Checklist Initial Study for Tulelake Drought Relief Project

Tulelake, CA

September 2024

Prepared for:
City of Tulelake

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PROJECT DESCRIPTION

1. **Project title:**
   City of Tulelake Drought Relief Project

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

4. **Project Location:**
   The proposed project components are located at two locations within the City of Tulelake, California. The total area of impact is approximately 2.27 acres. 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. The proposed site location for the replacement of a waterpipe and associated plumbing is located in the Sixth Street Alley between E Street and F Street. The proposed project location for the rehabilitation of two wells with associated plumbing is located between B Street and C Street in an undeveloped lot and a portion of the Water Pumping Facility public works yard.

5. **Project sponsor's name and address:**
   Jenny Coehlo, City Manager
   City of Tulelake
   1000 Dean Callas Way
   Tulelake, California 96134

4. **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.
5. **Zoning:**
   Mixed Use (MU) and Public Agency (PA)

6. **Description of project:**
   The proposed drought relief project includes the rehabilitation of two existing wells, replacement of 500 feet of aged cast iron leaky water main, replacement of five service connections, reconnection of two existing fire hydrants, installation of an emergency potable water re-filling station with a drinking fountain, and emergency use water bottle provisions. The proposed project would utilize a total area of approximately 2.27 acres comprised of portions of two tax lots (APNs 050-142-130 and 050-051-010) – an undeveloped portion of the Water Pumping Facility public works yard and the subterrain of an alleyway. The waterline

replacements are located in Sixth Alley between E Street and F Street. The well rehabilitations are located between B Street and C Street in an undeveloped lot and a portion of the Water Pumping Facility public works yard.

Engineered plans have been drawn up for review and all appropriate permits will be acquired pre-construction.

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 two subject properties. The properties are regular in shape with a total area of potential impact of approximately 2.27 acres.

The Sixth Alley project site for the waterline replacement is bordered by residentially zoned neighborhoods in all directions. Primarily, the properties are single-family homes and portable, motor homes. The well rehabilitation project site located between B Street and C Street is bordered to the West by open, agricultural fields. To the North, it is bordered by residential neighborhoods, primarily single-family homes. The South side of the property is bordered by Tulelake State Preschool's baseball recreation field. Otis Roper Park is located to the East of the project site.

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, California Air Resources 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


Tulelake Drought Relief Project
Legend
Tulelake
Project Area
Tulelake
D St
A St
Main St
Modoc
Havlina Rd
139
Hwy St
Siskiyou St
2nd St
D St
Volcanic Legacy Scenic Byway
Osborne Rd
Park St
First St
Fifth St
Modoc Ave
F St
G St
Google Earth
Image © 2024 Airbus
N
1000 ft

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 4 for additional information.

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

DETERMINATION

On the basis of this initial evaluation (choose one):

☒ 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 the 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 significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ 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	Jenny Coelho	09/30/2024
Print Name	Signature	Date

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Aesthetics				
Except as provided in Public Resources Code Section 21099, would the project:				
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

Aesthetics

Affected Environment

The alleys, streets, and a yard are located in two subject properties 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 approximately 4,045 feet. The city is located in what once was the center lakebed of Tule Lake, which stretched from the west of Sheepy Peak Ridge 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 waterline replacement property is located at Sixth Alley between E and F street. This subject property is bordered by residential properties including single family homes and mobile homes. The well rehabilitation project site is located between B and C Street in an undeveloped lot and in a portion of the Water Pumping Facility public works yard. The subject property is bordered by open, agricultural fields to the west, residential neighborhoods to the north and west, and Tulelake Basin Elementary School's baseball 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 well rehabilitation will not introduce new structures, so there will be no visual 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 daytime or nighttime views 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

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:

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?

Agriculture and Forestry Resources

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 residential area within city limits. According to the Web Soil Survey, the soil within the project area is Prime Farmland if irrigated and drained. As the area is not irrigated and drained, there is no prime farmland conversion. The proposed project introduces drought relief efforts, 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 water 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

Air Quality

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 July 10, 2024 (EPA 2024).

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, visitors to the adjacent Tulelake Basin Elementary School, and residential areas adjacent to the project properties. 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.

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, the project 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

Biological Resources

Affected Environment

The proposed drought relief project will be located on developed Mixed Use and Public Agency zoned lots in the city of Tulelake, California. The subject properties are in existing developed areas. The subject property for the well rehabilitation projects is located in the existing Water Pumping Facility 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. Because of the project site proximity to the river and lake, a search was conducted on the California Natural Diversity Database (CNDDB). The project is located within the Tulelake quadrangle of the CNDDB. There are 6 sensitive plant species and 24 sensitive wildlife species which are state or federally listed, threatened, or identified as species of special concern within the Tulelake CNDDB quadrangle. 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 the city limits of Tulelake. The sites are previously disturbed and will not have an adverse effect on any species as the project area is not located within the 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 absence of riparia areas within the project footprint. 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 to a wetland, marsh, vernal pool, etc.

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.

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.

Mitigation Measures

None required due to no negative impacts.

	Potentially significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Cultural Resources Would the project:				
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)	☐	☐	☐	X

of Public Resource Code §5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.

Cultural Resources

Affected Environment

An initial record check of the California Office of Historic Preservation listed California Historical Resources was conducted on July 10, 2024 and found no properties listed on or within a 1-mile radius of the proposed project. 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…" 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 as 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."

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 Karuk Tribe, Klamath Tribes, Quartz Valley Indian Community, Elk Valley Rancheria, Confederated Tribes of the Grand Ronde Community or Oregon, Confederated Tribes of the Siletz Indians of Oregon, and the Pit River Tribe on March 5, 2024.

Rabe Consulting contracted Pinnacle Archaeology to conduct a Cultural Resource Survey for the City of Tulelake. On March 19, 2024, Pinnacle Archaeology released a finding of no cultural material or features identified during the pedestrian survey. Through a records search of the Northeast Archaeological Information Center (Records Search No. NE24-93) and a pedestrian survey, Pinnacle Archaeology determined the proposed project to have a finding of no effect.

Discussion

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

Less Than Significant with Mitigation Incorporated. 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,* the *California Register of Historical Resources.* Previous waterline construction and maintenance have disturbed the project area. The proposed waterline and system improvement will replace the current utilities, therefore introducing no new disturbance. However, intact subsurface historic-period and prehistoric archaeological sites that may qualify as historical resources may be located within the project area. Implementation of Mitigation Measure CULT-1, described in the Mitigation Measures of this section, would reduce potential impacts from construction activities to a less-than-significant level.

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

Less Than Significant with Mitigation Incorporated. 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. However, intact subsurface archaeological deposits, which may qualify as archaeological resources, may be located within the project site, however disturbed. Implementation of Mitigation Measure CULT-2, described below in the Mitigation Measures section, would reduce potential impacts to unidentified archaeological resources to a less-than-significant level.

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

Less than Significant with Mitigation Incorporated. No recorded human remains have been identified within the project site from previous disturbance. See section (a) above for property disturbance information. Though the property has had ground disturbing activities in the past, remains may exist in the project area. 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 to a less-than-significant level.

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. On July 10, 2024, a search was conducted on the Office of Environment and Energy's Tribal Directory Assessment Tool (TDAT) to obtain a list of Tribes with interests in Siskiyou County. The list of Tribes included the Karuk Tribe, Klamath Tribes, Quartz Valley Indian Community, Elk Valley Rancheria, Pit River Tribe, and the Confederated Tribes of the Grand Ronde. Tribal consultation letters were sent to the Karuk Tribe, Klamath Tribes, Quartz Valley Indian Community, Elk valley Rancheria, Pit River Tribe, and the Confederated Tribes of the Grand Ronde. Tribal letters were sent to each Tribe on March 5, 2024, as of July 10, 2024, no Tribal responses have been received.

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.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Energy Would the project:				
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

Energy

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 a developed lots. Energy used during construction will be non-renewable in the form of diesel-powered vehicles and equipment.

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.

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

Geology and Soils

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).

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 replacement 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 opportunities 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. 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.

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

Greenhouse Gas Emissions

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.

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 greenhouse 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

Hazards and Hazardous Materials

Affected Environment

The Resource Control and Recovery Act of 1974 (RCRA) establishes 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 Reguatlions 22 CCR 66261.3. The project consists of a waterline replacement, two well rehabilitations, and more non-infrastructure related drought relief programs. The project will not generate or manage any long-term hazardous materials.

The waterline replacement is located in the subterrain of an alleyway located within a residentially zoned, single-family home neighborhood. The well rehabilitation sites are located between B Street and C Street and on a portion of the Water Pumping Facility public works yard which is bordered by residential neighborhoods, a city park, and open agricultural land.

Discussion

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

Less than Significant Impact. The proposed land use would be for Tulelake's water system components. Normal operations of the city water 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 a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This impact is considered less than significant.

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?*

Less Than Significant with Mitigation Incorporated. 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 reducing potential impacts to less-than-significant levels.

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

Less Than Significant with Mitigation Incorporated. 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 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 reducing potential impacts to less-than-significant levels.

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 a waterline replacement and rehabilitation of two wells. 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.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Hydrology and Water Quality Would the project:				
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	☐

Hydrology and Water Quality

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 water 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. While the well rehabilitation projects would draw on groundwater resources, the wells exist in the system already and rehabilitation will increase water quality and use efficiency.

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. 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. The proposed project would include no new impervious surfaces. 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 a waterline replacement and rehabilitation of two wells. 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.

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 substantial groundwater management plan.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Land Use and Planning Would the project:				
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

Land Use and Planning

Affected Environment

The project properties are dispersed throughout the city limits of Tulelake. The waterline replacement will be installed underground. The well rehabilitations will take place at existing well sites within the Water Pumping Facility public works yard.

The areas surrounding the subject properties are zoned as commercial and residential with primarily single-family housing units.

To the south of the well rehabilitation site is the Tulelake Basin Elementary School which is comprised of classroom buildings, outdoor recreation areas, and a baseball field.

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 well rehabilitations take place at the site of existing wells; therefore, no new structures will be introduced. 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 drought

relief project components bolster the current water system and will benefit mitigation efforts. Therefore, the project does not conflict and causes no impact.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Mineral Resources Would the project:				
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

Mineral Resources

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 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

Noise

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 approximately 2.27 acres of commercial and residential 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 "assures 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.

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.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Population and Housing Would the project:				
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

Population and Housing

Affected Environment

The proposed project would be located on multiple 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 upgrade the water system of the City of Tulelake, providing water resources 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 water system infrastructure. There would be no increase in population resulting from the project. Therefore, there will be no impact on 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.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Public Services				
Would the project:				
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

Public Services

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 introduce drought relief measures to the city's water system. 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

Recreation

Affected Environment

There is the current Tulelake Veterans Park located at 334 Main Street (0.23 miles east of proposed project property). Another park located on First Street from B Street to C Street (approximately 0.12 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 (0.45 miles from 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 water 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 a drought relief project and does not include any recreational facilities. Potential adverse effects on the environment have been addressed in this Initial Study.

Implementation of the mitigation measures described in this Initial Study would reduce potentially adverse physical environmental impacts to less than significant levels.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Transportation/Traffic Would the project:				
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

Transportation and Traffic

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 involves the existing water system infrastructure. Most project components will be installed underground, therefore not interfering with roadways. The well rehabilitation site is located at an existing water 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 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 surrounding areas. The infrastructure will be underground or on an established water management lot.

Mitigation Measures

None required due to no negative impacts.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Utilities and Service Systems Would the project:				
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

Utilities and Service Systems

Affected Environment

The project consists of rehabilitating two existing wells, replacing 500 feet of aged cast iron leaky water main, replacing five service connect ions, reconnecting two fire hydrants, providing bottled water for emergency use, and installing an emergency potable water re-filling station with a drinking water fountain. The project supports drought relief efforts.

Water. The city's water system facilities include three 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 water facilities and the replacement of outdated, inefficient system components. The project would have no impact on wastewater treatment facilities or storm water drainage. The new waterlines will replace 500 feet of existing aged cast iron leaky water main within the distribution system. The well rehabilitations will improve the existing wells. 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?*

No 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?*

No 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. Therefore, there is no impact from the project.

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?*

No 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, there is no impact from the project.

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

No 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.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Mandatory Findings of Significance				
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	☐	☐

Mandatory Findings of Significance

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 and relieve drought impacts. 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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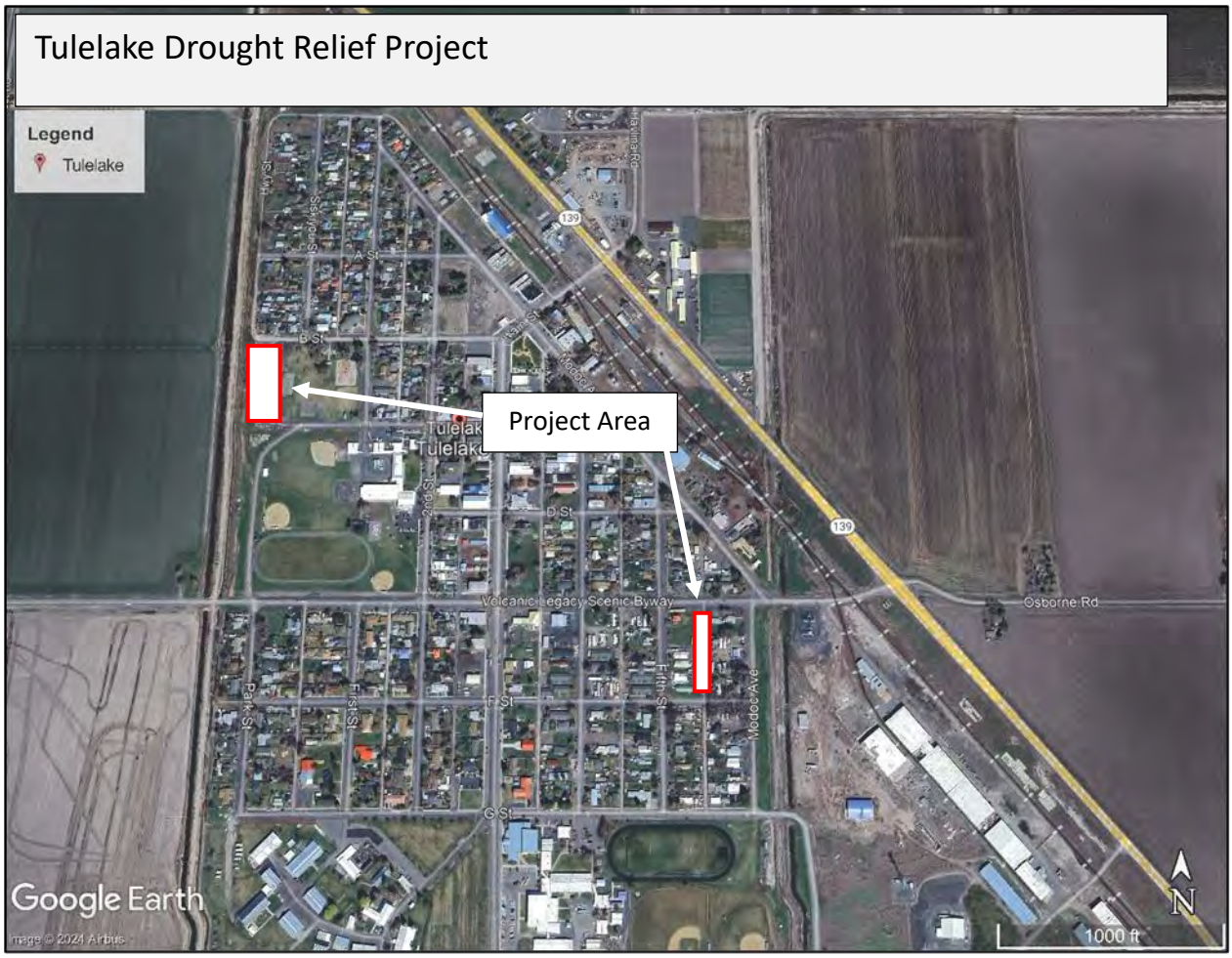
Appendix

Appendix A – Site Maps



Appendix B – Agriculture and Forestry Resources

- Organic matter
- pH
- Sand
- Sodium adsorption ratio
- Survey metadata

- Typical Profile Sketches
- T factor
- Wind erodibility

Tulebasin mucky silty clay loam (185)

▼▲ Map Unit Composition

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

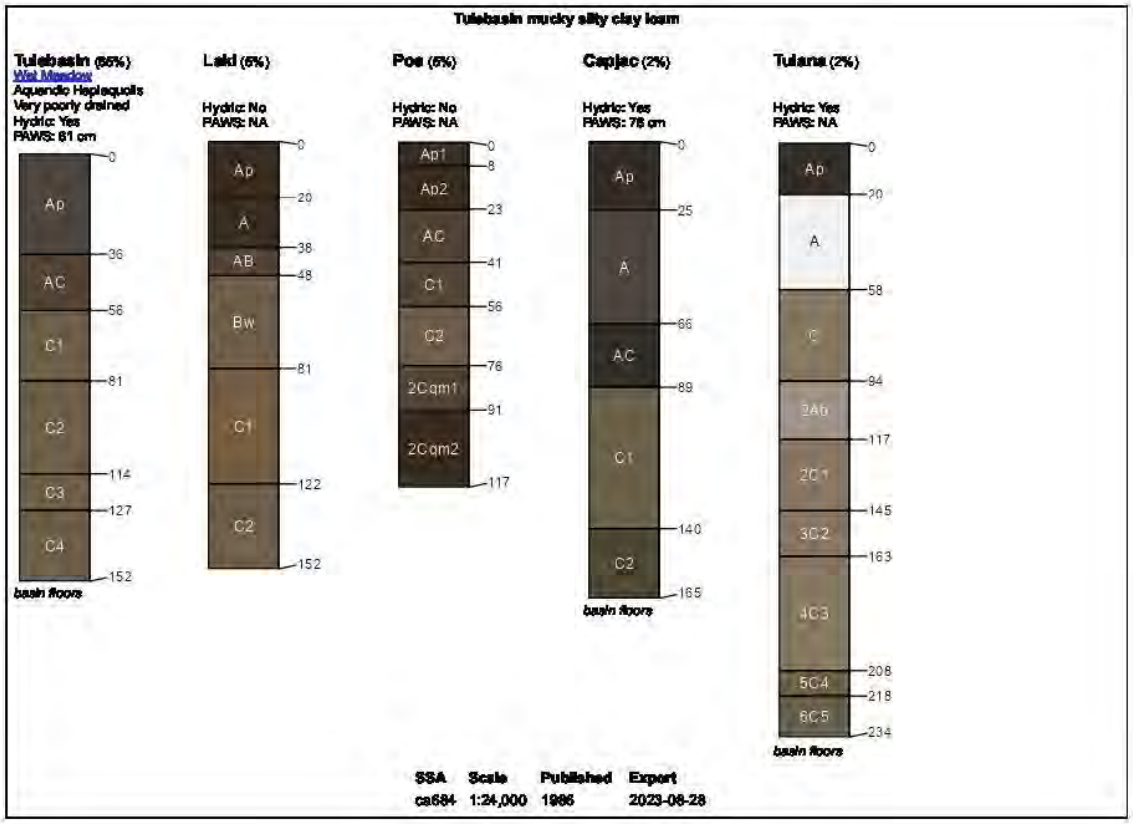
▼▲ Soil Profiles

- Soil Sketch ?>
- Org. Matter ?>
- 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



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

July 10, 2024

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

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

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

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

Soil Survey Area: Butte Valley-Tule Lake Area, California, Parts of Siskiyou and Modoc Counties
Survey Area Data: Version 19, Aug 28, 2023

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

Date(s) aerial images were photographed: Jun 9, 2019—Jun 14, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
185	Tulebasin mucky silty clay loam	152.1	100.0%
Totals for Area of Interest		**152.1**	**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

Laki

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

Poe

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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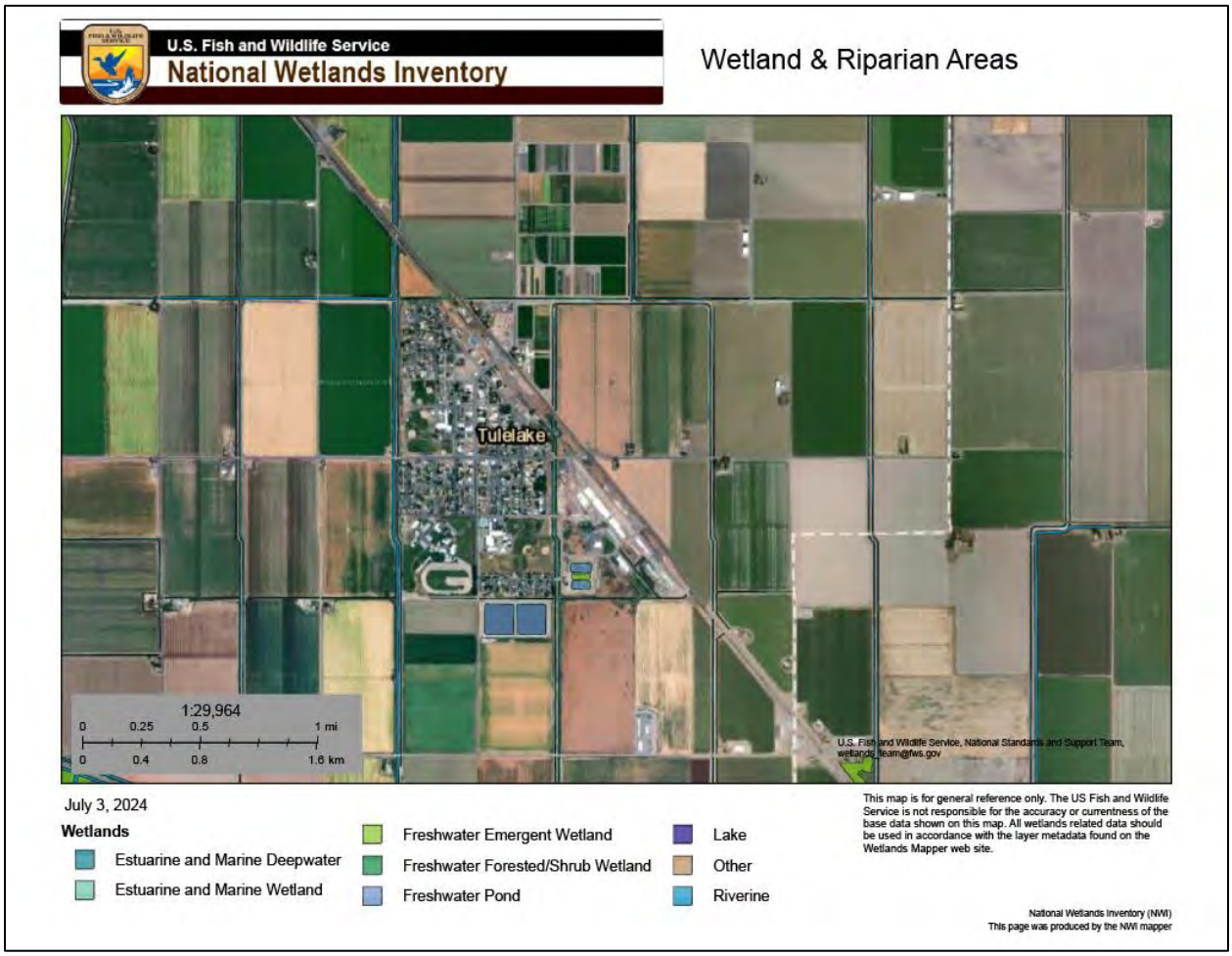
Appendix C – Biological Resources



Biological Report

for

Tulelake Drought Relief

September 2024

Client: City of Tulelake

Prepared By:

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Introduction

City of Tulelake has contracted Rabe Consulting for the preparation of a biological report for the proposed Tulelake Drought Relief Project, which consists of the rehabilitation of two existing wells, replacement of 500 feet of aged cast iron leaky water main, replacement of five service connections, reconnection of two existing fire hydrants, installation of an emergency potable water re-filling station with a drinking fountain and emergency use water bottle provisions in the City of Tulelake (Siskiyou County), California. This biological report is to analyze the potential impacts to sensitive species including Federally listed and California State listed Threatened and Endangered species which may occur within the Drought Relief Project. The biological report was prepared to support Siskiyou County's California Environmental Quality Act (CEQA) compliance process for the Tulelake Drought Relief Project.

The project area consists of portions of two tax lots (APNs 050-142-130 and 050-051-010) situated in Sixth Alley between E Street and F Street and between B Street and C Street, as well as a portion of the Water Pumping Facility public works yard of Tulelake, California (Siskiyou County). The project area's coordinates are latitude 41.956546, longitude -121.480958 and latitude 41.953012, longitude -121.473180. The legal description is Section 35 of Township 81 North, Range 04 East of the Mount Diablo Meridian. The project area totals approximately 2.27 acres of relatively flat land within the city of Tulelake.

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.

The project area is considered to have a mild climate with cool winters and warm summers. Average temperatures range from lows in the mid-30s to highs in the upper 70s Fahrenheit. The area receives an average of 22 inches of rainfall annually, which usually falls throughout the year.

Site Description

The project site consists of single-family dwellings and commercial zoned lots in the city of Tulelake, California. The subject properties are in existing developed areas. The subject property for the well rehabilitation projects is located in the existing Water Pumping Facility public works yard. The project area is approximately 4,045 feet (1,233 meteres) above mean sea level (amsl).

The project will not convert important agricultural resources (i.e. land under the Williamson Act contract or land designated as Prime Farmland, Farmland of Statewide Importance or Unique Farmland).

Authorities

There is no local policy or ordinance protecting biological resources. Therefore, no additional analysis was conducted to address local policy or ordinances protecting biological resources.

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the state. The State of California also lists Species of Special

Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value.

Federal Endangered Species Act

The Endangered Species Act (ESA) of 1973, administered by the United States Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), provides a framework to designate imperiled species and to conserve and protect these endangered and threatened species as well as their habitats.

Project Description

The proposed drought relief project includes rehabilitating two existing wells, replacing 500 feet of aged cast iron leaky water main, replacing five service connections, reconnecting two fire hydrants, providing bottled water for emergency use, and installing an emergency potable water re-filling station with a drinking water fountain. The proposed project would utilize an undeveloped lot, a portion of the Water Pumping Facility public works yard, and the subterrain of an alleyway.

Database Research

Prior to field surveys and site visits, a database search was conducted. Primary data sources reviewed to evaluate the occurrence potential of sensitive status species included: the California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) inventory of rare and endangered plants, and USFWS Information for Planning and Consulting (IPaC) list of federally listed species.

On September 4, 2024, a 9-quad search was conducted on the CNDDB website to determine which species of concern may be present in or near the project area. CNPS List 1A, 1B, and 2 species are considered special-status plant species.

On September 4, 2024, an IPaC report (see Appendix) was obtained from USFWS. The project code is 2024-0139223 (Project name: Tulelake Drought Relief). 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".

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species.

The project area is not located within any local or regional designated migratory corridors or linkages.

The project area is not located within a local, regional, or state habitat conservation plan boundary. Therefore, no additional analysis was conducted to address local, regional, or state habitat conservation plan areas.

Sensitive Species Potentially in Project Area

CNDDB Sensitive Status Plants

There are 6 sensitive status plant species that are known in the general project area based on CNDDB results. These plant species have the potential to occur in the general area of the project. Of the 6 species, the species have different designations including Federally endangered; state endangered, threatened, and candidate threatened; and CNPS sensitive (List 1 or 2). Lists 1 and 2 are category designations for plants presumed extinct in California; plants rare and endangered in California and elsewhere; and plants rare and endangered in California, but more common elsewhere. The CNDDB search identified sensitive species which are known to potentially occur in the USGS 9-quadrangle map area around the project area for the Tulelake Drought Relief Project. Table 1 lists the number of species in each designation category.

Table 1 Sensitive Plant Designations

Designation Category	Number of Species in 9 Quad Area
Federally Endangered/State Endangered	0
Federally Threatened/State Endangered	0
Federally Endangered/State Threatened	0
Federally Endangered	0
State Candidate Threatened	0
State Endangered	0
CNPS Sensitive Species (List 1 and 2)	6

Table 2 Species Habitat Requirements; Species and Habitat Presence

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Plants					
Syntrichia lithophila	Dusens twisted moss	State Rare Plant Rank 2B.3	Exposed soil or rock in arid and semi-arid regions.	**No, preferred habitat is not present**	**No**
Allium punctum	Dotted onion	State Rare Plant Rank2B.2	Rocky, gravelly, sandy soils on washes and flats with pinyon and juniper woodland communities.	**No, preferred habitat is not present**	**No**
Rorippa columbiae	Columbia yellow cress	State Rare Plant Rank 1B.2	Moist to wet, sandy areas such as dry lakes.	**No, preferred habitat is not present**	**No**

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Carex atherodes	Wheat sedge	State Rare Plant Rank 2B.2	Wet, open areas in calcareous or neutral substrates such as marshes, shores, streambanks, swales.	**No, preferred habitat is not present**	**No**
Phlox musicoides	Squarestem phlox	State Rare Plant Rank 2B.3	Alpine fellfields.	**No, preferred habitat is not present**	**No**
Potentilla newberryi	Newberrys cinquefoil	State Rare Plant Rank 2B.3	Drying areas of moist habitats (vernal pools, puddles) amongst sagebrush and juniper woodland communities.	**No, preferred habitat is not present**	**No**

Based on the habitat requirements for specific species and the field visits, it was determined that the project area does not provide suitable habitat for 6 sensitive status plant species known to occur in the general vicinity of the project area.

CNDDB Special Status Wildlife Species

There are 24 sensitive status wildlife species that are known in the general area of the project according to the CNDDB results. These wildlife species have the potential to occur in the project area. Of the 24 sensitive species, the species have different designations including Federally endangered and threatened; state endangered, threatened, and candidate threatened; and California Department of Fish and Wildlife (CDFW) sensitive. CDFW sensitive category designations for wildlife include Species of Special Concern (SSC), California Fully Protected (FP) and Watch List (WL). The CNDDB search identified sensitive species which are known to potentially occur in the USGS 9-quadrangle map area around the project area for the Tulelake Drought Relief Project. Table 3 lists the number of species in each designation category.

Table 3 Sensitive Wildlife Designations

Designation Category	Number of Species in 9 Quad Area
Federally Endangered/State Endangered	3
Federally Threatened/State Endangered	0
Federally Threatened/State Threatened	0
Federally Endangered/State Candidate Endangered	0

Federally Delisted/State Endangered	0
Federally Threatened	1
Federally Endangered	3
State Threatened	4
State Endangered	3
State Candidate Endangered	2
CDFW Sensitive Species (SSC/FP/WL)	24

Table 4 Sensitive Wildlife Species by Animal Type

Animal Type	Number of Species in 9 Quad Area
Birds	16
Fish	3
Insects	1
Mammals	4

Table 5 Species Habitat Requirements; Species and Habitat Presence

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Birds					
Aquila chrysaetos	Golden eagle	CDFW Fully Protected / Watch List	Tundra, through grasslands, intermittent forested habitat and woodland-brushlands, and south to arid deserts and canyonlands. Typically found in open country in the vicinity of hills, cliffs, and bluffs. Known to be sensitive to human activity and are known to avoid developed areas.	**No, preferred habitat is not present**	**No**
Buteo swainsoni	Swainson's hawk	State Threatened	Dry grasslands and farmlands. Nests peripheral to riparian areas or tall trees near suitable foraging areas.	**No, preferred habitat is not present**	**No**
Charadrius nivosus nivosus	Western snowy plover	Federally Threatened / CDFW Species of Special Concern	Sandy beaches with sparse vegetation. Breeds along shores, peninsulas, offshore islands, bays, estuaries, and rivers.	**No, preferred habitat is not present**	**No**

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Falco mexicanus	Prairie falcon	CDFW Watch List	Open mountainous areas, steppe, plains, or prairies – nesting in pothole or well-sheltered ledge on rocky cliff or steep earth embankments.	**No, preferred habitat is not present**	**No**
Antigone canadensis tabida	Greater sandhill crane	State Threatened / CDFW Fully Protected	Freshwater wetlands such as marshes, wet grasslands, and river basins.	**No, preferred habitat is not present**	**No**
Prgne subis	Purple martin	CDFW Species of Special Concern	Open areas such as grasslands, farms and cropland, over lakes and ponds, especially areas near water.	**No, preferred habitat is not present**	**No**
Riparia riparia	Bank swallow	State Threatened	Soft, eroding banks along rivers, streams, and coastal areas. Also, among sandy coastal bluffs or cliffs.	**No, preferred habitat is not present**	**No**
Agalaius tricolor	Tricolored blackbird	State Threatened / CDFW Species of Special Concern	Wetlands with open accessible water, protected nesting substrate with thorny or spiny vegetation, and foraging space.	**No, preferred habitat is not present**	**No**
Childonias niger	Black tern	CDFW Species of Special Concern	Large freshwater wetlands, usually 50 acres or larger, in dense marshes on the edges of shallow lakes of the open prairies.	**No, preferred habitat is not present**	**No**

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Larus californicus	California gull	CDFW Watch List	Seacoasts, bays, estuaries, mudflats, marshes, irrigated fields, lakes, ponds, dumps, cities, and agricultural lands. Nests inland on open sandy or gravelly areas on islands or along shores of lakes and ponds, generally with scattered grasses.	**No, preferred habitat is not present**	**No**
Pelecanus erythrorhynchos	American white pelican	CDFW Species of Special Concern	Isolated islands in freshwater lakes. Also, found in shallow water on inland marshes, along lake or river edges, and in wetlands.	**No, preferred habitat is not present**	**No**
Centrocercus urophasianus	Greater sage-grouse	State Candidate Endangered / CDFW Species of Special Concern	Sagebrush steppe. Especially on leks, patches of open ground.	**No, preferred habitat is not present**	**No**
Tympanuchus phasianellus columbianus	Columbia sharp-tailed grouse	CDFW Species of Special Concern	Sage-steppe and intermontane mixed shrub-grass communities. Breeds on leks in relatively flat, sparsely vegetated knolls, ridge-tops, recently burnt areas, forest clearcuts, natural openings, and open areas.	**No, preferred habitat is not present**	**No**
Numenius americanus	Long-billed curlew	CDFW Watch List	Areas with sparse, short grasses, such as shortgrass and mixed-grass prairies and agricultural fields. Winter in wetlands, tidal estuaries, mudflats, flooded fields, and beaches.	**No, preferred habitat is not present**	**No**

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Asio flammeus	Short-eared owl	CDFW Species of Special Concern	Open areas with low shrublands including prairie, coastal grasslands, shrubsteppe, and marshes.	**No, preferred habitat is not present**	**No**
Plegadis chihi	White-faced ibis	CDFW Watch List	Shallow wetlands and wet agricultural fields with low plant cover. Nest in shallow marshes with emergent vegetation including cattail, bur-reed, or bulrush.	**No, preferred habitat is not present**	**No**
Fish					
Chasmistes brevirostris	Shortnose sucker	Federally Endangered / State Endangerd / CDFW Fully Protected	Turbid, shallow, alkaline, well-oxygenated, cool lake with shoreline vegetation.	**No, preferred habitat is not present**	**No**
Deltistes luxatus	Lost River sucker	Federally Endangered / State Endangered / CDFW Fully Protected	Deep lakes and pools with fast currents. Forages on shoreline with vegetation. Spawns in streams with gravel and cobble substrates.	**No, preferred habitat is not present**	**No**
Gila coerulea	Blue chub	CDFW Species of Special Concern	Warm, low-velocity waters with mixed substrates including lakes, small streams, shallow reservoirs. Common in small, shallow, weedy reservoirs of larger perennial streams.	**No, preferred habitat is not present**	**No**
Insects					
Bombus crotchii	Crotch's bumble bee	State Candidate Endangered	Arid grasslands and shrublands with foraging vegetation including milkweeds, dusty maidens, lupines, medics, phacelias, sages, and wild buckwheat.	**No, preferred habitat is not present**	**No**
Mammals					

Scientific	Common	Status	General Habitat	Habitat Present in Action Area	Species Present in Action Area
Taxidea taxus	American badger	CDFW Species of Special Concern	Open areas and may also frequent brushlands with little groundcover in western United States and southern British Columbia.	**No, preferred habitat is not present**	**No**
Ovis canadensis nelsoni	Desert bighorn sheep	CDFW Fully Protected	Rocky slopes and cliffs, canyons, washes and alluvial fans from Oregon to the deserts of the southwestern United States and to northwestern Mexico.	**No, preferred habitat is not present**	**No**
Corynorhinus townsendii	Townsend's big-eared bat	CDFW Species of Special Concern	Limestone caves, lava tubes, and human-made structures in coastal lowlands, cultivated valleys, and hills covered with mixed vegetation across the mid and western US into western Canada.	**No, preferred habitat is not present**	**No**
Canis lupus	Gray wolf	Federally Endangered / State Endangered	Occurs in areas with few roads, which increase human access and incompatible land uses but occupy semi-wild lands if ungulate prey is abundant and if not killed by humans.	**No, preferred habitat is not present**	**No**

Based on the habitat requirements for specific species and the field visits, it was determined that the project area does not provide suitable habitat for 24 sensitive status wildlife species known to occur in the general vicinity of the project area.

IPaC Federally Listed Species

ESA-Listed Threatened and Endangered Species

On September 4, 2024, an IPaC report (see Appendix) was obtained from USFWS. The project code is 2024-0139223 (Project name: Tulelake Drought Relief). 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".

There are no designated critical habitats in the proposed project.

Table 5 IPaC list of federally listed species with the potential to be affected by the project

Scientific	Common	Federal Status	General Habitat*	Habitat Present within Action Area (Yes/No)	Species Present in Action Area (Yes/No)
Mammals					
Canis lupus	Gray wolf	Endangered	Areas with few roads and little to no human disturbance in northern Mexico, a few areas in the Rocky Mountains, northwestern Great Lakes region, and Cascade Mountains of northern Washington.	**No, preferred habitat is not present**	**No**
Gulo gulo luscus	North American wolverine	Threatened	Alpine and arctic tundra, boreal and coniferous mountain forests in the Holarctic, northern Europe, northern Asia, and northern North America.	**No, preferred habitat is not present**	**No**
Birds					
Coccyzus americanus	Yellow-billed cuckoo	Threatened	Breeding in deciduous riparian woodland, especially including dense stands of cottonwood and willow. Nests in dense riparian understory foliage.	**No, preferred habitat is not present**	**No**
Insects					
Danaus plexippus	Monarch butterfly	Candidate	Open areas with milkweed and flowering plants,	**No, preferred habitat is not present**	**No**
Flowering Plants					
Tuctoria greenei	Greene's Tuctoria	Endangered	Edges of deeper vernal pools.	**No, preferred habitat is not present**	**No**
Orcuttia tenuis	Slender Orcutt Grass	Threatened	Vernal pools on Northern Volcanic Ashflows and Northern Volcanic Mudflows soils and grassland, oak	**No, preferred habitat is not present**	**No**

Scientific	Common	Federal Status	General Habitat*	Habitat Present within Action Area (Yes/No)	Species Present in Action Area (Yes/No)
			woodland, and confer forest habitats.		
***Information on General Habitat comes from website links provided in the IPaC Resource List (USFWS 2024) attached at the end of this report.**					

Based on review of site conditions and habitat requirements, gray wolf, North American wolverine, Crotch's bumble bee, monarch butterfly, Greene's tructoria, and slender Orcutt grass do not have habitat within the project area. Therefore, the proposed project will have no effect on these eight species and these eight species will not be discussed further in this analysis.

Direct and Indirect Impacts

Impacts, both direct and indirect, of project implementation will be discussed in this section. Biological resources may be directly or indirectly impacted by project implementation. Impacts may be permanent or temporary in nature. Direct impacts are defined as any alteration, disturbance, or destruction of biological resources that would result from project actions. For example, machinery physically moving an active nest of a sensitive bird species. Indirect impacts are results of impacts which are not direct. For example, noise from machinery disturbing an active nest of a sensitive bird species. Temporary impacts would be considered those which occur during the project construction. Temporary impacts are viewed as reversible when the disturbance has concluded whereas permanent impacts would result over the duration of the project operation.

Construction Disturbance

Construction disturbance will occur during the construction of the project. The construction impacts will be temporary in nature and last the duration of the construction period, but not extend during the operation of the project.

Impacts to Sensitive Status Plant Species

As there are no sensitive plant species within the project area, there will be no effect from the project on sensitive plant species.

Impacts to Sensitive Status Wildlife Species

As there are no sensitive wildlife species within the project area, there will be no effect from the project on sensitive wildlife species.

Project Conservation Measures

Implementation of project conservation measures will decrease and avoid impacts from the project on sensitive plant and wildlife species.

1. *Invasive Species* Preventing the spread of noxious weeds will occur through cleaning vehicles and equipment prior to entering the project area, so as not to introduce seeds or vegetation pieces to the project area.

Significant Unavoidable Impacts

Biological impacts associated with the project would be less than significant. No significant unavoidable impacts to biological resources would occur. With the implementation of the project conservation measures, no effect will occur to federally or state listed species.

Appendix

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:
Project Code: 2024-0139223
Project Name: Tulelake Drought Relief

09/04/2024 15:15:23 UTC

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 IPaC 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 Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

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

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: 2024-0139223
Project Name: Tulelake Drought Relief
Project Type: Water Supply Pipeline - Maintenance/Modification - Below Ground
Project Description: This drought relief project includes various approaches to conserving water and preparing for drought.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.954711,-121.47837810825692,14z

Counties: Siskiyou County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

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

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

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

Project code: 2024-0139223 09/04/2024 15:15:23 UTC

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
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Threatened

BIRDS

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

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.	Threatened

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Project code: 2024-0139223 09/04/2024 15:15:23 UTC

NAME STATUS

Species profile: https://ecos.fws.gov/ecp/species/1063

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.

7 of 8

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

CNDDB 9-Quad Map

CNDDB 9-Quad 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 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	None	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	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

Appendix D – Cultural Resources

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
+	Confederated Tribes of the Grand Ronde Community of Oregon	Siskiyou
+	Elk Valley Rancheria, California	Siskiyou
+	Karuk Tribe	Siskiyou
+	Klamath Tribes	Siskiyou
+	Pit River Tribe, California	Siskiyou
+	Quartz Valley Indian Community of the Quartz Valley Reservation of California	Siskiyou

1 - 7 of 7 results « ‹ 1 › » 10

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: Delores Pigsley/Chairperson
Confederated Tribes of Siletz Indians of Oregon
201 SE Swan Avenue, Siletz, OR - 97380-0549

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Ms. Pigsley:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

Below please find a description of the proposed project and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d). The site plan for the project is attached separately.

The City of Tulelake Drought Relief Project is comprised of rehabilitating two existing wells, replacing 500 feet of aged cast iron leaky water main, replacing five service connections, reconnecting two fire hydrants, providing bottled water for emergency use, and installing an emergency potable water re-filling station with a drinking water fountain The City received funding from the California Natural Resources Agency Department of Water Resources Small Community Drought Relief Program.

The project location is: Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street.

If you have questions regarding this project, please direct them to Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Pursuant to PRC § 21080.3.1 (b), you have 30 days or until April 5, 2024, from the receipt of this letter to request consultation, in writing, with The City of Tulelake by contacting Rabe Consulting at 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at andrea@rabeconsulting.com.

Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

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

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chair Kennedy:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

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

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Mr. Bailey:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

Below please find a description of the proposed project and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d). The site plan for the project is attached separately.

The City of Tulelake Drought Relief Project is comprised of rehabilitating two existing wells, replacing 500 feet of aged cast iron leaky water main, replacing five service connections, reconnecting two fire hydrants, providing bottled water for emergency use, and installing an emergency potable water re-filling station with a drinking water fountain The City received funding from the California Natural Resources Agency Department of Water Resources Small Community Drought Relief Program.

The project location is: Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street.

If you have questions regarding this project, please direct them to Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

Pursuant to PRC § 21080.3.1 (b), you have 30 days or until April 5, 2024, from the receipt of this letter to request consultation, in writing, with The City of Tulelake by contacting Rabe Consulting at 421 Commercial Street, Klamath Falls, Oregon 97601 or via email at andrea@rabeconsulting.com.

Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: David Harrelson/THPO
Confederated Tribes of the Grand Ronde Community of Oregon
9615 Grand Ronde Rd., Grand Ronde, OR - 97347

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).
Dear THPO Harrelson:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: Dale Miller/Chairperson
Elk Valley Rancheria, California
2332 Howland Hill Road, Crescent City, CA - 95531

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chair Miller:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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The project location is: Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street.

If you have questions regarding this project, please direct them to Andréa Rabe at 541-891-2137 or andrea@rabeconsulting.com.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

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

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear THPO Green:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: Russell Attebery/Chairman
Karuk Tribe
64236 2nd Avenue, Happy Camp, CA – 96039

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chair Attebery:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

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

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear THPO Watts-Tobin:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: Clayton Dumont/Chairman
Klamath Tribes
501 Chiloquin Boulevard, Chiloquin, OR - 97624

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chair Dumont:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

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

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Director Rubidoux:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: Agnes Gonzalez / Chairperson
Pit River Tribe, California
36970 Park Avenue, Burney, CA – 96013

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chair Gonzalez:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Very Respectfully,

Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

TO: Natalie Forrest-Perez/ THPO
Pit River Tribe, California
36970 Park Avenue, Burney, CA – 96013

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear THPO Forrest-Perez:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Andréa Rabe
Senior Environmental Consultant
Rabe Consulting
andrea@rabeconsulting.com

March 5, 2024

FROM: City of Tulelake
591 Main Street
Tulelake, California 96134

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

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chair Bennett:

The City of Tulelake has decided to undertake the following project: *City of Tulelake Drought Relief Project.* The proposed waterline replacement is located at Sixth Alley and Rehabilitating (2) Existing Wells located south of B Street and West of Siskiyou Street. The City has received funding from the Small Community Drought Relief Program.

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Senior Environmental Consultant
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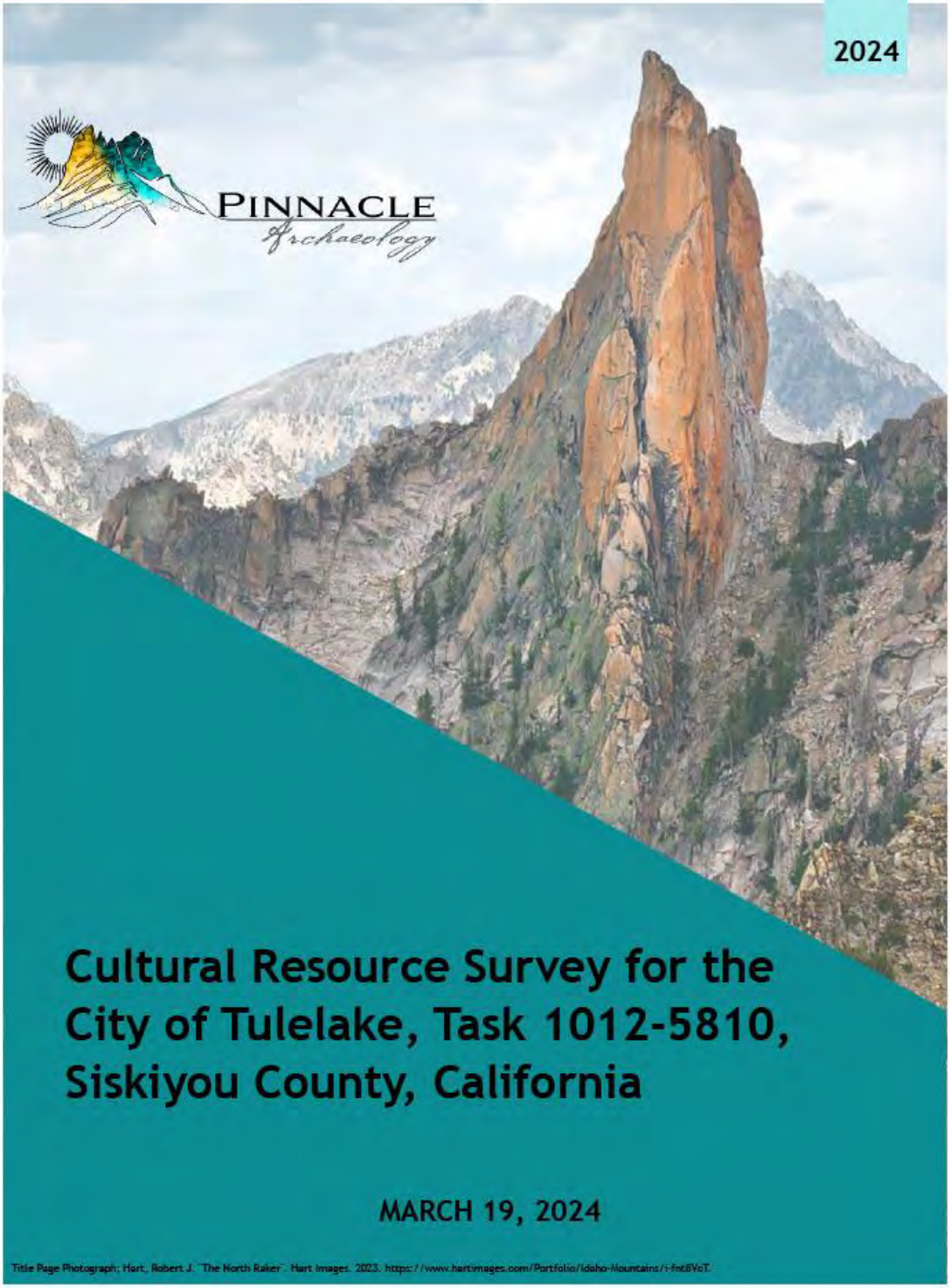
2024



PINNACLE
Archaeology

Cultural Resource Survey for the City of Tulelake, Task 1012-5810, Siskiyou County, California

MARCH 19, 2024

Title Page Photograph; Hart, Robert J. "The North Raker". Hart Images. 2023. https://www.hartimages.com/Portfolio/Idaho-Mountains/i-fnt8VcT

Cultural Resource Survey for the City of Tulelake, Task 1012-5810, Siskiyou County, California

Prepared for:

Rabe Consulting
421 Commercial St.
Klamath Falls, Oregon 97601

Prepared by:

PINNACLE Archaeology

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

PO Box 190187
Boise, Idaho 83719

March 19, 2024

Pinnacle Archaeology Report No. 24-009.2

Executive Summary

Project Title: Cultural Resource Survey for the City of Tulelake Roads, Task 1012-5810, Siskiyou County, California

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

Pinnacle Project No.: 24-009.2

Project Description: Pinnacle Archaeology LLC (Pinnacle) was contracted by Rabe Consulting to conduct a cultural resource survey in preparation for the rehabilitation of two existing wells, replacement of a waterline, and associated plumbing requirements in the City of Tulelake. The proposed project includes two locales in Tulelake, Siskiyou County, California. The project area associated with the project accounts for approximately 2.27 acres including an unpaved alleyway as well as the Water Pumping Facility public works yard and associated abandoned lot. The City of Tulelake received funding from the State of California through a 2024 Small Community Drought Relief Grant (SCDRG). Therefore, the project is subject to California Environmental Quality Act (CEQA) compliance. Pinnacle performed a pedestrian survey on March 16, 2024, as part of a cultural resource inventory and evaluation to support 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 of the Mount Diablo Meridian

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

Project Area: approximately 2.27 acres

Acres Surveyed: approximately 2.27 acres

Method(s): Intensive pedestrian survey

Cultural Resources Recorded: No cultural resources identified in the project area

NRHP Eligibility Recommendations: No cultural resources identified in the project area

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

Date(s) of Fieldwork: March 16, 2024

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 project area and within a 0.5-mi (0.8-km) study area around the project area. Nine previous cultural resource studies occurred within the 0.5-mi study area; however, none of the previous cultural resource studies overlap with the project area. One previously documented cultural resource occurred within the 0.5-mi study area but does not overlap the project area.

Pinnacle archaeologists completed a pedestrian survey of the project area on March 16, 2024. 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, pavement, structures, and storage of sediment, refuse, and machinery. The project area included a gravel alleyway, planted grass, a tennis court, an undeveloped lot with sediment and construction refuse, and the modern Water Pumping Facility public works yard, which has a water storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Previous well and waterline construction and maintenance, in addition to private and public property improvements, have significantly disturbed the project area 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 well rehabilitations, waterline replacement, and associated system improvements will replace current utilities resulting in no new disturbance.

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 project, 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 the rehabilitation of an two existing wells, replacement of a waterline, and associated plumbing requirements in the City of Tulelake. The proposed project includes two locales in Tulelake, Siskiyou County, California. The project area associated with the project accounts for approximately 2.27 acres including an unpaved alleyway as well as the Water Pumping Facility public works yard and associated abandoned lot. The City of Tulelake received funding from the State of California through a 2024 Small Community Drought Relief Grant (SCDRG). Therefore, the project is subject to California Environmental Quality Act (CEQA) compliance. Pinnacle performed a pedestrian survey on March 16, 2024, as part of a cultural resource inventory and evaluation to support CEQA compliance for the proposed project.

Regulatory Context

The City of Tulelake received funding through a SCDRG to fund the project; therefore, the project is subject to CEQA compliance. Historical properties must be identified and evaluated for listing on the California Register of Historical Resources (CRHP). Additionally, Tribal Cultural Property (TCR) must be identified and considered under CEQA. An overview of these regulations is presented in the following sections.

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.

Project Area

The City of Tulelake proposes two well rehabilitations and waterline replacement project that includes a potential area of impact of approximately 2.27 acres in two locations in Tulelake, Siskiyou County, California (Figure 1). The project area is in Township 48 North, Range 04 East, Section 35 of the Mount Diablo Meridian. The project area is depicted on the 2022 Tulelake, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2). The project area is owned by the City of Tulelake.

The proposed project includes the rehabilitation of two wells with associated plumbing and installation of fire hydrants as well as the replacement of a waterpipe and associated plumbing in one alleyway (Figure 3). The wells are located between B Street and C Street in an undeveloped lot and a portion of the Water Pumping Facility public works yard. The undeveloped lot has several piles of dirt and construction refuse while the eastern margin includes a grass field connected with Otis Roper Park and a disused tennis court (Photograph 1—Photograph 2). The public works yard has a storage tank, various buildings, a chain-link fence, storage, and gravel driveways (Photograph 3). The waterline replacements will take place in the Sixth Street Alley between E Street and F Street. The alleyway is not paved but consists of compacted sediments and gravel with residents on either side (Photograph 4).

Figure 1. Project Area Vicinity Map

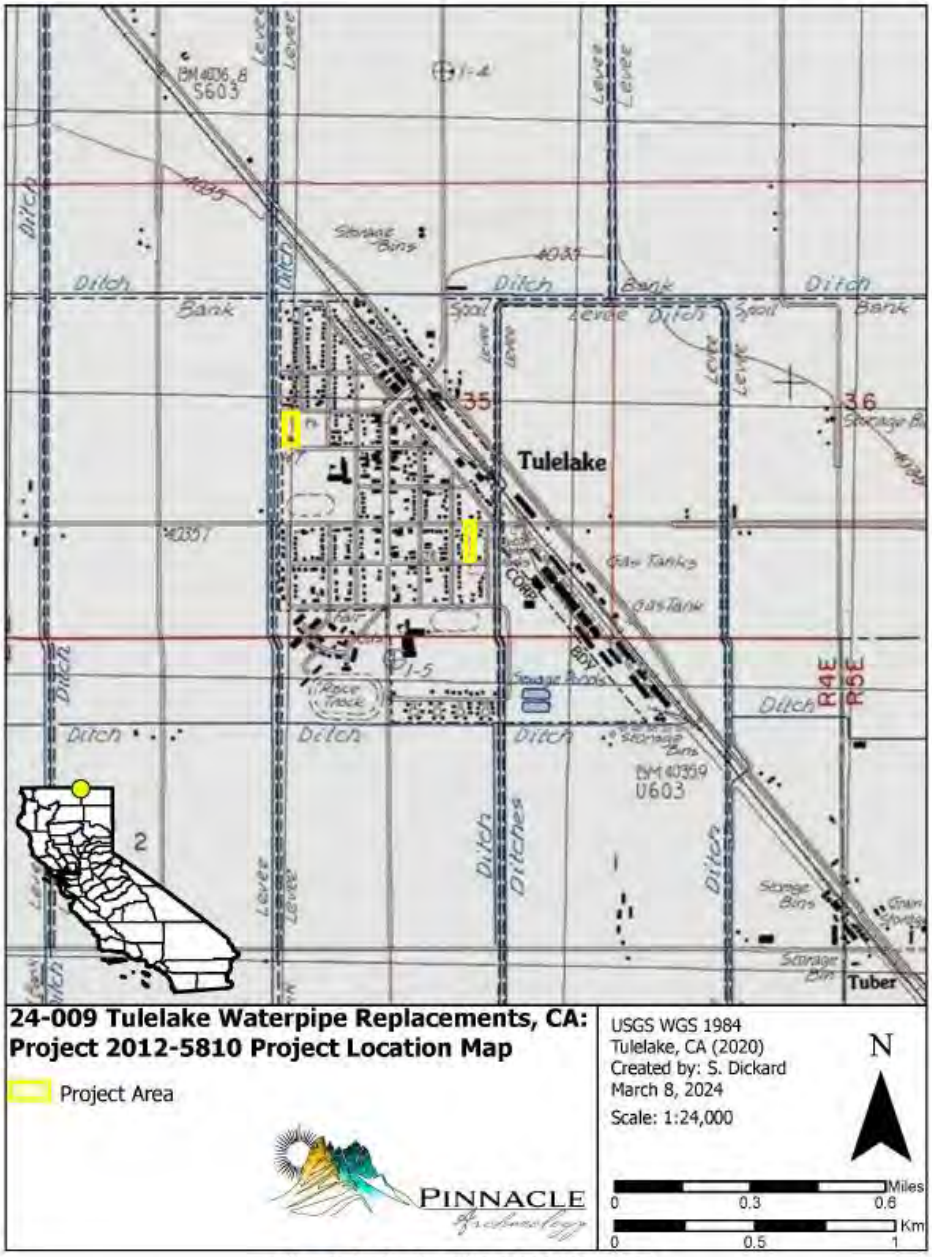

Figure 2. Project Area Location Map

Figure 3. Project Area Aerial Map

Photograph 1. Disused well and sediment/construction debris overview, facing northwest.

Photograph 2. Otis Roper Park in foreground with disused tennis court on left and public works yard on right, facing southwest.

Photograph 3. Overview of the public works yard, facing northwest.

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

Environmental Context

Identification and discussion of physiographic and environmental conditions within the project area, 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 project area 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 musky 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 2024).

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 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 project area 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 latifola*), wokas (*Nuphar polysepalum*), epos (*Perideridia 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 (*Branta*), 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 project area 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 project area 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 project area 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. 13,000 to 7,000 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. 7,000 to 5,000 B.P.)

Mount Mazama erupted circa 7,600 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. 5,000 to 600 B.P.)

During the Early Archaic (c. 5,000–3,500 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. 3,500–1,300 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 1,000 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 1,000 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. 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. 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 project area and within a 0.5-mi (0.8 km) study area around the project area. 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 project area.

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 project area (Figure 4; Table 1). 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

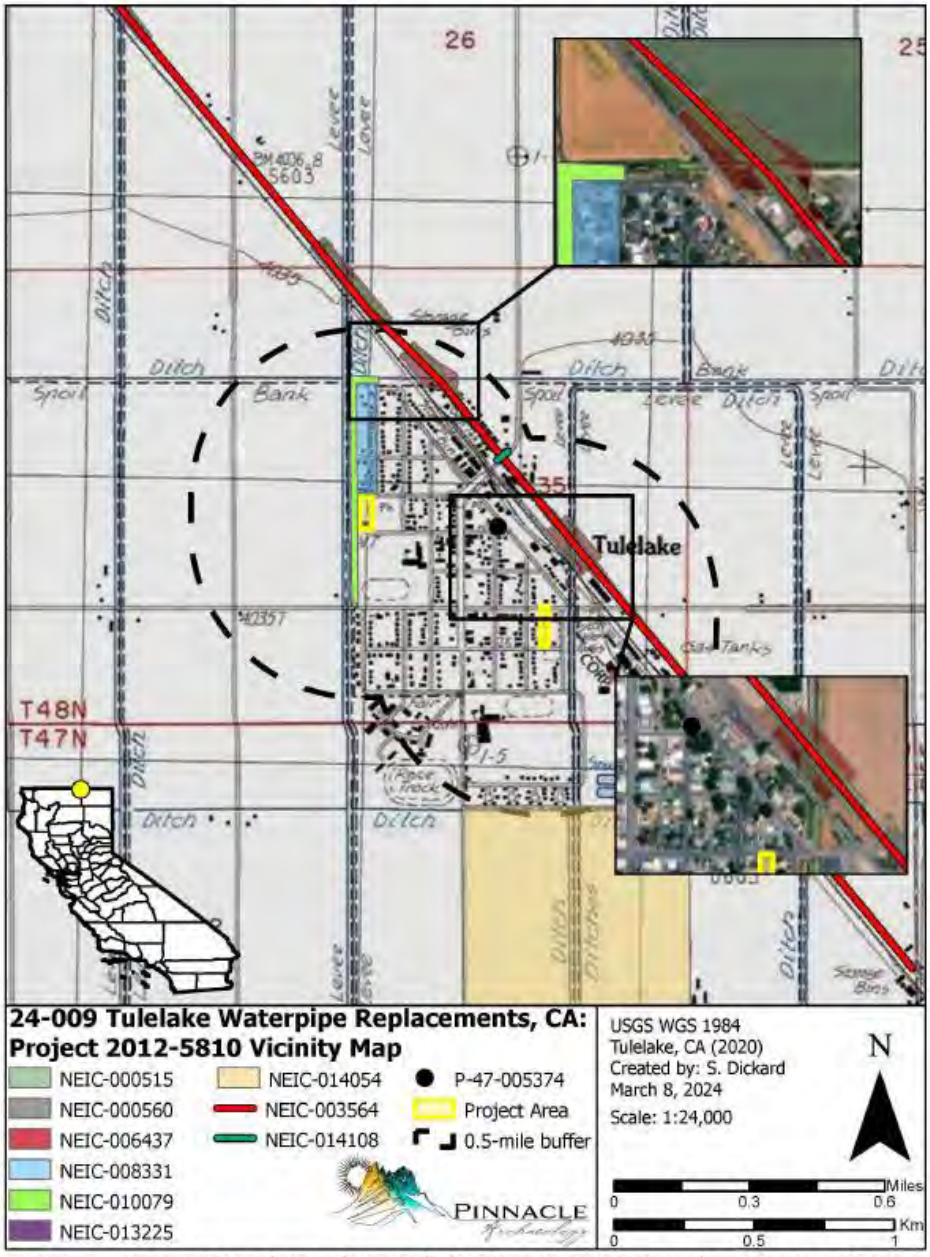

Figure 4. Previously Studies and Recorded Cultural Resources in the 0.5-mi Study Area

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. None of the previous cultural resource inventories occurred within the project area.

Previously Recorded Cultural Resources

Pinnacle's record search revealed one previously recorded archaeological site within 0.5 mi (0.8 km) of the project area 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 project area 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 project area (GLO 1917; GLO 1920; GLO 1925). In 1930, the GLO map first depicts 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 1930; GLO 1948; GLO 1960). The 1930 GLO also depicts the Southern Pacific Railway Line on the east side of Tulelake, California (GLO 1930).

Archival USGS topographic maps were also consulted for the project area. 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 project area remains unchanged into the present day (USGS 1954; USGS 1958; USGS 1984).

Aerial images of the project area were also reviewed through the Historic Aerials website (Nationwide Environmental Title Research, LLC (NETR) 2024). 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 project area between the western extents of B Street and C Street at the modern Water Pumping Facility public works yard appears as structures organized into three rows and four columns (NETR 2024; Figure 5). The exact nature of what is depicted in this section of the project area 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

project area, modern Otis Roper Park, also contained rows of structures and appears to be part of the same facility (Figure 5).

Figure 5. Project area plotted on the 1948 aerial image (NETR 2024).

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 project area itself remains visibly unchanged between 1955 and 2020, the latest available aerial image (NETR 2024).

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 March 16, 2024.

The project area included approximately 2.27 acres of land in the City of Tulelake, California. The project area was flat at an elevation of about 4,036–4,038 ft (1,230–1,231 m) amsl. The project area is in a developed area of Tulelake. The project area is entirely disturbed from previous underground utilities including waterlines. The project area included a gravel alleyway (Photograph 5), an undeveloped lot with a disused well and sediment/construction refuse piles (Photograph 6), grass and a disused tennis court in the Otis Roper Park (Photograph 7), and the modern Water Pumping Facility public works yard, which has a water storage tank, various buildings, a chain-link fence, storage, and gravel driveways (Photograph 8). Mineral sediment visibility ranged from zero to 30 percent due to the grass, gravel, pavement, structures, and storage of sediment, refuse, and machinery. No native vegetation was observed. Pinnacle archaeologists completed an intensive pedestrian survey of the project area on March 16, 2024, when the weather was in the mid 40 degrees F with clear skies and little to no wind.

Prior to fieldwork, the project area 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 GNSS 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.

Photograph 5. Sixth Street Alley, facing north.

Photograph 6. Undeveloped lot, facing southeast.

Photograph 7. Otis Roper Park grass and disused tennis court, facing south.

Photograph 8. Public works yard, facing northeast.

Results of Survey

On March 16, 2024, Ashlee Hart and Brooklynn Carnevale performed a pedestrian survey of the approximately 2.27-acre project area. 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, pavement, 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 project area included a gravel alleyway, planted grass, a tennis court, an undeveloped lot with sediment and construction refuse, and the modern Water Pumping Facility public works yard, which has a water storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Previous waterline construction and maintenance, in addition to private and public property improvements, have significantly disturbed the project area 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 waterline, well rehabilitations, and associated system improvements will replace current utilities resulting in no new disturbance. Proposed actions are in already highly disturbed areas (Photograph 9—Photograph 10).

Photograph 9. New tank location in the public works yard, facing northeast.

Photograph 10. Tennis court on north side of public works yard that is proposed for new tank, facing north.

Summary and Recommendations

Pinnacle was contracted by Rabe Consulting to conduct a cultural resource survey in preparation for the rehabilitation of two existing wells, replacement of a waterline, and associated plumbing requirements in the City of Tulelake. The proposed project includes two locales in Tulelake, Siskiyou County, California. The project area associated with the project accounts for approximately 2.27 acres including an unpaved alleyway as well as the Water Pumping Facility public works yard and associated abandoned lot. The City of Tulelake received funding from the State of California through a 2024 SCDRG. Therefore, the project is subject to CEQA compliance. Pinnacle performed a pedestrian survey on March 16, 2024, as part of a cultural resource inventory and evaluation to support CEQA compliance for the proposed project. No cultural material or features were identified during the pedestrian survey. 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 project area and within a 0.5-mi (0.8-km) study area around the project area. Nine previous cultural resource studies occurred within the 0.5-mi study area; however, none of the previous cultural resource studies overlap with the project area. One previously documented cultural resource occurred within the 0.5-mi study area but does not overlap the project area.

Pinnacle archaeologists completed a pedestrian survey of the project area on March 16, 2024. 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, pavement, structures, and storage of sediment, refuse, and machinery. The project area included a gravel alleyway, planted grass, a tennis court, an undeveloped lot with sediment and construction refuse, and the modern Water Pumping Facility public works yard, which has a water storage tank, various buildings, a chain-link fence, storage, and gravel driveways. Previous well and waterline construction and maintenance, in addition to private and public property improvements, have significantly disturbed the project area 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 well rehabilitations, waterline replacement, and associated system improvements will replace current utilities resulting in no new disturbance.

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 project, 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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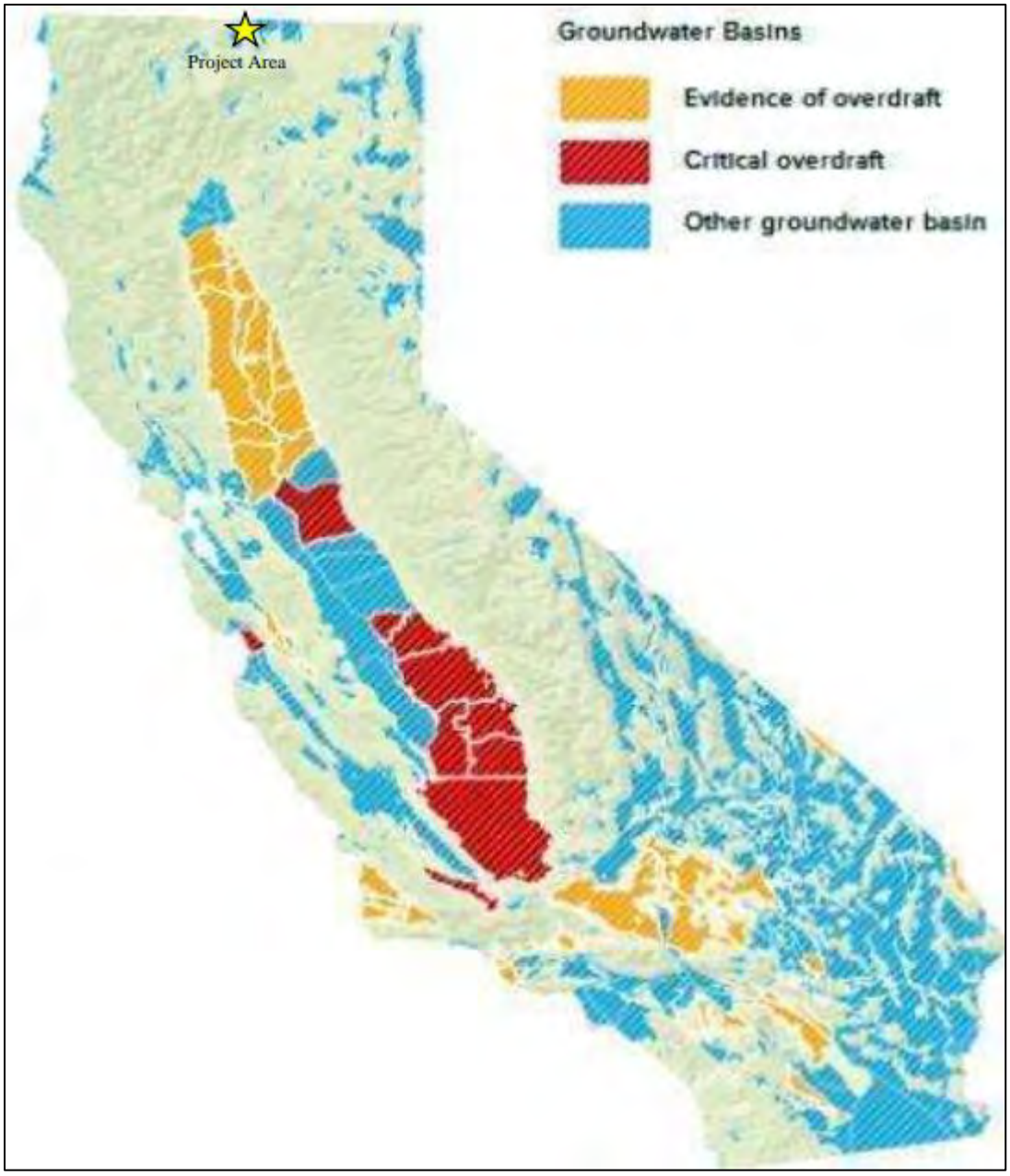
Appendix E – Hydrology and Water Resources

Environmental Protection Agency Sole Source Aquifers (https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b)



California Groundwater Restricted Areas Map

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS
  - Without Base Flood Elevation (BFE) Zone A, V, A99
  - With BFE or Depth Zone AE, AO, AH, VE, AR
  - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
  - Future Conditions 1% Annual Chance Flood Hazard Zone X
  - Area with Reduced Flood Risk due to Levee. See Notes. Zone X
  - Area with Flood Risk due to Levee Zone D
- OTHER AREAS
  - NO SCREEN Area of Minimal Flood Hazard Zone X
  - Effective LOMRs
  - Area of Undetermined Flood Hazard Zone D
- GENERAL STRUCTURES
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- OTHER FEATURES
  - 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- MAP PANELS
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/5/2024 at 4:59 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.