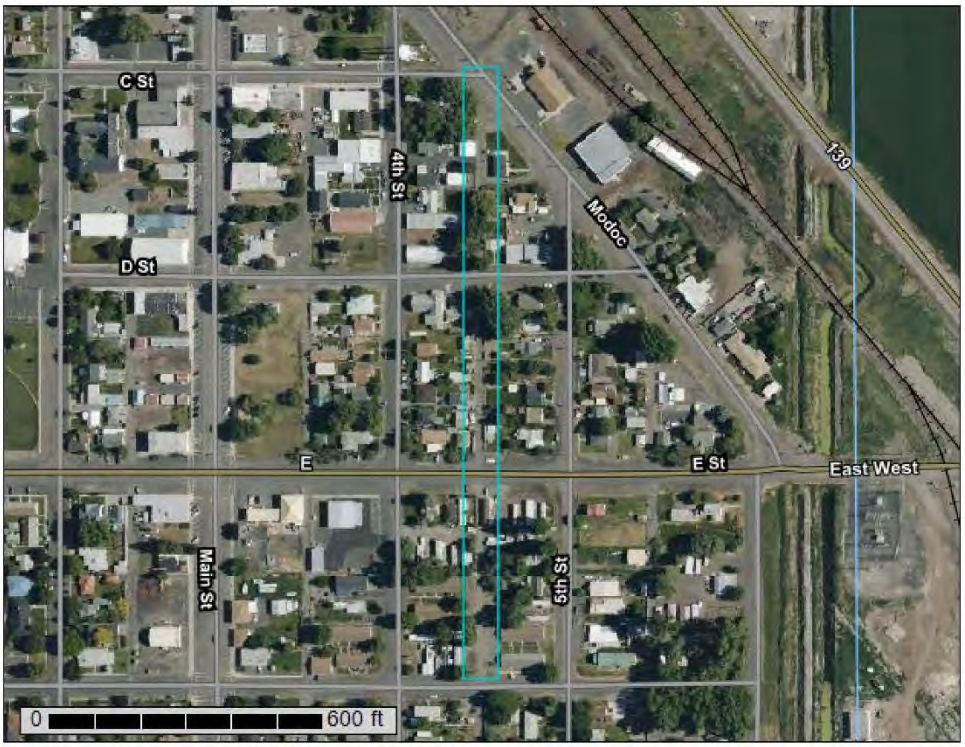
NRCS

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 Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

Install Approx 1300 ft of PVC pipe (B)



March 25, 2025


Custom Soil Resource Report
Soil Map
121° 28' 36" W
121° 28' 20" W
41° 57' 23" N
41° 57' 7" N
626250
626310
626370
626430
626490
626550
626610
4646070
4646010
4645950
4645890
4645830
4645770
4645710
4645650
4645590
C St
4th St
Modoc
D St
185
5th St
E
E St
F St
Soil Map may not be valid at this scale.
Map Scale: 1:2,380 if printed on A portrait (8.5" x 11") sheet.
Meters
0
35
70
140
210
Feet
0
100
200
400
600
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
9

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
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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.

Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

185—Tulebasin mucky silty clay loam

Map Unit Setting

National map unit symbol: jbdf
Elevation: 4,030 to 4,050 feet
Mean annual precipitation: 11 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 65 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Tulebasin and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tulebasin

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 14 inches: mucky silty clay loam
H2 - 14 to 32 inches: silty clay
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG915CA - Wet Meadow
Hydric soil rating: Yes

Custom Soil Resource Report

Minor Components

Poe

Percent of map unit: 5 percent
Hydric soil rating: No

Laki

Percent of map unit: 5 percent
Hydric soil rating: No

Capjac

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tulana

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

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United States Department of Agriculture

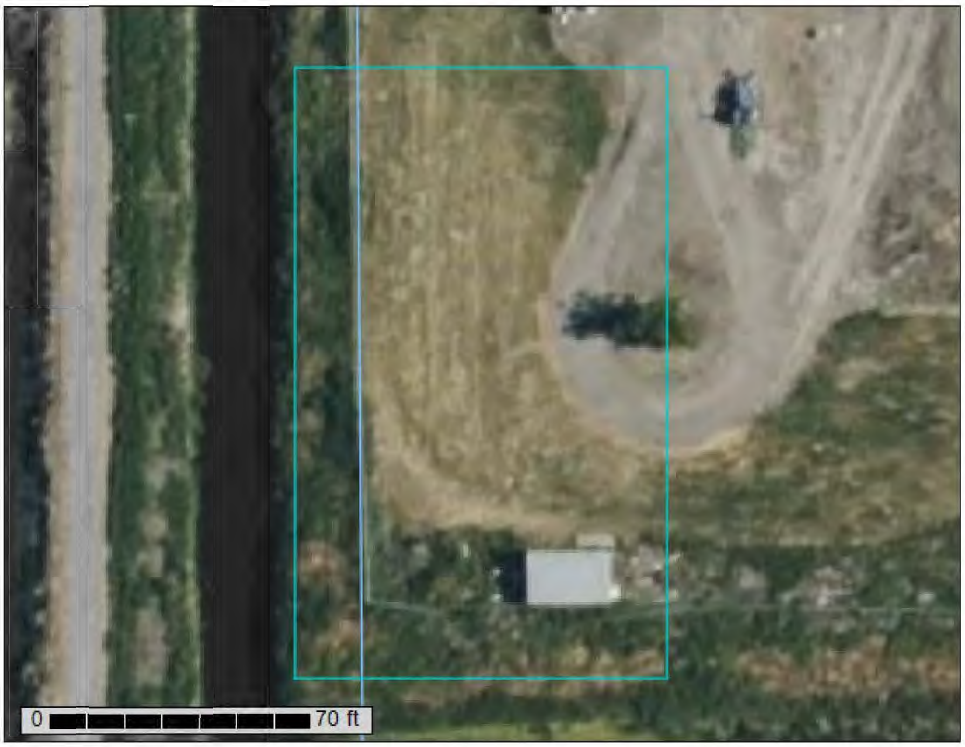
NRCS

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 Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

Install Headworks Screening Facility (F)



March 25, 2025


Custom Soil Resource Report
Soil Map
185
183
Soil Map may not be valid at this scale.
Map Scale: 1:290 if printed on A portrait (8.5" x 11") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
9

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
183	Tulana silt loam, 0 to 1 percent slopes	0.0	0.0%
185	Tulebasin mucky silty clay loam	0.4	100.0%
Totals for Area of Interest		0.4	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.

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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.

Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

183—Tulana silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: jbdc
Elevation: 4,080 to 4,100 feet
Mean annual precipitation: 12 inches
Mean annual air temperature: 46 degrees F
Frost-free period: 80 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Tulana and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tulana

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 41 inches: silt loam
H3 - 41 to 60 inches: stratified fine sand to silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (1.0 to 3.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Very high (about 25.5 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG903CA - Dry Clayey
Hydric soil rating: Yes

Minor Components

Unnamed
Percent of map unit: 6 percent
Hydric soil rating: No

Capjac
Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Lamath
Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

185—Tulebasin mucky silty clay loam

Map Unit Setting
National map unit symbol: jbdf
Elevation: 4,030 to 4,050 feet
Mean annual precipitation: 11 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 65 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition
Tulebasin and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit

Description of Tulebasin

Setting
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile
H1 - 0 to 14 inches: mucky silty clay loam
H2 - 14 to 32 inches: silty clay
H3 - 32 to 60 inches: silty clay

Custom Soil Resource Report

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG915CA - Wet Meadow
Hydric soil rating: Yes

Minor Components

Poe

Percent of map unit: 5 percent
Hydric soil rating: No

Laki

Percent of map unit: 5 percent
Hydric soil rating: No

Capjac

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tulana

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

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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 Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

Install Approx 1300 ft of PVC pipe (G)



March 25, 2025


Custom Soil Resource Report
Soil Map
121° 28' 41" W
121° 28' 25" W
41° 57' 23" N
41° 57' 7" N
626130
626190
626250
626310
626370
626430
626490
4646080
4646020
4645960
4645900
4645840
4645780
4645720
4645660
4645600
C St
D St
E
E St
F St
4th St
Main St
185
Soil Map may not be valid at this scale.
Map Scale: 1:2,400 if printed on A portrait (8.5" x 11") sheet.
Meters
0
35
70
140
210
Feet
0
100
200
400
600
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
9

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
185	Tulebasin mucky silty clay loam	2.2	100.0%
Totals for Area of Interest		2.2	100.0%

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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.

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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.

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

Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

185—Tulebasin mucky silty clay loam

Map Unit Setting

National map unit symbol: jbdf
Elevation: 4,030 to 4,050 feet
Mean annual precipitation: 11 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 65 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Tulebasin and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tulebasin

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 14 inches: mucky silty clay loam
H2 - 14 to 32 inches: silty clay
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG915CA - Wet Meadow
Hydric soil rating: Yes

Minor Components

Poe

Percent of map unit: 5 percent
Hydric soil rating: No

Laki

Percent of map unit: 5 percent
Hydric soil rating: No

Capjac

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tulana

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

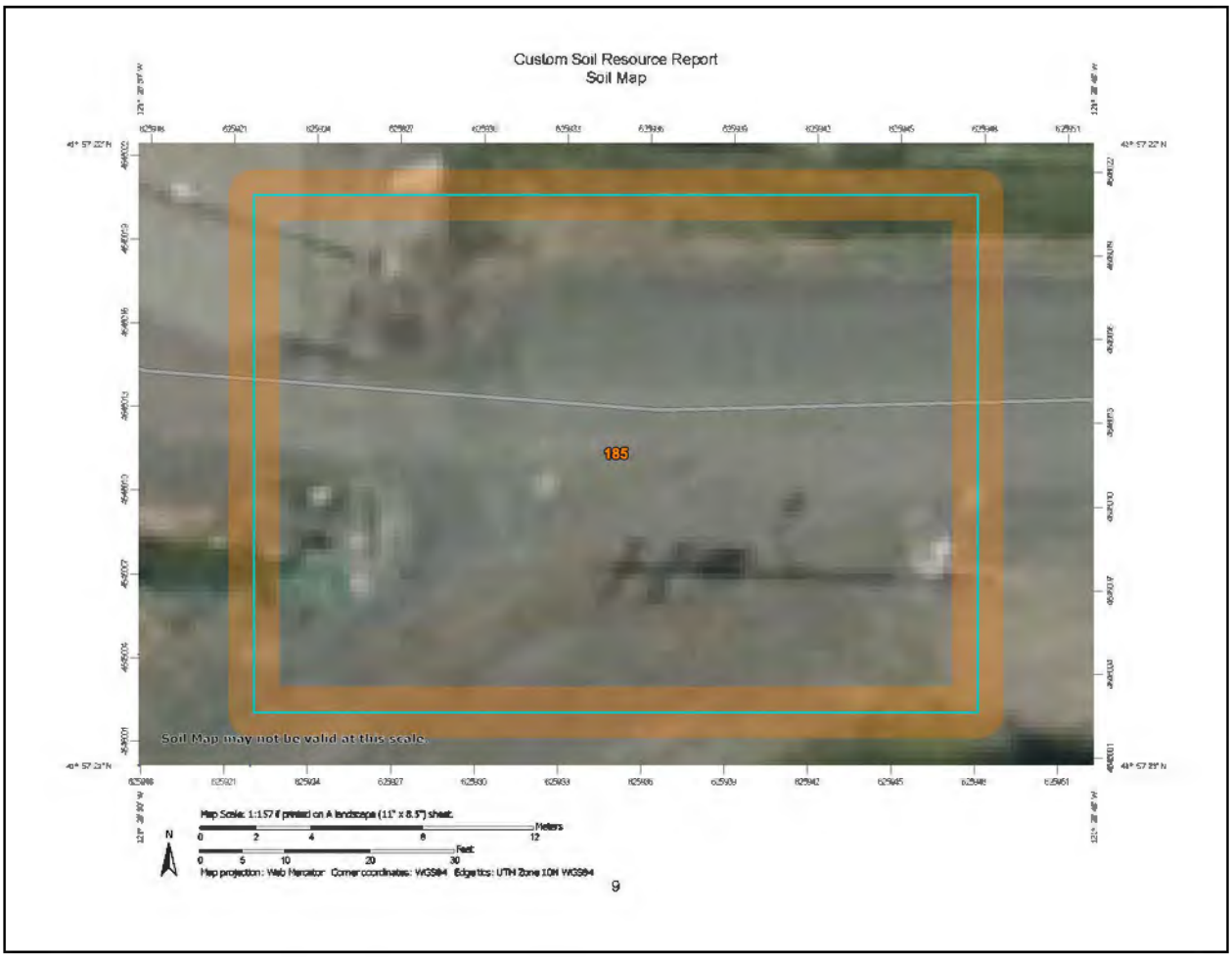
A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

Replace C Street Lift Station and install screening equipment (H, D)



March 25, 2025


Custom Soil Resource Report
Soil Map
185
Soil Map may not be valid at this scale.
Map Scale: 1:157 if printed on A landscape (11" x 8.5") sheet.
Meters
0 2 4 8 12
Feet
0 5 10 20 30
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
N
9

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
185	Tulebasin mucky silty clay loam	0.1	100.0%
Totals for Area of Interest		0.1	100.0%

Map Unit Descriptions

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Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

185—Tulebasin mucky silty clay loam

Map Unit Setting

National map unit symbol: jbdf
Elevation: 4,030 to 4,050 feet
Mean annual precipitation: 11 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 65 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Tulebasin and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tulebasin

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 14 inches: mucky silty clay loam
H2 - 14 to 32 inches: silty clay
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG915CA - Wet Meadow
Hydric soil rating: Yes

Custom Soil Resource Report

Minor Components

Poe

Percent of map unit: 5 percent
Hydric soil rating: No

Laki

Percent of map unit: 5 percent
Hydric soil rating: No

Capjac

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tulana

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

15

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

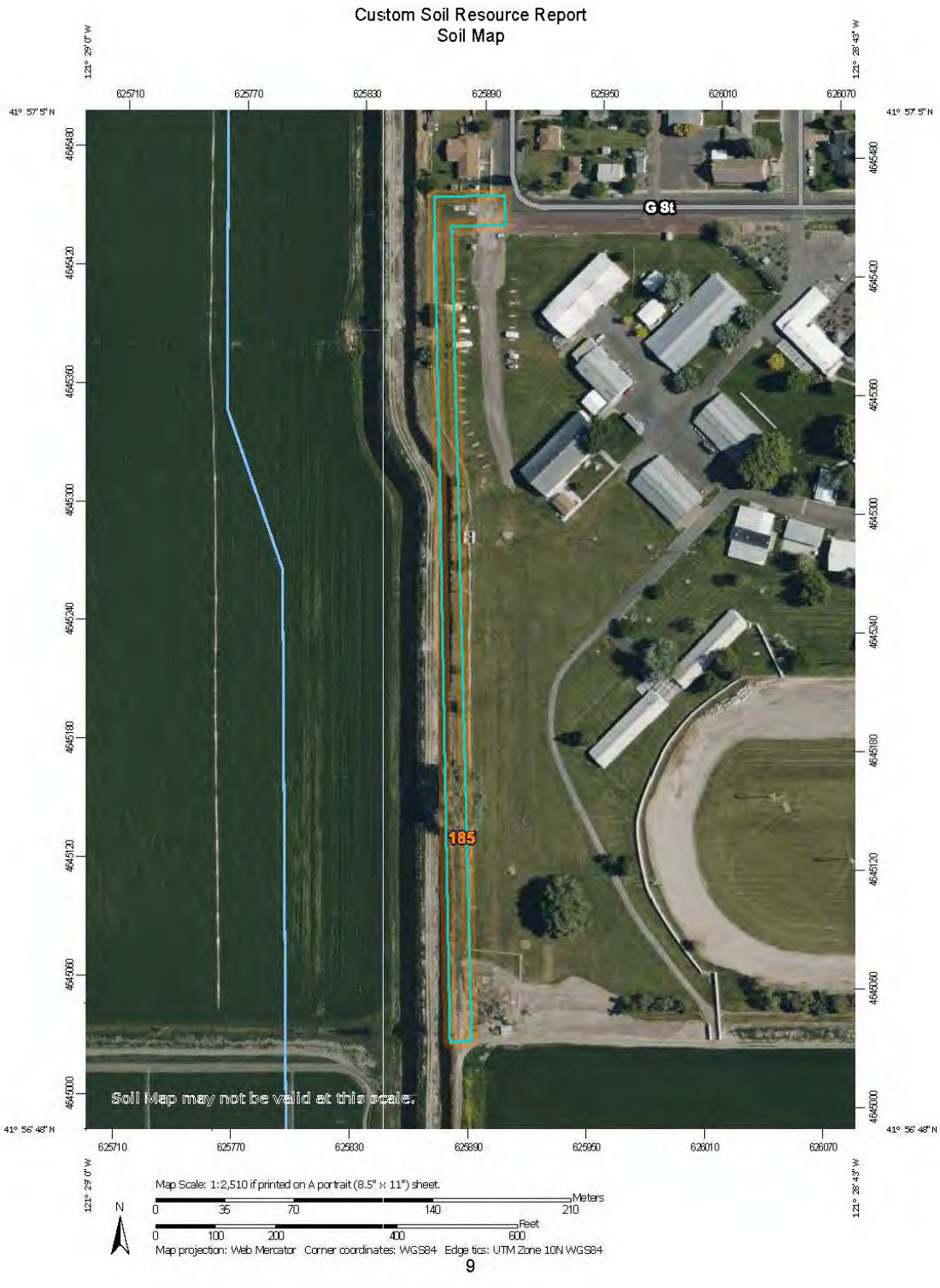
A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

Replace Park Street Lift Station and install screening equipment (H, E)



March 25, 2025


Custom Soil Resource Report
Soil Map
121° 29' 0" W
121° 28' 43" W
41° 57' 5" N
41° 56' 48" N
625710
625770
625830
625890
625950
626010
626070
4645480
4645420
4645360
4645300
4645240
4645180
4645120
4645060
4645000
G St
185
Soil Map may not be valid at this scale.
Map Scale: 1:2,510 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 35 70 140 210
Feet
0 100 200 400 600
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
9

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
185	Tulebasin mucky silty clay loam	1.1	100.0%
Totals for Area of Interest		1.1	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.

Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties

185—Tulebasin mucky silty clay loam

Map Unit Setting

National map unit symbol: jbdf
Elevation: 4,030 to 4,050 feet
Mean annual precipitation: 11 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 65 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Tulebasin and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tulebasin

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 14 inches: mucky silty clay loam
H2 - 14 to 32 inches: silty clay
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R021XG915CA - Wet Meadow
Hydric soil rating: Yes

Minor Components

Poe

Percent of map unit: 5 percent
Hydric soil rating: No

Laki

Percent of map unit: 5 percent
Hydric soil rating: No

Capjac

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tulana

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

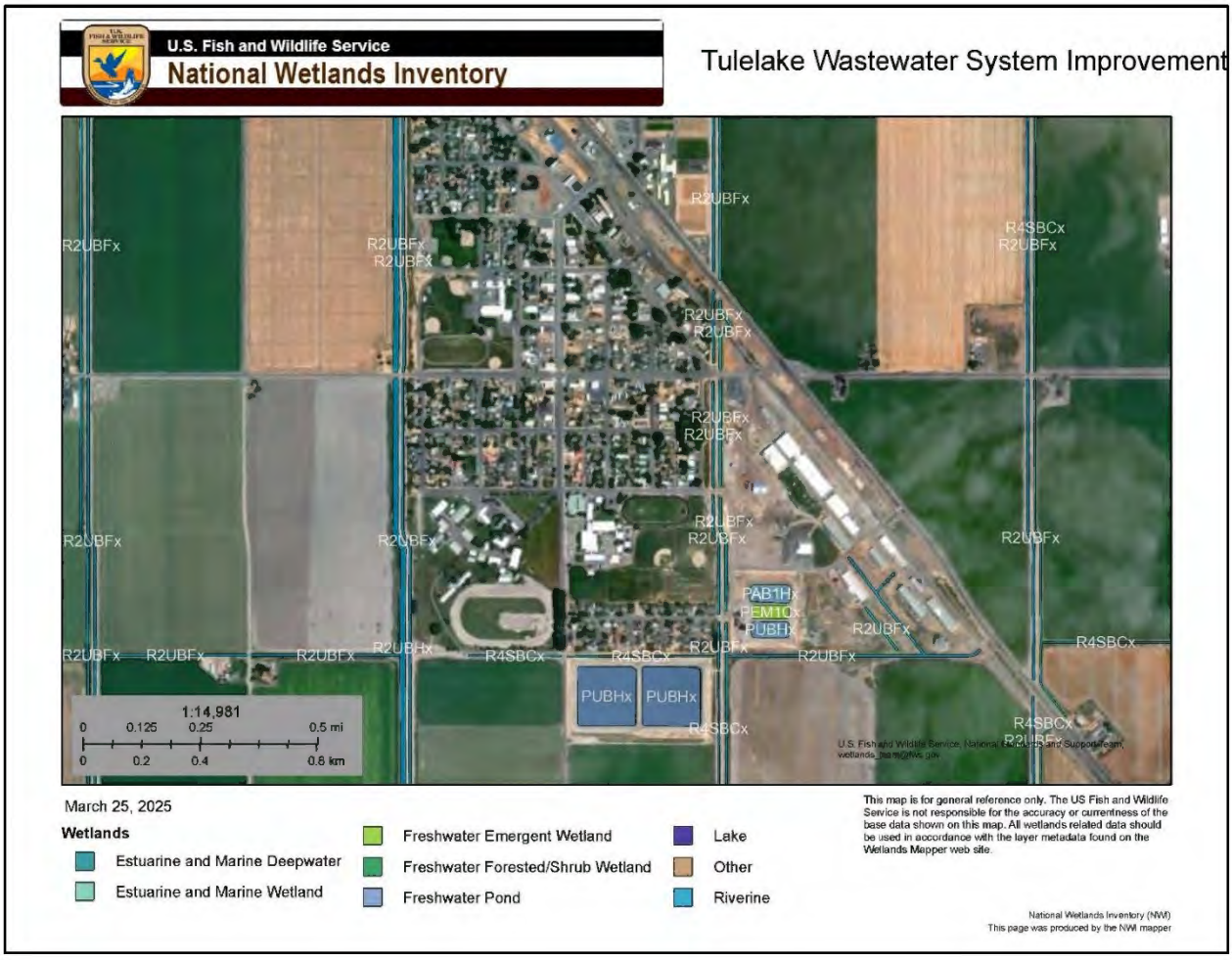
Custom Soil Resource Report

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

Appendix C – Biological Resources



CNDDB 9-Quad Map



CNDDB 9-Quad Search Results

Element_Type	Scientific_Name	Common_Name	Element_Code	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP | WL	-
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-
Animals - Birds	Charadrius nivosus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-
Animals - Birds	Antigone canadensis canadensis	lesser sandhill crane	ABNMK01011	None	None	SSC	-
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-
Animals - Birds	Chlidonias niger	black tern	ABNNM10020	None	None	SSC	-
Animals - Birds	Larus californicus	California gull	ABNNM03110	None	None	WL	-
Animals - Birds	Pelecanus erythrorhynchos	American white pelican	ABNFC01010	None	None	SSC	-
Animals - Birds	Centrocercus urophasianus	greater sage-grouse	ABNLC12010	Proposed Threatened	Candidate Endangered	SSC	-
Animals - Birds	Tympanuchus phasianellus columbianus	Columbian sharp-tailed grouse	ABNLC13033	None	None	SSC	-
Animals - Birds	Numenius americanus	long-billed curlew	ABNNF07070	None	None	WL	-
Animals - Birds	Asio flammeus	short-eared owl	ABNSB13040	None	None	SSC	-
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	Candidate Endangered	SSC	-
Animals - Birds	Plegadis chihi	white-faced ibis	ABNGE02020	None	None	WL	-
Animals - Fish	Chasmistes brevirostris	shortnose sucker	AFCJC03010	Endangered	Endangered	FP	-
Animals - Fish	Deltistes luxatus	Lost River sucker	AFCJC12010	Endangered	Endangered	FP	-
Animals - Fish	Gila coerulea	blue chub	AFCJB13050	None	None	SSC	-
Animals - Insects	Bombus crotchii	Crotchs bumble bee	IIHYM24480	None	Candidate Endangered	-	-
Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-
Animals - Mammals	Canis lupus	gray wolf	AMAJA01030	Endangered	Endangered	-	-
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-
Animals - Mammals	Corynorhinus townsendii	Townsends big-eared bat	AMACC08010	None	None	SSC	-
Plants - Bryophytes	Syntrichia lithophila	Dusens twisted moss	NBMUSA2080	None	None	-	2B.3
Plants - Vascular	Allium punctum	dotted onion	PMLIL021Y0	None	None	-	2B.2
Plants - Vascular	Rorippa columbiae	Columbia yellow cress	PDBRA27060	None	None	-	1B.2
Plants - Vascular	Carex atherodes	wheat sedge	PMCYP03160	None	None	-	2B.2
Plants - Vascular	Phlox muscoides	squarestem phlox	PDPLM0D115	None	None	-	2B.3
Plants - Vascular	Potentilla newberryi	Newberrys cinquefoil	PDROS1B130	None	None	-	2B.3

IPaC Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Klamath Falls Fish And Wildlife Office
1936 California Avenue
Klamath Falls, OR 97601
Phone: (541) 885-8481 Fax: (541) 885-7837

In Reply Refer To: 03/25/2025 16:36:09 UTC
Project Code: 2025-0073665
Project Name: City of Tulelake Wastewater System Improvements

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 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 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:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.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/program/migratory-bird-permit/what-we-do.

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/library/collections/threats-birds.

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/partner/council-conservation-migratory-birds.

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
- Bald & Golden Eagles
- 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:

Klamath Falls Fish And Wildlife Office
1936 California Avenue
Klamath Falls, OR 97601
(541) 885-8481

PROJECT SUMMARY

Project Code: 2025-0073665
Project Name: City of Tulelake Wastewater System Improvements
Project Type: Wastewater Facility - Maintenance / Modification
Project Description: Install 8" PVC sewer collection piping at 4 different places, replace 2 sewer lift stations, install a headworks screening facility, and install screening equipment at a lift station.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.95175345,-121.47609049918144,14z



Counties: Siskiyou County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Gray Wolf *Canis lupus* Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is **final** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4488	Endangered

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Pacific Northwest NEP No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8193	Experimental Population, Non-Essential
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

FISHES

NAME	STATUS
Lost River Sucker *Deltistes luxatus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5604	Endangered
Shortnose Sucker *Chasmistes brevirostris* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7160	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

FLOWERING PLANTS

NAME	STATUS
Greene's Tuctoria *Tuctoria greenei* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

CRITICAL HABITATS

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

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

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.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/

activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* 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. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* 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. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

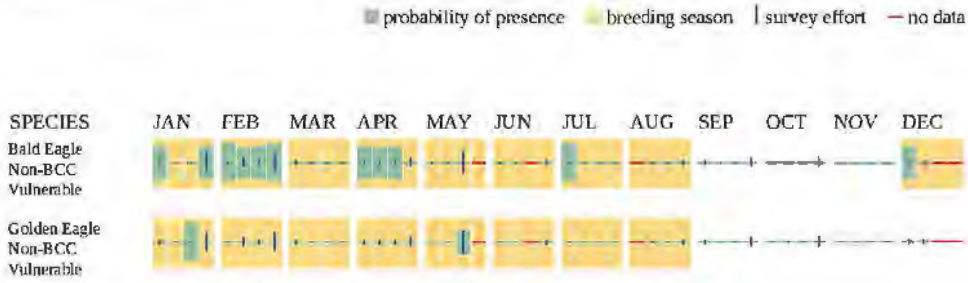
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
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Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Avocet *Recurvirostra americana* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11927	Breeds Apr 21 to Aug 10
American White Pelican *pelecanus erythrorhynchos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6886	Breeds Apr 1 to Aug 31
Bald Eagle *Haliaeetus leucocephalus* 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. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465	Breeds May 15 to Aug 10
Forster's Tern *Sterna forsteri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11953	Breeds Mar 1 to Aug 15
Franklin's Gull *Leucophaeus pipixcan* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567	Breeds May 1 to Jul 31

NAME	BREEDING SEASON
Golden Eagle *Aquila chrysaetos* 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. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Project code: 2025-0073665 03/25/2025 16:36:09 UTC

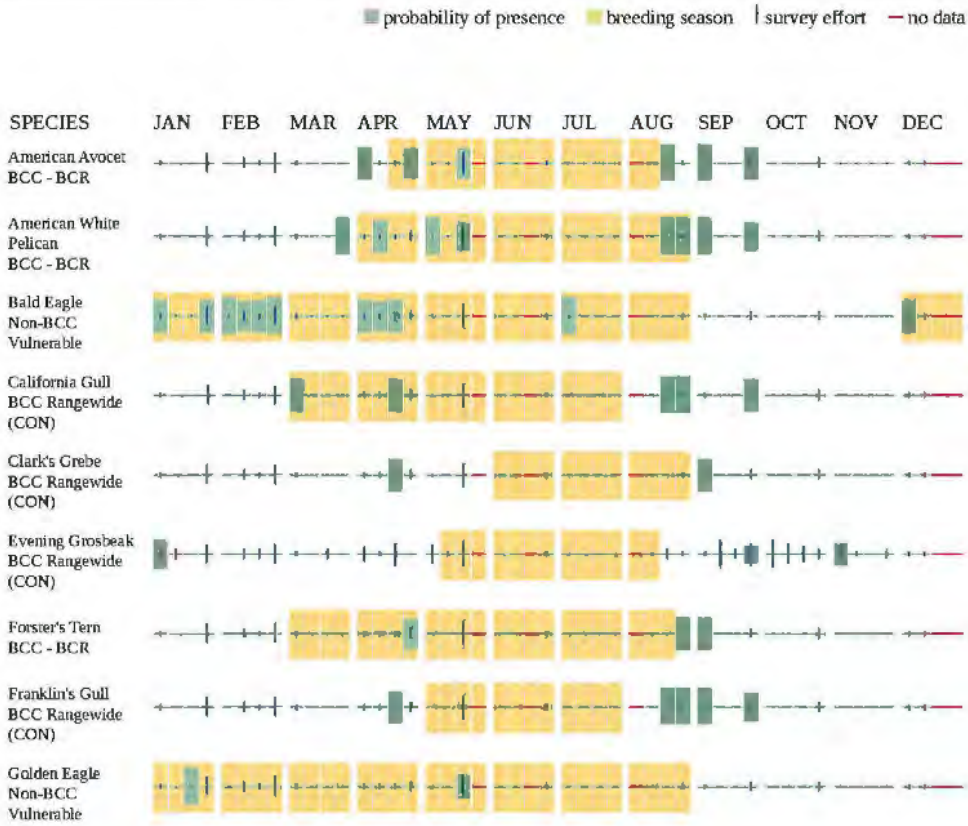
Probability of Presence (■)

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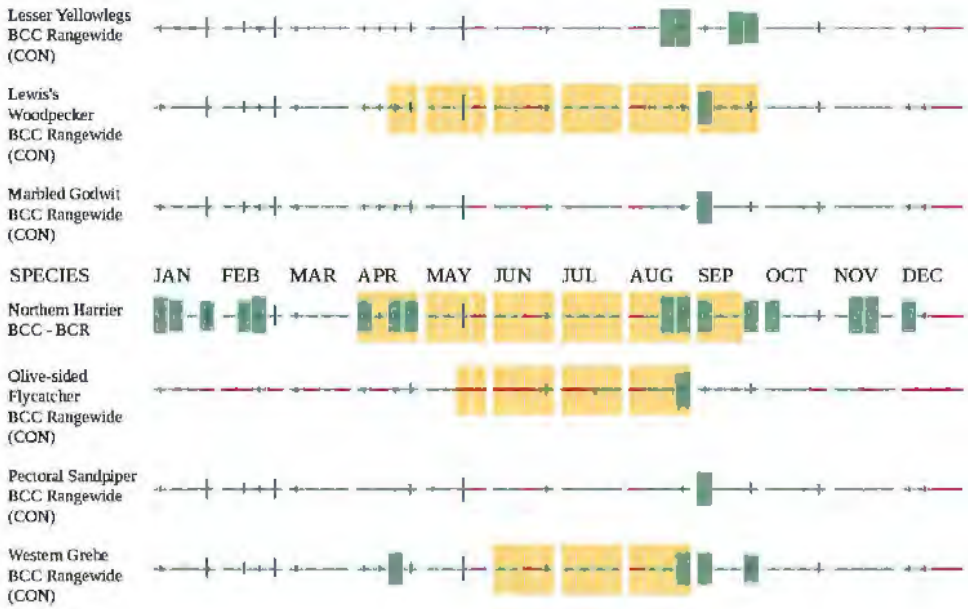
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Survey Effort (|)
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12 of 15



Additional information can be found using the following links:

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- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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.

RIVERINE

- R2UBFx
- R2UBHx

IPAC USER CONTACT INFORMATION

Agency: Rabe Consulting
Name: Andrea Rabe
Address: 421 Commercial Street
City: Klamath Falls
State: OR
Zip: 97601
Email andrea@rabeconsulting.com
Phone: 5418912137

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Agriculture

Updated IPaC Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Klamath Falls Fish And Wildlife Office
1936 California Avenue
Klamath Falls, OR 97601
Phone: (541) 885-8481 Fax: (541) 885-7837

In Reply Refer To: 11/17/2025 19:44:28 UTC
Project Code: 2025-0073665
Project Name: City of Tulelake Wastewater System Improvements

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 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 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:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.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 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/program/migratory-bird-permit/what-we-do.

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/library/collections/threats-birds.

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/partner/council-conservation-migratory-birds.

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
- Bald & Golden Eagles
- 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:

Klamath Falls Fish And Wildlife Office
1936 California Avenue
Klamath Falls, OR 97601
(541) 885-8481

PROJECT SUMMARY

Project Code: 2025-0073665
Project Name: City of Tulelake Wastewater System Improvements
Project Type: Wastewater Facility - Maintenance / Modification
Project Description: Install 8" PVC sewer collection piping at 4 different places, replace 2 sewer lift stations, install a headworks screening facility, and install screening equipment at a lift station.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.95175345,-121.47609049918144,14z



Counties: Siskiyou County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Gray Wolf *Canis lupus* Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is **final** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4488	Endangered

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Pacific Northwest NEP No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8193	Experimental Population, Non-Essential
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

NAME	STATUS
Lost River Sucker *Deltistes luxatus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5604	Endangered
Shortnose Sucker *Chasmistes brevirostris* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7160	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

NAME	STATUS
Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

FLOWERING PLANTS

NAME	STATUS
Greene's Tuctoria *Tuctoria greenei* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

CRITICAL HABITATS

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

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

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.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* 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. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* 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. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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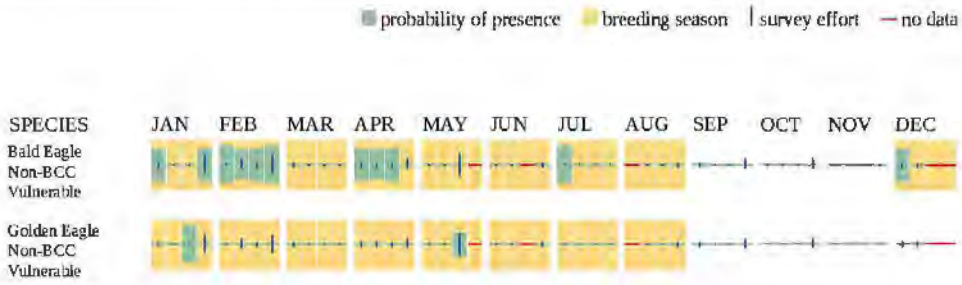
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American White Pelican *pelecanus erythrorhynchos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6886	Breeds Apr 1 to Aug 31
Bald Eagle *Haliaeetas leucocephalus* 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. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465	Breeds May 15 to Aug 10

NAME	BREEDING SEASON
Forster's Tern *Sterna forsteri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11953	Breeds Mar 1 to Aug 15
Franklin's Gull *Leucophaeus pipixcan* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567	Breeds May 1 to Jul 31
Golden Eagle *Aquila chrysaetos* 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. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
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Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
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Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

Project code: 2025-0073665 11/17/2025 19:44:28 UTC

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

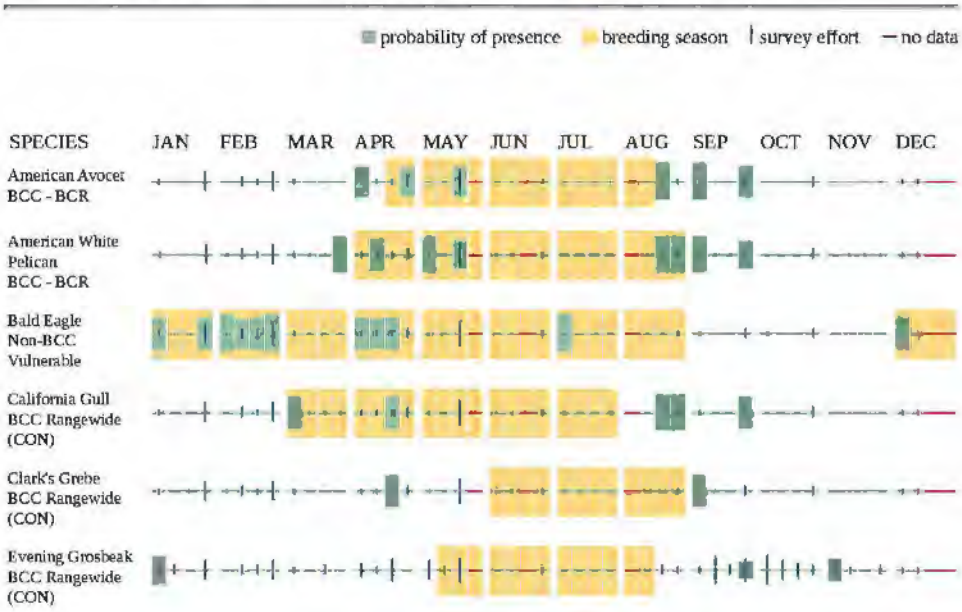
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

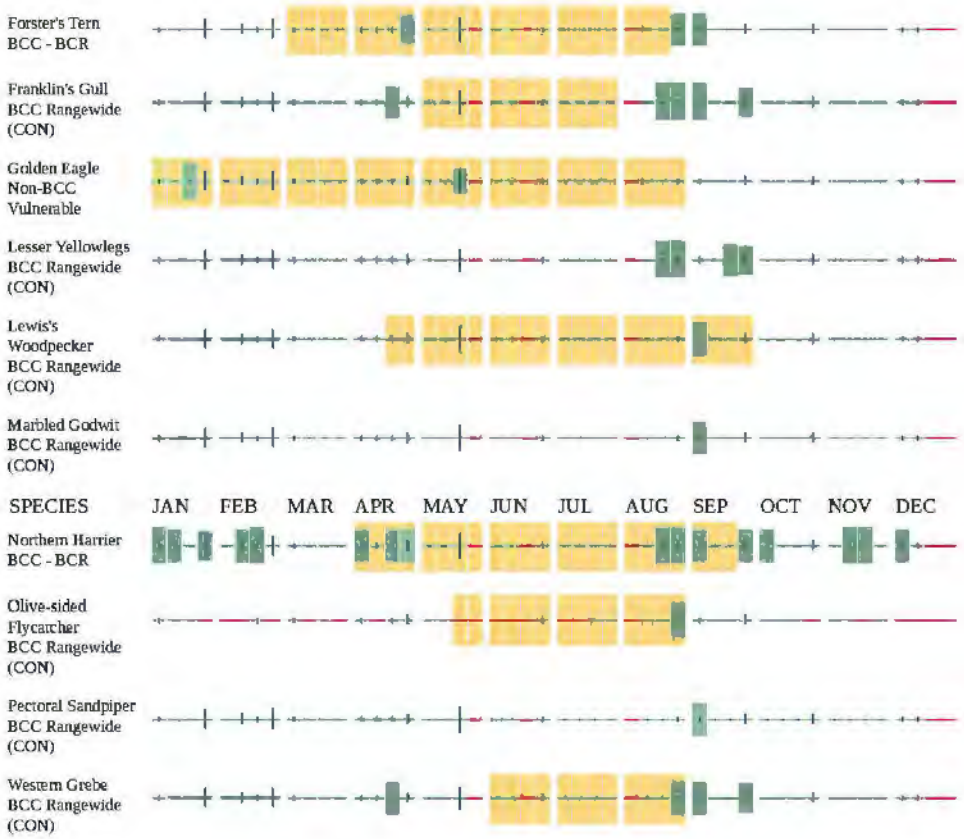
Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



12 of 15

Project code: 2025-0073665 11/17/2025 19:44:28 UTC



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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.

13 of 15

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.

RIVERINE

- R2UBFx
- R2UBHx

IPAC USER CONTACT INFORMATION

Agency: Rabe Consulting
Name: Andrea Rabe
Address: 421 Commercial Street
City: Klamath Falls
State: OR
Zip: 97601
Email andrea@rabeconsulting.com
Phone: 5418912137

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Agriculture

Appendix D – Cultural Resources

NAHC

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Tulelake Wastewater System Improvements

County: Siskiyou

USGS Quadrangle Name: Tulelake

Township: 48N **Range:** 4E **Section(s):** 35

Company/Firm/Agency: Rabe Consulting

Street Address: 421 Commercial Street, Klamath Falls, OR 97601

City: Tulelake **Zip:** 96134

Phone: 541-891-2137

Fax:

Email: rabeconsulting98@gmail.com

Project Description: The City of Tulelake is proposing the planning and design to improve the City's wastewater system. The project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station.

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

June 6, 2025

Miranda Mell
Rabe Consulting

Via Email to: miranda@rabeconsulting.com

Re: Tulelake Wastewater System Improvements Project, Siskiyou County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: melina.carlos@nahc.ca.gov

Sincerely,

Melina Carlos

Melina Carlos
Cultural Resources Analyst

Attachment

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

COMMISSIONER
Vacant

ACTING EXECUTIVE SECRETARY
Steven Quinn

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

TDAT

Tribal Directory Assessment Information

Contact Information for Tribes with Interests in Siskiyou County, California

	Tribal Name	County Name
−	Confederated Tribes of Siletz Indians of Oregon	Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Delores Pigsley	Chairwoman	201 Se Swan Avenue, Siletz, OR - 97380	(541) 444-2532	(541) 444-2307	dpigsley@msn.com	www.ctsi.nsn.us

	Tribal Name	County Name
−	Confederated Tribes of the Grand Ronde Community of Oregon	Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
David Harrelson	Program Manager and THPO	9615 Grand Ronde Rd., Grand Ronde, OR - 97347	503-879-1630		thpo@grandronde.org	www.grandronde.org
Cheryle Kennedy	Chairwoman	9615 Grand Ronde Road, Grand Ronde, OR - 97347	(503) 879-5211	(503) 879-5964	cheryle.kennedy@grandronde.org	www.grandronde.org
Christopher Bailey	Cultural Protection Specialist	8720 Grand Ronde Road, Grand Ronde, OR - 97347-9712	(503) 879-1675	(503) 878-2126	thpo@grandronde.org	www.grandronde.org

	Tribal Name	County Name
−	Elk Valley Rancheria, California	Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Dale Miller	Chairman	2332 Howland Hill Road, Crescent City, CA - 95531	(707) 464-4680	(707) 464-4519	jgisler@elk-valley.com	www.elk-valley.com
Lawanda Green	THPO	2332 Howland Hill Road, Crescent, CA - 95531	(707) 218-8261	(707) 464-4519	lgreen@elk-valley.com	

	Tribal Name	County Name
−	Karuk Tribe	Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Alex Watts-Tobin	THPO	P.O. Box 1016, Happy Camp, CA - 96039	(530) 627-3446 x 3015	(530) 627-3448	atobin@karuk.us	www.karuk.us
Russell Attebery	Chairman	64236 2nd Avenue, Happy Camp, CA - 96039	(530) 493-1600	(530) 493-5322	battebery@karuk.us	www.karuk.us

- Klamath Tribes — Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Clayton Dumont	Chairman	501 Chiloquin Boulevard, Chiloquin, OR - 97624	(541) 783-2219	(541) 783-2029	council@klamathtribes.com	
Christina Rubidoux	Director of the Culture & Heritage Department	Po Box 436, Chiloquin, OR - 97624	541-783-2764 ext. 107	541-783-2095	christina.rubidoux@klamathtribes.com	www.klamathtribes.org

- Pit River Tribe, California — Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Yatch Bamford	Chairman	36970 Park Avenue, Burney, CA - 96013	(530) 335-5421	(530) 335-3140	chairman@pitrivertribe.org	http://www.pitrivertribe.org
Natalie Forrest-Peraz	Interim THPO	36970 Park Avenue, Burney, CA - 96013	(530) 335-5421 ext.2040	(530) 335-3140	thpo@pitrivertribe.org	http://www.pitrivertribe.org

- Quartz Valley Indian Community of the Quartz Valley Reservation of California — Siskiyou

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Harold Bennett	Chairman	13601 Quartz Valley Road, Fort Jones, CA - 96032	(530) 468-5907	(530) 468-5908	sherry.smith@qvir-nsn.gov	

1 - 7 of 7 results

« ‹ 1 › » 10

SHPO

June 6, 2025

Julianne Polanco
California State Historic Preservation Officer
California Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

RE:

Notification of Intent to Initiate Section 106 Review
City of Tulelake Wastewater Improvements
Tulelake (Siskiyou County), California

Dear Officer Polanco:

The City of Tulelake is undertaking the following project: *City of Tulelake Wastewater System Improvements*. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

Section I: General Information about the Undertaking:

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970)The City of Tulelake is initiating Section 106 review.

Consultation is being coordinated with the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The project is located at Sixth Alley, Fifth Alley, Fourth Alley, along the eastern border of the Tulelake-Butte Valley Fairground, intersection of Siskiyou Street and C Street (latitude 41.956077, latitude -121.480440), intersection of Park Street and G Street (latitude 41.951017, latitude -121.480922), and south of the intersection of Dean Callas Way and Ridgeview Street (latitude 41.947685, longitude -121.471358).

Section II: Contact Information:

Rabe Consulting is representing the City of Tulelake. Should you have any questions, please contact Andréa Rabe at 541-891-2137, via email at andrea@rabeconsulting.com, or by mail at 421 Commercial Street, Klamath Falls, Oregon 97601.

Section III: Description of the Undertaking and Area of Potential Effects:

The development of the proposed project includes the planning and design to improve the City's wastewater system. The project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. in Tulelake (Siskiyou County), California.

The City of Tulelake proposes that the area of potential effects (APE) for the referenced project is 7.3 acres of road right of ways and the headworks screening facility. (see attached map).The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x).

Section IIIA: Ground-Disturbing Activity

The proposed project area is currently established as road right of ways and the headworks screening facility.

Section IV: Identification of Historic Properties:

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required. A copy of the report is attached.

The City of Tulelake has notified and is seeking information about possibly affected historic properties in the APE from the following Indian tribes – Confederated Tribes of Siletz Indians of Oregon, Confederated Tribes of the Grand Ronde Community of Oregon, Elk Valley Rancheria, California, Karuk Tribe, Klamath Tribes, Pit River Tribe, California, and the Quartz Valley Indian Community of the Quartz Valley Reservation of California. This list of relevant Tribes was obtained from Consultation on Tribal Directory Assessment Tool. Letters were sent to the relevant Tribes and Tribes were given 30 days to respond. After 30 days, follow-up emails were sent to the relevant Tribes.

Please review the project(s) and enclosed map. After completing your review, please provide the City of Tulelake with your recommendation(s) about whether or not study of the APE is needed to identify affected historic properties. If you recommend study, please explain the nature and scope of the proposed investigation specifically in reference to those factors identified in 36 CFR § 800.4(b)(1).

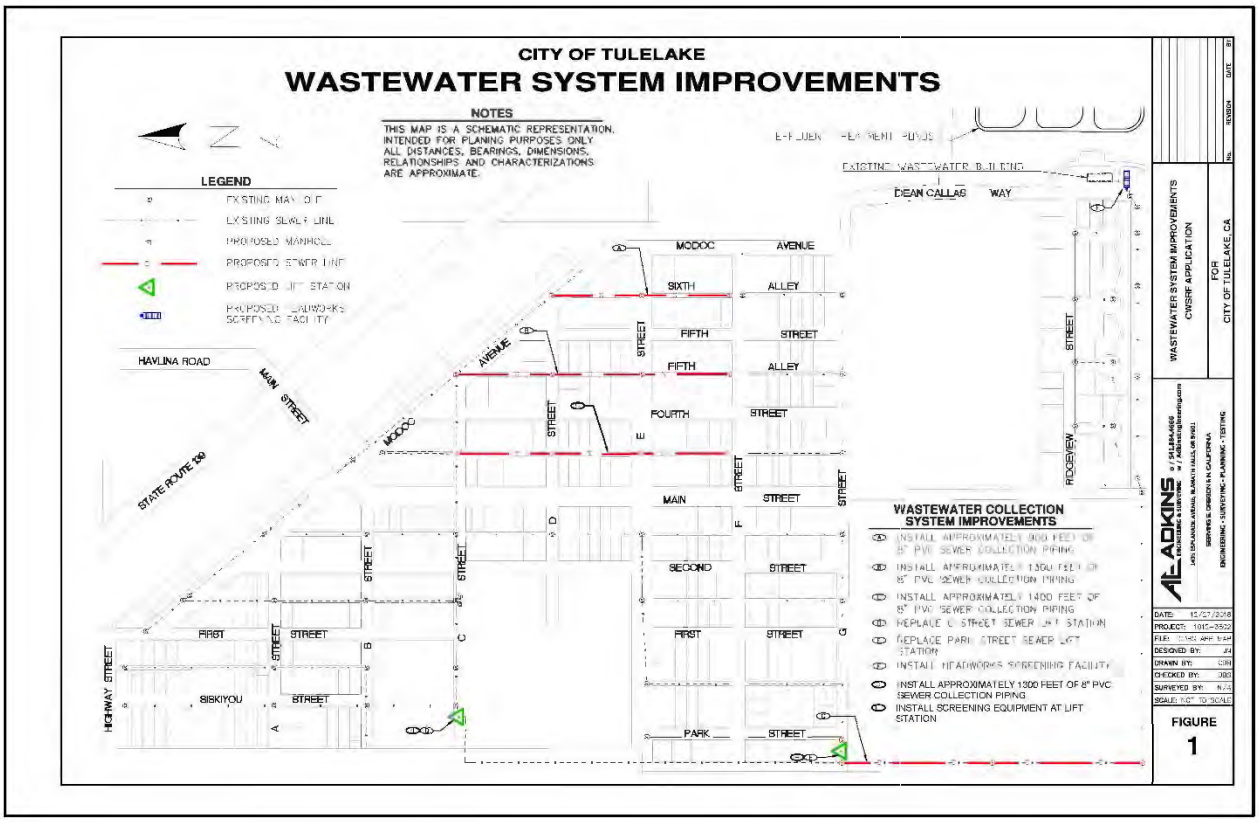
Section V: Finding of Effect:

City of Tulelake is proposing a finding of "no effect" on historic resources from implementation of this project.

Conclusion:

Submit your recommendations within thirty (30) days of your receipt of this request to Andréa Rabe at 541-891-2137 or via email at rabeconsulting98@gmail.com. Should you have any questions, please contact Andréa Rabe at 541-891-2137 or via email at andrea@rabeconsulting.com.


Tulelake Wastewater System Improvements
Legend
B St
Modoc Ave
Tulelake
2nd St
D St
Volcanic Legacy Scenic Byway
Osborne Rd
Park St
First St
F St
Fifth St
Modoc Ave
139
G St
Ray Cenlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
N
1000 ft


CITY OF TULELAKE
WASTEWATER SYSTEM IMPROVEMENTS
NOTES
THIS MAP IS A SCHEMATIC REPRESENTATION. INTENDED FOR PLANING PURPOSES ONLY. ALL DISTANCES, BEARINGS, DIMENSIONS, RELATIONSHIPS AND CHARACTERIZATIONS ARE APPROXIMATE.
LEGEND
EXISTING MANHOLE
EXISTING SEWER LINE
PROPOSED MANHOLE
PROPOSED SEWER LINE
PROPOSED LIFT STATION
PROPOSED HEADWORKS SCREENING FACILITY
EFFLUENT DISPOSAL
EXISTING WASTEWATER BUILDING
DEAN CALLAS WAY
MODOC AVENUE
SIXTH ALLEY
FIFTH STREET
FIFTH ALLEY
FOURTH STREET
MAIN STREET
SECOND STREET
FIRST STREET
PARK STREET
ROOSEVELT
HAVLINA ROAD
MAIN STREET
STATE ROUTE 139
HIGHWAY STREET
SISKIYOU STREET
WASTEWATER COLLECTION SYSTEM IMPROVEMENTS
INSTALL APPROXIMATELY 900 FEET OF 8" PVC SEWER COLLECTION PIPING
INSTALL APPROXIMATELY 1300 FEET OF 8" PVC SEWER COLLECTION PIPING
INSTALL APPROXIMATELY 1400 FEET OF 8" PVC SEWER COLLECTION PIPING
REPLACE C STREET SEWER LIFT STATION
REPLACE PARK STREET SEWER LIFT STATION
INSTALL HEADWORKS SCREENING FACILITY
INSTALL APPROXIMATELY 1300 FEET OF 8" PVC SEWER COLLECTION PIPING
INSTALL SCREENING EQUIPMENT AT LIFT STATION
WASTEWATER SYSTEM IMPROVEMENTS
CWSRF APPLICATION
FOR
CITY OF TULELAKE, CA
ADKINS
ENGINEERING • SURVEYING • PLANNING • TESTING
DATE: 10/27/2016
PROJECT: 1012-3502
DESIGNED BY: JM
DRAWN BY: CRH
CHECKED BY: JMH
SURVEYED BY: N/A
SCALE: NOT TO SCALE
FIGURE
1


USGS
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
The National Map
OnDemand Topo
7.5-MINUTE TOPO QUADRANGLE
CALIFORNIA - OREGON CUSTOM EXTENT
7.5-MINUTE TOPO
T43N R8E
T43N R9E
T42N R8E
T42N R9E
Tulelake
Produced by the United States Geological Survey
SCALE 1:24 000
7.5-MINUTE TOPO, CA
2025

Tribal Letters

June 6, 2025

Delores Pigsley
Chairwoman
Confederated Tribes of Siletz Indians of Oregon
201 SE Swan Avenue
Siletz, OR 97380

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairwoman Pigsley:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

The area of potential effect (APE) is defined as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The City of Tulelake proposes that the area of potential effects (APE) for the referenced project is 7.3 acres of road right of ways and the headworks screening facility. (see attached map).The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x).

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Confederated Tribes of Siletz Indians of Oregon in Tulelake (Siskiyou County), California. Should the Confederated Tribes of Siletz Indians of Oregon elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,



Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
Legend
B St
Modoc Ave
Tulelake
2nd St
D St
Volcanic Legacy Scenic Byway
Osborne Rd
Park St
First St
F St
Fifth St
Modoc Ave
139
G St
Ray Oehlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
N
1000 ft

June 6, 2025

Cheryle Kennedy
Chairwoman
Confederated Tribes of the Grand Ronde Community of Oregon
9615 Grand Ronde Rd.
Grand Ronde, OR 97347

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairwoman Kennedy:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

The area of potential effect (APE) is defined as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Confederated Tribes of the Grand Ronde Community of Oregon in Tulelake (Siskiyou County), California. Should the Confederated Tribes of the Grand Ronde Community of Oregon elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

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Sincerely,

Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
Legend
B St
Modoc Ave
Tulelake
2nd St
D St
Volcanic Legacy Scenic Byway
Osborne Rd
Park St
First St
F St
Fifth St
Modoc Ave
139
G St
Ray Cenlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
N
1000 ft

June 6, 2025

Christopher Bailey
Cultural Protection Specialist
Confederated Tribes of the Grand Ronde Community of Oregon
8720 Grand Ronde Road
Grand Ronde, OR 97347-9712

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Cultural Protection Specialist Bailey:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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The City of Tulelake proposes that the area of potential effects (APE) for the referenced project is 7.3 acres of road right of ways and the headworks screening facility. (see attached map).The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x).

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Confederated Tribes of the Grand Ronde Community of Oregon in Tulelake (Siskiyou County), California. Should the Confederated Tribes of the Grand Ronde Community of Oregon elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,

Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
Legend
B St
Modoc Ave
Tulelake
2nd St
D St
Volcanic Legacy Scenic Byway
Osborne Rd
Park St
First St
F St
Fifth St
Modoc Ave
139
C St
Ray Cehlerich Way
Ridgeview St
Google Earth
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1000 ft

June 6, 2025

David Harrelson
Program Manager and THPO
Confederated Tribes of the Grand Ronde Community of Oregon
9615 Grand Ronde Rd.
Grand Ronde, OR 97347

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Program Manager and THPO Harrelson:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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Sincerely,

Andréa Rabe
Senior Environmental Consultant


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June 6, 2025

Dale Miller
Chairman
Elk Valley Rancheria, California
2332 Howland Hill Road
Crescent City, CA 95531

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairman Miller:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Elk Valley Rancheria, California in Tulelake (Siskiyou County), California. Should the Elk Valley Rancheria, California elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,

Andréa Rabe
Senior Environmental Consultant


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June 6, 2025

Lawanda Green
THPO
Elk Valley Rancheria, California
2332 Howland Hill Road
Crescent City, CA 95531

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear THPO Green:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Elk Valley Rancheria, California in Tulelake (Siskiyou County), California. Should the Elk Valley Rancheria, California elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

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Sincerely,

Andréa Rabe
Senior Environmental Consultant


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Google Earth
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June 6, 2025

Russell Attebery
Chairman
Karuk Tribe
64236 2nd Avenue
Happy Camp, CA 96039

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairman Attebery:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Karuk Tribe in Tulelake (Siskiyou County), California. Should the Karuk Tribe elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

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Sincerely,

Andréa Rabe
Senior Environmental Consultant


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June 6, 2025

Alex Watts-Tobin
THPO
Karuk Tribe
P.O. Box 1016
Happy Camp, CA 96039

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear THPO Watts-Tobin:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

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Sincerely,

Andréa Rabe
Senior Environmental Consultant


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June 6, 2025

Clayton Dumont
Chairman
Klamath Tribes
501 Chiloquin Boulevard
Chiloquin, OR 97624

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairman Dumont:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Klamath Tribes in Tulelake (Siskiyou County), California. Should the Klamath Tribes elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

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Sincerely,

Andréa Rabe
Senior Environmental Consultant


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June 6, 2025

Christina Rubidoux
Director of the Culture & Heritage Department
Klamath Tribes
Po Box 436
Chiloquin, OR 97624

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Director Rubidoux:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

The area of potential effect (APE) is defined as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The City of Tulelake proposes that the area of potential effects (APE) for the referenced project is 7.3 acres of road right of ways and the headworks screening facility. (see attached map).The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x).

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Klamath Tribes in Tulelake (Siskiyou County), California. Should the Klamath Tribes elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,

Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
Legend
B St
Modoc Ave
Tulelake
2nd St
D St
Volcanic Legacy Scenic Byway
Osborne Rd
Park St
First St
F St
Fifth St
Modoc Ave
139
C St
Ray Cenlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
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1000 ft

June 6, 2025

Yatch Bamford
Chairman
Pit River Tribe, California
36970 Park Avenue
Burney, CA 96013

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairman Bamford:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Pit River Tribe, California in Tulelake (Siskiyou County), California. Should the Pit River Tribe, California elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,

Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
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Modoc Ave
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D St
Volcanic Legacy Scenic Byway
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Fifth St
Modoc Ave
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C St
Ray Cehlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
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1000 ft

June 6, 2025

Natalie Forrest-Perez
Interim THPO
Pit River Tribe, California
36970 Park Avenue
Burney, CA 96013

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear THPO Forrest-Perez:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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The City of Tulelake proposes that the area of potential effects (APE) for the referenced project is 7.3 acres of road right of ways and the headworks screening facility. (see attached map).The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x).

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Pit River Tribe, California in Tulelake (Siskiyou County), California. Should the Pit River Tribe, California elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,

Andréa Rabe
Senior Environmental Consultant


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Tulelake
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Volcanic Legacy Scenic Byway
Osborne Rd
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C St
Ray Oenlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
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1000 ft

June 6, 2025

Harold Bennett
Chairman
Quartz Valley Indian Community of the Quartz Valley Reservation of California
13601 Quartz Valley Road
Fort Jones, CA 96032

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Chairman Bennett:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

The action is an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800. Pursuant to 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970). The City of Tulelake is initiating Section 106 review.

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The City of Tulelake proposes that the area of potential effects (APE) for the referenced project is 7.3 acres of road right of ways and the headworks screening facility. (see attached map).The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x).

On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Quartz Valley Indian Community of the Quartz Valley Reservation of California in Tulelake (Siskiyou County), California. Should the Quartz Valley Indian Community of the Quartz Valley Reservation of California elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 6, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,

Andréa Rabe
Senior Environmental Consultant


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Ridgeview St
Google Earth
Image © 2025 Airbus
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1000 ft

June 9, 2025

Ken Sandusky
Resource and Development Director
Modoc Nation
29718 State Hwy 299 E
Canby, CA 96015

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Director Sandusky:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Modoc Nation in Tulelake (Siskiyou County), California. Should the Modoc Nation elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 9, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,



Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
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Ridgeview St
Google Earth
Image © 2025 Airbus
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1000 ft

June 9, 2025

Bill Tripp
Department of Natural Resources
Karuk Tribe
P.O. Box 282
Orleans, CA 95556

Subject:

Proposed Finding of No Historic Properties Affected
Section 106 Consultation Letter
City of Tulelake Wastewater System Improvements Project
Tulelake (Siskiyou County), California

Dear Department of Natural Resources Tripp:

The City of Tulelake is undertaking the following project: City of Tulelake Wastewater System Improvements. The development of the proposed project includes the installation of approximately 4,900 feet of 8" PVC sewer collection piping, replace C Street sewer lift station, replace Park Street sewer lift station, install headworks screening facility, and install screening equipment at lift station. The proposed sewer lines are located at Sixth Alley, Fifth Alley, Fourth Alley, and along the eastern border of the Tulelake-Butte Valley Fairgrounds. The proposed lift stations are located at the intersection of Siskiyou Street and C Street (latitude 41.956077, longitude -121.480440) and the intersection of Park Street and G Street (latitude 41.951017, longitude -121.480922). The proposed headworks screening facility is located south of the intersection of Dean Calles Way and Ridgeview Street (latitude 41.947685, longitude -121.471358). The project is located in Tulelake, California. See Attachment 1 Project maps.

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On June 4, 2025, Pinnacle Archaeology completed a Cultural Resource Survey for the City of Tulelake Wastewater System Improvements project. No cultural artifacts or features were observed during the pedestrian survey. The proposed project should have a finding of "no effect" and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

The City of Tulelake is notifying you about the referenced project because of the possible interest of the Karuk Tribe in Tulelake (Siskiyou County), California. Should the Karuk Tribe elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at rabeconsulting98@gmail.com.

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. The City of Tulelake will respect the confidentiality of the information which you provide to the fullest extent possible.

Please submit your response to me by July 9, 2025. During this time period, I will follow-up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. The City of Tulelake will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Sincerely,



Andréa Rabe
Senior Environmental Consultant


Tulelake Wastewater System Improvements
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Ray Oehlerich Way
Ridgeview St
Google Earth
Image © 2025 Airbus
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1000 ft

Tribal Responses

Gmail

Andrea Rabe <rabeconsulting98@gmail.com>

Tulelake wastewater system
1 message

Clarence Henthorne <clarence.henthome@klamathtribes.com> Thu, Jun 12, 2025 at 9:56 AM
To: Andrea Rabe <rabeconsulting98@gmail.com>
Cc: Garin Riddle <garin.riddle@klamathtribes.com>, Kaitlin Hakanson <kaitlin.hakanson@klamathtribes.com>

Dear Andrea,

Thank you for contacting the Klamath Tribes in regards to the proposed project pursuant to Section 106 of the National Historic Preservation Act. This project is within the Klamath, Modoc and Yahooskin aboriginal territories and we would like to thank you for submitting a complete description of the project. The Klamath Tribes has no concerns with the project as described; we ask that you have a monitor on site during any ground disturbing activities and that you contact the Klamath Tribes Culture and Heritage Department for consultation if any inadvertent discoveries occur.

Please consider this an official comment from the Klamath Tribes, Culture and Heritage Department.

Notice: This communication, along with any attachments, may contain confidential and legally privileged information and is intended only for use of the individual(s) to which this email is addressed. It may contain information that is exempt from disclosure under applicable laws. If you are not the intended recipient of the email, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If this email was received in error, please notify the sender immediately and delete this email from your inbox, mailbox, and trash. Thank you.

Clarence Henthorne

The Klamath Tribes

Cultural Resource Protection Specialist

Gmail

Andrea Rabe <rabeconsulting98@gmail.com>

Tulelake Wastewater System Improvement Project

2 messages

Andrea Rabe <rabeconsulting98@gmail.com> Mon, Jun 9, 2025 at 2:10 PM
To: kenneth.sandusky@modocnation.com

Good afternoon,

Rabe Consulting has been contracted to perform a NEPA compliance study and CEQA compliance study for a wastewater system improvements project in Siskiyou County, California. As a part of the NEPA compliance and CEQA compliance reports, Rabe Consulting performs an environmental review of the proposed project which includes tribal notification related to cultural resources.

Thank you,

Andrea Rabe, MS, PWS
Senior Environmental Consultant
Rabe Consulting
421 Commercial Street
Klamath Falls, OR 97601
541-891-2137
www.rabeconsulting.com

Modoc Nation Resource and Development Director Tribal Letter Tulelake Wastewater System Improvements Project.pdf
4197K

Ken Sandusky <kenneth.sandusky@modocnation.com> Wed, Jun 11, 2025 at 10:12 AM
To: Andrea Rabe <rabeconsulting98@gmail.com>
Cc: THPO Dept <THPOdept@modocnation.com>, Audrey McGaughey <audrey.mcgaughey@modocnation.com>

Hello,

Thank you for the notification. The Modoc Nation supports the City of Tulelake, this project, and all efforts to protect and enhance the community. Our only request is to be notified immediately of any inadvertent discoveries. I have copied our THPO Department here that can be used for these notifications and all heritage resource related issues. It includes all of us who need to know about these things. Our Tribal Historic Preservation Officer can be reached directly at audrey.mcgaughey@modocnation.com

In gratitude,

Ken Sandusky

Modoc Nation

Homelands Director

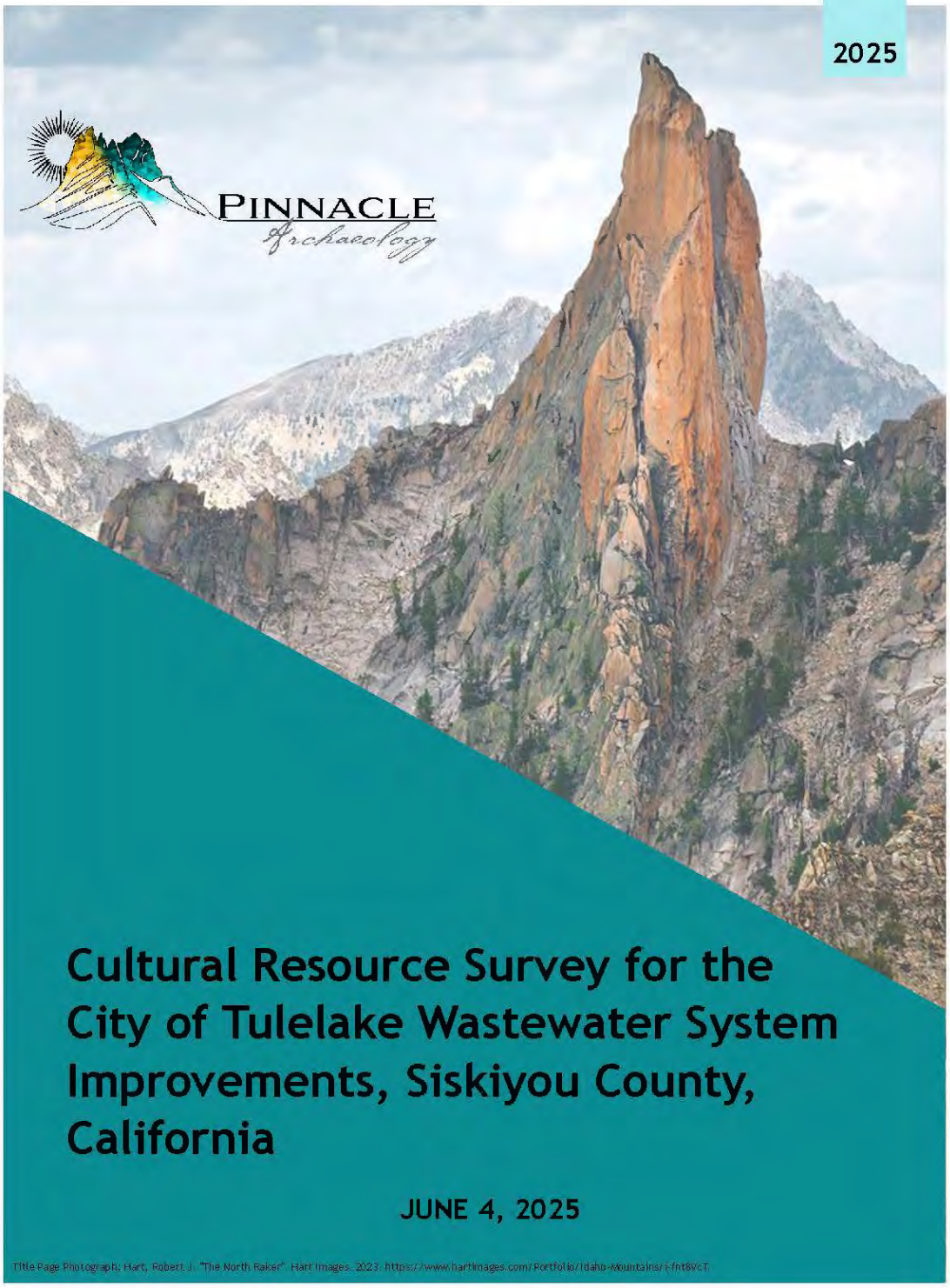
541-891-7321

From: Andrea Rabe <rabeconsulting98@gmail.com>
Sent: Monday, June 9, 2025 2:10 PM
To: Ken Sandusky <kenneth.sandusky@modocnation.com>
Subject: Tulelake Wastewater System Improvement Project

You don't often get email from rabeconsulting98@gmail.com. Learn why this is important

[Quoted text hidden]

Cultural Resource Report



Cultural Resource Survey for the City of Tulelake Wastewater System Improvements, Siskiyou County, California

Prepared for:

Rabe Consulting
421 Commercial St.
Klamath Falls, Oregon 97601

Prepared by:

Ashlee Hart (Ph.D., RPA) and Brooklynn Carnevale (B.S.)

PO Box 190187
Boise, Idaho 83719

June 4, 2025

Pinnacle Archaeology Report No. 25-011

Executive Summary

Project Title: Cultural Resource Survey for the City of Tulelake Wastewater System Improvements, Siskiyou County, California

Report Author: Ashlee Hart (Ph.D, RPA) and Brooklynn Carnevale (B.S.)

Pinnacle Project No.: 25-011

Project Description: Pinnacle Archaeology LLC (Pinnacle) was contracted by Rabe Consulting to conduct a cultural resource survey in preparation for wastewater system improvements in the City of Tulelake. The proposed project includes six locales throughout Tulelake, Siskiyou County, California. The APE associated with the project accounts for approximately 3 acres including grass shoulders adjacent to paved roads, unpaved alleyways, a modern use canal, and the Water Pumping Facility public works yard. The City of Tulelake received funding from the California Clean Water State Revolving Fund (CWSRF) that is funded by the United States Environmental Protection Agency (EPA). Since federal funding will be used, the project is considered an undertaking as defined by the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code [U.S.C.] 306108) and subject to a Section 106 review following regulations (36 Code of Federal Regulations [CFR] Part 800). Additionally, the project is overseen by the State of California and subject to California Environmental Quality Act (CEQA) compliance. Pinnacle performed a pedestrian survey on April 6, 2025, as part of a cultural resource inventory and evaluation to support Section 106 and CEQA compliance for the proposed project. No cultural material or features were identified during the pedestrian survey.

Land Status: City of Tulelake

Location: Tulelake, Siskiyou County, California

Legal Location (Township/Range/Section): Township 48 North, Range 04 East, Section 35, Township 47 North, Range 04 East, Section 01, and Township 47 North, Range 04 East, Section 02 of the Mount Diablo Meridian

United States Geological Survey Quadrangle Map(s): Tulelake, California (2022)

Area of Potential Effect: approximately 3 acres

Acres Surveyed: approximately 3 acres

Method(s): Intensive pedestrian survey

Cultural Resources Recorded: No cultural resources identified in the APE

NRHP Eligibility Recommendations: No cultural resources identified in the APE

Field Personnel: Ashlee Hart (Ph.D, RPA) and Brooklynn Carnevale (B.S.)

Date(s) of Fieldwork: April 6, 2025

Summary of Recommendations: Pinnacle performed fieldwork and reporting in compliance with California Office of Historic Preservation (OHP) guidelines and standards. All work was performed under the oversight of Ashlee Hart (P.H.D., RPA) who meets the Secretary of the Interiors' (SOI) Professional Qualification Standards for archaeology in accordance with Appendix A of 36 Code of Federal Regulations (CFR) 61 and is a California Historic Resource Information System (CHRIS) Authorized User.

Prior to fieldwork, Pinnacle requested a records search of the Northeast Archaeological Information Center (Records Search No. NE24-93) for previously recorded historic resources within the APE and within a 0.5-mile (mi) (0.8 kilometer [km]) study area around the APE. Nine previous cultural resource studies occurred within the 0.5-mi study area. One of the previous cultural resource studies overlaps with a portion of the APE but no cultural resources were documented by the study in the APE. One previously documented cultural resource occurred within the 0.5-mi study area but does not overlap the APE.

Pinnacle archaeologists completed a pedestrian survey of the APE on April 6, 2025. The crew used transects spaced no more than 10-m apart. The mineral sediment visibility ranged from zero to 30 percent due to the grass, gravel, structures, and storage of sediment and refuse. The APE included grass, gravel alleyways, the existing wastewater building property, and the modern Water Pumping Facility public works yard, which has a storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Previous sewer line construction and maintenance, in addition to private and public property improvements, have significantly disturbed the APE or overlain it with fill material and gravel. Property improvements, subsurface utilities, transmission lines, and vehicle use are the major contributors to soil disturbance. The proposed wastewater system improvements will replace current utilities resulting in no new disturbance. Proposed additions such as the lift stations or headworks screening facility are in an already highly disturbed area with past subsurface utilities including sewer lines, transmission lines, gravel fill, and chain link fences.

No cultural artifacts or features were observed during the pedestrian survey and all structures depicted on historic aerials are no longer extant. All proposed work will occur within already highly disturbed sediments so there is little potential for intact subsurface cultural deposits. The proposed project should have a finding of **"no effect"** and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

If previously unrecorded cultural resources are encountered during the wastewater system improvements, an SOI qualified archaeologist should be immediately notified and allowed proper time to address the nature and significance of the discovery. Additionally, if human remains are discovered, all activity must cease in the immediate area, the archaeologist should be immediately notified, and the remains should not be further disturbed and will be treated with dignity and respect at all times while an appropriate course of action is determined, pursuant to 43 CFR 10 (Native American Graves Protection and Repatriation Act of 1991, as amended).

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Introduction

Pinnacle Archaeology LLC (Pinnacle) was contracted by Rabe Consulting to conduct a cultural resource survey in preparation for wastewater system improvements in the City of Tulelake. The proposed project includes six locales throughout Tulelake, Siskiyou County, California. The APE associated with the project accounts for approximately 3 acres including grass shoulders adjacent to paved roads, unpaved alleyways, a modern use canal, and the Water Pumping Facility. The City of Tulelake received funding from the California Clean Water State Revolving Fund (CWSRF) that is funded by the United States Environmental Protection Agency (EPA). Since federal funding will be used, the project is considered an undertaking as defined by the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code [U.S.C.] 306108) and subject to a Section 106 review following regulations (36 Code of Federal Regulations [CFR] Part 800). Additionally, the project is overseen by the State of California and subject to California Environmental Quality Act (CEQA) compliance. Pinnacle performed a pedestrian survey on April 6, 2025, as part of a cultural resource inventory and evaluation to support Section 106 and CEQA compliance for the proposed project. An overview of these regulations is presented in the following sections.

Regulatory Context

Federal Regulations

Federally administered funds will be used for this project; therefore, it is considered an undertaking as defined by the NHPA. For purposes of Section 106 under the NHPA, the Advisory Council's regulations define an undertaking as "any project, activity, or program that can result in changes in the character or use of historic properties" whether federal agency jurisdiction is direct or indirect. Federal agencies are required to consider the effects of their undertakings on historic properties and afford the Oregon State Historic Preservation Office (SHPO) and other parties with a demonstrated interest a reasonable opportunity to comment on such undertakings (16 USC.470). Additionally, the National Environmental Policy Act requires that federal agencies work to preserve not only natural resources but also important historical and cultural aspects of our national heritage (42 United States Code [USC] § 4321-4347). Regulations for Protection of Historic Properties (36 CFR Part 800) define a process for responsible federal agencies to consult with SHPO or Tribal Historic Preservation Officer, Native American groups, other interested parties, and, when necessary, the Advisory Council on Historic Preservation to ensure that historic properties are duly considered as federal undertakings are planned and implemented.

A "historic property" is defined in the NHPA as any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places [NRHP], including artifacts, records, and material remains related to such a property or resource" (54 USC § 300308). The NRHP includes significant properties, classified as buildings, structures, objects, sites, and districts as defined in the NHPA (36 CFR 60.3):

- **A Building** is a structure created to shelter any form of human activity, such as a house, barn, church, hotel, or similar structure. Building may refer to a historically related complex such as a courthouse and jail or a house and barn.

- **A Structure** is a work made up of interdependent and interrelated parts in a definite pattern of organization. Constructed by man, it is often an engineering project large in scale.
- **An Object** is a material thing of functional, aesthetic, cultural, historical or scientific value that may be, by nature or design, movable yet related to a specific setting or environment.
- **A Site** is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself maintains historical or archeological value regardless of the value of any existing structure.
- **A District** is a geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history.

Properties identified in the area of potential effect (APE) must be evaluated according to the National Register criteria, in consultation with the SHPO. The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. National Register Bulletin (NRB) 24 (Guidelines for Local Surveys: A Basis for Preservation Planning) identifies the process of identifying historic properties. A survey is defined as the process of identifying and gathering data on a community's historic resources. The Secretary of the Interior (SOI) identifies two levels of survey effort: reconnaissance and intensive. Reconnaissance survey is a once over quick inspection of an area, most useful for characterizing its resources in general and for developing a basis for deciding how to organize and orient more detailed survey efforts. An intensive survey is a close and careful look at the area being surveyed. It is designed to identify precisely and completely all historic resources in the area. It generally involves detailed background research, and thorough inspection and documentation of all historic properties in the field. It should produce all the information needed to evaluate historic properties.

Properties should be evaluated for significance within a historic context, or multiple historic contexts. Properties can be of local, state, or national historic importance. For cultural resources, eligibility for listing in the NRHP is used as the benchmark for evaluating the significance of the identified prehistoric and historic-period resources. To be determined eligible for inclusion in the NRHP, properties must be significant in American history, architecture, archaeology, engineering, or culture. They also must possess integrity of location, design, settings, materials, workmanship, feeling, and association, and meet at least one of the following four criteria (36 CFR 60.4):

- **Criterion A:** that are associated with events that have made a significant contribution to the broad patterns of our history; or
- **Criterion B:** that are associated with the lives of persons significant in our past; or
- **Criterion C:** that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess

high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

- **Criterion D:** that have yielded, or may be likely to yield, information important in prehistory or history.

Properties that have achieved significance within the past 50 years as well as specific properties such as cemeteries, birthplaces, graves of historical figures, religious properties, reconstructed or moved historic buildings, and properties primarily commemorative in nature shall not be considered eligible for the NRHP except in specific cases (36 CFR 60.4). In addition to the four criteria, historic properties are significant because they have integrity. Integrity is the ability of the property to convey this significance through physical features and context (NRB 15). The integrity of a property is evaluated after the area of significance is established. Integrity includes seven aspects: location, design, setting, materials, workmanship, feeling, and association (NRB 15). These aspects are defined as:

- **Location** is the place where the historic property was constructed or the place where the historic event occurred.
- **Design** is the combination of elements that create the form, plan, space, structure, and style of a property.
- **Setting** is the physical environment of a historic property. Setting includes elements such as topographic features, open space, viewshed, landscape, vegetation, and artificial features.
- **Materials** are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- **Workmanship** is the physical evidence of the labor and skill of a particular culture or people during any given period in history.
- **Feeling** is a property's expression of the aesthetic or historic sense of a particular period of time.
- **Association** is the direct link between an important historic event or person and a historic property. Under Criterion D, it is measured in the strength of association between data and important research questions.

Assessing integrity requires determining whether or not the property retains the identity for which it is significant. A property that retains integrity may possess several of the seven aspects, as well as the essential features that define why a property is significant and when it was significant. When addressing integrity of archaeological sites, it is important to note that it is generally based on the degree that remaining evidence can provide important information and that "all seven qualities do not need to be present for eligibility as long as the overall sense of past time and place is evident" (NRB 16A).

Once a historic property is deemed significant, a determination of eligibility is made by the Department of the Interior formally acknowledging that the building, structure, object, site, or district meets NRHP criteria. The next step during a Section 106 review is to apply criteria of effect and adverse effect to determine if the undertaking will affect historic properties (36 CFR 800.9). Application of the criteria of effect and adverse effect will yield one of three

findings: no effect, no adverse effect, or adverse effect as follows (National Park Service [NPS] 28):

- **Finding of No Effect** is when an undertaking will have no effect on NRHP eligible properties. Regulations require notification of the SHPO and interested persons. If the SHPO does not object, Section 106 responsibilities have been met. If the SHPO does object, the criteria of adverse effect is applied.
- **Finding of No Adverse Effect** is when there will be an effect but that it will not be adverse. If the SHPO agrees with the "no adverse effect" finding and the Advisory Council does not object, the Section 106 process is complete.
- **Finding of Adverse Effect** is when an undertaking may be in the public interest even though it will impair cultural resources. The Section 106 process is designed to ensure that feasible ways to avoid or minimize adverse effects are fully considered and acted upon. Location or design alternatives, for example, may reduce if not eliminate potential damage. The loss of historic structures and archeological resources may be mitigated by recording and data recovery.

California Environmental Quality Act (CEQA)

CEQA establishes a state of policy of sustainability to "create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations" (California Public Resources Code [PRC] § 21000 et seq.). California Code of Regulations Title 14 § 15000 et seq. details the protocol which state and agencies must comply. Under CEQA, state and local agencies are required to disclose and evaluate the significant environmental impacts of proposed projects and adopt all feasible mitigation measures to reduce or eliminate those impacts.

Lead agencies must determine if there are historical resources within a project area that are listed in the CRHP, or if properties exist that are not yet listed that may be historical resources or legally defined unique archaeological sites under CEQA. If there are historic properties, the lead agency must determine if the proposed project has the potential to impact those resources. The lead state agency is responsible for compliance with state law and for determining if cultural resources studies are needed. Under CEQA, studies are needed to determine whether historical resources are present within a project area.

California Register of Historical Resources (CRHR)

The CRHPO is established under PRC 5024.1 and is the state equivalent of the National Register of Historic Places. California Register listed properties are historical resources for purposes of CEQA. Lead state agencies are required to determine if additional properties not currently listed in the California Register may also be historical resources for purposes of CEQA. California Department of Parks and Recreation (DPR) 523 forms and continuation forms are used to record historical properties. To be considered eligible for listing in the CRHP, a property must meet at least one of the following criteria:

- **Criterion 1:** associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States; or
- **Criterion 2:** associated with the lives of persons important to local, California or national history; or

- **Criterion 3:** embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
- **Criterion 4:** has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Tribal Cultural Resources (TCR)

Assembly Bill 52 amended CEQA to identify a TCR as a new, separate, and distinct resource to be analyzed under the CEQA. The bill also amends PRC Section 5097.94 (Native American Historical, Cultural, and Sacred Sites) to include adds Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21084.2, and 21084.3. The additions mandate clear timelines for consultation with California Native American tribes. If a tribe provides substantial evidence that a TCR may be affected by a project, it must be considered as part of the CEQA analysis. A TCR may be:

- A site, feature, place, cultural landscape, sacred place, or object included or determined to be eligible for the California Register or a local register; or
- Any resource that meets California register criteria as determined by the CEQA lead agency "in its discretion and supported by substantial evidence" taking into account the significance of the TCR to a California Native American tribe.

Area of Potential Effect

The City of Tulelake proposes a wastewater system improvement project that encompasses approximately 3 acres across six locations in Tulelake, Siskiyou County, California (Figure 1). The APE is in Township 48 North, Range 04 East, Section 35 and Township 47 North, Range 04 East, Sections 01 and 02 of the Mount Diablo Meridian. The APE is depicted on the 2022 Tulelake, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2). The APE is owned by the City of Tulelake.

The proposed project includes the replacement of sewer lines and manholes in three alleyways and along one canal, the replacement of two lift stations at two locations, and the installation of one headworks screening facility near the existing wastewater building (Figure 3). Sewer line replacements will consist of installation of 900 ft of 8 in PVC sewer collection piping in Sixth Alley, 1300 ft of the piping in Fifth Alley, 1300 ft of the piping in Fourth Alley, and 1400 ft of piping parallel to the canal. The lift stations are located at the modern Water Pumping Facility public works yard at the west end of C Street, and near the RV park at the west end of G Street. Both lift stations are in highly disturbed areas with current lift station installations as well as other subsurface utilities (Photograph 1—Photograph 3). The sewer line replacements and manhole installations within town will occur in Fourth Alley, Fifth Alley, and Sixth Alley between C Street and F Street, and along the canal beginning at the western extent of G Street and ending at an east-to-west trending ditch. The alleyways are not paved but consist of compacted sediments and gravel with residents on either side (Photograph 4—Photograph 7). The proposed headworks screening facility is located on the grounds of the current wastewater building and is bordered by a modern use canal and contains other disturbances including a chain link fence, transmission line, and buried utilities (Photograph 8).

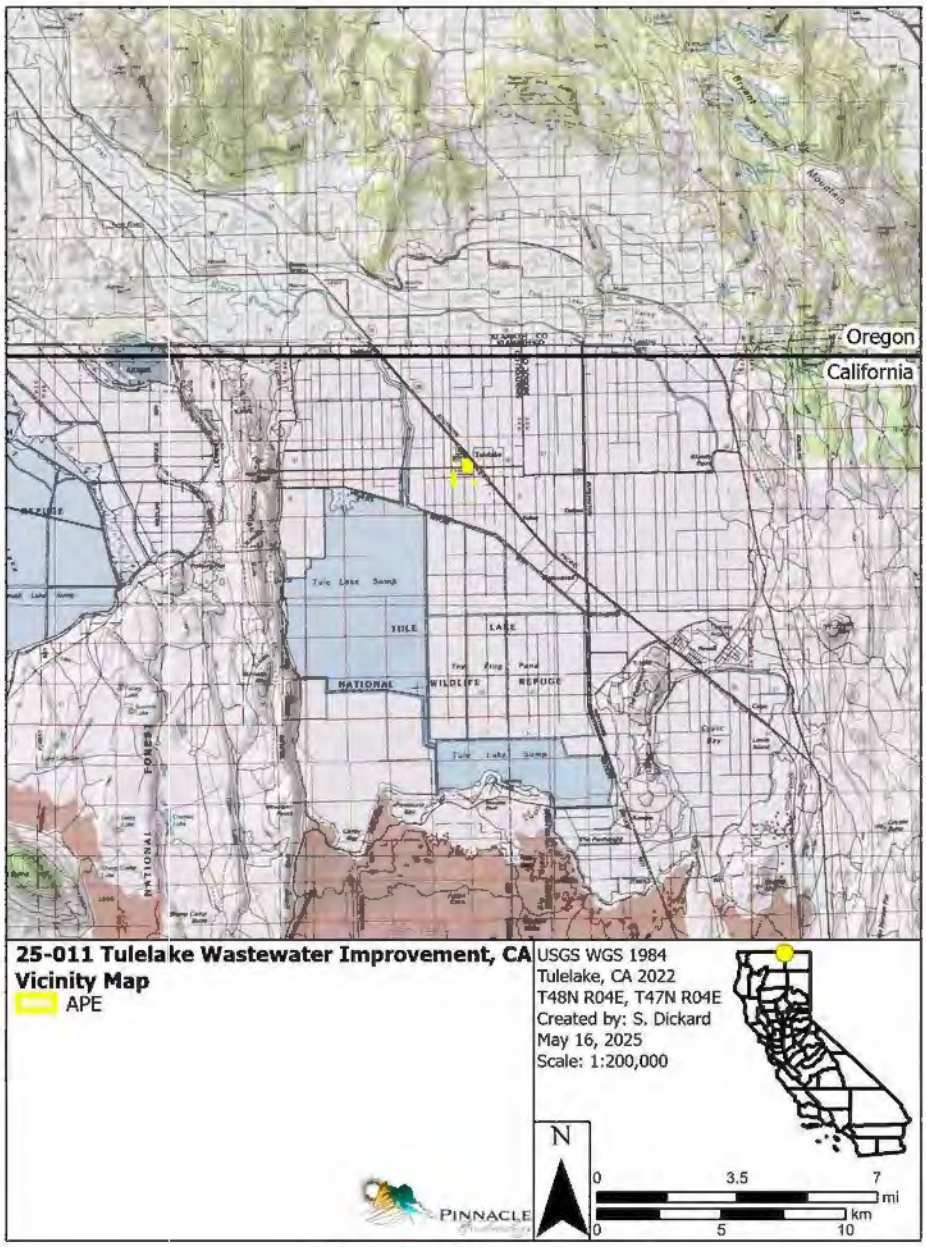


Figure 1. APE Vicinity Map

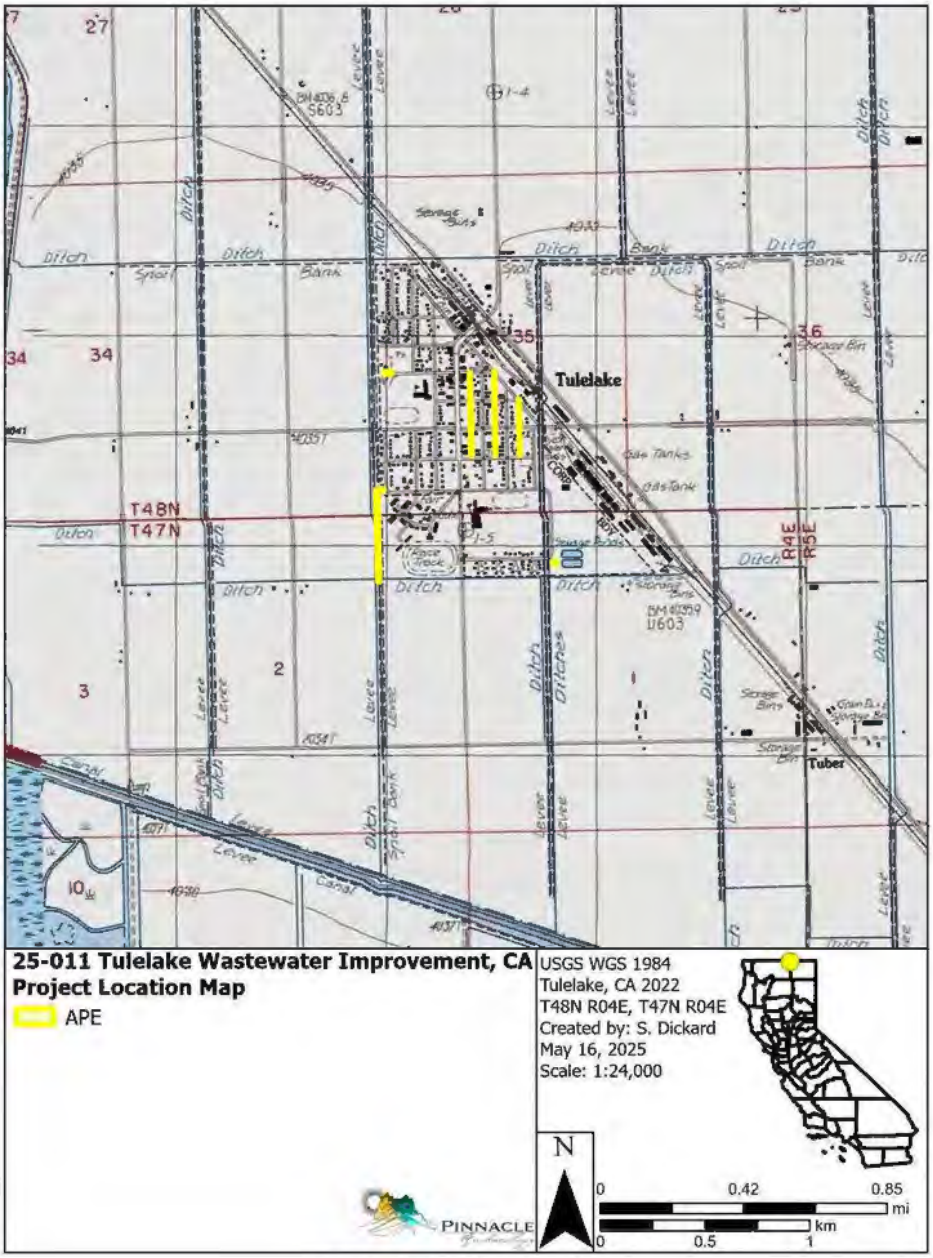


Figure 2. APE Location Map



Figure 3. APE Aerial Map



Photograph 1. Overview of proposed lift station at west end of C Street, facing northwest.



Photograph 2. Overview of proposed lift station at west end of C Street, facing west.



Photograph 3. Overview of proposed lift station at west end of G Street, facing west.



Photograph 4. Overview of Fourth Alley from the south end, facing north.



Photograph 5. Overview of Fifth Alley from the north end, facing south.



Photograph 6. Overview of Sixth Alley from the south end, facing north.



Photograph 7. Overview of sewer line replacement paralleling canal, facing north.



Photograph 8. Overview of the proposed headworks screening facility, facing south.

Environmental Context

Identification and discussion of physiographic and environmental conditions within the APE, and its geographic vicinity, is essential to understanding both prehistoric and historic land use. The factors known, and suspected, to have affected human adaptations to the environment are examined below. Geologic history, soils and sediments, climatic changes and contemporary climate, flora, and fauna are discussed in the following sections.

Physiographic and Geological Overview

The APE lies in northeastern California on the Modoc Plateau in Siskiyou County, California. The Modoc Plateau extends from the Warner Mountains and Surprise Valley to the east along the Nevada state border, south to the Madeline Plains, westward past Lower Klamath Lake at the edge of the Cascade Mountains, and north beyond the Oregon state border (McGuire 2007; Woodbridge et. al 2012). Elevations within the Modoc Plateau generally exceed 5,000 feet (ft) above mean sea level (amsl), providing cool and wet conditions. The Modoc Plateau is comprised of a broad, volcanic tableland that is broken by isolated volcanic cones, numerous rimrock benches, and deeply incised canyons. This physiographic province is defined by many natural lakes including the Lower Klamath, Tule, Goose, and Clear Lake, which are fed by the Pit, McCloud, Fall, and Lost rivers. These make up the defining hydrological features of the Modoc Plateau.

Prior to the geologic formation of the Klamath Mountains, a volcanic island archipelago existed with a seaway, known as the Modoc Seaway, which separated the archipelago from the Sierra Nevada Mountains (Orr and Orr 2002). The Modoc Seaway covered the northern portion of the Modoc Plateau throughout the Cretaceous period (Alt and Hindman 2000). Approximately 160 million years ago (mya) an oceanic plate began to collide with the North American continental plate. This resulted in erosion and uplifting that caused reduced sea levels and the end of the Modoc Seaway. Additional tectonic pressure led to the creation of the Klamath Mountains (Harden 2004). Volcanic activities resulting in the Modoc Plateau creation began in the Oligocene and continued through the Miocene to the Pleistocene (Smith 2008).

By approximately three mya, pluvial Lake Modoc was forming. At the height of Lake Modoc, during the Pleistocene, there were an estimated 400 miles (mi) of lake shoreline (Dicken 1980). Throughout the Pleistocene, glacial and interglacial periods occurred. Around 11,800 years ago, a warming climate contributed to the end of the Ice Ages and the beginning of the Holocene. The early Holocene is marked by a significant increase in temperature and decrease in precipitation (Adam and West 1983; West 2002). The Holocene had periodic and persistent widespread dry conditions that resulted in lower lake levels and runoff, increased fire frequency, and reduced vegetational growth (Anderson et. al 2008). These dry periods resulted in Lake Modoc drying up and dividing into three lakes. These are known as the Upper Klamath, Lower Klamath, and Tule Lakes (Smith 2008). Lake Tule reduced rapidly during the Holocene and fluctuated often. This resulted in the creation of rockshelters near the bottom of Gilem Bluff (Dicken 1980; Cleghorn 1959). Modern climatic conditions developed in the Modoc Plateau around 2,200 years ago, resulting in the Modoc Plateau we see today (Anderson et. al 2008).

Soils and Sediments

The volcanic rocks that comprise the Modoc Plateau are predominantly Miocene-age basalts, with late extrusions of rhyolitic rocks that are common near the southern edge of the Madeline Basin (Alt and Hyndman 2000). The Modoc Plateau is capped by Warner basalt flows and Garden Basalt Veneer from the late Miocene to late Pleistocene (Woodhouse et. al 2004).

According to the USDA, Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey, the vicinity of Tulelake is comprised of Tulana silt loam (183) and Tulebasin mucky silty clay loam (185). Tulana silt loam consists of a poorly drained lacustrine deposit derived from igneous and sedimentary rock formed on basin floors with a slope of 0–1 percent. The topsoil consists of a silt loam up to 12 inches (in) in depth with a silt loam up to 41 in in depth followed by a stratified fine sand to silt loam. Tulebasin mucky silty clay loam consists of a very poorly drained lacustrine deposit derived from igneous and sedimentary rock formed on basin floors. The topsoil consists of a mucky silty clay loam up to 14 in in depth with a silty clay up to 60 in in depth (USDA-NRCS 2025).

Climate

Seasonal fluctuations in precipitation has varied since the end of the Pleistocene Epoch. Regional climate conditions at the end of the Pleistocene enabled much greater stream discharge and more robust wetland areas than are currently observed. Before people arrived on the continent, climatic oscillations occurred every 150–200 thousand years throughout the Pleistocene, with the Last Glacial Maximum (LGM) occurring around 26,000 to 19,000 years ago (Remonte 2023). Around 14,700–12,900 years ago, a major climatic warming phase known as the Bolling-Allerod Interstadial Period occurred that rapidly melted away large swathes of ice sheets, sea ice and glaciers. This warming period changed the water balance of the Northern Hemisphere by unlocking huge amounts of fresh water and releasing it to oceans and basin lakes and allowing it to be cycled into the atmosphere resulting in precipitation. This effect, stemming from a changing balance between frozen water and water available for evaporation and transpiration from soils and plants, contributed to a wetter climate at the end of the Pleistocene and beginning of the Holocene (Pester and Zimmermann 2022; Norris et al. 2021).

During the early Holocene Epoch, beginning around 11,700 years ago, conditions were much wetter than today. The Neothermal Climate Sequence, proposed by Earnst Antevs, applies to the greater western United States, and suggests that from around 9000 years before present (B.P.) until around 7000 B.P., the weather remained cool and moist. This timespan, termed the Anathermal period, was followed by the Altithermal period from about 7000 to 4000 B.P., which was distinctively warmer and drier. During the second half of the Altithermal period, warmer and drier weather patterns allowed many of the massive inland lakes of the Great Basin to evaporate, many of them disappearing completely, along with their unique ecosystems, plants and animals by 6000 B.P. (Martin and Klein 1984). This period of climate change is especially important to the environmental context of human land use and subsistence in the region and may have pushed people into different geographic regions in search of untapped resources. The Medithermal period, which is the one we are still in now, began around 4000 B.P. and has been a more seasonal climate, subject to fluctuations of draught and deluge, much like today (Antevs 1948).

The modern Modoc Plateau climatic conditions developed around 2,200 years ago, resulting in the large number of modern fauna, especially aquatic varieties in marshland area (Anderson et al. 2008). The Modoc Plateau ranges in elevation from 3,200 ft amsl in the Fall River Valley to upwards of 8,000 ft amsl on Red Rock Mountain. The climatic pattern of the area is classified as "Mediterranean Montane" (Bailey 1995). The Modoc Plateau is within the rain shadow of the Cascades and therefore receives minimal annual rainfall. Precipitation usually results from snow between October and May, averaging 17 in annually (Woodbridge et al. 2012). Most of the Modoc Plateau precipitation originates from winter Pacific cyclonic storms with a short, unpredictable summer monsoon season (Smith and Davidson 2003). The summers tend to be cool and dry with minimal rainfall (McGuire 2007). Historically, droughts are frequent within the area (United States Fish and Wildlife Service 2001).

Historic weather data from Tulelake, California between January 1, 1932, and June 7, 2016, suggest that the average annual maximum temperature is 62.0 degrees Fahrenheit (F) while the average minimum temperature is 31.5 degrees F. Average annual precipitation is 10.8 in and occurs mostly in the fall and winter months. Average annual snowfall is 21.3 in occurring between October and May with the greatest amount in January (Western Regional Climate Center 2023).

Flora and Fauna

The Modoc Plateau bioregion supports several diverse ecosystems including Great Basin shrub, juniper woodland, coniferous forest, lacustrine, and wetland. Great basin shrub encompasses most of the Modoc Plateau in non-mountainous regions less than 5,000 ft amsl in elevation. This ecosystem supports sagebrush (*Artemisia tridentata*), rabbitbrush (*Chrysothamus app.*), and various native bunchgrasses. Additionally, the vicinity of the APE may have had juniper woodlands, lacustrine, or wetland ecosystems prior to Euro-American depletion of Tule Lake for irrigation and agriculture. Juniper woodlands occur in rockier soils of the foothills with mostly western juniper (*Juniperus occidentalis*), sagebrush, and bitterbrush (*Purshia tridentata*). Lacustrine and well-developed marsh communities around major water sources support common tule (*Scirpus acutus*), sego lily (*Calochortus spp.*), cattail (*Typha latifala*), wokas (*Nuphar polysepalum*), epos (*Perideridio gairdneri*), and camas (*Camassia quamash*). Wetlands additionally have sedges (*Carex spp.*), rushes (*Juncus spp.*) and tufted grasses (*Deschampsia caespitosa*) (Luhnow 1998; McGuire 2007; Smith and Davidson 2003). Little of this original vegetation remains due to development of the basin for agriculture, but remnants of native vegetation exist. Contemporary land use in this ecoregion is mostly agricultural.

Fauna within the Modoc Plateau traditionally included mule deer (*Ococoileus hemionus hemionus*), antelope (*Antiliocapra americana*), bighorn sheep (*Ovis canadensis California*), grizzly bear (*Ursus horribilis*), Canadian elk (*Cervus xanadensis*), and bison (*Bison bison*). The area is within the Pacific Flyway, a major route for migrating birds that include American White Pelicans (*Pelecanus erythrorhynchos*), ducks (*Anas platyrhynchos*), geese (*Branto*), and swans (*Cygnus*). Fish in the Lost River included the Lost River sucker (*Deltistes luxatus*), shortnose sucker (*Chasmistes brevirostris*), and rainbow trout (*Oncorhynchus mykiss*).

The APE occurs in a developed suburban context and as such, it is not an ideal habitat for all its original animal residents. Many wild animals have adapted to live and thrive alongside people and are likely to utilize the area. Raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*),

coyote (*Canis latrans*), and skunk (*Mephitis mephitis*) are a few of the fur bearing mammals that may be present in the area.

Cultural Context

Pinnacle prepared the following cultural context of the APE to properly evaluate the significance of cultural resources found during the survey and aid in National Register of Historic Places (NRHP) recommendations. This overview is intended only as a general outline and is not meant to be exhaustive.

Prehistoric Context

The APE falls within northeastern California. Northeastern California's prehistory is slightly different than the Great Basin (McGuire 2007). A generalized chronology presented by King et al. (2004:23–46) and McGuire (2007:165–176) divides the prehistory of northeastern California into the Late Pleistocene/Early Holocene, Post-Mazama, Archaic, and Terminal Prehistoric periods.

Late Pleistocene/Early Holocene (c. 13000 to 7000 B.P.)

Post-glacial warming, drying of ancient lakes, population increase, and artifact diversification characterizes this period (Cressman 1956). Most early Holocene sites occur on the edges of former lake shores and marshes. Cultural material of this period includes the presence of Clovis tradition projectile points, lanceolates, large cores, bifaces, and edge modified flakes. Clovis artifacts in the region have been found at the Tulelake Shelter on the western shore of Tule Lake. Carbon dating suggested a date of 11,450 ± 340 calibrated (cal) years B.P. (Beaton 1991:64).

Post-Mazama (c. 7000 to 5,000 B.P.)

Mount Mazama erupted circa 7600 B.P. which resulted in a region-wide environmental decline due to massive tephra deposits affecting wildlife, hydrology, and vegetation communities. Archaeological evidence indicates that during this population decline, mobility increased and interregional interactions between cultural groups resulted in adaptive lithic technologies.

Middle Holocene sites tend to occur on upslope alluvial fans near freshwater resources. This is suggestive of the importance of riparian habitats after the disappearance of marshlands. Lakeshore adaptation is apparent in Surprise Valley and the Klamath Basin. The Post-Mazama period is characterized by large side notched projectile points, antler wedges, mortars with V-shaped bowls, pointed pestles, T-shaped drills, tanged blades, and flaked stone pendants (Coleman 2013; McGuire 2007).

Archaic Period (c. 5000 to 600 B.P.)

During the Early Archaic (c. 5000–3500 B.P.) period, population density increased. Seasonal base camps appeared that are suggestive of sedentism. The cultural material from this period predominantly includes bifacial knives, heavy core implements, and milling equipment (Coleman 2013; McGuire 2007). Regionally significant sites from this period have been identified on Lower Klamath Lake, in the Pit River Watershed, Surprise Valley and Upland Modoc Plateau (Brown 1964; Cleland 1995; Hildebrandt and Mikkelsen 1995; O'Connell 1975; and Sampson 1985).

The Middle Archaic period (c. 3500–1300 B.P.) represents a cultural boom of large semisedentary villages, cultural elaboration, obsidian production, and ceremonial activity (Hildebrandt and McGuire 2002). Middle Archaic sites are widespread in the Klamath and Tule

Lake basins. Extensive obsidian distribution networks have been reported with origins in northern and central California (Arnold et al. 2004).

Between 1000 and 600 B.P., the Medieval Climatic Anomaly may have contributed to the change in cultural assemblages, subsistence, and settlement patterns associated with the Late Archaic period. Late Archaic sites have been identified in the Klamath, Tule, and Goose Lake basins (Cressman et. al 1942; Sampson 1985; Squier and Grosscup 1954). The Late Archaic period is indicated archaeologically by the adoption of Rose Spring projectile points, along with Gunther barbed projectile points (Coleman 2013; McGuire 2007). By 1000 B.P. brownware ceramics occur and continue into the Terminal Prehistoric.

Terminal Prehistoric (c. 600 B.P. to Contact)

Starting during the Late Archaic period, smaller Numic villages, established by the arrival of Northern Paiute groups from southern California, replaced the larger seasonal and semi-permanent villages. Permanent settlement continued along the banks of the Pit River (Coleman 2013) until diseases brought by Europeans decimated native populations. This decimation resulted in the change from seasonal and semi-permanent villages to single and multi-family camps (Coleman 2013: McGuire 2007). Cottonwood projectile points came into use as tool kits began to favor easily created and disposed of tools (McGuire 2007).

Ethnographic Context

At the time of European contact, the Modoc Plateau was home to the Modoc people. Traditional Modoc land encompasses Goose Lake to the east, Medicine Lake highlands to the south, Mt. Shasta to the west, and north of the Oregon state line (Kroeber 1925; Ray 1963; Stern 1998).

The Modoc's language dialect is part of the Plateau Penutian family (Stern 1998). The Modoc are closely related in language to their northern neighbors, the Klamath. The name Modoc derives from the tribal name for Tule Lake, *móatak* or *móatak é-ush*, which means "lake of the extreme south" (McNally 2017). The Modoc recognizes three major divisions or subgroups which were based on geography (Stern 1998). These included the Gumbatwas or the "people of the west" who occupied the Lower Klamath Lake and Tule Lake region, the Kokiwas or the "people of the far-out country" who lived around Clear Lake, and the Paskanwas or the "river people" found in the Lost River Valley (Ray 1963:202; Stern 1998:447).

Social life was elaborate when families congregated in winter villages with three types of leaders including a political leader or chief, a war leader, and a shaman. The chief position was largely hereditary, but a chief could also be chosen for their success and skills (Kroeber 1939:320; Stern 1998:454). The war leader was autonomous from the chief and was selected based on proven ability in warfare, which occurred when their territory was encroached by other tribes such as the Pit River from the south, for retaliation, or to take slaves for lucrative trade on the Columbia River (Ray 1963:134-136).

Prior to the arrival of Europeans, before 1800, the Modoc ground their food with bedrock mortars, hunted with bows and arrows, utilized obsidian from Glass Mountain, made clothing from tule fibers or animal skin that was decorated with beads, and houses were semi-dugout wickiup structures (Murray 1959). Traditionally spring was the time for fishing for trout and suckers in the Lost River. Early summer was the time to collect camas. Late summer was the time to hunt larger game such as deer, antelope, bears in the mountains as well as duck and

geese on the lake. Berry collection was important, and fishing continued. Each family unit was responsible for storing enough food between spring and fall to survive the winter in semipermanent to permanent villages along the edge of the lake (Riddle 1914). Peter Skene Ogden of the Hudson Bay Company interacted with a Modoc winter village on the shores of Tule Lake in 1826 (McNally 2017). In historic times the Modoc had at least two large permanent villages, cremation places, and a ritual center on the north and northeast shore of Clear Lake, but the exact location is unknown (Ray 1963:209).

Upon death, the body was washed and dressed in preparation for cremation. Ideally, the cremation would take place within 24 hours after the death. A wood pyre was built usually on a rocky prominence near the village and the ashes were covered over with rock (Ray 1963: 113-117). These cremation sites are known around Sheepy Creek and east of Tule Lake. Rock art and rock features were used within larger cosmological and religious frameworks (Foster and Foster, 2002; Haynal, 2000).

Both the Modoc and the Klamath created rock features in antiquity, and some are still produced today by peoples following traditional religious practices. Ethnographically, rock features were built as part of religious activity aimed at obtaining power or overcoming grief (Ray 1963; Spier 1930). Most often rock features are associated with male puberty rites in which boys would go out to remote locations on multi-day vigils. They would fast, stack rocks, swim, and run until at the point of exhaustion they received visions bringing them power (Spier 1930:95-96). Shamans and other tribal members are also known to stack rocks for a variety of reasons. Other rock features include hunting blinds, rock ring structures, U-shaped prayer seats, and defensive structures (Hildebrandt et al. 2015).

Ethnohistoric Context

From the 1820s through the Civil War, contact between Euro-Americans and the Modoc was intermittent. During this time, mining disturbed streams, traders altered the economic way of life, and settlers flowed in (Murray 1959). The introduction of the horse after 1800 led to cultural changes resulting in an increase of Klamath and Modoc raids for weapons, horses, and status symbols (Luhnow 1998). By the mid-nineteenth century, the Modoc had adopted European style clothes, horses, guns, and built permanent timber houses (Murray 1959).

Between 1847 and 1849, the Modoc were hit by European diseases including smallpox, malaria, measles, and venereal diseases (Cross 1982). The mortality rate was upwards of 40 percent and an estimated 150 people died by the end of 1847 alone, while the Modoc's population at the time of contact is estimated to be only around 2,000 (Powers 1877).

The Homestead Act of 1862 allowed traditional Klamath, Yahooskin, and Modoc lands to be obtained by Euro-Americans. Homesteaders and land speculators began to flood the region. This began to cause conflicts including the Sacramento River Massacre, Klamath Lake Massacre, Bloody Point Massacre, and the Ben Wright Massacre. After the Ben Wright Massacre, Kientpoos (later known as Captain Jack) was appointed subchief of the Modoc and peace ensued for several years (Compton 2017; McNally 2017; Riddle 1914). Captain Jack's band of Modoc resided in the watershed of Clear Lake and Lost River, which was an area targeted by those filing land claims and seeking livestock pasture. As Euro-Americans pushed into the Klamath Basin, the Modoc and Klamath lost traditional hunting grounds. In response, Captain Jack approached Indian agent, Judge Elisha Steele to establish a treaty. Without the

authority to do so, Judge Steele made an agreement with Captain Jack to establish a reservation for the Modoc in the Tule Lake area (Compton 2017; Lava Beds National Monument 2015; McNally 2017).

The Office of Indian Affairs in Washington, D.C. decided to negotiate a treaty that would remove all Native Americans of the Upper Klamath basin to a reservation in Oregon: The Klamath Reservation (Compton 2017; McNally 2017). Indian Superintendent, J.W. P. Huntington assembled over 1,000 Native Americans at Council Grove, north of Upper Klamath Lake. The Modoc, Klamath, and Yahooskin Band of Northern Paiutes were asked to cede more than 20 million acres of south-central Oregon and northeastern California. They would be relocated to a two-million-acre reservation on traditional Klamath lands where no Euro-Americans would be allowed to live. Additionally, the Native Americans were to receive thousands of dollars' worth of supplies over the next 15 years (Most 2003).

The Modoc agreed to move to the Klamath Reservation in Oregon in 1864 (Compton 2017:23; Riddle 1914). The new occupation of the Modoc led to competition over resources such as timber (Riddle 1914). In 1865, after several failed attempts by Captain Jack to obtain assistance from judges and federal agents, several Modoc families decided to ignore the terms of the treaty and returned to traditional lands along the Lost River (Murray 1959).

The Modoc that left the Klamath Reservation lived without conflict for approximately four years (Compton 2017:23; Riddle 1914). In 1868 Abe Ball, a local homesteader, began to write letters to Captain Knapp at the Klamath Agency reporting that the Modoc were becoming aggressive, stealing cattle and other goods (Riddle 1914). In December 1869, the Modoc were peacefully returned to the Klamath Reservation. The issues between the Klamath and Modoc on the Reservation continued and Knapp did nothing to alleviate the tensions (Riddle 1914). Again, a group of Modoc left the Klamath Reservation in April 1870 (Compton 2017; Riddle 1914).

In November 1872, the Bureau of Indian Affairs ordered the Army from Fort Klamath to return the Modoc to the Klamath Reservation, by force if needed (Compton 2017; McNally 2017). The attempt resulted in the death of several cavalry men and Modoc in what is known as the Battle of Lost River, the first battle in the Modoc War. On December 21, 1872, Modoc warriors attacked Army supply wagons on Land's Ranch. Two men were killed and several more were wounded. This was the second battle of the Modoc War known as the Battle of Land's Ranch.

Captain Jack requested a reservation on the Lost River but was refused (Compton 2017; McNally 2017). The decision angered some Modoc, of which many, led by a warrior named Hooker Jim, went on a rampage and killed upwards of a dozen settlers before retreating to the lava beds south of Tule Lake (i.e., Lava Beds National Monument). An estimated 57 Modoc warriors kept the Army, numbering in the thousands, at bay for approximately six months.

President Grant established a Peace Commission to try to prevent further fighting but two Modoc, Hooker Jim and Curly-headed Doctor, shamed Captain Jack into a plot to kill the peace commissioners (Compton 2017; Lava Beds National Monument 2015; McNally 2017). On April 11, 1873, five unarmed Modoc were supposed to meet with the commissioners. Captain Jack made another request for a Lost Reservation; however, when Canby denied the request, Captain Jack shot and killed him (Compton 2017; McNally 2017). In response, the Army attacked Captain Jack's Stronghold approximately 9 mi southwest of the APE. Although the

initial attempt failed, the Army was able to cut off the Modoc water supply. On April 17, 1873, the Army captured the Stronghold only to find that the Modoc had escaped (Compton 2017; Lava Beds National Monument 2015; McNally 2017).

The Modoc group divided. One group went to the Fairchild Ranch on Hot Creek to surrender peacefully on May 20, 1873. The other, led by Captain Jack, avoided surrender until he was apprehended on June 1, 1873 (Compton 2017; Lava Beds National Monument 2015; Luhnow 1998; McNally 2017). Captain Jack and several other Modoc were subject to a military trial and sentenced to be hanged (Riddle 1914). After their execution, the heads of the hanged men were sent to the Smithsonian in Washington D.C. for study and only returned in the 1980s to the Klamath Tribes (Luhnow 1998). The remaining Modoc, including 39 men, 54 women, and six children were banished to the Quapaw Agency in Oklahoma in early October 1873 to prevent further struggles. It was not until 36 years later that a bill in Congress would allow them to return to the Klamath Reservation; however, by then, many Modoc had made Oklahoma their home and few returned to Oregon (Luhnow 1998).

Historical Context

The expectation of large populations of beavers, minks, and muskrats living in and around the lake systems of southern Oregon and northern California brought the first Euro-American explorers to the Tule Lake Basin. In 1826, Peter Skene Ogden, a member of the Hudson's Bay Company (HBC) with a company of 35 fur trappers and their families, described crossing a land bridge southeast of modern Merrill, Oregon to reach Tule Lake. This land bridge known as Natural Bridge was shown to Ogden by a group of Modoc (Tulelake-Butte Valley Fair Museum 2021). Odgen disliked the Tule Lake region because it lacked rivers and beavers, his fur trappers were unable to support themselves during the winter and relied upon Modoc for survival (McNally 2017).

In 1843, a group of trappers led by Old Bill Williams arrived at Upper Klamath Lake. The trappers stayed the winter with the Klamath and trapped martin. The trappers ventured into Modoc country and to Tule Lake where they met up with approximately 30 Native Americans who were most likely Modoc. A skirmish later broke out with several trappers and Modoc killed before Williams moved on to Clear Lake.

In December 1843, John C. Frémont and his party of Topographical Engineers entered the Klamath Basin from the north in December 1843. Frémont turned east at Sycan Marsh and explored Summer Lake and Abert Lake. In 1846, Frémont returned to the Klamath Basin with 60 men, guided by Kit Carson, to search for a route to California through Modoc country this time travelling around Tule Lake (Jackson and Spence 1970). In July of 1846, two months after Frémont arrived in California, Scott Applegate moved through the area looking for a southern route for the Oregon Trail. The route followed along the northern edge of Modoc territory, through volcanic fields, and stopped near Clear and Tule lakes. The route became known as the "Applegate Trail" (Luhnow 1998). By the 1850s, the discovery of gold in California increased western migration along the Applegate (Roberts 1980:76-79).

When California was granted statehood in 1850, politicians pushed to allow independent farming, but this was suppressed by southern politicians fearing an unequal number of slave states. After the South succeeded from the Union, Congress passed the Homestead Act of 1862. Just in California, the Homestead Act ultimately created nearly 10.5 million acres in

land grants (National Park Service 2015). Homesteading in California was accelerated by the gold rush because farmers and ranchers could sell their supplies to mining camps. Few settlers homesteaded on the Modoc Plateau until after the conclusion of the Modoc War in 1873. The settlement boom economy of the Modoc Plateau during the 1870s was based on timber, gold, agriculture, and the railroad industry.

Cattle entered northeastern California as early as 1846 on the Applegate Trail alongside the oxen, but cattle often died along the way or arrived in poor condition (Roberts 1980). Small ranches were established, but a severe winter between 1859 and 1860 led to the death of most livestock. Cattle prices dropped and ranchers added to their herds. Between 1862 and 1864, a drought reduced stock numbers by as much as 50 percent and forced many ranchers to move closer to the lakes in northeastern California. The climate finally improved between 1865 and 1874. Better climate conditions, along with the forced relocations of Native Americans, allowed agricultural settlement to flourish (Roberts 1980:117).

By the late 19th century, most public land suited for homesteading had been claimed or patented; however, a national depression in 1896 led farmers to reconsider the remaining dry lands available for homesteading in the region resulting in the Dry Farming movement (Mackey et al. 2000). Commerce began to boom with the export of cash crops utilizing newly constructed railroads. In 1908, the Southern Pacific's Fernley-Lassen railroad line was extended reaching Lakeview, Oregon by 1912. In 1928–1929, the line was widened and extended to Klamath Falls on the east side of Tule Lake (Woodhouse et al. 2004).

The rapid settlement of lands within the Klamath Basin was further supported by the 1902 Reclamation Act by President Roosevelt, which aimed to turn unproductive lands into small, irrigated farms. To facilitate this, the Bureau of Reclamation (BOR) proposed an ambitious project to reduce water levels in Tule and Lower Klamath lakes to expose lake beds for farming by building dams on the outlets of Clear and Upper Klamath lakes (Foster 2002). In 1903 the Klamath Basin was surveyed by the federal government. The plan included a 50-square-mile area with canals and drains to irrigate the Klamath and Lost River Valleys and the reclamation of Lower Klamath and Tule lakes. The U.S. Secretary of the Interior approved the project, the Klamath Project, on May 15,1904 with $4.4 million appropriated for construction. The Klamath Reclamation Project was established in 1905 and was the largest reclamation project at the time (Tulelake-Butte Valley Fair Museum 2021; Turner 2007:13). Oregon and California ceded lands to the government for the purpose of providing land for reclamation during that year (BOR 2008:1).

The Lost River Diversion Dam and Channel would divert water from the Lost River to the Klamath River. The dam was completed in 1910. Immediately, Tule Lake began to dry out, furthered by 1915 irrigation and drainage projects allowed under President Wilson's Executive Order 2202, which allowed the sale of federal lands to private parties. By 1917, the water supply to Lower Klamath Lake was completely shut down in favor of irrigation (Lantis et al. 1973: 22). In 1922, the federal government opened the lakebed to homesteading claims and potatoes became a primary crop produced at this time (Lantis et al. 1973: 22).

Plans were also drafted for a town site in the Tule Lake Basin, but establishment was postponed until there was sufficient economy to support a town (Turner 1987:197). The BOR announced the formation of a "Government Town Site" in 1929 due to the increased

population from homestead lottery drawings of previous years and the Southern Pacific Railroad line from Klamath Falls (Turner 1987:197-198).

Over the next two years, the town developed slowly and development along the Southern Pacific Railroad right-of-way began in preparation for new residents. The largest business that was developed was the Siskiyou Tractor and Implement Company, built and owned by Earl Ager, one of the town's strongest proponents. Ager found himself in Tulelake after he heard the announcement of the town development as part of the reclamation project (Turner 1987:198–199). Ager eventually came to be the President of the Tulelake Chamber of Commerce, as well as owner of "Earl's Market", a grocery store sited in the Clyde Hotel, in 1935 (Turner 1987:200, 203).

Shortly after the news of a town site spread through the community, so did the Great Depression, caused by the stock market crash of 1929. Despite the declining economy, and harsh frosts which impacted local crops, Tulelake continued to grow, and shared many characteristics of a boom town in the wild west (Turner 1987:200, 203).

In 1930, local homesteader and engineer J.W. Taylor was hired to survey the proposed town site area and develop a street plan. At this time, much of the area was planted with grain owned by L.J. Horton and his family (Turner 1987:199). The Horton family was the first to build a home in what is now Tulelake, after they settled in the area in the 1920s. The town grew quickly after the Horton family agreed to sell their land to the BOR and relocate (Tulelake-Butte Valley Fair Museum 2021).

The sale of the town lots began in 1931 by auction. Residential and commercial lots were available, and some lots were set aside for public parks and future development. Additional BOR auctions took place in 1936, 1941, and 1948 (Turner 1987:198–199). The year 1931 continued to be an impactful year for the town. The first post office was established, which also established the name of the town as Tulelake, California (Turner 2007:16).

On March 1st of 1937, Tulelake was incorporated after two years of debate and petitioning for incorporation and organized services in the town (Turner 2007). Tulelake's incorporation status was questioned in 1940 while trying to secure a water bond. The State of California stated that Tulelake had not submitted an official city map which negated their incorporation status. With help from Siskiyou County administrators the issue was resolved, and the 1937 election results were verified. Tulelake was considered officially incorporated in March of 1937 (Tulelake-Butte Valley Fair Museum 2021; Turner 1987:209).

As Tulelake grew, so did the need for reliable and safe drinking water. Despite sufficient irrigation water, reliable drinking water was not available. A test well was dug in Tulelake in 1938 and deepened in 1941 and 1951 before reaching a depth of 3,000 feet in 1953 and securing safe water. Additionally, the Tulelake water tower (P-47-005374) was constructed at this time (Turner 1987:212–213; Tulelake-Butte Valley Fair Museum 2021).

The United States' involvement in World War II (WWII) slowed the growth of Tulelake. WWII put a complete stop to major infrastructure, including the development of a Tulelake airport (Turner 1987:213–214). Shortly after the declaration of war on December 8, 1941, President Franklin Roosevelt issued Executive Order 9066 on February 19, 1942, "evacuating" those of Japanese ancestry to designated relocation centers. Construction of the Tule Lake Relocation Center (Center) began nine miles south of Tulelake, in the town of Newell. The Center was

opened on May 27, 1942. At its maximum, the Center housed 18,000 Japanese American forced internees (Donnelly 2003b).

From 1942 to 1945, Tulelake benefitted economically from the development of the Center. When the Center was under construction, laborers lived in Tulelake. Once the Center was in operation, civilians were employed and lived in Tulelake (Turner 1987:216). Tulelake also served as a local shopping center for farmers and homesteaders, since the road between Tulelake and Klamath Falls, Oregon was difficult (Ebinger 2021). Although the construction of the Center drew laborers to the area, farmers in Tulelake were desperate for workers to assist with harvesting and maintenance. In 1944, Tulelake appealed to source laborers from the Italian and German prisoner of war (POW) camp in Medford, Oregon. The POWs lived in tents on lots in town or at the Civilian Conservation Corps (CCC) camp west of town (Turner 1987:216; Tulelake-Butte Valley Fair Museum 2021). The Center was closed in March of 1946, and the land was returned to the BOR.

In 1946, as WWII veterans returned to the United States, another round of the homesteading lottery was opened in Tulelake (Tulelake-Butte Valley Fair Museum 2021). Application requirements for the lottery were stricter than in previous years. Some of these requirements included being a WWII veteran, submit reference letters, proof of farming experience, and having greater than or equal to $2,000 in assets. Over 2,000 applications were entered into the lottery, but only 86 homesteads were available. The lottery winners were offered the option to purchase building materials left over from the Center in Newell (Donnelly 2003a).

Lottery drawings for homesteads also occurred in 1947 and 1948. By the time of the 1948 homestead lottery drawing there was a housing shortage in the area. Due to this issue, homesteaders from faraway places were encouraged to leave their families, stay in hotels, take out lines of credit, and purchase machinery to plant their first line of crops. With their homestead, new settlers were given two Center barracks and were given plans to be able to convert them into homes (BOR 1948:2, 4).

Several of the homesteads awarded in the 1940s drawings were unsuccessful and were no longer being farmed by the 1950s and 1960s (Donnelly 2003a). No further homesteads were awarded after 1948 subsequently stagnated the growth of Tulelake. During this period, improved transportation routes caused commercial property owners to lose business to larger nearby cities. Businesses vacated the town in the 1960s and 1970s in hopes of being successful elsewhere. The businesses that vacated were not replaced (Turner 1987:222). A series of droughts in the early 2000s negatively impacted the farmers remaining in Tulelake and recovery for the town has been slow in the years since (Turner 2007:20).

Record Search and Literature Review

Prior to fieldwork, Pinnacle conducted a record search and literature review to identify previously conducted cultural resource inventories and studies, previously recorded cultural resources, and documented historic resources within the APE and within a 0.5-mi (0.8 km) study area around the APE. Pinnacle searched the California Office of Historic Preservation (OHP) online California Historical Resources Information System (CHRIS) previous cultural resources (Records Search No. NE24-93). In addition to previously documented cultural resource databases, Pinnacle reviewed historical resources including maps (i.e., General Land Office [GLO] survey plat maps and USGS topographic maps), GLO land patents, and aerial images. The study helped determine the extent of previous inventories, potential cultural resource periods and types, and historic activity in the study area and APE.

Previous Cultural Resource Studies

The records search revealed that nine cultural resources inventories have been completed within the 0.5-mi study area of the APE (Figure 4; **Error! Not a valid bookmark self-reference.**). The cultural inventories were conducted for a variety of different projects including the replacement of bridges (i.e., Parker 1978; Sletteland 1980), highway improvements for Highway 139 (i.e., Wiant 1993), installation of a pump-house (i.e., Barnes 2007), waterline improvements (i.e., Vann 2007), a wastewater treatment plant upgrade (i.e., Vann 2013), and telecommunications installations (i.e., Billat and Billat 2005; Caltrans 2016; Willis et al. 2015).

Table 1. Previous Cultural Resource Studies in the 0.5-mi Study Area

CHRIS No.:	Report Title	Reference
NEIC-000515	Archaeological Evaluation of Eight Areas for Proposed Bridge Replacement on State Route 139, Modoc and Siskiyou Counties, California	Parker 1978
NEIC-000560	Archaeological Survey Report for the Proposed Replacement of 17 Bridges on 02-MOD-139-PM 46.4/50.7 and 02-SIS-139-PM 0.0/4.8, Modoc and Siskiyou Counties, California	Sletteland 1980
NEIC-003564	Negative Archaeological Survey Report for the Proposed Highway 139 Widening Project, Siskiyou County, California	Wiant 1993
NEIC-006437	New Tower Submission Packet FCC Form 620 for the Proposed Tulelake Cell Tower Project, Siskiyou County, California	Billat and Billat 2005
NEIC-008331	Archaeological Survey and Findings Report for the City of Tule Lake Community Development Block Grant, Modoc County, California	Vann 2007
NEIC-010079	Archaeological Inventory of the J-7 Lateral Canal and 44-F Drain in the City of Tulelake, Siskiyou County, California	Barnes 2007
NEIC-013225	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SC5536A (Tulelake), NE Corner of 4th Street and Modoc Avenue, Tulelake, Siskiyou County, California	Willis et al. 2015
NEIC-014054	An Archaeological Survey and Findings Report for the City of Tule Lake Waste Water Treatment Plant Upgrade, Siskiyou County, California	Vann 2013
NEIC-014108	Hunter Communications State Route 139 Encroachment Areas - Tulelake and Tionesta Archaeological Survey Report	Caltrans 2016

BOLD indicates previous inventory overlapping the APE

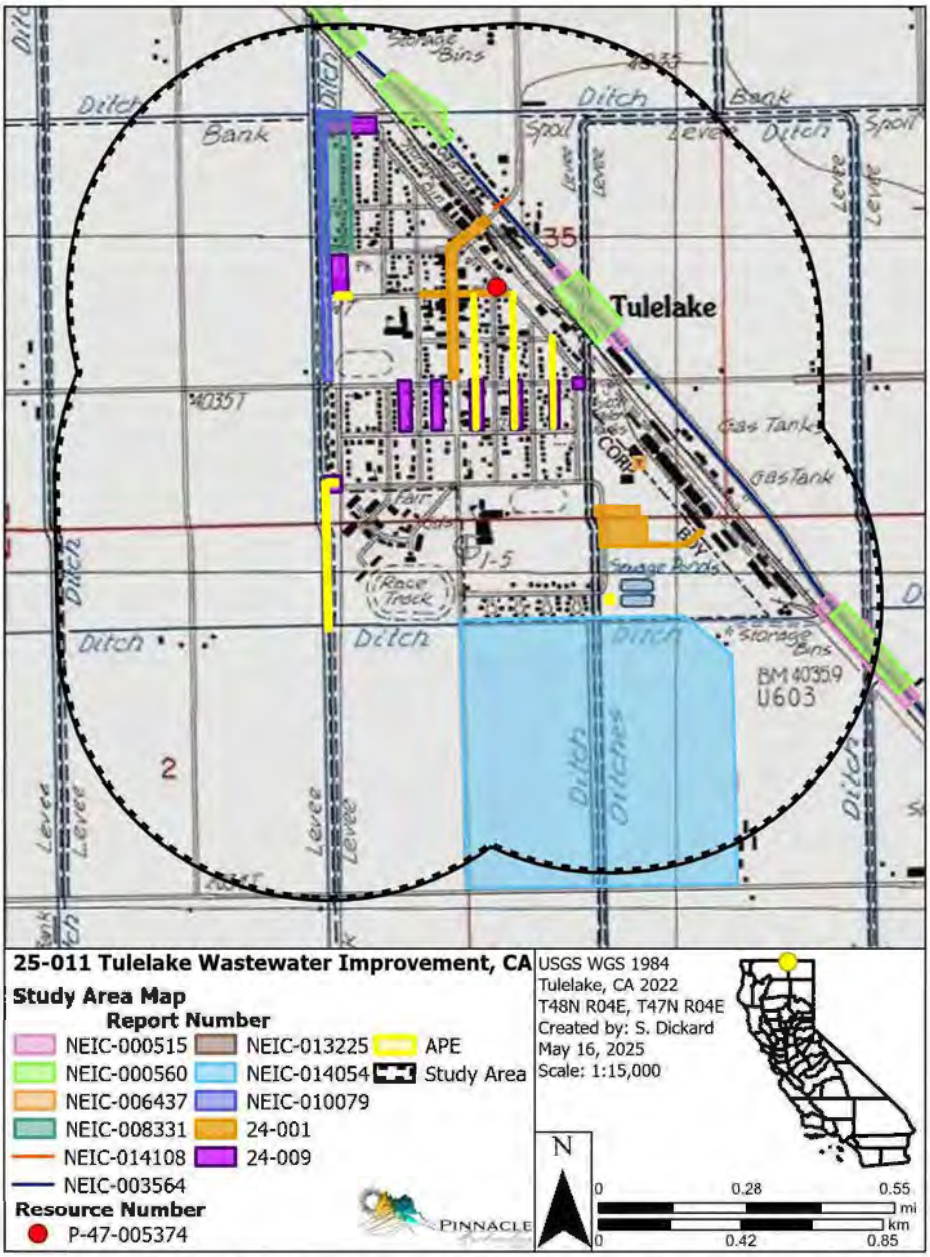


Figure 4. Previously Studies and Recorded Cultural Resources in the 0.5-mi Study Area

Eight of the previous cultural resource studies consisted of pedestrian survey and no cultural resources were identified. NEIC-013225 was an historic architectural survey of a water tower structure to determine if it should be considered a historic property, which resulted in the recording of the water tower as P-47-005374. One of the previous cultural resource inventories occurred within the APE (NEIC-010079) but no cultural resources have been recorded within the APE.

Additionally, Pinnacle completed cultural resource surveys for the City of Tulelake in 2024 for various projects. Project 24-001 included Task Order 11 for proposed construction of single and multi-family housing apartment units, townhouses, and single-family homes as well as Task Orders 12–14 for street improvements. Project 24-009 included Task Order 1012-5803 for waterline replacements and drinking water system updates as well as Task Order 1012-5810 for rehabilitation of existing wells and replacement of waterlines with associated plumbing. These projects were both pedestrian surveys that were negative for cultural material.

Previously Recorded Cultural Resources

Pinnacle's record search revealed one previously recorded archaeological site within 0.5 mi (0.8 km) of the APE inventoried in CHRIS (Figure 4). CHRIS Report NEIC-013225 provides the NRHP evaluation of the Tulelake Water Tower that was constructed around 1955 (P-47-005374) (Willis et al. 2015). The Water Tower was the proposed installation location for three T-Mobile antennas. Evaluation of the Water Tower found that it was not eligible for the NRHP (Willis et al. 2015).

Historic Maps and Other Documented Resources

GLO maps were consulted to identify potential historical properties in the APE with the earliest available map dating to 1873 (GLO 1873). The 1873 GLO map, and maps through 1925, do not identify any cultural resources in the APE (GLO 1917; GLO 1920; GLO 1925a, 1925b). Between 1929 and 1930, the GLO maps first depict the City of Tulelake street grid plan with defined lots for commercial and residential development. The streets established by 1930 remain in their original alignment to this day (GLO 1929a, 1929b; GLO 1930a, 1930b; GLO 1931; GLO 1948; GLO 1960). The 1930 GLO also depicts the Southern Pacific Railway Line on the east side of Tulelake, California (GLO 1930a).

Archival USGS topographic maps were also consulted for the APE. The earliest available USGS topographic map for the area dates to 1886, with no historic resources or structures in the area (USGS 1886). A further investigation of USGS topographic maps depicts the City of Tulelake street grid plan and the Southern Pacific Railway Line by 1951 (USGS 1951). The APE remains unchanged into the present day (USGS 1954; USGS 1958; USGS 1984).

Aerial images of the APE were also reviewed through the Historic Aerials website (Nationwide Environmental Title Research, LLC (NETR) 2025). The earliest aerial images begin in 1948. An aerial image from 1948 depicts the City of Tulelake and the Southern Pacific Railway Line. The section of the APE at the western extent of C Street at the modern Water Pumping Facility public works yard appears as several structures including a water tower, which is surrounded by rows of structures or tents (NETR 2025; Figure 5). The exact nature of what is depicted in this section of the APE in 1948 is unclear but may be associated with housing laborers or POWs involved with the Tule Lake Relocation Center (Center). The Center was opened on May 27, 1942, under Executive Order 9066, which was issued by President Franklin Roosevelt shortly

after the declaration of war and subsequent United States involvement in WWII. The Center housed Japanese American internees in the town of Newell, nine miles south of Tulelake. From 1942 to 1945, Tulelake benefited economically from the Center. When the Center was under construction, laborers lived in Tulelake. Once the Center was in operation, civilians were employed and lived in Tulelake. In 1944, Italian and German POWs were transferred from Medford, Oregon to Tulelake. The POWs lived in tents on lots in town or at the CCC camp west of town (Turner 1987:216; Tulelake-Butte Valley Fair Museum 2021). The Center was closed in March of 1946 (Turner 1987:216). The area adjacent to the APE, modern Otis Roper Park, also contained rows of structures and appears to be part of the same facility (Figure 5).



Figure 5. APE plotted on the 1948 aerial image (NETR 2025).

The 1955 aerial image revealed that by 1955 all the features depicted in 1948 were removed. A water storage tank, gravel lot, and a few structures associated with the modern Water Pumping Facility public works yard are depicted. The APE on the west side of C Street remains visibly unchanged between 1955 and 2022, the latest available aerial image (NETR 2025). Aerial images for the APE locale on the west side of G Street that parallels the canal depicts that the canal was constructed by 1948 and remains visibly unchanged through 2022. The remainder of the APE locations within the alleyways depict structures along the streets of

Tulelake by 1948 and structures remain through 2022 (NETR 2025). Due to the scale of the images it is impossible to determine if the structures present today are original constructions from 1948.



Photograph 9. Overview of sediment pile with modern refuse and debris on east side of canal, facing east.



Photograph 10. Fourth Alley, example of gravel and disturbed alley, facing south.



Photograph 11. Water pumping structure south of G Street on the east side of canal, facing south.

Results of Survey

On April 6, 2025, Ashlee Hart and Brooklynn Carnevale performed a pedestrian survey of the approximately 3-acre APE. Pedestrian transects were placed no more than 10-m apart. The mineral sediment visibility ranged from zero to 30 percent due to the grass, gravel, structures, and storage of sediment, refuse, and machinery. No cultural artifacts or features were observed during the pedestrian survey and all structures depicted on historic aerials are no longer extant.

The APE included grass, gravel alleyways, and the modern Water Pumping Facility public works yard, which has a storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Previous sewer line construction and maintenance, in addition to private and public property improvements, have significantly disturbed the APE or overlain it with fill material and gravel. Property improvements, subsurface utilities, transmission lines, and vehicle use are the major contributors to soil disturbance (Photograph 12). The proposed wastewater system improvements will replace current utilities resulting in no new disturbance. Proposed additions such as lift stations are in an already highly disturbed area with subsurface utilities (Photograph 13—Photograph 14).



Photograph 12. Fourth Alley overview with gravel road, transmission lines, underground utilities, and modern residences, facing north.



Photograph 13. Overview of utilities present along south edge of public works yard, facing east.



Photograph 14. Proposed lift station at the west end of G Street, facing southwest.

Field Methods

Pinnacle performed fieldwork, resource recording, and NRHP evaluation in compliance with California OHP guidelines and standards. All work was performed under the oversight of Ashlee Hart (Ph.D., RPA) who meets the SOI Professional Qualification Standards for archaeology in accordance with Appendix A of 36 CFR 61 and is a CHRIS Authorized User. Dr. Hart and Staff Archaeologist Brooklynn Carnevale performed fieldwork on April 6, 2025.

The APE included approximately 3 acres of land in the City of Tulelake, California. The APE was flat at an elevation of about 4,689–4,694 ft (1,429–1,431 m) amsl. The APE is in a developed area of Tulelake. The APE is entirely disturbed from previous underground utilities including waterlines and sewer lines. The APE included grass, gravel alleyways, the existing wastewater building property, and the modern Water Pumping Facility public works yard, which has a storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Mineral sediment visibility ranged from zero to 30 percent due to the grass, gravel, structures, utilities, and storage of sediment, refuse, and machinery (Photograph 8–Photograph 11). No native vegetation was observed. Pinnacle archaeologists completed an intensive pedestrian survey of the APE on April 6, 2025, when the weather was in the low 60 degrees F with clear skies and little to no wind.

Prior to fieldwork, the APE polygon was uploaded to the Environmental Systems Research Institute, Inc. (ESRI) ArcGIS Field Maps application on iPad 9th generation tablets. To gain sub-meter accuracy, a Juniper Geode GNS2 sub-meter accuracy Global Positioning System (GPS) device was connected in Field Maps. Geographic Information System (GIS) data collection was set to North American Datum 1983 (NAD83), Universal Transverse Mercator (UTM) Zone 10 to view and record all locational data. Representative photographs of the terrain, geology, vegetation, and other relevant features were taken throughout the survey. Additionally, field notes were recorded in ESRI Survey 123. No subsurface exploration occurred, and artifacts were not collected during the pedestrian survey. The crew used transects spaced no more than 10-m apart.

Summary and Recommendations

Pinnacle was contracted by Rabe Consulting to conduct a cultural resource survey in preparation for wastewater system improvements in the City of Tulelake. The proposed project includes seven locales throughout Tulelake, Siskiyou County, California. The APE associated with the project accounts for approximately 3 acres including grass shoulders adjacent to paved roads, unpaved alleyways, and the Water Pumping Facility. The City of Tulelake received funding from the EPA through the CWSRF and the project is overseen by the State of California. Therefore, the project is subject to Section 106 and CEQA compliance. Pinnacle performed a pedestrian survey on April 6, 2025, as part of a cultural resource inventory and evaluation to support Section 106 and CEQA compliance for the proposed project. No cultural material or features were identified during the pedestrian survey.

Pinnacle performed fieldwork and reporting in compliance with California OHP guidelines and standards. All work was performed under the oversight of Ashlee Hart (P.H.D., RPA) who meets the SOI Professional Qualification Standards for archaeology in accordance with Appendix A of 36 CFR 61 and is a CHRIS Authorized User.

Prior to fieldwork, Pinnacle requested a records search of the Northeast Archaeological Information Center (Records Search No. NE24-93) for previously recorded historic resources within the APE and within a 0.5-mi (0.8-km) study area around the APE. Nine previous cultural resource studies occurred within the 0.5-mi study area. One of the previous cultural resource studies overlap with a portion of the APE but no cultural resources were documented by the study in the APE. One previously documented cultural resource occurred within the 0.5-mi study area but does not overlap the APE.

Pinnacle archaeologists completed a pedestrian survey of the APE on April 6, 2025. The crew used transects spaced no more than 10-m apart. The mineral sediment visibility ranged from zero to 30 percent due to the grass, gravel, structures, and storage of sediment, refuse, and machinery. The APE included grass, gravel alleyways, and the modern Water Pumping Facility public works yard, which has a storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Previous sewer line construction and maintenance, in addition to private and public property improvements, have significantly disturbed the APE or overlain it with fill material and gravel. Property improvements, subsurface utilities, transmission lines, and vehicle use are the major contributors to soil disturbance. The proposed wastewater system improvements will replace current utilities resulting in no new disturbance. Proposed additions such as the lift stations and headworks screening facility are in an already highly disturbed area with past subsurface utilities including waterlines, underground utilities, and sewer lines.

No cultural artifacts or features were observed during the pedestrian survey and all structures depicted on historic aerials are no longer extant. All proposed work will occur within already highly disturbed sediments so there is little potential for intact subsurface cultural deposits. The proposed project should have a finding of **"no effect"** and no additional archaeological work should be required; however, an inadvertent discovery plan (IDP) should be implemented during all ground disturbing activities.

If previously unrecorded cultural resources are encountered during the wastewater system improvements, an SOI qualified archaeologist should be immediately notified and allowed

proper time to address the nature and significance of the discovery. Additionally, if human remains are discovered, all activity must cease in the immediate area, the archaeologist should be immediately notified, and the remains should not be further disturbed and will be treated with dignity and respect at all times while an appropriate course of action is determined, pursuant to 43 CFR 10 (Native American Graves Protection and Repatriation Act of 1991, as amended).

References Cited

Adam, David P., and G. James West. 1983. Temperature and Precipitation Estimates through the Last Glacial Cycle from Clear Lake, California. *Science* 219:168-170.

Alt, D.D., and D.W. Hyndman. 2001. *Roadside Geology of Northern and Central California*. Mountain Press Publishing Co, Missoula.

Anderson, R. S., Smith, S. J., Jass, R. B., and Spaulding, W. G. 2008. A late Holocene record of vegetation and climate from a small wetland in Shasta County, California. *Madroño, 55*(1), 15-25.

Antevs, Ernst. 1948. *The Great Basin, with Emphasis on Glacial and Post-glacial Times: Climatic Changes and Pre-white Man*. University of Utah bulletin, 33(20):168-191.

Arnold, J. E., Walsh, M. R., & Hollimon, S. E. 2004. The archaeology of California. *Journal of Archaeological Research, 12*(1), 1-73.

Bailey, R. 1995. Description of the Ecoregions of the United States. Miscellaneous Publication 1391. 2nd ed. USDA Forest Service, Washington, D. C.

Barnes, Amy. 2007. Archaeological Inventory of the J-7 Lateral Canal and 44-F Drain in the City of Tulelake, Siskiyou County, California. CHRIS Report No. NEIC-010079.

Beaton, John M. 1991. Paleoindian Occupation Greater than 11,000 years BP at Tule Lake, Northern California. In *Current Research in the Pleistocene* 8: pp. 5-7.

Billat, Scott and Lorna Billat. 2005. New Tower Submission Packet FCC Form 620 for the Proposed Tulelake Cell Tower Project, Siskiyou County, California. CHRIS Report No. NEIC-006437.

Brown, W. R. 1964. The Prehistory of Surprise Valley. Unpublished Master's thesis, Department of Anthropology, University of California, Davis.

Bureau of Reclamation (BOR). 1948. *Settler's Guide*. Accessed at the Shaw Historical Library on September 28, 2021.

Bureau of Reclamation (BOR). 2008. "Brief History of Leaselands." Electronic document, https://www.usbr.gov/mp/kbao/programs/land-lease/1-bidding-program/2008/brief-history.pdf, accessed April 16, 2025.

Caltrans. 2016. Hunter Communications State Route 139 Encroachment Areas - Tulelake and Tionesta Archaeological Survey Report. CHRIS Report No. NEIC-014108.

Cleghorn, J.C. 1959. *Historic Water Levels of Tule Lake, California-Oregon and Their Relation to Petroglyphs*. Klamath County Museum Research Papers 1. Guide Printing Company, Klamath Falls, Oregon.

Cleland, J. E. 1995. *Prehistory of the Middle Pit River, Northeastern California: Archaeological Investigatians at Lake Britton, Pit 3, 4 & 5 Project, Volume I*, edited by J. H. Cleland. Report submitted to Pacific Gas and Electric Company, San Francisco.

Coleman, Jason. 2013. *Cultural Resources Survey Report for the Soldier Mountain Farm Wetland Enhancement Project, Shasta County, California*. NEIC Report #11917.

Compton, Jim. 2017. *Spirit in the Rock: The Fierce Battle for Modoc Homelands*. Washington State University Press, Pullman.

Cressman, Luther S. 1956. Klamath Prehistory: The Prehistory of the Klamath Lakes Area. *Transactions of the American Philosophical Society* 46(4): 375-515. Philadelphia.

Cressman, L. S., F. C. Baker, H. P. Hansen, P. Conger, and R. F. Heizer. 1942. *Archaeological Reseorches in the Northern Greot Basin*. Carnegie Institution of Washington Publication 538. Washington, DC.

Cross, Michelle S. 1980. *The Devil He Wolks Behind You: Pit River Use and Avoidance of the Devils Garden*. Unpublished Master's thesis. Department of Anthropology, California State University, Sacramento.

Dicken, Samuel. 1980. *Pluvial Lake Modoc, Klamath County, Oregon and Modoc and Siskiyou Counties, California*. Oregon Geology, V 42, No. 11, pp 179-187.

Donnelly, Robert. 2003a. "Tulelake, California." *The Oregon History Project, A Project of the Oregon Historical Society*. Electronic document, https://www.oregonhistoryproject.org/articles/historical-records/tulelake-california/#.YU4wyOySmUn, accessed April 16, 2025.

Donnelly, Robert. 2003b. "The Tule Lake Relocation Center." *The Oregon History Project, A Project of the Oregon Historical Society*. Electronic document, https://www.oregonhistoryproject.org/articles/historical-records/the-tule-lake-relocation-center/#.YU4_DuySmUl, accessed April 16, 2025.

Ebinger, Henry "Hank", Mayor of Tulelake. 2021. Personal communication at City Hall, Tulelake, California, September 29, 2021.

Foster, D. 2002. Refuges and reclamation: Conflicts in the Klamath Basin, 1904-1964. *Oregon Historical Quarterly, 103*(2),150-187.

General Land Office (GLO). 1873. Original Survey for Township 48 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292154&sid=bltqnyar.vjj, accessed April 16, 2025.

General Land Office (GLO). 1917. Original Survey for Township 48 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292156&sid=bltqnyar.vjj, accessed April 16, 2025.

General Land Office (GLO). 1920. Original Survey for Township 48 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292158&sid=bltqnyar.vjj, accessed April 16, 2025.

General Land Office (GLO). 1925a. Original Survey for Township 48 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292166&sid=bltqnyar.vjj, accessed April 16, 2025.

General Land Office (GLO). 1925b. Original Survey for Township 47 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292134&sid=n1xxtki0.xx0#surveyDetailsTabIndex=1, accessed April 16, 2025.

General Land Office (GLO). 1929a. Supplemental Plat: Sections 2, 3, 4, 11, and 12 of Township 47 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292138&sid=n1xxtki0.xx0#surveyDetailsTabIndex=1, accessed April 16, 2025.

General Land Office (GLO). 1929b. Original Survey for Township 47 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292138&sid=n1xxtki0.xx0, accessed April 16, 2025.

General Land Office (GLO). 1930a. Original Survey for Township 48 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292176&sid=bltqnyar.vjj#surveyDetailsTabIndex=1, accessed April 16, 2025.

General Land Office (GLO). 1930b. Original Survey for Township 47 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292144&sid=n1xxtki0.xx0#surveyDetailsTabIndex=1, accessed April 16, 2025.

General Land Office (GLO). 1931. Original Survey for Township 47 North, Range 4 East. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292146&sid=n1xxtki0.xx0#surveyDetailsTabIndex=1, accessed April 16, 2025.

General Land Office (GLO). 1948. Supplemental Plat: Section 35 of Tulelake Townsite. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292180&sid=bltqnyar.vjj, accessed April 16, 2025.

General Land Office (GLO). 1960. Supplemental Plat: Section 35 of Tulelake Townsite. Electronic document, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=292182&sid=bltqnyar.vjj#surveyDetailsTabIndex=1, accessed April 16, 2025.

Harden, D. 2004. *California Geology*; Second Edition. Pearson Prentice Hall, Upper Saddle River.

Hildebrandt, William R., and P. J. Mikkelsen. 1995. Projectile Point Typology. In *Archaeological Investigations PGT-PG&E Pipeline Expansion Project Idaho, Washington, Oregon, and California*, Vol. V, edited by R. U. Bryson, C. E. Skinner, and R. M. Pettigrew, pp. 1-1 to 1-40 . Report submitted to Pacific Gas Transmission Company, Portland.

Jackson, Donald and Mary Spence. 1970. *The Expeditions of John Charles Fremont. Volume 1 Travels from 1838 to 1844*. University of Illinois Press, Urbana, Illinois.

King, Jerome, Kelly McGuire, Kimberly Carpenter, Mary Maniery, Cindy Baker, Helen McCarthy, and Heather Scotten. 2004. *Class I Cultural Resources Overview and Research Design for the Alturas, Eagle Lake, and Surprise Resource Areas*. Report No. NEIC-008919. Report prepared by Far Western Anthropological Research Group, Inc.

Kroeber, Alfred L. 1925. Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* 78. Smithsonian Institution, Washington, D.C.

Lantis, D. W., R. Steiner, and A. Karinen. 1973. *California: Land of Contrast*. Revised 2nd edition. Kendall/Hunt Publishing Company, Dubuque, Iowa.

Lava Beds National Monument. 2015. *A Brief History of the Modoc War*. Electronic Document, http://www.nps.gov/labe/planyourvisit/upload/MODOC%20WAR.pdf, accessed April 16, 2025.

Luhnow, G. G. 1998. *An examination of the ethnographic boundary shared by Gumbatwas and Kakiwas Modoc tribelets, northeastern California*. Unpublished Master's thesis. Sonoma State University.

Mackey, B. J., M. Brodhead, S. Tiley, K. A. Schneider, and R. L. Reno. 2000. *Tuwutlamit Wusci: Ethnographic, Historical, and Archaeological Perspectives on the Infernal Caverns Battlefield Area*. Submitted to Sierra Pacific Power Company. Summit Envirosolutions Inc., Carson City, Nevada.

Martin, Paul S., and Richard G. Klein. 1984. *Quaternary Extinctions: A Prehistoric Revolution*. University of Arizona Press, Tucson, AZ.

McGuire, K. 2007. Models Made of Glass: A Prehistory of Northeast California. In *California Prehistory: Colonization, Culture, and Complexity*, pp. 165-176. T. Jones and K. Klar (ed). Alta Mira Press, Lanham, Maryland.

McNally, R. A. 2017. *The Modoc War: A Story of Genocide at the Dawn of America's Gilded Age*. University of Nebraska Press.

Most, Stephen. 2003. The Treaty of 1864. Nature and History in the Klamath Basin, Inhabiting the Land. The Oregon History Project. Electronic document, http://oregonhistoryproject.org/narratives/nature-and-history-in-the-klamath-

basin/inhabiting-the-land/the-treaty-of-1864/#.VnMV2SHn_IU, accessed April 16, 2025.

Murray, K. A. 1959. *The Modocs and their war* (Vol. 52). University of Oklahoma Press.

National Park Service. 2015. *State by State Numbers*. Electronic document, https://www.nps.gov/home/learn/historyculture/statenumbers.htm, accessed April 16, 2025.

National Park Service.2021. "Tule Lake National Monument California." National Park Service History eLibrary. Electronic document, http://npshistory.com/publications/tule/index.htm, accessed April 16, 2025.

Nationwide Environmental Title Research, LLC (NETR). 2025. Historic Aerials. Electronic document, http://historicaerials.com, accessed on April 16, 2025.

Norris, Sophie L., L. Tarasov, A.J. Monteath, J.C. Gosse, A.J. Hindy, M. Margold, D.G. Froese. 2021. Rapid Retreat of the Southwestern Laurentide Ice Sheet During the Bolling-Allerod Interval. *Geology* 50(4):417-421.

O'Connell, J. F. 1975. The Prehistory of Surprise Valley, edited by L. J. Bean. Ballena Press Anthropological Papers.

Orr, W.N., and E.L. Orr. 2002. *Geology of the Pacific Northwest*. McGraw-Hill, New York.

Parker, John W. 1978. Archaeological Evaluation of Eight Areas for Proposed Bridge Replacement on State Route 139, Modoc and Siskiyou Counties, California. CHRIS Report No. NEIC-000515.

Pester, P. and K.A. Zimmermann. 2022. Pleistocene Epoch: The Last Ice Age. *Live Science*. Electronic resource, https://livescience.com/40311-pleistocene-epoch.html, accessed on April 16, 2025.

Powers, Stephen. 1877. Tribes of California. *Contributions to North American Ethnology, U.S. Geographical and Geological Survey of the Rocky Mountains Region*, Washington, D.C.

Ray, Vern F. 1963. *Primitive Pragmatists: The Modoc Indians of Northern California*. University of Washington Press, Seattle, Washington.

Remonte, Perrin. 2023. Mapped: What Did the World Look Like in the Last Ice Age? *Visual Capitalist*. Electronic resource, https://www.visualcapitalist.com/cp/mapped-world-the-last-ice-age/, accessed on December 12, 2023.

Riddle, J. C. 1914. *The Indian History of the Modoc War and the Causes that Led to It, by Jeff C. Riddle*. Marnell and Company.

Roberts, L. 1980. *Historical Overview of a Portion of Lassen and Modoc Counties, California*. Pacific Palisades, California. On file, Bureau of Land Management, Susanville.

Sampson, C. G. 1985. *Nightfire Island: Later Holocene Lakemarsh Adaptations on the Western Edge of the Great Basin.* University of Oregon Anthropological Papers 33, Eugene, Oregon.

Sleteland, Trygve B. 1980. Archaeological Survey Report for the Proposed Replacement of 17 Bridges on 02-MOD-139-PM 46.4/50.7 and 02-SIS-139-PM 0.0/4.8, Modoc and Siskiyou Counties, California. CHRIS Report No. NEIC-000560.

Smith, S. B. 2008. *A Flora of Lava Beds National Monument.* Unpublished Doctoral Dissertation. Southern Oregon University.

Smith, S., and B. Davidson. 2003. *Terrestrial ecological unit inventory user's manual, land type associations, Modoc National Forest.* R5-TP-015 Version 1.0. USDA Forest Service, Washington, D.C.

Spier, L. 1930. Klamath Ethnography. *University of California Publications in American Archaeology and Ethnology* 30, Berkeley.

Squier, Robert J., and G. L. Grosscup. 1954. *Preliminary Report of Archaeological Excavations in Lower Klamath Basin, California, 1954.* University of California Archaeological Survey Report 183.

Stern, Theodore. 1998. Klamath and Modoc. In *Plateau*, edited by Deward E. Walker, Jr., pp. 446-466. Handbook of North American Indians, Vol. 12, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Tulelake-Butte Valley Fair Museum. 2021. Museum display items. Accessed in person September 29, 2021 at Tulelake-Butte Valley Fairgrounds, Tulelake, California.

Turner, Stan. 1987. *The Years of Harvest: A History of the Tule Lake Basin.* 49th Avenue Press, Eugene, Oregon.

Turner, Stan. 2007. "Land of Opportunity: The City of Tulelake and the Townsite of Newell." Essay from *Where Fortune Calls,* Shaw Historical Library, Klamath Falls, Oregon:13-30.

United States Department of Agriculture - Natural Resources Conservation Service (USDA-NRCS). 2025. *Web Soil Survey*, Electronic Database, https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, accessed April 16, 2025.

United States Fish and Wildlife Service (U.S. FWS). 2001. Biological/Conference Opinion regarding the effects of operation of the Bureau of Reclamation's Klamath Project on the endangered Lost River sucker (Deltistes luxatus), endangered shortnose sucker (Chasmistes brevirostris), threatened bald eagle (Haliaeetus leucocephalus) and proposed critical habitat for the Lost River/shortnose suckers. Prepared by the Klamath Falls Fish and Wildlife Office. Sacramento, California.

United States Geological Survey (USGS). 1886. Modoc Lava Bed, California (HTMC, 1886 ed.) Scale 1:250,000. Electronic document, https://livingatlas.arcgis.com/topoexplorer/index.html, accessed April 16, 2025.

United States Geological Survey (USGS). 1892. Modoc Lava Bed, California (HTMC, 1892 ed.) Scale 1:250,000. Electronic document, https://livingatlas.arcgis.com/topoexplorer/index.html, accessed April 16, 2025.

United States Geological Survey (USGS). 1951. Tulelake, California (HTMC, 1951 ed.) Scale 1:62,500. Electronic document, https://livingatlas.arcgis.com/topoexplorer/index.html, accessed April 16, 2025.

United States Geological Survey (USGS). 1954. Alturas, California (HTMC, 1954 ed.) Scale 1:250,000. Electronic document, https://livingatlas.arcgis.com/topoexplorer/index.html, accessed April 16, 2025.

United States Geological Survey (USGS). 1958. Alturas, California (HTMC, 1958 ed.) Scale 1:250,000. Electronic document, https://livingatlas.arcgis.com/topoexplorer/index.html, accessed April 16, 2025.

United States Geological Survey (USGS). 1984. Tulelake, California (HTMC, 1984 ed.) Scale 1:100,000. Electronic document, https://livingatlas.arcgis.com/topoexplorer/index.html, accessed April 16, 2025.

Vann, David. 2007. Archaeological Survey and Findings Report for the City of Tule Lake Community Development Block Grant, Modoc County, California. CHRIS Report No. NEIC-008331.

Vann, David. 2013. An Archaeological Survey and Findings Report for the City of Tule Lake Waste Water Treatment Plant Upgrade, Siskiyou County, California. CHRIS Report No. NEIC-014054.

Western Regional Climate Center. 2025. "Tulelake, California" Western Regional Climate Center. Electronic resource, https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9053, accessed April 16, 2025.

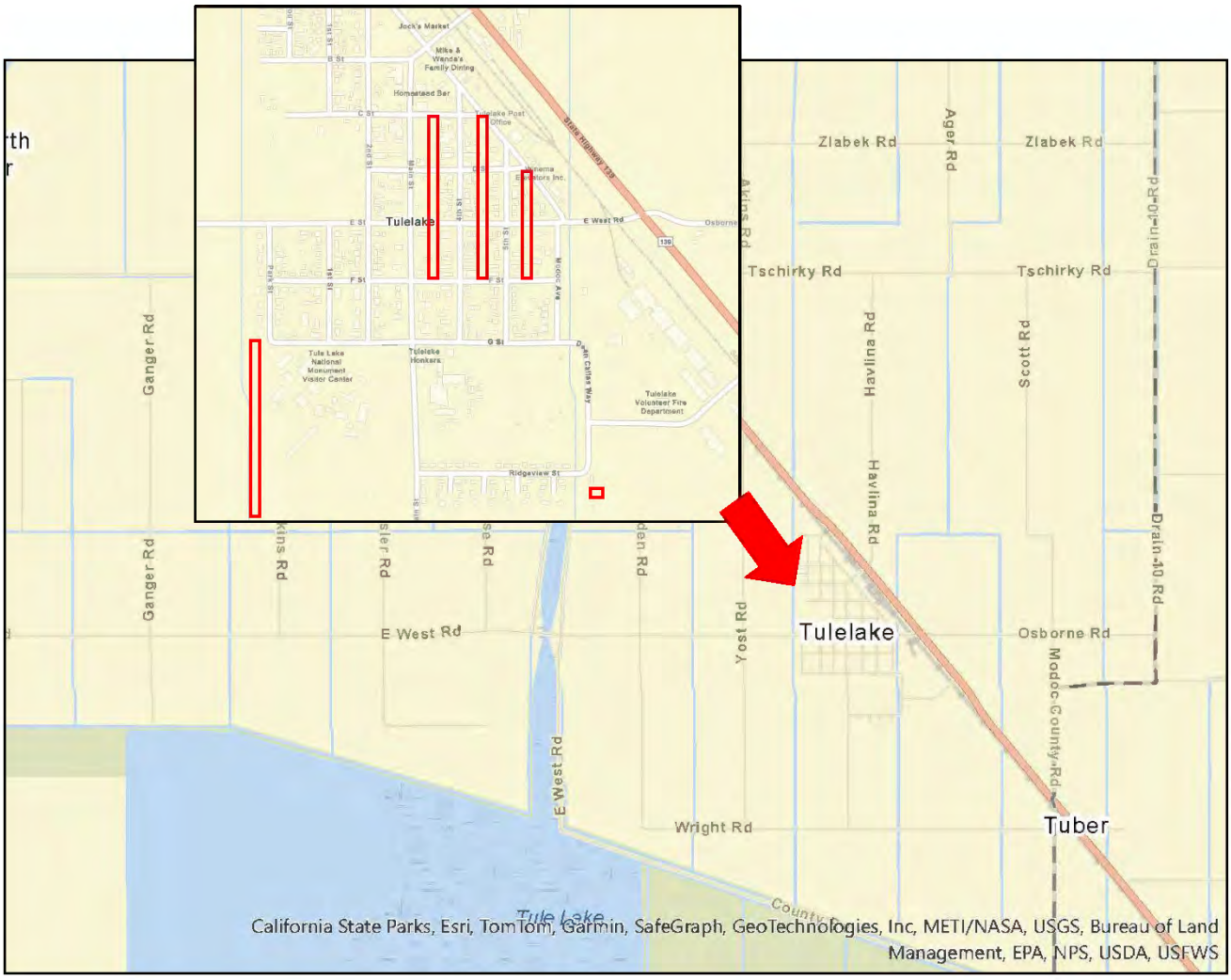
West, G. James. 2002. Pollen Analysis of Two Late Pleistocene-Holocene Cores from Clear Lake. In *Cultural Diversity and Cultural Change in Prehistoric Clear Lake Basin: Final Report of the Anderson Flat Project*, by G. G. White, D. A. Fredrickson, L. D. Hager, J. Meyer, J. S. Rosenthal, M. R. Waters, G. J. West, E. Wohlgemuth, pp. 99-113. Center for Archaeological Research at Davis, No. 13. University of California, Davis.

Wiant, Wayne. 1993. Negative Archaeological Survey Report for the Proposed Highway 139 Widening Project, Siskiyou County, California. CHRIS Report No. NEIC-003564.

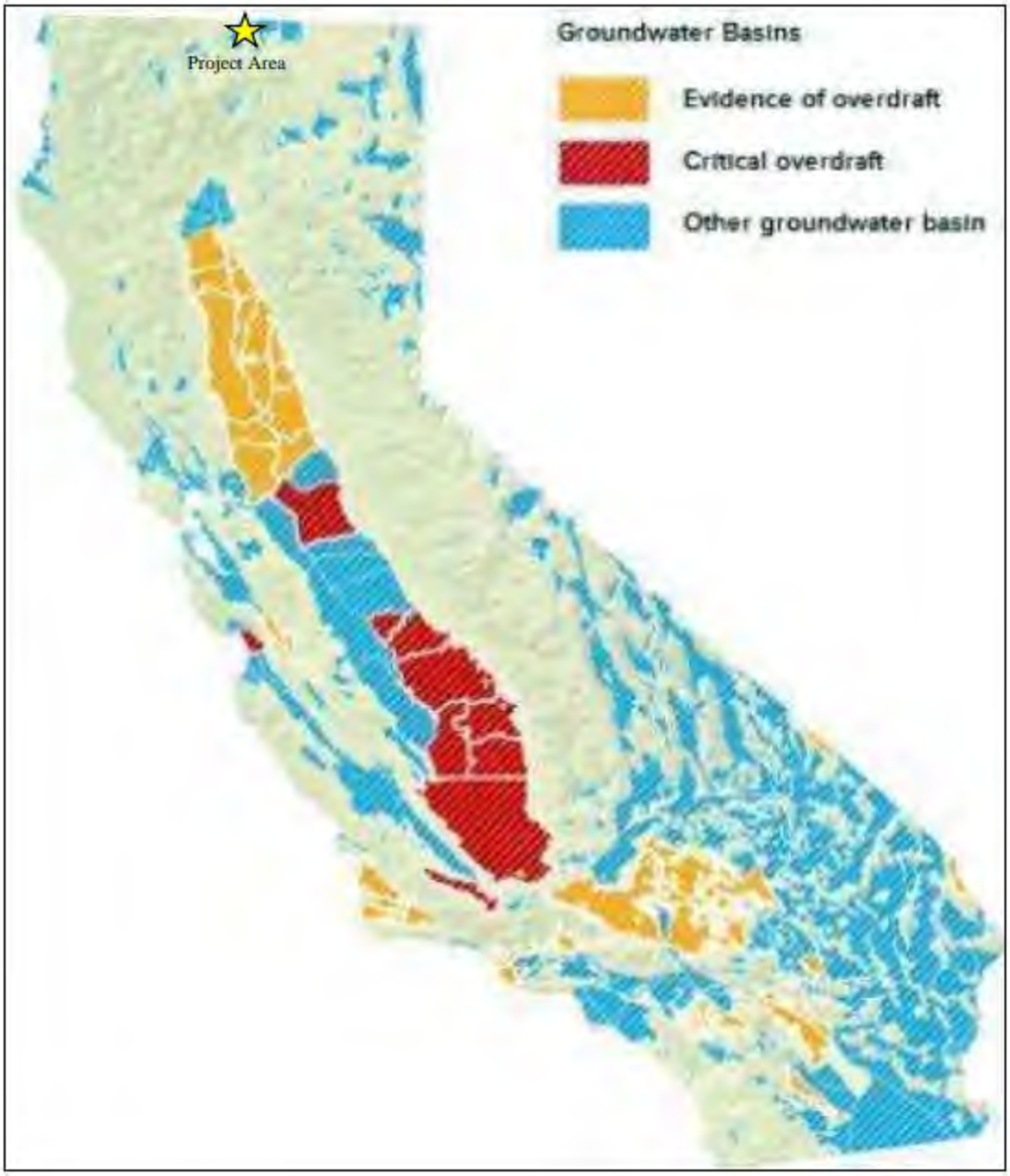
Woodbridge, B., Hansen, D. L., and Salafsky, S. R. 2012. Modoc Plateau Bioregion (Interior Yellow Pine Forest). *The Northern Goshawk in California: A Technical Assessment of Its Ecology and Status*, 295.

Woodhouse, Caryn, William Hobson, and Carey Wilder. 2004. *Upper Lost River and Clear Loke Reservoir Watershed: Totol Maximum Daily Load Analysis Water Temperature and Nutrients.* California Regional Water Quality Control Board North Coast Region.

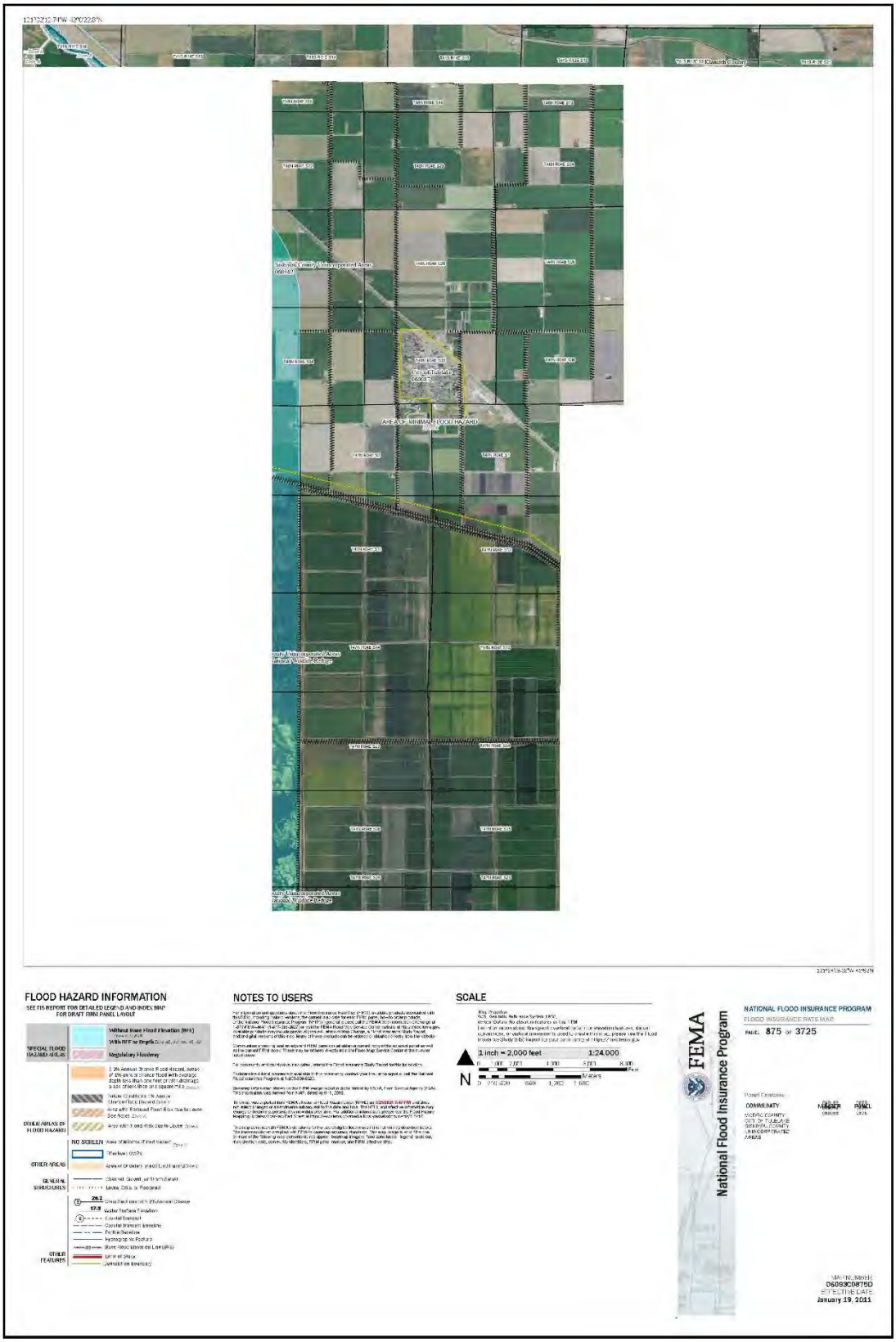
Appendix E – Hydrology and Water Resources



Sole Source Aquifers (https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b)



California Groundwater Restricted Areas Map



National Flood Hazard Layer