NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

PROJECT NAME: **LOWER LAKE EMERGENCY WATER INTERTIE PROJECT**

Date of Preparation: June 27, 2019

Lead Agency: Lower Lake County Waterworks District No. 1

Project Description: The project would provide an emergency water intertie between three existing water systems, Lower Lake County Waterworks District No. 1, Highlands Mutual Water Company, and Konocti County Water District. The three water systems serve the community of Lower Lake and parts of the City of Clearlake in Lake County.

Project Location: Lower Lake and City of Clearlake, Lake County, CA

Findings: Based on the Initial Study dated June 27, 2019, the Lower Lake County Waterworks District No. 1 has determined that:

1. This project does not have the potential to degrade the quality of the environment, nor to curtail the diversity of the environment.
2. This project will not have a detrimental effect upon either short-term or long-term environmental goals.
3. This project will not have impacts that are cumulatively considerable.
4. This project will not have environmental impacts that will cause substantial adverse effects on human beings, either directly or indirectly.

Public Review Period: June 27, 2019 to July 26, 2019

Public Review: The Initial Study is available (beginning June 27, 2019) for public review at the Lower Lake County Waterworks District No. 1, 16254 Main Street, Suite B, Lower Lake. The Initial Study can also be viewed at https://llcwd.com/current-projects. All documents referenced in the Initial Study are available at the office of Brelje & Race, 475 Aviation Blvd. Suite 120, Santa Rosa. The public is invited to submit written comments regarding the environmental findings and the proposed Mitigated Negative Declaration determination to the Lower Lake County Waterworks District No. 1. Persons commenting are advised to raise all pertinent issues during the public comment period. If action taken by the Lower Lake County Waterworks District No. 1 is challenged in court, the legal challenge may be limited to those issues raised by persons during the public comment period.

Where to Submit Comments: Lower Lake County Waterworks District No. 1
16254 Main Street, Suite B
Lower Lake, CA 95457

Contact Person: Todd Fiora. General Manager
(707) 994-6009
general.manager@mchsi.com

The Mitigated Negative Declaration has been prepared in compliance with the provisions of the California Environmental Quality Act.

MITIGATED NEGATIVE DECLARATION

Project Title: **Lower Lake Emergency Water Intertie Project**

Date of Preparation: June 27, 2019

Lead Agency: Lower Lake County Waterworks District No. 1

Project Description: The project would provide an emergency water intertie between three existing water systems, Lower Lake County Waterworks District No. 1, Highlands Mutual Water Company, and Konocti County Water District. The three water systems serve the community of Lower Lake and parts of the City of Clearlake in Lake County.

Project Location: Lower Lake and City of Clearlake, Lake County, CA

General Plan: Varies, primarily in roadways or public utility easements

Zoning: Varies, primarily in roadways or public utility easements

Findings:

1. With the incorporation of mitigation measures, this project does not have the potential to degrade the quality of the environment, nor to curtail the diversity of the environment.
2. This project will not have a detrimental effect upon either short-term or long-term environmental goals.
3. This project will not have impacts that are cumulatively considerable.
4. This project will not have environmental impacts that will cause substantial adverse effects on human beings, either directly or indirectly.

- The proposed project could not have a significant effect on the environment and a Negative Declaration will be prepared.
- 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.

Public Review Period: June 27, 2019 to July 26, 2019

Mitigation Measures: See Initial Study

Where to Submit Comments:
Lower Lake County Waterworks District No. 1
16254 Main Street, Suite B
Lower Lake, CA 95457

Contact Person:
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(707) 994-6009
general.manager@mchsi.com

Attachment: Initial Study

LOWER LAKE EMERGENCY WATER INTERTIE PROJECT

Lower Lake and City of Clearlake, California

Initial Study

June 2019

Prepared for:
Lower Lake County Waterworks District No. 1
16254 Main Street
Suite B
Lower Lake, CA 95457

Prepared by:
Brelje & Race Engineers
475 Aviation Blvd., Suite 120
Santa Rosa CA 95403
707/576-1322

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Appendices

PROJECT DATA

Project Title:	Lower Lake Emergency Water Intertie Project
Lead Agency:	Lower Lake County Waterworks District No. 1 16254 Main Street, Suite B Lower Lake, CA 95457
Contact Person:	Todd Fiora. General Manager (707) 994-6009 general.manager@mchsi.com
Project Location:	Lower Lake and City of Clearlake, Lake County, CA
General Plan Designation:	Varies, primarily in roadways of public utility easements
Zoning:	Varies, primarily in roadways of public utility easements

INTRODUCTION

The purpose of this Initial Study is to provide the Lead Agency, the Lower Lake County Waterworks District No. 1 (District), with an assessment of relevant environmental information associated with implementation of the proposed project in order to determine whether a Negative Declaration, Mitigated Negative Declaration or an Environmental Impact Report (EIR) will be required for the Lower Lake Emergency Water Intertie Project. This environmental evaluation is intended to fully inform the Lead Agency, other interested agencies and the public of the proposed plan and associated environmental impacts. This Initial Study has been prepared in conformance with the requirements of §15063 of the 2019 California Environmental Quality Act (CEQA) Guidelines.

If the Lead Agency determines that there is no substantial evidence that the project may cause a significant effect on the environment, then a Negative Declaration may be prepared. A Negative Declaration may include conditions of approval to avoid or reduce potential impacts. However, if the Initial Study determines that the project may cause an unavoidable or unknown significant effect on the environment, the Lead Agency must prepare an EIR.

The Initial Study process also enables the Lead Agency to modify a project, mitigating adverse effects before an EIR is prepared, thereby enabling the project to move forward under a Mitigated Negative Declaration. This facilitates the environmental evaluation portion of the project development process and eliminates unnecessary EIRs.

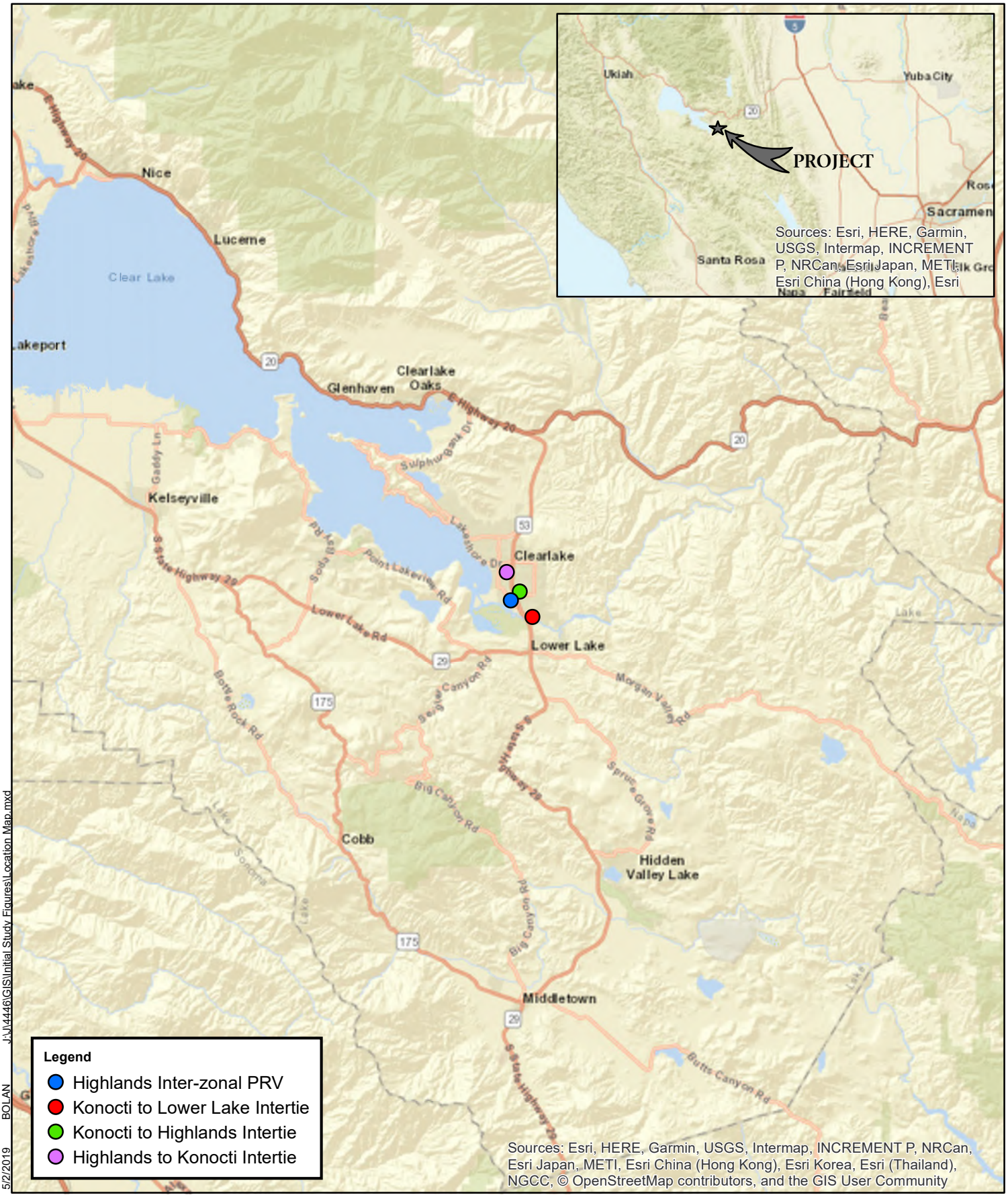
PROJECT SETTING

The project area is generally developed with residential uses surrounding proposed project locations. Highway 53 is the major access way to the project area. All project locations occur on developed parcels, in roadways or within publicly owned property. The proposed project's regional location and project overview is shown on Figures 1 and 2.

PROJECT OBJECTIVES/PURPOSE AND NEED

An emergency intertie is being proposed between three State-regulated public water systems: Lower Lake County Waterworks District No. 1, Highlands Mutual Water Company, and Konocti County Water District. The three water systems serve the unincorporated community of Lower Lake and parts of the City of Clearlake in Lake County. The usefulness of an emergency intertie was highlighted during the 2016 Clayton Wildfire and the preceding severe drought. An intertie would also be useful during periods when water quality issues curtail the use of surface water from Clear Lake as a supply source.

The proposed interties would allow each water system to take delivery of treated water from one of the other water systems at a flow rate of approximately 400 gallons per minute (GPM) in the event of an emergency disruption to its own system. With the District as Lead Agency, the water systems intend to apply for funding for implementation of the project through the Community Development Block Grant program administered by the California Department of Housing and Community Development or with the State Water Board Division of Financial Assistance.



5/2/2019 BOLAN J:\J4446\GIS\Initial Study Figures\Location Map.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake

NORTH

0 2 4 8 Mile

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FIGURE 1

PROJECT LOCATION

LOWER LAKE CWD

MAY 2019

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake

NORTH

0 500 1,000 2,000 Feet

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5/2/2019 Witt JN\4446\GIS\Initial Study Figures\Project Overview.mxd

FIGURE 2

PROJECT LOCATIONS

LOWER LAKE CWD

MAY 2019

PROJECT BACKGROUND

EXISTING WATER SYSTEMS

Lower Lake County Waterworks District No. 1

The District serves approximately 1,900 people in the unincorporated community of Lower Lake. The water system was originally developed to serve the immediate town of Lower Lake, but has expanded in stages to include the Copsey Creek subdivision to the northeast and the Rancho Sendero Subdivision and Twin Lakes area, located southwest and southeast of town respectively. The boundary of the service area is shown on Figure 3.

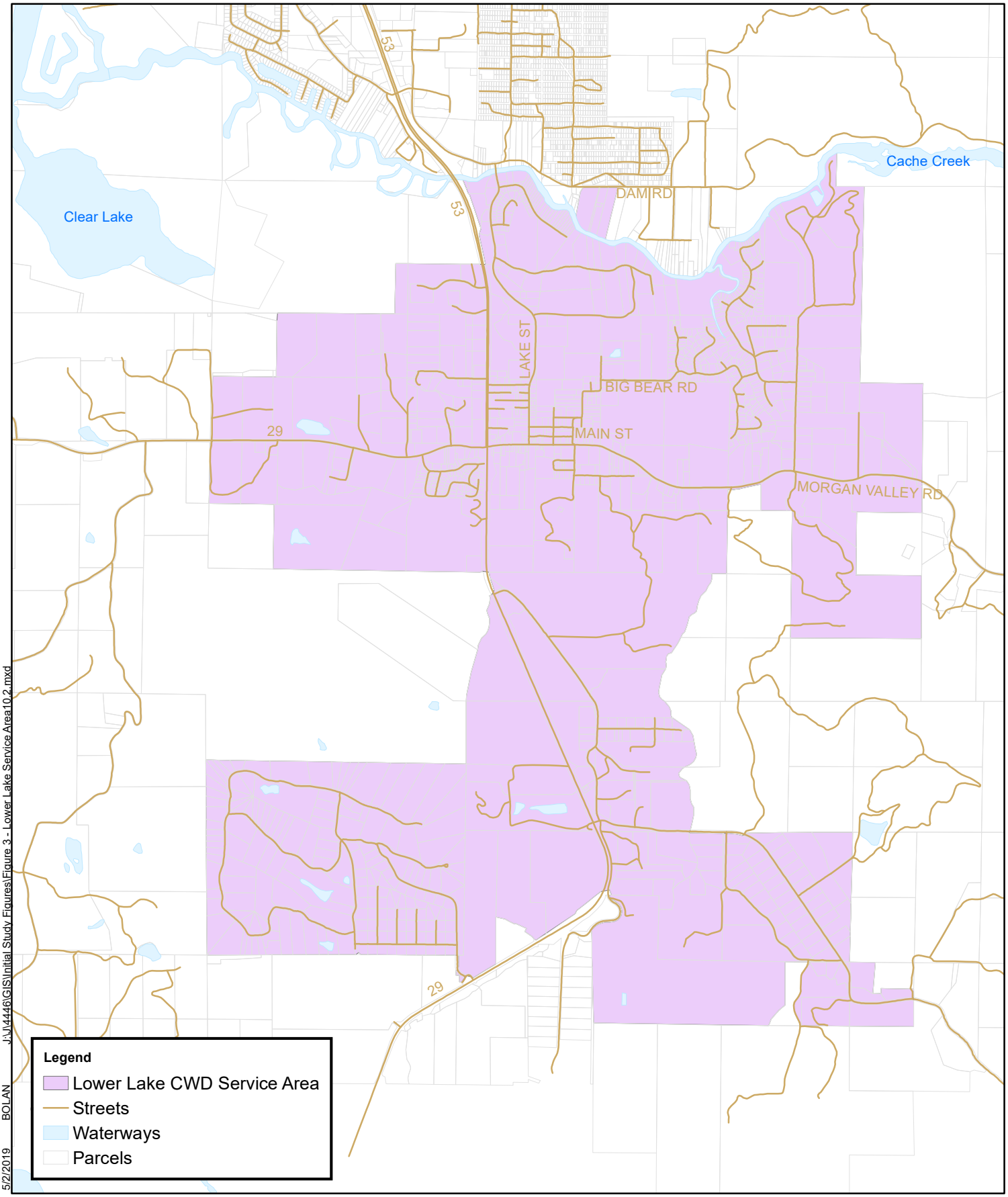
Water supply is derived from eight active groundwater wells. An inspection of the water system by the Division of Drinking Water in 2016 included an analysis of source capacity. The maximum day demand in the prior ten years based on production records was 0.692 million gallons (MG) whereas the source capacity was listed at 0.918 MG, more than adequate. Average daily usage during the period was approximately 275,000 gallons per day (gpd) or 190 gallons per minute. Average daily usage in the month of maximum usage was 410,000 gpd or 285 gpm. The maximum day demand was 692,000 gpd in 2010, although the next highest demand on record was over 20% less. Given the structure losses in the 2016 Clayton Wildfire, it will be a long time before the current maximum day demand is exceeded.

Well water is treated water and stored in seven tanks having a combined capacity of 1.34 MG. The District's water distribution system consists of a mix of asbestos cement and PVC piping with some of the PVC piping being of the thin-wall variety. Pipe size ranges from three to twelve inches. The smaller and older piping is located in the downtown area (part of the original system) and the Copsey Creek Ranch Subdivision that was developed in the 1960's.

Highlands Mutual Water Company

Highlands Mutual Water Company (Highlands MWC) is one of three water systems that serves customers located in the City of Clearlake. The water system was originally developed to serve the Clearlake Highlands Subdivisions and has grown over the years to include connections located in the central portion of the City of Clearlake. The system serves approximately 7,250 people. The water system's service area also includes the shopping center at Dam Road and Highway 53. The service area is shown on Figure 4.

Water supply is derived from Clear Lake. Raw water is pumped to the conventional treatment plant located at 14772 Hillcrest Avenue. A Surface Water Treatment Plant Evaluation was conducted by the Division of Drinking Water in 2013 and updated in 2016. The evaluation included historical production data for the period for 2003 to 20159. For the period 2008 through 2015, the maximum day demand was 1.65 MG in 2012. Maximum day demands for the most recent three year period in the evaluation (2012 to 2015) averaged 1.2 MG or less even though the number of connections had increased by 25%. Source and treatment capacity is 2.0 MG. Average daily usage during the period 2003 to 2015 was approximately 785,000 gallons per day (gpd) or 545 gallons per minute and average daily usage in the month of maximum usage was 1.095 MGD or 760 gpm.



5/2/2019 BOLAN J:\J4446\GIS\Initial Study Figures\Figure 3 - Lower Lake Service Area10.2.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake

NORTH

0 0.25 0.5 1 Mile

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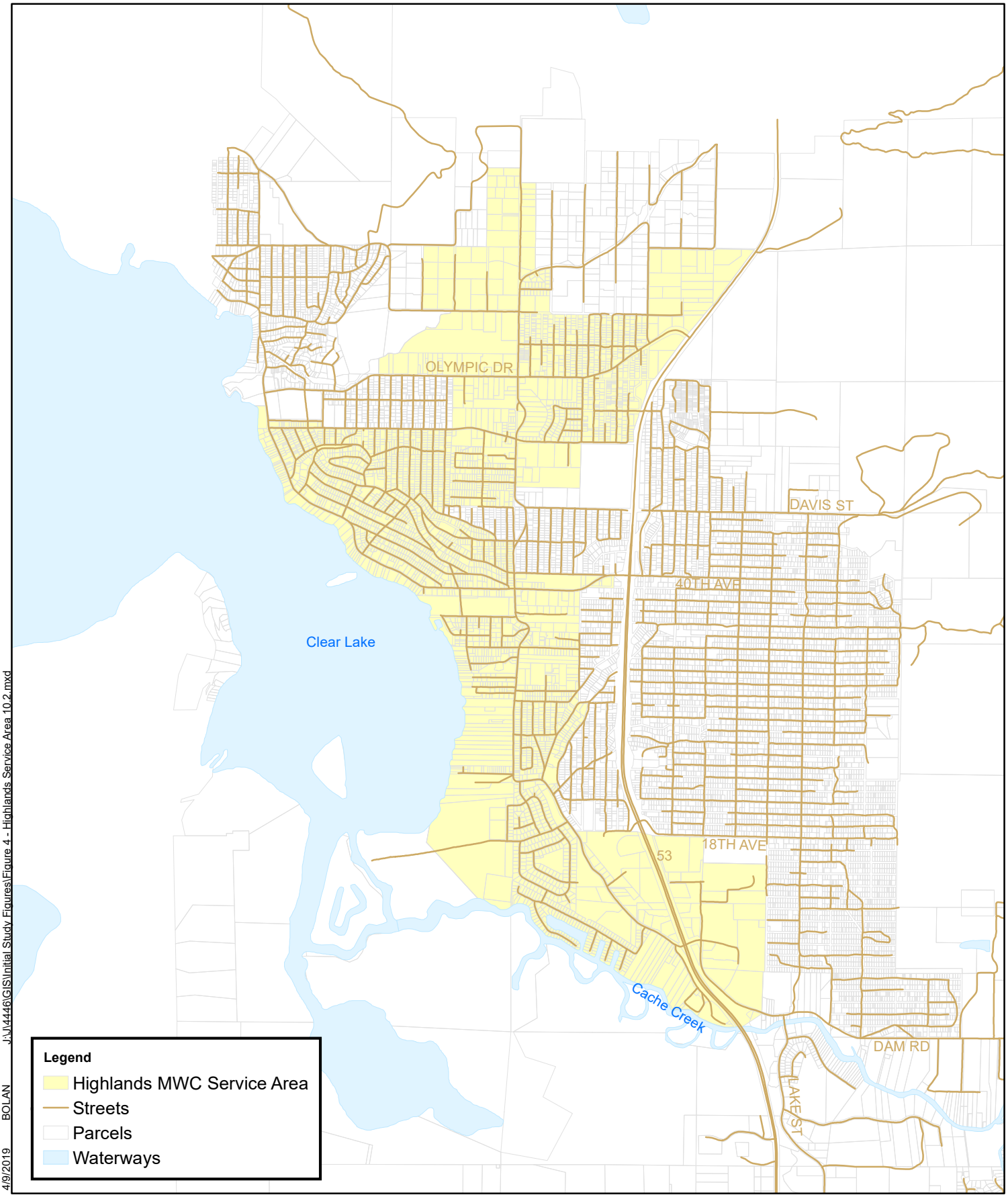
FIGURE 3

LOWER LAKE CWD SERVICE AREA BOUNDARY

LOWER LAKE CWD

MAY 2019



4/9/2019 BOLAN J:\J\4446\GIS\Initial Study Figures\Figure 4 - Highlands Service Area 10.2.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake

NORTH

0 0.25 0.5 1 Mile

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FIGURE 4

HIGHLANDS MWC SERVICE AREA BOUNDARY

LOWER LAKE CWD

MAY 2019

Treated water is stored in tanks located at the treatment facility and in three higher service zones served by booster pumps. Total system storage is 4.88 MG. Total system storage exceeds the system's maximum day demand.

The distribution system is constructed of approximately 43 miles of steel, asbestos cement, and PVC piping serving four service zones. There are two existing interties: An existing two-way emergency intertie with the Golden State water system is located in the Plant Zone; and, an existing emergency intertie with the Konocti water system (Konocti to Highlands via gravity feed) is located in the 20th Avenue Zone. A test of the intertie was conducted in 1994 and resulted in excessive pressures in the lower portions of the 20th Avenue Zone. It is not known if the problem resulted from a malfunction of the pressure reducing valve.

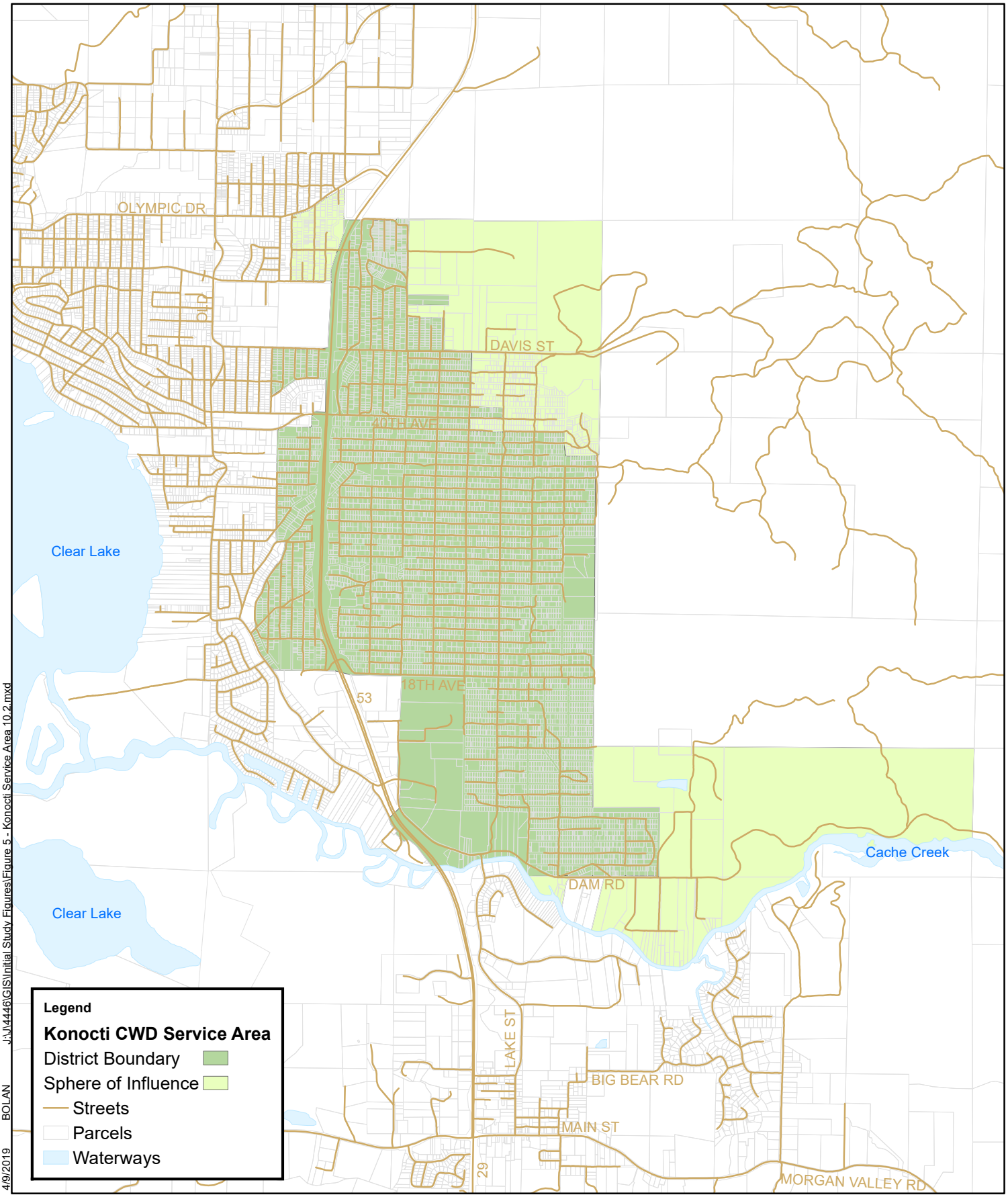
Konocti County Water District

Konocti County Water District (Konocti CWD) is also one of three water systems that serves customers in the City of Clearlake. The water system serves approximately 4,100 people. Konocti CWD serves the portion of the City of Clearlake east of Highway 53, excluding the shopping center served by Highlands Mutual Water Company. The District abuts Lower Lake CWD along Cache Creek and Highlands MWC along Highway 53. The District service area is shown on Figure 5.

Water supply is derived from Clear Lake. Raw water is pumped to the conventional treatment plant located at 15449 Stanyon Street. An inspection of the water system was conducted by the Division of Drinking Water in 2017. The inspection report included an analysis of source capacity. The maximum day demand in the prior ten years was determined to be 0.82 million gallons (MG) based on production records. Source capacity was determined to be 0.96 MG (not including a 300 gpm pumped intertie with the Highlands Mutual Water System), exceeding the source capacity requirement. Average daily usage during the period was approximately 398,000 gallons per day (gpd), or 276 gallons per minute, and average daily usage in the month of maximum usage was 589,000 gpd, or 409 gpm.

Treated water is stored in five welded-steel tanks at two sites, each site serving a service zone. The distribution system primarily consists of four to ten-inch C900 PVC with a small portion of two-inch piping remaining from the original system construction. Approximately 80% of the piping is six-inch diameter.

The distribution system includes two emergency interties to the Highlands MWC system. One intertie is located near Highlands' 20th Avenue storage tank. The intertie consists of a six-inch diameter main with a pressure reducing valve and four-inch meter. The intertie is only capable of transfers from Konocti to Highlands and is owned by Highlands MWC. A test of the intertie many years ago reportedly resulted in excessive pressure in the lower portions of the 20th Avenue Service Zone. It is not known if the problem resulted from a malfunction of the pressure reducing valve.



4/9/2019 BOLAN J:\J4446\GIS\Initial Study Figures\Figure 5 - Konocti Service Area 10.2.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake

NORTH

0 0.25 0.5 1 Mile

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FIGURE 5
KONOCTI CWD
SERVICE AREA BOUNDARY

LOWER LAKE CWD
MAY 2019

The second emergency intertie, consisting of a six-inch interconnection, with a 40 HP booster pump with an estimated capacity of 300 gpm, is located at the Highlands' Spruce Avenue tank site. This intertie is owned and operated by Konocti CWD. The booster pump is housed in a small wood-framed shed. The shed was designed with a removable roof as the wall height is approximately 3.5 feet. The pump station, including building, is in very poor condition.

The pump station derives its supply from Highland MWCs' adjacent Spruce Avenue storage tanks. These tanks receive water from Highlands' Laguna Avenue Booster Station located approximately 1,500 feet to the west at the intersection of Laguna Avenue and Old Highway 53. While the pump station is equipped with four pumps having a combined capacity of greater than 1,000 gpm, pump station discharge is limited to slightly more than 300 gpm due to the size of the transmission piping between the pump station and the tank site (four-inch diameter). The transmission piping also functions as a distribution main so customers served are subject to unacceptable pressure swings when the facility is operated at higher flows. This deficiency within Highlands MWC' distribution system limits the duration (less than a day) that the intertie could be operated at the proposed maximum transfer rate (400 gpm).

POLICY SETTING

The project occurs within the City of Clearlake and the unincorporated community of Lower Lake in Lake County. Development in the project area is governed by the County of Lake's and the City of Clearlake's General Plan and zoning ordinance. The project is composed of three existing water service areas, Lower Lake County Waterworks District No. 1, Highlands Mutual Water Company, and Konocti County Water District.

The proposed Dam Road pump station is the only facility located on an undeveloped parcel. All other proposed project components are located either in existing roadways, public utility easements or at existing water facilities. Zoning designations include R1, C2 and R3. Public water systems are permissible uses in all of the zoning designations.

PROJECT DESCRIPTION

OVERVIEW

Management of all three water systems would prefer a single jointly-owned intertie facility at the intersection of Dam Road and Lake Street. However, the potential construction delays and associated costs that could arise due to environmental issues during installation of the required Dam Road transmission main could be significant. The recommended project therefor would involve reuse of the existing Konocti/Highland interties, refurbishment of an existing Highlands' inter-zonal intertie, and construction of a new Konocti/Lower Lake intertie at the intersection of Lake Street and Dam Road. Upon project completion, each water system would have emergency sources equal to or greater than their respective average demand during their month of maximum demand. In the case of Highlands MWC, that water system would need to rely upon transfers from both Golden State Water Company and either Konocti CWD or Lower Lake CWD (through Konocti) to satisfy this criteria. The recommended project locations are shown on Figure 2 and would include the following components:

Refurbish Konocti to Highlands Intertie

The existing intertie located along 19th Avenue at Highlands' 20th Avenue tank site would be refurbished (Figure 6). The main valve seat, diaphragm, and pilot system of the existing pressure reducing valve would be replaced. The valve would also be outfitted with an insulation bag for freeze protection. Lastly, the existing epoxy-coated valves and fittings would receive a fresh coat of paint.

Refurbish Highlands Inter-zonal Intertie

In order for transferred water to be available to the Highlands' Spruce Zone, water must enter the zone via the inter-zonal intertie at the 20th Avenue Booster Station. The main component of the intertie, the pressure reducing valve, would be refurbished as described above for the pressure reducing valve at the Konocti to Highlands intertie.

Reconstructed Highlands to Konocti Intertie

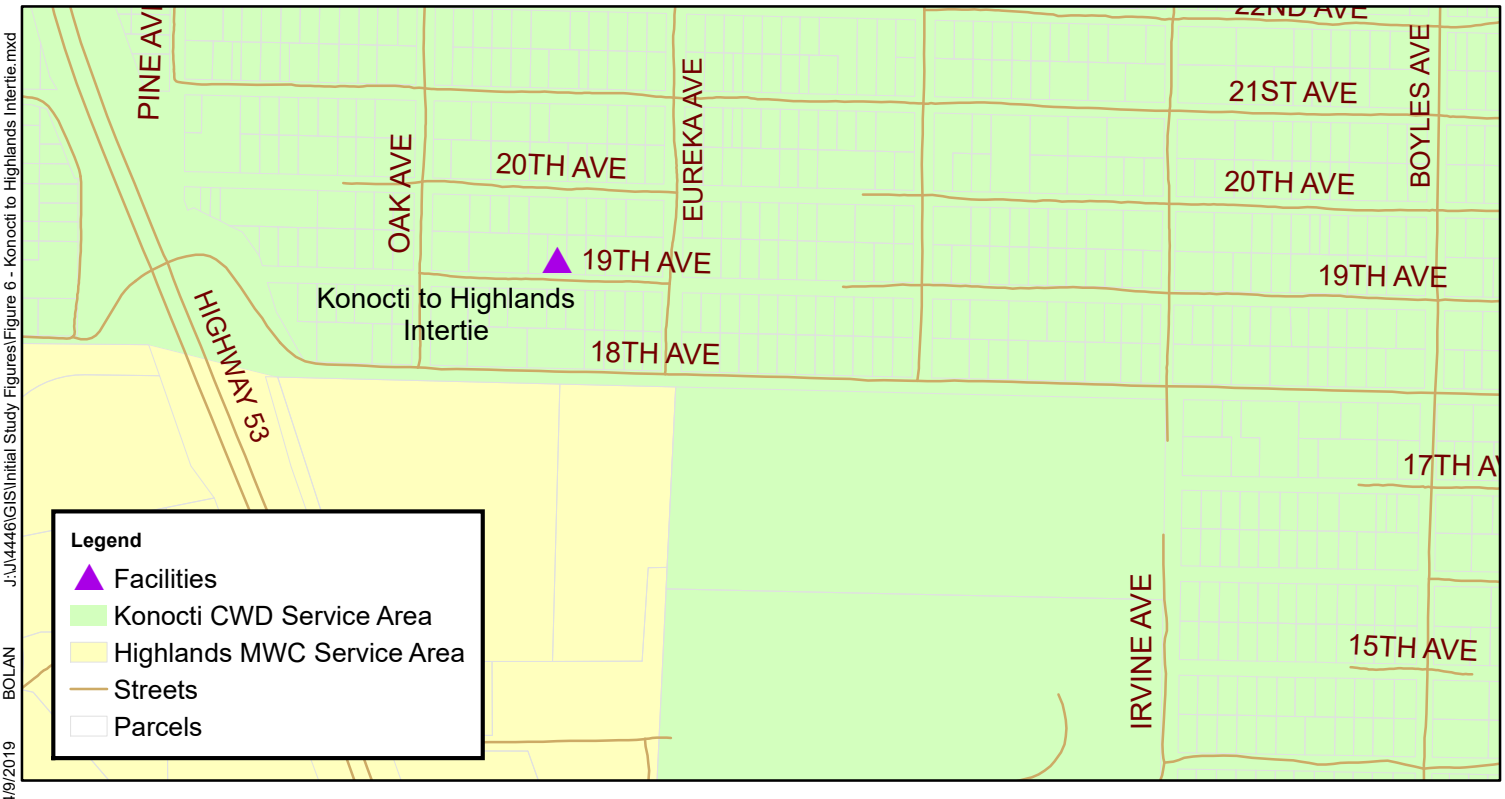
The existing intertie at Highlands' Spruce Avenue tank site (Figure 7) needs to be replaced and the transmission piping that feeds the intertie and adjoining tanks upgraded. A new eight-inch transmission main would be installed from the Laguna Avenue Booster Station site to Spruce Avenue, a distance of approximately 1,300 feet. If funding is available at the time of its installation, it is recommended that the existing domestic water services (26 total) along the pipeline route be transferred from the existing old, undersized transmission main to the new pipeline so that the old main can be abandoned in place.

The new intertie would consist of a pump station housed in a new, slightly larger, building at the same location as the existing intertie structure. Most of the building footprint expansion would be to the south, towards the adjacent storage tank. The building would be constructed of concrete block with a steel frame roof with metal roofing.

The pump station would be equipped with two pumps, each capable of supplying at least 200 gpm. Both pumps would be equipped with a variable frequency drive (VFD) to provide for flow-based control over a wide range of transfer rates. Minor excavation would be required so that the finish floor of the new structure could be set approximately 18 inches below that of the existing building (approximately the same elevation of the slab adjacent to the tank foundation) to reduce the increase in roof ridgeline elevation as the new building will be approximately four feet taller. The existing electrical service panel to the north of the existing structure would also be replaced.

New Konocti to Lower Lake Intertie

The intertie would consist of a pump station housed in a new building, associated valving and metering, and a main extension (Figure 8). The new building would be located at 16121 Dam Road, a parcel owned by



JJJ\4446\GIS\Initial Study Figures\Figure 6 - Konocti to Highlands Intertie.mxd
BOLAN
4/9/2019

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake
Image: Google Earth

NORTH

0 250 500 1,000 Feet

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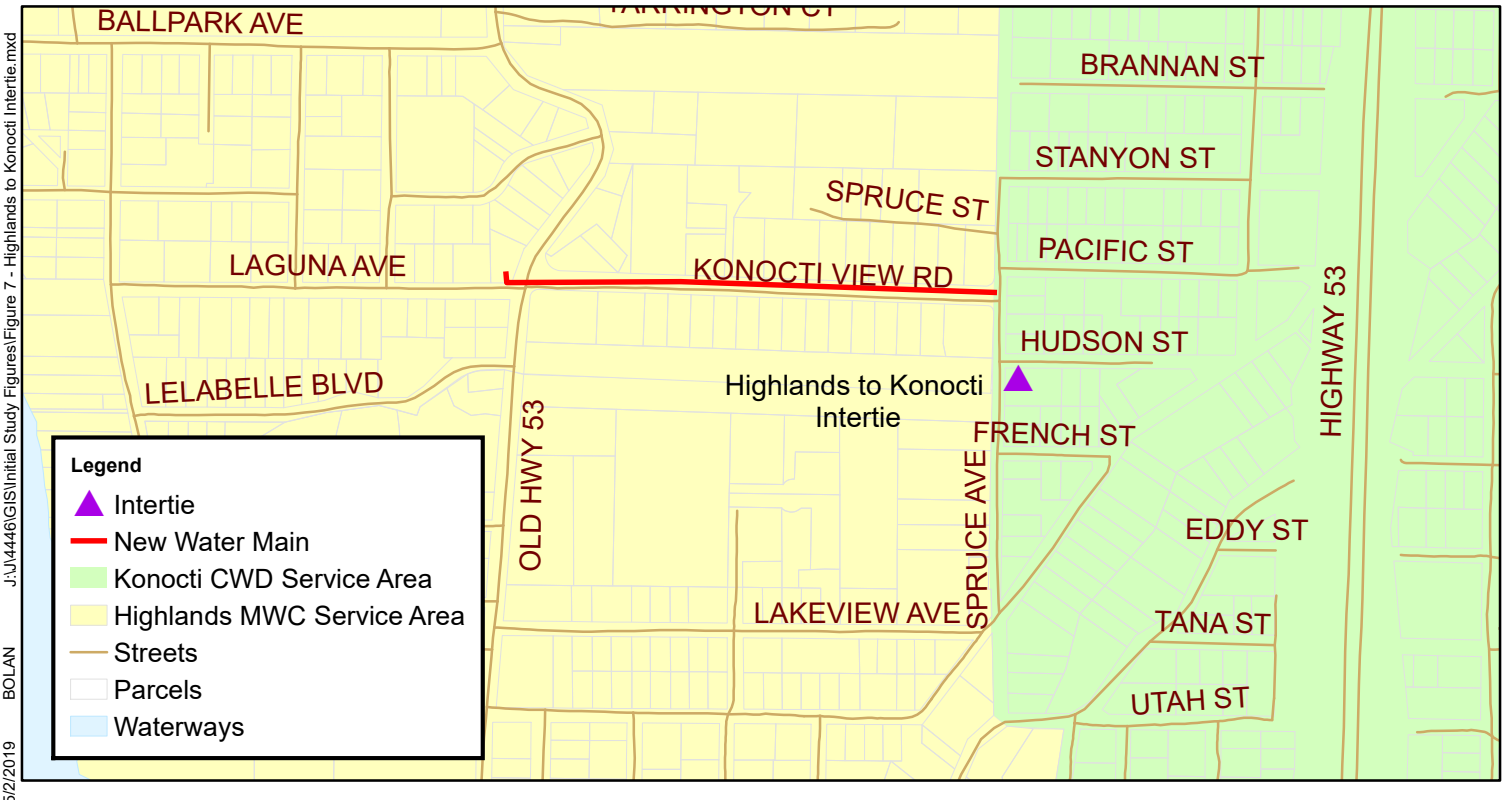
FIGURE 6
KONOCTI TO HIGHLANDS EMERGENCY INTERTIE

LOWER LAKE CWD
MAY 2019



JJU4446\GIS\Initial Study Figures\Figure 7 - Highlands to Konocti Intertie.mxd
BOLAN
5/2/2019

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake
Image: Google Earth

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NORTH

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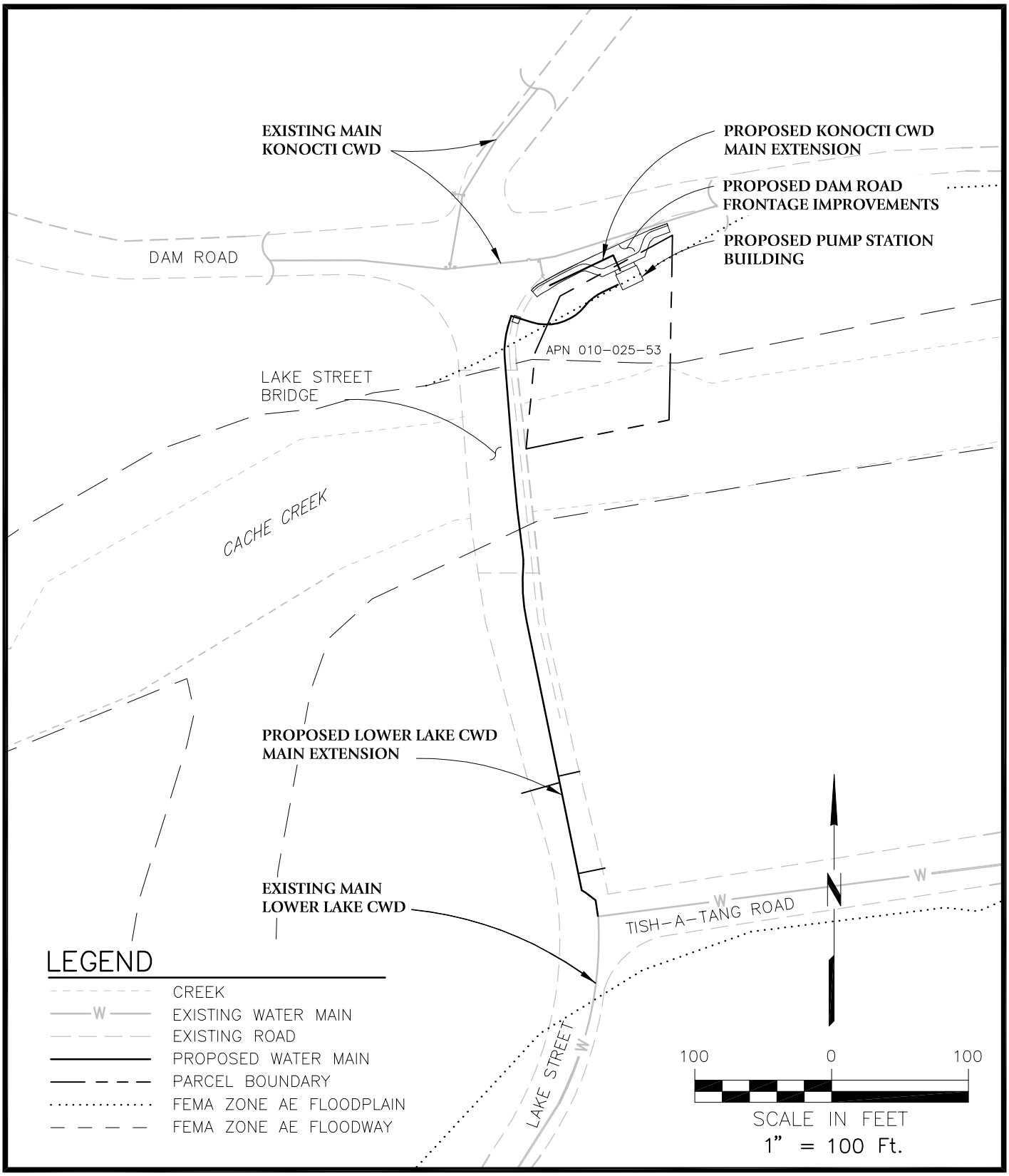
FIGURE 7
HIGHLANDS TO KONOCTI EMERGENCY INTERTIE

LOWER LAKE CWD
MAY 2019



LOWER LAKE/KONOCTI/HIGHLANDS EMERGENCY INTERTIE

VICINITY MAP

DECEMBER 2018

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FIGURE 8

Konocti County Water District (APN 010-025-53). This is the only portion of the project that occurs on vacant land. The Konocti and Lower Lake distribution systems would be interconnected at the pump station and the plumbing arrangement would allow each water system to receive treated water from the other system.

The pumping equipment would be housed in an approximately 200 square foot concrete block building with a steel frame roof with metal roofing. Street frontage improvements consisting of minor widening with curb and gutter, sidewalk and at least one on-street parking stall would be provided as required by the City of Clear Lake. Due to the parcel's topography and locations of trees, sidewalk and parking area development will likely involve retaining walls.

The pump station would be equipped with a flow control valve to control transfers from Konocti to Lower Lake and two pumps, each capable of supplying at least 200 gpm for water transfers from Lower Lake to Konocti. Both of the pumps will be equipped with a variable frequency drive (VFD) to provide for flow-based control over a wide range of transfer rates.

Lower Lake's existing six-inch distribution line located near the intersection of Lake Street and Tish-A-Tang Road would need to be extended approximately 600 feet northerly across the Lake Street Bridge to the pump station. The proposed piping material is HDPE.

The Lake Street Bridge is owned and maintained by the County of Lake. The bridge is a concrete box beam structure consisting of four cells. An existing gravity sewer and 20-inch reclaimed water pipeline occupy the middle two cells (operated and maintained by Lake County Sanitation District). The water main extension would be installed in the easternmost cell. The bridge design drawings show a reduced section of concrete in each abutment at each end of this cell for future utility use. No utilities were noted in the cell during a cursory site review.

PROJECT CONSTRUCTION

It is anticipated that the majority of the construction would include five-man crew(s) working weekdays. Equipment is anticipated to include: an excavator, a loader, a dump truck, a skip loader, an air compressor, a transport truck, an earth compactor, a pavement grinder, and a paving machine. Operations and material stockpiling would be constrained to paved areas.

Schedule

It is anticipated that the construction would last approximately six months. It is assumed that there would be two crews working on different parts of the project. Grading during the rainy season would be limited by the project's erosion control plan but construction within stabilized areas may occur during the rainy season.

Construction Equipment and Activities

PIPELINE INSTALLATION

In most areas, the pipeline would be installed using open cut trenching. It is anticipated that the pipeline would be installed within existing paved roadways and/or on road shoulders. Pipeline construction rates are expected to exceed 150 feet per day for each crew that is installing pipeline.

Construction equipment would generally be limited in size due to roadway widths in the project area. It is expected that each pipeline crew would utilize an excavator (midi or small standard size excavator), compaction equipment and loader and be supported by two axle six-yard dump trucks or three axle ten-yard dump trucks for handling spoils and supplying backfill materials. A large hoe-ram may be needed to complete the excavation where large boulders are encountered. The trench depths would be generally be 42 inches deep and trench widths would vary from a minimum of 12 inches and likely no wider than 24 inches. It is anticipated that 30 to 60 cubic yards of material per pipeline crew would be exported from trenches per day and the same amount of material would be imported per day for backfill resulting in approximately 12 truck trips per day associated with trenching for each crew.

Where the pipeline would cross a culvert the pipeline would be installed above it where possible or below it. Where the pipeline crosses a culvert the culvert itself would not be modified. It is anticipated that the some of the culverts may be failing (rusted through) and would need to be repaired as part of the project. The repair would consist of reinforcement of the culvert in the area of the trench and backfilling the trench with concrete slurry at the culvert. There would be no impact to the downstream area under either circumstance. Where the pipeline would cross under a culvert the trench depth could reach six feet deep and may exceed that depth if the culvert is large. Trenches deeper than five feet would require the use of shoring to support the trench walls.

If shallow groundwater were to be encountered during construction activities, dewatering activities would be required. In the event that groundwater encountered during pipeline construction could not be contained on site or could not be pumped into tank trucks and transported to a disposal facility, the groundwater could be discharged to a surface water body. This would require obtaining a General Order for Dewatering and Other Low Threat Discharges to Surface Water Permit (National Pollutant Discharge Elimination System (NPDES) # CA0083356 from the Central Valley Regional Water Quality Control Board (CVRWQCB).

TRENCH BACKFILL

Trench backfilling would begin immediately after the pipe was installed in the trenches. Appropriate backfill materials would be used to prevent damage to the pipelines and allow adequate backfill compaction using appropriate equipment. Imported backfill would be delivered to stockpiles near the open trenching. During construction, vertical wall trenches would be temporarily closed at the end of each work day, either by covering with steel trench plates, using backfill material, or installing barricades to restrict access, depending on the conditions of the encroachment permit from Lake County. Once backfilling is complete, surface restoration would be completed.

SURFACE RESTORATION

Typical surface restoration within paved roadways would include compacting 12 inches of slurry cement and installing a pavement patch that extends six inches beyond each side of the trench over its entire length after backfilling and compaction are complete. The surface restoration crew would typically use a grinder, a skip loader, a roller, and a paving machine. It is anticipated that the paving would produce about six trucks of off-haul and require six trucks of asphalt.

SERVICES AND HYDRANTS

It is anticipated that services and a hydrant would be installed in a similar manner to the pipeline. The service meter boxes and hydrant are required to be outside the paved roadway resulting in disturbed areas in native areas. Crew size for service and hydrant installation may be one or two people smaller than the pipeline crew. Each service location is expected to produce a small volume of spoils to off haul and a similar volume of backfill material would need to be imported. The service installation area would generate two total truck trips per day, one for spoils off-haul and one for imported backfill. It is anticipated that the hydrant installation would generate about one truck load of spoils and require one truck trip of imported backfill. The hydrant installation crew should complete the installation in one day resulting in one truck trip.

PUMP STATIONS

The Dam Road pumps station would include several phases of construction. Excavation for the building foundation and Dam Road frontage improvements would require the use of an excavator, auger, skid steer and dump truck and take approximately two weeks. Depending on the rock encountered, a jack hammer or hydraulic hammer may be required for a brief period for the pier foundations. Building the retaining walls would occur once excavation is complete and require the use of small hand tools, concrete mixers and pumps. Retaining wall construction would take approximately four weeks. The retaining walls would then be backfilled and the site would be rough graded. Finally, fine grading and construction of parking frontage improvements will take an additional four weeks.

The construction process for the Spruce pump station will be similar but will not require extensive excavation, grading or frontage improvements.

STREAM CROSSINGS

The pipelines will cross several creeks across the existing Cache Creek Bridge would primarily be constructed within the existing bridge support. Cuts would be made in the concrete and the pipe and casing would be installed inside of the bridge. Two new manways (access points) would be cut underneath the concrete bridge structure for access.

GROWTH INDUCEMENT POTENTIAL

The proposed project does not induce growth. The project provides for emergency water transfers between the three service areas to serve existing customers. Any growth within the water service areas would be according to relevant General Plan and zoning designations currently planned for by the City and County

OTHER PUBLIC AGENCY APPROVALS

The project is under District review authority. Because the project would include work within the County- and City-owned right of ways, the project may require additional permitting approvals from the following agencies:

City of Clearlake

All work within the City of Clearlake right of way would require encroachment permits. Some work outside of the right of way may require additional permitting by the City.

County of Lake

All work within the County of Lake right of way would require encroachment permits.

Central Valley Regional Water Quality Control Board

CVRWQCB has discretionary authority regarding the following permits and approvals:

- NPDES permit. The U.S. Environmental Protection Agency (EPA) has delegated responsibility for issuance of Clean Water Act (CWA) NPDES permits to the Regional Water Quality Control Boards within California. These permits are required to ensure protection of surface waters from construction and other land-disturbing activity.

State of California Water Resources Control Board, Division of Drinking Water (DDW)

DDW may require an amendment to the existing water systems' operating permits to recognize the interties.

U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Wildlife (CDFW)

Consultation is required with these agencies if a project has the potential to take or otherwise harm federally listed or state-protected wildlife and plant species.

ENVIRONMENTAL SIGNIFICANCE CHECKLIST:

The following list of questions is provided by Appendix G of the CEQA Guidelines, in order to determine a project's environmental impacts. The checklist utilized herein was updated by the State of California in 2019.

Based on the project description, answers to the questions fall into one of four categories:

- Potentially Significant Impact
- Less Than Significant Impact with Mitigation Incorporation
- Less Than Significant Impact
- No Impact

With regard to the checklist, a "No Impact" response indicates that no impact would result from implementation of the project. A "Less Than Significant Impact" response indicates that an impact would occur, but the level of impact would be less than significant. A "Less Than Significant with Mitigation Incorporation" response indicates that an impact is involved, and, with implementation of the identified mitigation measure, such impact would be less than significant. A "Potentially Significant Impact" response indicates that there is substantial evidence that impacts may be significant if mitigation measures are unknown, infeasible, or not proposed. Each response is discussed at a level of detail commensurate with the potential for adverse environmental effect.

The discussion following each checklist item consists of an *Analysis* section, a *Cumulative Impacts* discussion, and a section for identification of *Mitigation Measures*, as necessary. The *Analysis* section includes a discussion addressing whether the project would result in potential adverse environmental impacts. All potential impacts have been considered, including on-site and off-site impacts, direct and indirect impacts, construction and operation-related effects, as well as cumulative effects. The recently updated 2019 CEQA Guidelines contain revised regulations relative to the project's potential for contributing to cumulative effects[1]. The *Cumulative Impacts* section presents information regarding the project's potential cumulative impacts and is included in this section. If an impact(s) has been identified and mitigation is identified to reduce the impact to a less than significant level, then such measures are contained in the *Mitigation Measures* sections.

[1] California Environmental Quality Act Guidelines, §15064(i).

I AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Have a substantial adverse effect on a scenic vista?	□	□	□	■
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	□	□	□	■
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	□	□	□	■
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	□	□	□	■

Environmental Setting

The project is primarily located within the developed City of Clearlake and unincorporated community of Lower Lake, Lake County, California. The project is surrounded by development with undeveloped hillsides to the east and Clear Lake to the west. The major sources of light and glare in the project vicinity are from residential development. Highway 53 is an eligible state scenic highway but is not officially designated[2]. There are no other designated scenic highways in the project area.

Analysis

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. Although the project area is not considered to be a scenic vista for the purposes of this environmental analysis, the site does have characteristics that most people would consider aesthetically pleasing and a positive visual resource. Most of the immediate project locations are surrounded by rural residential development and occur in roadways or easements.

The proposed project would not result in the disturbance or elimination of open space areas or remove an object of aesthetic value. The project would not result in long-term physical adverse changes to the

[2] http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/

height or bulk of structures or view blockages within the view shed of the project area or along Highway 53. The project primarily involves below-ground water pipelines that will not be visible once construction is complete or rehabilitation of existing structures. The Dam Road pump station will only be visible for a short length along Dam Road and will not be significantly different from other development in the area. Therefore, obstruction of scenic views will be avoided.

Construction activities would create dust, expose soil from grading, and create soil piles from trenching and excavation but would cease after construction is complete. Short-term construction impacts associated with the project would not have a significant impact on any scenic vista.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Highway 53 through the project is designated as an eligible state scenic highway but is not officially designated. The project would primarily be installed below grade with surfaces restored. None of the project elements would be visible from Highway 53. Any visual impacts would be short term and limited to the construction phase of the proposed project. As such, the proposed project would not introduce features that would adversely affect the use of Highway 53 as a scenic roadway, should it be officially designated, and would have no impact.

c. In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project would not significantly degrade the existing visual character of the project area. The project would primarily be installed below grade in existing roadways or public utility easement and would not substantially degrade the existing visual character of the site or surroundings.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The project would not create a new substantial source of light or glare. Minor nighttime security lighting may be installed at the Dam Road pump station but will not result in substantial light or glare.

Cumulative Impacts

There are no adverse cumulative environmental impacts to aesthetic resources resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to aesthetic resources have been identified; therefore, no mitigation is required.

II AGRICULTURAL & FOREST 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 Department 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.

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project 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 non-agricultural use?	□	□	□	■
b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	■
c. Would the project 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))?	□	□	□	■
d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?	□	□	□	■
e. Would the project 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?	□	□	□	■

Environmental Setting

The zoning in the project locations are a combination of Single Family Residential (R1, R2) and commercial (C3) and public right of way. Land uses in the project area are primarily residential. The project would occur almost entirely in existing roadways, developed locations or public utility easements.

Regulatory Setting

FARMLAND MAPPING AND MONITORING PROGRAM

Agricultural lands within the state of California are rated according to soil quality and irrigation status by the Farmland Mapping and Monitoring Program (FMMP). The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The best quality land is called Prime Farmland, followed by Unique Farmland, Farmland of Statewide Importance, and so on, in decreasing order of importance. The maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance.

The project area is entirely designated as Urban and Built-up Land, as shown on Figure 9. None of the project areas are zoned for agricultural uses.

WILLIAMSON ACT

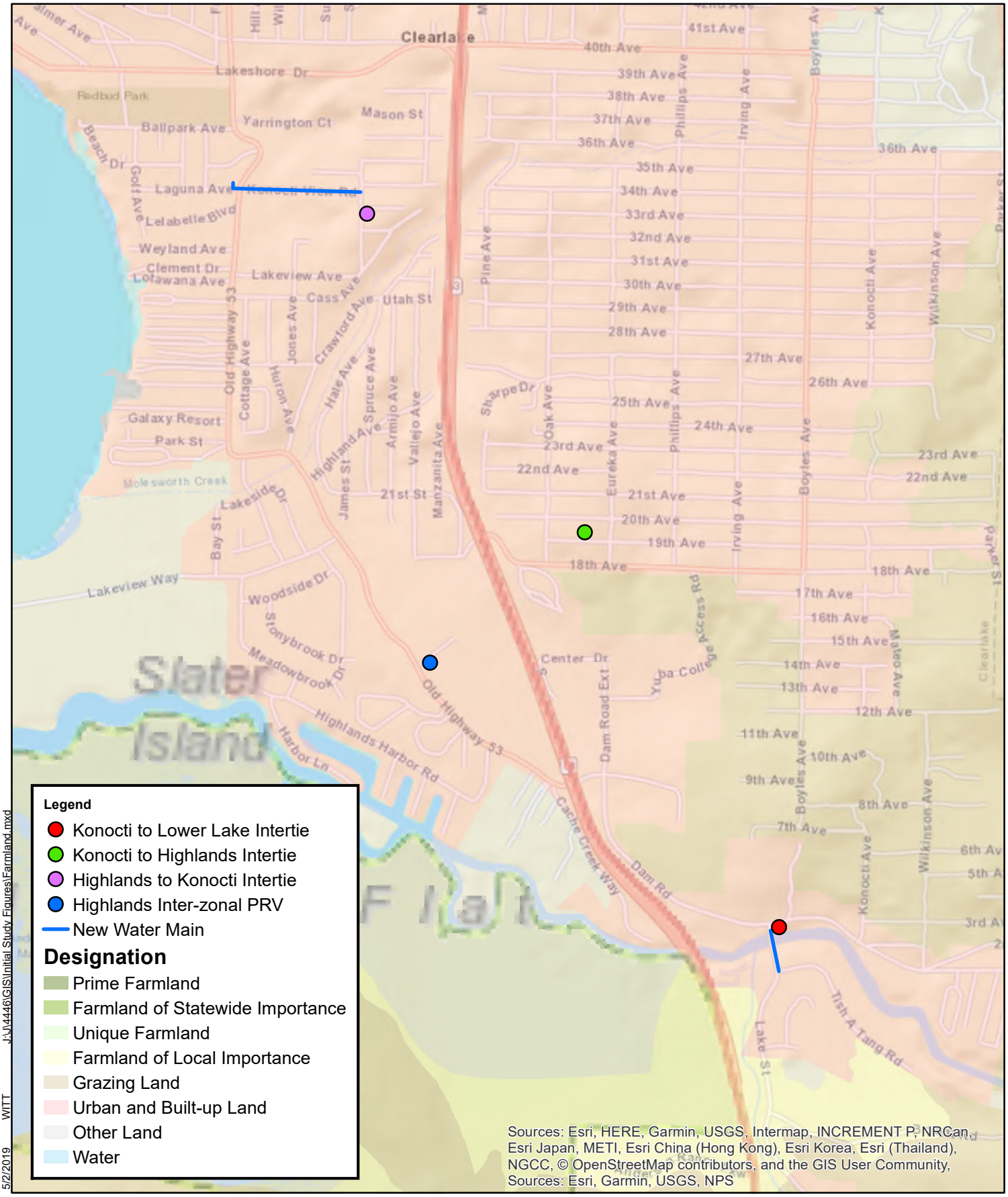
Agricultural land in the project area may also be subject to the California Land Conservation Act of 1965, more commonly referred to as the Williamson Act. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are lower than normal because they are based on farming and open space uses as opposed to full market value. None of the land in the project area is under contract under the Williamson Act nor is it zoned for agricultural uses.

Analysis

a. Would the project 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 non-agricultural use?

As shown on Figure 9, the Farmland Mapping and Monitoring Program[3] designates all locations within the project extents as Urban and Built-up Land. Project components would generally be located within developed roadways, roadway shoulders or already developed areas that do not support farmland. The project would not convert Farmland to non-agricultural uses.

[3] *Lake County Important Farmland—2016*. Farmland Mapping and Monitoring Program of the California Resources Agency.



5/2/2019 WITT J:\J\4446\GIS\Initial Study Figures\Farmland.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
California Department of Conservation

NORTH

0 0.125 0.25 0.5 Miles

Brelje & Race CONSULTING ENGINEERS
475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE 9

IMPORTANT FARMLAND

LOWER LAKE CWD

MAY 2019

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project locations are not under Williamson Act contracts. Project locations are not zoned for agricultural uses.

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

Forest land, as defined by the U.S. Forest Service, includes land at least 10 percent of which is stocked by trees of any size, or land formerly having had such tree cover that would be naturally or artificially regenerated. Forest land includes transition zones, such as areas between heavily forested and non-forested lands that are at least 10 percent stocked with forest trees and forest areas adjacent to urban and built-up lands.

The project does not propose any activities related to timber harvest nor would it result in the conversion of forest land to non-forest uses. As such, there would be no impact to forest land or conversion of designated land to non-forest uses. The project locations are not zoned for and do not currently support timberland nor are they zoned as timber production land by the City or County.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

The project locations do not currently support forest land and the project area is largely developed with residential uses. The proposed project would not result in any impact to forest land.

e. Would the project 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?

Because the project would be located primarily in existing roadways or public utility easements and in areas that do not currently support Farmland or forest land, the project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Cumulative Impacts

There are no adverse cumulative environmental impacts to agricultural and forestry resources resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to agricultural and forestry resources have been identified; therefore, no mitigation is required.

III 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:	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project conflict with or obstruct implementation of the applicable air quality plan?	□	□	□	■
b. Would the project 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?	□	■	□	□
c. Would the project expose sensitive receptors to substantial pollutant concentrations?	□	■	□	□
d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	□	□	□	■

Environmental Setting

The project is located within the Lake County Air Basin. The Lake County Air Quality Management District monitors and manages air quality in Lake County.

LAKE COUNTY AIR BASIN

The project area is located in the Lake County Air Basin (LCAB), which is contiguous with the boundaries of Lake County and the local air quality agency, the Lake County Air Quality Management District (LCAQMD). The LCAB is located within the northern Coast Ranges of California. This mountain system consists of long, parallel ridges which trend from the south to the north. In Lake County, the mountain pattern is conspicuously interrupted by the Clear Lake Basin. Clear Lake occupies this basin in approximately the middle one-third of the county. The northern third of the county is largely unoccupied, much of it lying within the Mendocino National Forest. Mountains are also predominant in the southern one-third of Lake County. The topography ranges from a low of approximately 1,100 feet in elevation to over 7,000 feet at the peaks of the surrounding coastal range.

REGIONAL CLIMATE AND METEOROLOGY

Lake County climate, like much of California, is Mediterranean in nature. Summers are warm and dry, and winters are cool and moist. Much local variation is standard in Lake County, reflective of its mountainous character. Lake County is near the edge of a more transitional climatic zone, which is influenced more by the Pacific Ocean. Its proximity to the oceanic influence, elevation, and mountainous influence combine to create a local climate that is somewhat more severe than many other parts of California. Rainfall predominantly occurs during the months of November through March. The normal historic rainfall average is

approximately 31 inches annually. Winds are generally light due to the sheltering effect of surrounding mountains, with predominant winds from the northwest, particularly in the summer months. Wind during the winter months tends to be more variable in direction. Average predominant wind speeds throughout the year are typically less than five miles per hour.

Regulatory Setting

Air quality in the project vicinity is regulated by several jurisdictions, including EPA, ARB, and LCAQMD. These entities, described below, develop rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

FEDERAL REGULATIONS

The Clean Air Act

The Federal Clean Air Act (FCAA) required the US EPA to establish National Ambient Air Quality Standards (NAAQS) and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The US EPA has responsibility to review all state SIPs to determine conformance to the mandates of the CAA, and the amendments thereof, and determine if implementation would achieve air quality goals. If the US EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Federal Conformity Requirements

The CAA Amendments of 1990 require that all federally funded projects come from a plan or program that conforms to the appropriate State Implementation Plan (SIP). Federal actions are subject to either the Transportation Conformity Rule (40 Code of Federal Regulations [CFR] 51[T]), which applies to federal highway or transit projects, or the General Conformity Rule (40 CFR 51[W]), which applies to all other federal actions.

STATE REGULATIONS

California Clean Air Act

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. The California Clean Air Act (CCAA) requires that all air districts in the state endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for ozone, CO, sulfur dioxide (SO2), and

nitrogen dioxide (NO2) by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors, or (2) provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

LOCAL REGULATIONS

Lake County Air Quality Management District (LCAQMD)

The LCAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The LCAQMD is a regional agency created by the state that regulates stationary sources of air pollution within the LCAB. The District also regulates open burning and is delegated a variety of other programs such as state Air Toxic Control Measures (ATCMs) and federal New Source Performance Standards (NSPSs). The main purpose of the LCAQMD is to enforce local, state, and federal air quality laws, rules, and regulations in order to maintain the ambient air quality standards (AAQSs) and protect the public from air toxics through local, CARB ATCM, and federal EPA NESHAP specific control regulations. Because the county is an attainment area (or is unclassified) for all criteria pollutants, both federal and state, it is not required to prepare air quality attainment/management plans.

CRITERIA POLLUTANTS

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the United States Environmental Protection Agency (US EPA) publishes criteria documents to justify the choice of standards. Current California and Federal standards for certain types of pollutants are shown below.

Pollutant	Averaging Time	State Standard	Federal Primary Standard
Ozone	1-Hour 8-Hour	0.09 ppm 0.07 ppm	-- 0.070 ppm
PM10	Annual 24-Hour	20 ug/m^3 50 ug/m^3	-- 150 ug/m^3
PM2.5	Annual 24-Hour	12 ug/m^3 ---	12 ug/m^3 35 ug/m^3
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 20.0 ppm	9.0 ppm 35.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.03 ppm 0.18 ppm	.053 ppm 100 ppb
Sulfur Dioxide	24-Hour 3-Hour 1-Hour	0.04 ppm -- 0.25 ppm	.14ppm -- 75 ppb
Lead	30-Day Avg. Calendar Quarter 3-Month Avg.	1.5 ug/m^3 -- --	-- 1.5 ug/m^3 0.15 ug/m^3

ppm = parts per million

ppb = parts per billion
ug/m^3 = Micrograms per Cubic Meter

The federal and California ambient air quality standards are defined below for criteria pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both federal and state standards are intended to avoid health related effects.

Federal

- Nonattainment: any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
- Attainment: any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant.
- Unclassifiable: any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

State

- Unclassified: a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- Attainment: a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a three-year period.
- Nonattainment: a pollutant is designated nonattainment if there was at least one violation of a State standard for that pollutant in the area.
- Nonattainment / Transitional: is a subcategory of the nonattainment designation. An area is designated nonattainment / transitional to signify that the area is close to attaining the standard for that pollutant.

MONITORING STATION DATA

Ambient air quality measurements are routinely conducted at nearby air quality monitoring stations. LCAQMD maintains four monitoring stations and is designated as attainment or unclassified for all state and federal standards. Because the county is an attainment area (or is unclassified) for all criteria pollutants it is not required to prepare air quality attainment/management plans.

Both the California Air Resources Board (CARB) and the US EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvements. The three basic designation categories are nonattainment, attainment, and unclassified, as defined above.

The LCAB is currently designated either attainment or unclassified/attainment for all state and national ambient air quality standards. For this reason, the LCAQMD has not been required to prepare ambient air quality attainment plans for the basin (CARB, 2017).

Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The project is located within the LCAQMD. The LCAQMD is designated to be in attainment or unclassified for all federal and state constituents (see b, below). The LCAQMD does not have an applicable air quality plan as air quality meets attainment standards. The project would not impact air quality plans.

b. Would the project 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?

The LCAQMD is responsible for monitoring and reporting air quality data for the Lake County air basin. Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels that avoid specific adverse health effects associated with each pollutant, termed criteria pollutants.

As shown in the table below, the LCAQMD is designated to be in attainment or unclassified for all federal constituents and in attainment or unclassified for all state constituents. The LCAQMD does not have any management plans as air quality meets attainment standards.

Standard	2017 State Status[4]	2017 Federal Status
Ozone 8-Hour	Attainment	Unclassified/Attainment
Ozone 1-Hour	Attainment	N/A
PM2.5	Attainment	Unclassified/Attainment
PM10	Attainment	Unclassified
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	N/A
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Attainment	N/A
Visibility Reducing Particles	Attainment	N/A

The LCAQMD has not adopted its own thresholds of significance for project emissions. For air quality impacts, the Bay Area Air Quality Management District (BAAQMD) provides useful guidance in assessing project impacts on attainment status. The BAAQMD's 2017 Air Quality Guidelines[5] establish recommended thresholds of significance for criteria pollutants for project construction and operation

[4] http://www.arb.ca.gov/desig/adm/adm.htm

[5] *California Environmental Quality Act Air Quality Guidelines*. Bay Area Air Quality Management District. May 2017.

for CEQA analysis. The Air Quality Guidelines do not provide screening levels for this type of project so it is necessary to conduct an analysis using the Road Construction Emissions Model (RoadMod), Version 8.1.0, per Air Quality Guidelines recommendations for linear pipeline projects.

The BAAQMD's thresholds are presented below with a comparison to modeled project construction-related emissions generated utilizing the RoadMod model. Emissions shown below assume non mitigated emissions with an approximately five month construction period.

BAAQMD Thresholds of Significance		**Project Emissions**
Criteria Air Pollutants & Precursors	**Construction-related Average Daily Emissions (lb/day)**	**RoadMod Construction Emission Estimates (lb/day)**
Reactive Organic Gases (ROG)	54	2.59
Nitrous Oxides (NOx)	54	24.02
Particulate Matter (PM10)	82 (exhaust only)	1.35
Particulate Matter (PM2.5)	54 (exhaust only)	1.20

As shown in the table above, the project's construction-related emissions are modeled to be considerably lower than the BAAQMD's thresholds of significance. Based on the above, emissions associated with project construction are considered to be less than significant. Project operational emissions would be essentially unchanged due to the replacement and improvement nature of the project.

Construction activities associated with the project have the potential to create localized short-term dust impacts, PM10 and PM2.5. Mitigation Measure AQ1 includes feasible control measures and reduces such impacts to a less than significant level, as recommended by the BAAQMD's Basic Construction Mitigation Measures.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

As a water intertie project for existing water systems, operation of the project would not alter air quality in any appreciable way. During the construction phase of the project, generation of dust and equipment exhaust can be expected to increase. A portion of this dust would contain PM10 and PM2.5, which are criteria air pollutants regulated at both the federal and state levels. Diesel particulate matter would be emitted by construction equipment and trucks. Equipment operation and trucks also emit nitrogen oxides during construction that contribute to regional ozone levels.

Although demolition, grading and construction activities would be temporary, they would have the potential to cause both nuisance and health air quality impacts. PM10 is the pollutant of greatest concern associated with dust. If uncontrolled, PM10 levels downwind of actively disturbed areas could possibly exceed state standards. Construction activities in the project area could impact residents within and adjacent to the community.

To mitigate air quality impacts associated with exposing sensitive receptors to substantial pollutant concentrations to less than significant levels, mitigation measure AQ-1 shall be implemented.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people??

The project would not create objectionable odors or other emissions. The project includes replacement water distribution pipeline that are not associated with creation of odors.

Cumulative Impacts

There are no adverse cumulative environmental impacts to air quality resulting from implementation of the proposed project.

Mitigation Measures

AQ1

The following Feasible Control Measures, as described by the Bay Area Air Quality Management District, shall be implemented during construction to minimize fugitive dust and 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 or be covered.
- 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 day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed or stabilized as soon as possible. Building slabs shall be poured as soon as possible after grading unless seeding or soil binders are used to stabilize the pad.
- 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 airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with the telephone number and person to contact at the District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The LCAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

IV BIOLOGICAL RESOURCES

On October 17, 2018, Sol Ecology, Inc. performed a biological resources survey for the Project. The purpose of the biological assessment is to review the project in sufficient detail to determine to what extent the proposed action may affect any endangered or threatened species or designated critical habitats and to gather information necessary to complete a review of potential biological resource impacts from development of the proposed project, under the guidelines of the California Environmental Quality Act (CEQA) for the County of Lake Planning Division. The Sol Ecology report describes the results of the site survey and assessment of the project site for the presence of sensitive biological resources protected by local, state, and federal laws and regulations. Excerpts of the report are contained in this section[6].

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	□	■	□	□
b. Would the project 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 US Fish and Wildlife Service?	□	■	□	□
c. Would the project 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?	□	□	□	■
d. Would the project 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?	□	□	□	■
e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	□	■	□	□
f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	□	□	□	■

[6] *Biological Resources Report, Lower Lake/Konocti Highlands Emergency Intertie Project, Lake County, CA*. SolEcology, Inc. March 28, 2019.

Overview

METHODS

Literature Review

Prior to the site visit, the Soil Survey of Lake County, California, Web Soil Survey, Google Earth aerial images, USGS topographic quadrangle maps were examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the project sites. A Manual of California Vegetation, Online Edition (CNPS 2019a) were reviewed to assess the potential for sensitive biological communities to occur in the project Site. All occurrences within the project sites with a ranking of 1 through 4 were considered sensitive biological communities and mapped if present.

Potential occurrence of special-status species in the project sites were evaluated by first determining which special-status species occur near the project sites through a literature and database search. Database searches for known occurrences of special-status species focused on the Lower Lake 7.5-minute USGS quadrangle and the surrounding USGS quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the surrounding vicinity of the project sites.

- California Natural Diversity Database (CNDDB) records (CDFW 2019; Appendix B)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2018; Appendix B)
- CNPS Inventory records (CNPS 2019b)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication California Bird Species of Special Concern (Shuford and Gardali 2008)
- CDFW and University of California Press publication California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)

Field Survey

The project sites were evaluated for the presence of sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW, habitat connectivity corridors, and scenic corridors. Sensitive communities were identified following A Manual of California Vegetation, Online Edition (CNPS 2019) and cross walked with the California Wildlife Habitat Relationships (CWHR) vegetation classification.

The project sites were also surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the U.S Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), or CDFW are present. This preliminary assessment was based primarily on the presence of wetland plant indicators, hydrology or wetland soils. A preliminary waters assessment was based on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high-water mark or a defined drainage course.

Sol Ecology biologists also performed reconnaissance-level surveys for special status species on and adjacent to the project sites on October 17, 2018. The focus of the surveys was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present on the project Site or not and whether the project would have the potential to result in impacts to any of these

species and/or their habitats either on- or off- site. Habitat elements examined for the potential presence of sensitive plant species included: soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat. No protocol-level surveys were performed.

EXISTING CONDITIONS AND GENERAL WILDLIFE USE

Biological communities present in the project sites were classified based on existing plant community descriptions described in the California Native Plant Society Online Manual of California Vegetation (CNPS 2019). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

Soils at the sites are mapped as silt loam on the south side of the Lake Street Bridge, which consists of deep, well drained soils that formed in alluvial material from sedimentary rocks and volcanic ash. These soils are common on flood plains and alluvial fans. Vegetation is typically annual grasses and scattered oaks.

The project sites and surrounding vicinity contains blue oak-foothill pine alliance (also mapped as mixed conifer and hardwood forest/woodland by CNPS), characterized by blue oak (*Quercus douglasii*), valley oak (*Q. lobata*), coast live oak (*Q. agrifolia*), and ponderosa pine (*Pinus ponderosa*). The understory is comprised of annual grassland species with shrubs such as manzanita, chamise, and poison oak, as well as non-native grasses and weedy species. This alliance is listed as a G4S4, which is not an imperiled community. Acorn woodpecker (*Melanerpes formicivorus*), oak titmouse (*Baeolophus inornatus*), wild turkey (*Meleagris gallopavo*), arboreal salamander (*Aneides lugubris*), and western gray squirrel (*Sciurus griseus*) are common wildlife likely to occur in this community. Much of this roadside habitat within the project sites are highly disturbed with evidence of past grading and fill materials. The rest of the project sites are developed hardscape.

No sensitive vegetation communities are present with the exception of Cache Creek, which is a federal and state jurisdictional waters and a portion of which is designated a California Wild and Scenic River. The proposed pump house would be located on the bank of this sensitive feature. However, no work is proposed below top of bank. The water line extension would be fully encased within the existing Lake Street Bridge. No riparian vegetation was observed at this location; the vegetation community at this location is blue oak-foothill alliance.

Special-Status Plants

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA.

Based upon a review of the resources and database, 21 special-status plant species have been documented within a five-mile radius of the project sites; of which 12 are federal and/or state listed species. Based on the presence of biological communities described above and soils at the site, as well as both historic and recent site disturbance the project sites have the potential to support none of these species; no federal or state listed

plant species are likely to be present primarily due to the absence of any aquatic or vernal pool habitat and/or serpentine soils. With the exception of the pump station at Dam Road, all of the proposed work would be performed within existing developed areas.

Species documented in the area are unlikely or have no potential to occur on the project Site for one or more of the following reasons:

- Hydrologic conditions (e.g. marsh habitat, pond, vernal pool, wetland habitat) necessary to support the special-status plants do not exist on site;
- Edaphic (soil) conditions (e.g. geothermic, gravelly, or clay soils) necessary to support the special-status plants do not exist on site;
- Topographic conditions (e.g. slopes) necessary to support the special-status plants do not exist on site;
- Unique pH conditions (e.g. serpentine) necessary to support the special-status plant species are not present on the project Site;
- Associated vegetation communities (e.g. riparian, chaparral, grassland) necessary to support the special-status plants do not exist on site.

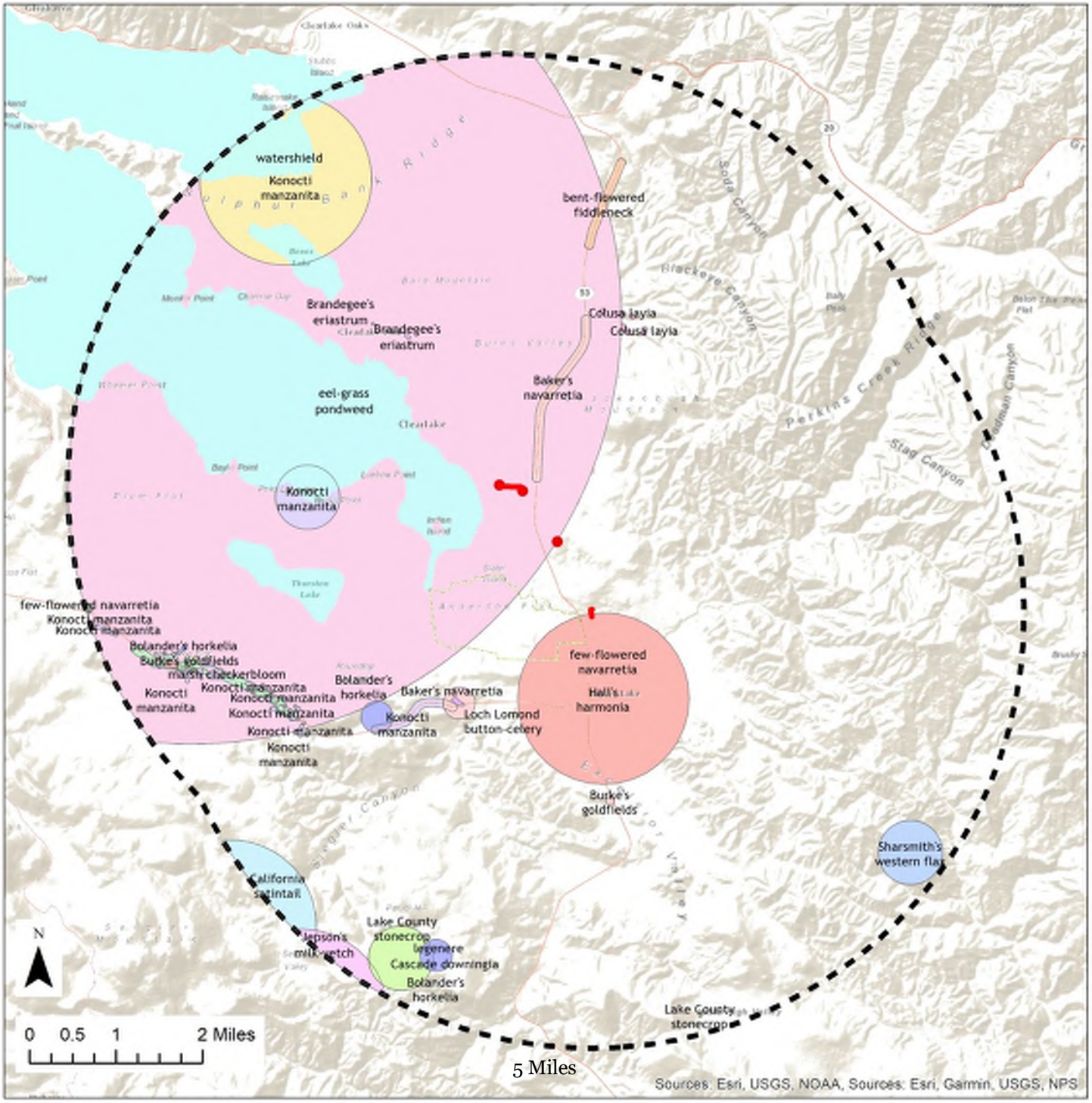
Suitable habitat is present for five of these species (Clear Lake hitch, fringed myotis, pallid bat, Nuttall's woodpecker and oak titmouse), though none of these species were observed during the site survey and disturbed conditions likely preclude presence for most species. Species with potential to occur on the project sites are described in more detail in the analysis section. Sensitive communities found in the project area are described in the analysis section and shown on Figure 10.

Special Status Wildlife

In addition to wildlife listed as federal or state endangered and/or threatened, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these species generally have no special legal status, they are given special consideration under CEQA. Furthermore, CDFG Fish and Game Code prohibits the take of actively nesting birds as well as common bats and their roosts. Potential special status wildlife is shown on Figure 11.

Thirteen special-status wildlife species have been documented within five miles of the project sites, of which three are federal and/or state listed species; four additional federal and/or state listed species were also considered based on results of the CNDDB and USFWS IPaC database searches. Based on the presence of biological communities described above, the project sites have the potential to support one state threatened species, Clear Lake hitch, and two special status bats. The site also provides suitable nesting substrate for many species of birds protected under the MBTA and CDFG Code, as well as three USFWS birds of conservation concern. Species with potential to occur on the project sites are described in more detail below. A discussion of potential impacts or unlikelihood for impacts is provided in the analysis section.

Figure 10 Special Status Plant Species within 5 Miles of the Project Site
Lake County Water Districts Intertie Project



Proposed Water Line Locations
Tank Location
5-Mile Buffer
Baker's navarretia (3)
Boggs Lake hedge-hyssop (1)
Bolander's horkelia (5)
Brandegee's eriastrum (2)
Burke's goldfields (3)
California satintail (1)
Cascade downingia (1)
Colusa layia (1)
Hall's harmonia (1)
Jepson's milk-vetch (1)
Konocti manzanita (5)
Lake County stonecrop (4)
Loch Lomond button-celery (1)
Sharsmith's western flax (1)
bent-flowered fiddleneck (1)
eel-grass pondweed (1)
few-flowered navarretia (3)
legenere (1)
marsh checkerbloom (1)
oval-leaved viburnum (1)
watershield (1)

Date: 2-28-2019
Data: Sol Ecology Inc., CDFW, Lake Co.
Base: ESRI
GIS: AJG

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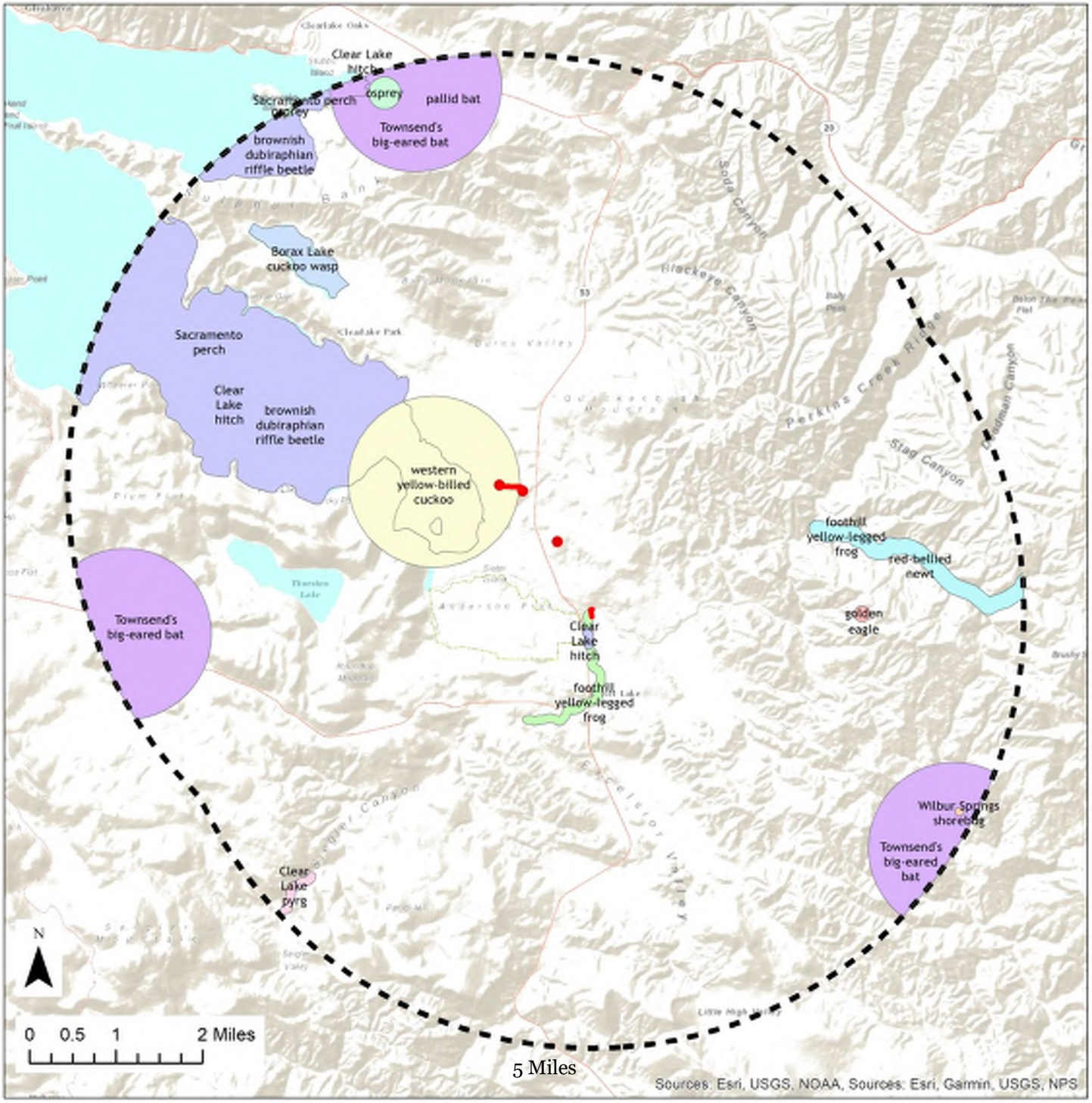
Figure 11 Special Status Animal Species within 5 Miles of the Project Site
Lake County Water Districts Intertie Project



Proposed Water Line Locations
Tank Location
5-Mile Buffer
Borax Lake cuckoo wasp (1)
Clear Lake hitch (2)
Clear Lake pyrg (1)
Sacramento perch (1)
Townsend's big-eared bat (3)
Wilbur Springs shorebug (1)
brownish dubiraphian riffle beetle (1)
foothill yellow-legged frog (2)
golden eagle (1)
osprey (2)
pallid bat (1)
red-bellied newt (1)
western yellow-billed cuckoo (1)

Date: 2-28-2019
Data: Sol Ecology Inc., CDFW, Lake Co.
Base: ESRI
GIS: AJG

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The remaining species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the project sites. Other federal and state listed species are not likely to occur primarily due to the absence of suitable aquatic/riparian, vernal pool, or mature forest habitat. Habitat elements that were evaluated but found to be absent from the immediate area of the project sites or surrounding habitats subject to potential indirect impacts include the following:

- Associated vegetation communities (e.g. vernal pool and mature forest) necessary to support the special-status wildlife do not exist on site.
- Stream habitat on the project site is fast-moving with numerous predators and is not suitable for most amphibians (e.g. foothill yellow-legged frog or California red-legged frog); though these species may be present in smaller tributaries.
- Project site is outside the range for some species (e.g. Delta smelt).

Clear Lake hitch (*Lavinia exilicauda chi*). State Threatened, CDFW Species of Special Concern. Clear Lake hitch is most often found in slow warm water, including lakes and quiet stretches of rivers. They are sometimes found in cool and clear, low-gradient streams in sandy runs or pools where aquatic vegetation is present. Diet includes zooplankton, crustaceans, or insects. Spawning occurs in tributaries to lakes and rivers from February to late July. Young of the year may swim down to the lake or reside within the stream under the cover of aquatic plants. This species is documented to occur Cache Creek and is likely present at the Lake Street Bridge location, though it is not within the proposed project footprint.

Fringed myotis (*Myotis thysanodes*). WBWG High Priority. The fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. This species is found in desert scrubland, grassland, sage-grass steppe, old-growth forest, and mixed deciduous forest. Oak and pinyon-juniper woodlands are most commonly used. The fringed myotis roosts in colonies from 10 to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California (WBWG 2015). This species is not documented in the vicinity of the project but may potentially be present.

Trees on the project sites do not contain suitable cavities to support roosting bats. However, the Lake Street Bridge contains several access holes to an interior area of the bridge. These holes are likely for drainage but may support roosting bats either during the maternity or hibernating season. While no guano or bat carcasses were observed, staining was observed indicating that at least a night roost may be present. Surveys are needed to confirm the presence of day roosting bats at this location.

Pallid bat (*Antrozous pallidus*), CDFW Species of Special Concern, WBWG High Priority. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a variety of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles.

Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight.

Trees on the project sites do not contain suitable cavities to support roosting bats. However, the Lake Street Bridge provides suitable day and night roosting as described above.

Nuttall's woodpecker (*Picoides nuttallii*). USFWS Bird of Conservation Concern. Nuttall's Woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates and may nest at the proposed pump station location and/or in neighborhoods adjacent to two main extensions.

Oak titmouse (*Baeolophus inornatus*), USFWS Bird of Conservation Concern. This relatively common species is a year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat. Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines and/or junipers in some areas (Cicero 2000). The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet. This species may nest at the proposed pump station location and/or in neighborhoods adjacent to two main extensions.

Analysis

a. Would the project 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

No federal or state listed species are likely to be present on the project site, with the exception of one state listed fish, Clear Lake hitch. Because no work would occur in Cache Creek or directly overhead, no adverse effects are anticipated. All of the federal and state listed species evaluated under this assessment are unlikely to occur due to the absence of required habitat elements such as vernal pool or wetland habitat or old-growth forest, as well as serpentinite soils.

Special-Status Plant Species

Twenty-one special status plant species have been documented to occur within the vicinity of the project sites. None of these species were observed during the October 17, 2018 survey. No federal or state listed plant species are likely to be present due to the absence of vernal pool habitats and/or serpentine soils. Because all of the work would be performed in existing disturbed areas including predominantly developed hardscape, there is no potential for special status plants to be present.

Special-Status Wildlife Species

A total of 13 special status wildlife species has been documented in the vicinity of the project site, of which seven are federal and/or state listed. No federal threatened or endangered species (or candidate) have potential to be present on the project sites based on the absence of essential habitat elements for these species including aquatic and/or mature forest habitats. One state threatened species, Clear Lake hitch is documented in Cache Creek and therefore may be present in Cache Creek adjacent to the proposed pump station. However, the project would have no effect on Clear Lake hitch as no work would be performed in or over the waterway (work would be performed in the enclosed bridge).

Two special status species, fringed myotis bat and pallid bat may potentially roost under Lake Street Bridge and are therefore, subject to potential impacts from the proposed project. Two birds of conservation concern, as well as common migratory bird species may also nest in trees on or immediately adjacent to the project sites, as well as the Lake Street bridge where evidence of mud nests was noted. To avoid potential impacts to nesting birds, Mitigation Measure BIO1 is included requiring preconstruction nesting surveys.

Fringed myotis bat and pallid bat may day or night roost under the Lake Street Bridge. Day roosting (both during the maternity season or hibernation period) could occur in several access drains if they lead into an interior space within the lower deck of the bridge. Night roosting may occur in recesses under the bridge primarily. Work on the easternmost cell has the potential to significantly impact this species as well as other common bat species, if present. Because the bridge is not proposed to be removed or dismantled, no impacts to night roosts are anticipated and no compensatory mitigation is required. Because work is temporary, no permanent impacts or removal of day roost habitat is proposed. To avoid potential impacts to daytime roosting bats, Mitigation Measure BIO2 is included.

b. Would the project 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 US Fish and Wildlife Service?

No sensitive communities are present on the project sites, except for Cache Creek which would be completely avoided. Work under the bridge would be contained within the bridge structure and not impact the creek.

c. Would the project 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?

Project sites were surveyed for wetlands. No wetlands were observed at the project sites and the majority of those sites are already developed or paved.

d. Would the project 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?

The project site does not support wildlife nursery sites and is not representative of a wildlife migratory corridor.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project would result in the removal of nine trees greater than four inches in diameter. The Dam Road pump station would result in seven tress being removed in including one 5-inch gray bark pine, one 15-inch gray bark pine, one 20-inch gray bark pine, one 12-inch oak, one 16-inch oak, one 12-inch live oak, and one 14-inch live oak. Two landscape trees would be removed at the Highlands to Konocti pump station location.

The County does not have a tree protection ordinance, so removal of the seven trees associated with that site would not conflict with a local ordinance. The City of Clearlake does have a tree protection ordinance (Section 18-5.14 Native Tree Protection and Removal). Section 18-5.1403(d.) of the code exempts the requirement for mitigation of tree removal to accommodate public improvements by the City, County or public utility company so would not apply to this project. The landscape trees at the Highlands to Konocti pump station location are not considered to be protected trees.

While the project does not conflict with any tree preservation ordinance, removal of trees could impact habitats. Based on the predominantly rural nature of the project area, the small number of trees proposed to be removed would not significantly alter habitats. All tree removal would be subject to preconstruction nesting bird surveys (if removed during the nesting season), as required by BIO1, to reduce this impact to less than significant.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project location is not part of an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

Cumulative Impacts

There are no adverse cumulative environmental impacts to biological resources resulting from implementation of the proposed project.

Mitigation Measures

BIO1

To avoid impacts to migratory birds (Protected under MBTA and CDFG Code), all construction-related activities shall be initiated during the non-nesting season from September 1 to January 31 to prevent any impacts to nesting birds. If work cannot be initiated outside the nesting season, the following measures are recommended:

- A qualified biologist should conduct a pre-construction nesting bird survey in accessible areas within 100 feet of the project Site.
- If nests are detected, an appropriate no-disturbance buffer should be established around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by

construction. Factors to be considered for determining buffer size will include: status of the nest and species; the presence of natural buffers provided by vegetation or topography; nest height; and baseline levels of noise and human activity. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

- Bird deterrent methods may be employed under the direction of a qualified biologist to prevent birds from nesting under the Lake Street Bridge.

BIO2

To avoid potential impacts to fringed myotis bat and pallid bats, work on the Lake Street bridge shall occur outside the maternity and/or hibernation season to the extent practical. If work cannot occur within the work window between September 1 and November 15, then the following measures are recommended to ensure impacts to special status bats are avoided:

- A nighttime bat emergence survey with acoustic monitoring should be performed. If bats are observed exiting the roost, bridge work (as well as any noise-producing activities in close proximity) should be delayed until outside the maternity season to ensure impacts are avoided.
- Alternatively, a nighttime bat emergence survey may be performed prior to the maternity season and if no bats are present, the entrance holes may be blocked off to prevent bats from entering the bridge cell prior to construction activities.

V CULTURAL RESOURCES

Section 15064.5(a) of CEQA includes a broad definition of historical and archaeological resources as follows:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).
(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
(3) 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 (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
    (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    (B) Is associated with the lives of persons important in our past;
    (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
    (D) Has yielded, or may be likely to yield, information important in prehistory or history.
(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	□	■	□	□
b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	□	■	□	□
c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	□	■	□	□

Environmental Setting

The Archaeological Research Center (ARC) at CSU Sacramento prepared a Cultural Resources Assessment for the project in March 2019[7]. This section contains excerpts from the ARC report. Locations of resources are necessarily vague as precise locations are confidential.

The project area lies within the Clear Lake Basin, located in the mountainous North Coast Ranges of California. The surrounding geology consists of uplifted sedimentary Franciscan formations to the east and west and volcanic crater formations in the southern boundary of the basin. Borax Lake and Mount Konocti, important sources of obsidian used by indigenous people, lie approximately five miles and nine miles to the northwest respectively. The terrain is characterized by low-lying knolls around the lake and steep ridges along the perimeter of the basin. The Area of Potential Effect (APE) is located east of Highway 53, directly upslope from Anderson Marsh and Cache Creek. The modern climate is typically Mediterranean, with cold, rainy winters and long, hot and dry summers. Regional vegetation is composed of a mosaic of oak woodland, conifer forests, and chaparral plant communities (Sims 1988). Local soils of the Benridge-Sodabay series are generally composed of thin of well drained loams formed in amorphous material primarily weathered from dacite, volcanic ash, or pyroclastic tuff and breccia on hill and mountainous slopes (NRCS 2018).

At the time of European contact, the southern region of the Clear Lake Basin was home to the Pomo, Wappo, and Lake Miwok. Pomo speakers, the most populous in the region, can be divided linguistically into two groups belonging to the Hokan family, Eastern and Southeastern Pomo. The Eastern Pomo occupied much of the southwestern region of the lake, while the Southeastern Pomo lived primarily along the east and southeastern boundaries of the lake (Kroeber 1925).

The ethnographic Pomo were hunter-gatherers who lived in semi-permanent villages and relied extensively on resources such as deer, small game, waterfowl, fish, acorns, seeds, and bulbs. Eastern and Southeastern Pomo were organized into tribelets, each of which contained large villages that had political and religious autonomy (Barrett 1908). Tribelets recognized both ceremonial rights and gathering rights. Gathering rights and ownership were primarily limited to plant resources, as fishing grounds around both the lake and nearby streams were considered open to all (McLendon and Lowy 1978). Pomo groups maintained unusually high population densities throughout the year due to the abundance of feeder streams around the lake during the spring and early summer. In addition to the open fishing grounds, obsidian toolstone from Mt. Konocti attracted Wappo and Lake Miwok speakers into the area, facilitating regular interaction and commerce with non-Pomo groups (Hildebrandt 2007).

The Clear Lake Wappo, a small group of Yukian speakers located just south of the lake, are considered a late addition to the area. Ethnographic information about the Clear Lake Wappo is limited, with sources noting a strong cultural similarity to neighboring Pomo groups (Kroeber 1925). The Wappo were relatively mobile during the year, regularly visiting the Mount Konocti region for both food and toolstone. The Lake Miwok, affiliated with the broad family of Penutian speakers of California, resided in a territory that extended from the Boggs Mountain area in the west to the headwaters of Putah Creek in the east. Additionally, the Lake

[7] *Cultural Resources Assessment, Lower Lake, Highlands, Konocti Emergency Intertie Project, Technical Assistance Work Plan 5504-A, Lake County, California*. Ryan Bradshaw, Timothy Slowik, Rachel Davies, and Nathan Stevens, Archaeological Research Center, CSU Sacramento. March 2019.

Miwok are believed to have made limited trips to fish and collect toolstone around the southern edges of the lake (McLendon and Lowy 1978).

According to McLendon and Lowy (1978), at least eight permanent ethnographic Eastern and Southeastern Pomo villages were located around the lake. Kunkel (1962) estimates an ethnographic population of 1,260 to 2,205 persons for the Eastern Pomo and 390 to 1,070 individuals for the Southeastern Pomo. Population estimates for the Wappo are variable, ranging from 500 to 1,000 individuals (Kroeber 1925; McLendon and Lowy 1978). The same is said for the Lake Miwok, who whose estimated populations also ranged from 500 to 1,000 at the time of contact (Kroeber 1925).

Euroamerican contact occurred shortly after the construction of Spanish missions at Mission San Francisco de Asis (Mission Dolores) in 1776 and Mission San Francisco Solano de Sonoma in 1823. American intrusion in the area intensified during and after the Gold Rush, forcing many Pomo in the region to abandon their traditional lifeways and seek wage-labor on local ranches (McLendon and Lowy 1978). During the last half of the 19th century, land clearance for farmland, road building, livestock grazing, mining, logging, and firewood cutting altered the landscape, depleting local resources and eliminating traditional foraging areas. More recently, the Clear Lake Basin has been transformed into an agricultural region dominated by the cultivation of wine grapes, pears, and walnuts. A significant tourist industry has also developed over the last fifty years, mostly catering to those seeking recreational activities around the lake.

ARCHAEOLOGICAL CONTEXT

Numerous archaeological investigations conducted in the northern Sacramento Valley and adjacent upland areas have revealed the prehistoric social and technological changes of the region. Beginning in the 1930s, Jeremiah Lillard, Robert Heizer, and Franklin Fenenga developed a wide-ranging cultural chronology for the Central California region. Subsequent research modified the Clear Lake Basin chronology to include technological and cultural changes identified in more recent excavations. According to this scheme, the earliest occupation is manifested in the Post Pattern (ca. 12,000-8000 BP). This is followed by the Borax Lake Aspect (ca. 8000-5000 BP), Mendocino Aspect (ca. 5000-2500 BP), Houx Aspect (ca. 2500- 1500 BP), and Clear Lake Aspect (ca. 1500-250 BP) (Frederickson 1984).

The best evidence for early human occupation in the Clear Lake Basin comes from the Borax Lake site (CA-LAK-36). The site is representative of the Post Pattern (ca. 12,000-8000 BP) and consists of fluted lanceolate points, foliate bifaces, stemmed points, scrapers, choppers, and crescents. While little is known of the culture of the earliest inhabitants, the absence of ground stone technology suggests a subsistence system geared toward the pursuit of game and lacustrine resources (Frederickson 1984). Emphasis on the latter is hypothesized based on the presence of flaked stone crescents, generally found in association with ancient playa and late Pleistocene/Early Holocene lacustrine environments (Moratto 1984).

The Borax Lake Aspect (8000-5000 BP) is characterized by flaked stone-dominated assemblages and regional variation in stemmed projectile points. Fluted points disappear and are replaced with Borax Lake Wide-Stemmed points (both squared and concave bases). Borax Lake assemblages have greater tool diversity, with handstones and milling stones also becoming more prevalent over time. These technological changes point to the incorporation of a greater array of resources into the diet, possibly relating to environmental changes, increasing population densities, and demographic circumscription (Hildebrandt 2007).

Diagnostic projectile points of the Mendocino Aspect (5000-2500 BP) include stemmed, non- stemmed, and concave base dart forms. Millingstones and handstones become increasingly common in the record,

indicating a greater reliance on plant resources. The addition of mortars and pestles in later Mendocino Aspect sites suggest resource intensification, tethering to plant resources, and growing population densities (Hildebrandt 2007).

The Houx Aspect (2500-1500 BP) is marked by the continued use of mortar and pestle technology, the influx of trade goods, and increased use of local obsidian toolstone. The adoption of the bow is inferred by the replacement of large dart points with smaller arrow-sized points. Frederickson (1984) argues that sourced obsidian and beads belonging to these assemblages signify greater population density and complexity. The Clear Lake Aspect (1500-250 BP) represents the terminal archaeological pattern in the region. The pattern is characterized by small arrow-sized points, bedrock mortars, beads, diverse shell and bone ornaments, baked clay figurines, and charmstones (Frederickson 1984). Changes in site locality and composition during the late prehistoric period are indicative of increased sedentism and logistical organization. Many sites dating to this time have evidence of occupations that extend well into the historic period.

Records Search

Prior to the archaeological survey, the ARC requested a records search from the Northwest Information Center, Sonoma State University (NWIC File No. 18-0510). This records search report, dated October 24, 2018, identified 33 previous cultural resource investigations within the APE, and an additional 22 cultural resource studies within a quarter mile of the APE. Five cultural resources have been documented within the APE, shown in the table below.

P-Number	Resource Name	Resource Type	Within ADI?	NRHP Eligibility
P-17-000025	CA-LAK-509	Prehistoric Site	Yes	Yes, 1D
P-17-000026	CA-LAK-510	Prehistoric Site	Yes	Yes, 1D
P-17-001899	CA-LAK-1798H	Historic Site	Yes	Not Previously
P-17-000051	CA-LAK-1818/H	Multicomponent	No	Recommended
P-17-002627	Anderson Marsh	District	Yes	Listed, 1S
NRHP Eligibility Codes: 1D = NRHP Eligible as element of a district; 1S - Individual property listed in National Register.				

CA-LAK-509, and CA-LAK-510 are contributing elements to the National Register listed Anderson Marsh Archaeological District [P-17-002627]. CA-LAK-1818/H is located directly adjacent to the project area, but based on prior investigations is outside of the Area of Direct Impact (ADI) (Hampson and Flaherty 2001) and is included within the APE only because its boundaries are encompassed by those of CA-LAK-510. An additional site (CA-LAK-619 [P-17-001537]) is incorrectly mapped near the APE by the Information Center but according to the site record, it is outside the APE to the northeast and is not further considered here. Each of the cultural resources identified by the records search are described in more detail below.

Anderson Marsh Archaeological District (P-17-002627)

The Anderson Marsh Archaeological District covers 47,500 acres and is located in the south-central portion of Lake County, an area ethnographically linked to the south-eastern Pomo. Following an archaeological

survey, John Parker nominated the area to the National Register of Historic Places after recording 43 prehistoric sites (Parker 1977). The area contains both prehistoric and historic sites which represent a time span ranging from more than 10,000 years ago through the early 20th century (California Department of Parks and Recreation 1989). Prehistoric site types found within the district include special use sites, habitation sites, and village sites (Parker 1977). As a result of these findings, Anderson Marsh State Historic Park was established in 1982, consisting of 1,065 acres with 27 recorded Native American sites wholly or partially within the Park (California Department of Parks and Recreation 1989).

CA-LAK-509 (P-17-000025)

Originally recorded by Branscomb (1975a) and updated several times in the intervening years (Thompson 1977a; Thompson 1977b; Biorn and Douglas 1985; US Army Corps of Engineers; Derr 1993; Thompson 1993), CA-LAK-509 is a complex prehistoric habitation site consisting of a well-developed midden, with varying amounts of flaked and groundstone tools, thermal features, and human remains. The site is currently listed on the National Register as a contributing element of the Anderson Marsh Archaeological District under criterion D. It has been suggested that the site corresponds to the ethnographic village Ka'wiyomi (Barrett 1908). Previous subsurface testing and monitoring for sewer and water main construction at the boundary of the project ADI identified redeposited cultural material but no intact deposits (Derr 1995; Holson et al. 1996). More substantial cultural materials, including a thermal feature, shell, and human remains, were recovered from test units located approximately 105 meters south- southeast of the current ADI. An existing water line directly above the burial was noted during excavation of Unit 5 (Derr 1995).

CA-LAK-510 (P-17-000026)

CA-LAK-510 is a large prehistoric habitation site located on the hillslope north of Cache Creek. The site is listed on the National Register as a contributing element of the Anderson Marsh Archaeological District under criterion D. Since it was first recorded by Branscomb (1975b), the site has since become the focus of ongoing research with no less than 2,167 square meters of surface collection and 201.3 cubic meters of hand excavation conducted over the last four decades (McCarthy et al. 1991; White 1984; White et al. 2002; Dougherty et al. 1993; Werner and Flaherty 2011). Site constituents include flaked and ground stone artifacts, midden deposits, bedrock mortars, thermal features, housefloors, human remains, and a variety of modified stone, clay, and bone artifacts not commonly found in the region (White et al. 2002).

The site is outside the ADI, the only portion of the site within the APE is a proposed material staging area, located on a developed, paved-over shopping center. The extreme southeast portion of the site is adjacent to the Konocti to Lower Lake ADI. This portion of the site was previously mapped by White as within the "sparse lithic area" of the site, a peripheral designation meaning it is not part of either the "dense lithic area" or the "midden area" where intact deposits were investigated (White 1984:17). This portion of the site was later recorded as a separate multi-component site, CA-LAK-1818/H, overlapping a portion of CA-LAK-510. A small area of intact site deposit was documented and determined to have potential to further contribute to the research potential and eligibility of the site and larger district (Werner and Flaherty 2011). This area is outside of the current project ADI where proposed construction impacts may occur.

CA-LAK-1798H (P-17-001899)

CA-LAK-1798H was first recoded as a mid-twentieth century debris scatter, rock lined well, boat ramp, and stone foundation (Meyer 1993). The site boundary is the only undeveloped portion of the ADI. This resource has not been previously evaluated for NRHP eligibility.

CA-LAK-1818/H (P-17-000051)

CA-LAK-1818/H consists of three stone foundations and a very sparse obsidian flake and tool scatter (Meyer 1993). The site was originally recorded as a separate resource from CA-LAK-510, then it was subsequently incorporated as part of the CA-LAK-510 deposit, corresponding to the "sparse lithic area" mapped by White (1984:17). CA-LAK- 1818/H lies outside of the project ADI where construction impacts may occur. The site has been evaluated twice (Werner and Flaherty 2011). Both studies recommended that the site lacks sufficient data potential or unique characteristics to be eligible for the NRHP under any criteria (Hampson and Flaherty 2001; Werner and Flaherty 2011).

NATIVE AMERICAN COORDINATION

At the onset of the project on September 11, 2018, a Sacred Lands File and Native American Contact list request was submitted to the Native American Heritage Commission. The Sacred Lands File identified sacred sites within the project area, and a list of four individuals was produced to contact. Initial letters dated October 17, 2018, were sent to each of the contacts via certified mail describing the proposed project with an APE map. A single response from Middletown Rancheria was received requesting to be a continued part of the archaeological process pending the discovery of new evidence of human habitation. Follow up emails were sent to each of the remaining contacts on March 20, 2019 requesting receipt of the initial letters and further soliciting comments. An email response was received on March 26, 2019 from the Koi Nation of Northern California requisitioning project information.

FIELD INVESTIGATION

The field investigation consisted of a pedestrian survey of all portions of the project ADI, totaling 4.7 acres. The survey was performed by three crew members under the supervision of the second report author on November 1, 2018 and January 8, 2018. All roadways and adjacent landforms within the ADI were surveyed on foot by crew members. Exposed soil surfaces, and roadway edges were carefully examined for artifacts, bones, and other culturally significant materials. Areas that were designated for the installation of new and replacement equipment were intensively surveyed by crew members.

Ground visibility was largely obstructed throughout the survey area. The Lake Street/Dam Road intersection area has been heavily developed over the last 30 years by roadway, bridge, and utility construction, with the exception of the proposed pump/ intertie locations, which retain some unpaved surfaces.

Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

ARC reports that previous research has determined that one historic site (CA- LAK-1798H) lies within the APE. The archaeological field survey did not find any new resources or relocate any surface remains associated with CA- LAK-1798H in or directly adjacent to the project area.

CA-LAK-1798H was located in the vicinity of the proposed pump house location. The original site record describes a mid-twentieth century debris scatter, rock lined well, boat ramp, and stone foundation (Meyer 1993). During the field investigation, none of the features were relocated, and only a short segment of galvanized pipe was found on the site. It appears ongoing creek bank erosion and stabilization work has completely destroyed the site. CA-LAK-1798H has been destroyed by a combination of natural erosion and creek side maintenance.

ARC determined there would be no impact to existing known historical resources. However, there is always the possibility of accidental discovery of historical resources during construction. In the event resources are discovered, mitigation measure CR1 would reduce such impact to less than significant.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The ARC archaeological field survey did not find any new resources or relocate any surface remains associated with any of the three resources located in or directly adjacent to the project area. Previous research has determined that two prehistoric sites (CA-LAK-509; -510) and portions of the Anderson Marsh Archaeological District lie within the APE.

Portions of the project ADI intersect NRHP listed resource CA-LAK-509. Previous subsurface testing and monitoring for sewer and water main construction at the boundary of the project ADI identified redeposited cultural material in this area (Derr 1995; Holson et al. 1996), suggesting this is not a NRHP contributing area of the resource. Intact deposits, including a thermal feature, and human remains, were recovered from test units located approximately 105 meters south-southeast of the current ADI.

The only portion of CA-LAK-510 within the APE is a proposed material staging area within a developed shopping center parking lot. Results of prior testing recommend that the area surrounding the intersection, particularly to the east, lacks the data potential to contribute to the eligibility of the site (White 1983; Werner and Flaherty 2011).

As currently designed, the Project APE encompasses portions of four archaeological sites and one archaeological district. CA-LAK-509 (P-17-000025) and CA-LAK-510 (P-17-000026) are both listed as contributing elements of the National Register listed Anderson Marsh Archaeological District (P-17-002627). Proposed work within CA-LAK-509 is limited to a peripheral area that has been shown through prior field studies to contain only redeposited cultural material. Proposed work at CA-LAK-510 is limited to material staging within an existing developed shopping center parking lot. CA-LAK-1818/H (P-17- 000051) is outside of the ADI and is included within the APE only because its

boundaries are encompassed by those of CA-LAK-510. The remaining site, CA-LAK-1798H (P-17-001899) has been destroyed by a combination of natural erosion and creek side maintenance.

Based on the above, ARC has determined there would be no impact to existing known archaeological resources. However, there is always the possibility of accidental discovery of archaeological resources during construction. In the event resources are discovered, mitigation measure CR1 would reduce such impact to less than significant.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

There are no known human remains in the project area. However, the remote possibility exists that human remains could be discovered during construction. In such an event, Mitigation Measure CR2 would reduce such impact to a less than significant level.

Cumulative Impacts

There are no adverse cumulative environmental impacts to cultural resources resulting from implementation of the proposed project.

Mitigation Measures

CR1

The project plans and specifications shall provide that in the event prehistoric-era or historic-era archaeological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. Prehistoric-era archaeologic site indicators could include chipped chert and obsidian tools and tool manufacture waste flakes, grinding implements such as mortars and pestles, and locally darkened soil containing the previously mentioned items as well as fire altered stone and dietary debris such as bone and shellfish fragments. Historic-era archaeologic site indicators could include items of ceramic, glass and metal, and features such as structural ruins, wells and pits containing such artifacts. After cessation of excavation, the contractor shall immediately contact the District. The District shall contact a qualified professional archaeologist immediately after the find. Such archaeologist shall conduct an evaluation of significance of the site, and assess the necessity for mitigation and contact local Native American tribes, as appropriate. The contractor shall not resume construction activities until authorization to proceed is received from the District.

CR2

If human remains are encountered during grading, excavation or trenching, all construction activity shall cease and the contractor shall immediately contact the District and the Lake County Coroner's Office. If the remains are determined by the Coroner's Office to be of Native American origin, the Native American Heritage Commission shall be contacted and the procedures outlined in CEQA §15064.5 (d) and (e) shall be implemented by the District or its designee.

VI ENERGY

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	□	□	□	■
b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	□	□	□	■

Setting

The California Energy Commission (Energy Commission) was charged with developing the states Renewable Energy Program in 1998, following deregulation of electric utilities. The Energy Commission provides a brief history of its actions with regard to the Renewable Energy Program:

> In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. The Energy Commission's 2003 Integrated Energy Policy Report recommended accelerating that goal to 2010, and the 2004 Energy Report Update urged increasing the target to 33 percent by 2020. Governor Schwarzenegger, the Energy Commission, and the California Public Utilities Commission (CPUC) endorsed this enhanced goal for the state as a whole. Achieving these renewable energy goals became even more important with the enactment of AB 32 (Núñez, Chapter 488), the California Global Warming Solutions Act of 2006. This legislation sets aggressive greenhouse gas reduction goals for the state and its achievements will depend in part on the success of renewable energy programs.
>
> SBX1-2 was signed by Governor Edmund G. Brown, Jr., in April 2011 to codify the ambitious 33 percent by 2020 goal. In his signing comments, Governor Brown noted that "This bill will bring many important benefits to California, including stimulating investment in green technologies in the state, creating tens of thousands of new jobs, improving local air quality, promoting energy independence, and reducing greenhouse gas emissions."
>
> This new RPS applied to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retails sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020.
>
> In October 2015, Governor Brown signed Senate Bill 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly

owned utilities to procure "half of the state's electricity from renewable sources by 2030.[8]"

These goals were accelerated in 2016 with passage of SB 32 requiring lowering greenhouse gas emissions to 40 percent below 1990 levels by 2030. Further, "In 2018, Senate Bill 100...set a planning target of 100 percent zero-carbon electricity resources by 2045 and increased the 2030 renewables target from 50 percent to 60 percent. On the same day of signing SB 100, then-Governor Brown signed Executive Order B-55-18 with a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter. The executive order covers all sectors of the economy[9]."

Today, California's energy policies are intertwined with goals of reducing greenhouse gases. The Energy Commission produces the biennial Integrated Energy Policy Report. The report contains an integrated assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The most recent report was divided into two sections. Volume I was produced in 2018 and Volume II was released in February 2019[10].

CURRENT ENERGY USAGE AND SOURCES

California uses the least electricity of any state with a 2016 (most recent electricity California Energy Commission date) usage of 6,536 kWh per capita[11]. The census states that Lake County had an estimated population of 64,246 in 2017[12] and the California Energy Commission indicates the Lake County used a total (residential and non-residential) of 470.800523 gigawatt hours (GWh) of electricity in 2017[13] for a per capita use of approximately 7,328 kWh, somewhat above the state average.

Lake County is provided electricity by PG&E. As of 2017, PG&E's power mix was three years ahead of California's goal and supplied 33 percent of its electricity from renewable resources under the California Renewables Portfolio Standard. PG&E intends to supply 50 percent renewable electricity by 2030, consistent with California's goals. Additionally, in 2017, 27 percent of PG&E electricity was nuclear power and 18 percent was hydroelectric, for a total of 78 percent greenhouse gas free electricity[14]. In contrast, the overall power mix in California is 29 percent renewable, 15 percent hydroelectric and nine percent nuclear, or 53 percent greenhouse gas free electricity. In 2018, total renewable electricity in California was 34 percent[15].

[8] https://www.energy.ca.gov/renewables/history.html
[9] Ibid.
[10] https://www.energy.ca.gov/2018_energypolicy/
[11] https://www.energy.ca.gov/almanac/electricity_data/us_per_capita_electricity.html
[12] https://www.census.gov/quickfacts/lakecountycalifornia
[13] http://www.ecdms.energy.ca.gov/elecbycounty.aspx
[14] https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2018/10-18_PowerContent.pdf
[15] https://www.energy.ca.gov/2018publications/CEC-100-2018-001/Exec_Sumry_CEC-100-2018-001-V2-CMF.pdf

Analysis

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Project construction would only account for a minor use of energy, primarily associated with fuels used in construction vehicles. All vehicles would be California-compliant to ensure state goals of efficiency and air quality are maintained. The Dam Road pump station is an addition to existing water system energy demands. At the Spruce site, the project replaces existing facilities with the same size but more efficient pumps. Both pump stations would be used for emergency interconnections and operate infrequently. The water mains would not require energy after installation. The project is necessary to meet emergency water transfers throughout the existing water systems and does not result in a wasteful, inefficient or unnecessary consumption of energy resources.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. As indicated above, electricity to the project is provided by PG&E and is exceeding the state's renewable energy goals. The Dam Road pump station would use approximately 10,000 kWh of electricity per year and the Spruce Avenue pump station would use approximately 11,000 kWh of electricity per year. This equates to the energy usage of approximately three people based on average per capita energy usage. Because the project uses so little energy and that energy is supplied according to California's renewable energy policies, the project will not conflict with or obstruct the state's plan for renewable energy or energy efficiency.

Cumulative Impacts

There are no adverse cumulative environmental impacts to energy resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to energy have been identified; therefore, no mitigation is required.

VII GEOLOGY & SOILS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project 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-Priolo 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.	□	□	■	□
ii. Strong seismic ground shaking?	□	□	■	□
iii. Seismic-related ground failure, including liquefaction?	□	□	■	□
iv. Landslides?	□	□	□	■
b. Would the project result in substantial soil erosion or the loss of topsoil?	□	■	□	□
c. Would the project 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?	□	□	■	□
d. Would the project 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?	□	□	■	□
e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	□	□	□	■
f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	□	■	□	□

Environmental Setting

REGIONAL GEOLOGY AND TOPOGRAPHY

The proposed project site is located within the Coast Ranges Geomorphic Province of California. This province is characterized by northwest trending topographic and geologic features, and it includes many separate ranges, coalescing mountain masses, and several major structural basins. The province is bounded on

the east by the Great Valley Geomorphic Province and on the west by the Pacific Ocean. The Coast Ranges region extends north into Oregon and south to the Transverse Ranges and Ventura County.

The structure of the northern Coast Ranges region is extremely complex due to continuous tectonic deformation imposed over a long period of time. The initial tectonic episode in the northern Coast Ranges was a result of the plate convergence which is believed to have begun during late Jurassic time. This process involved eastward thrusting of oceanic crust beneath the continental crust (Klamath Mountains and Sierra Nevada) and the scraping off of materials that are now accreted to the continent (northern Coast Ranges). This is a seismically active region characterized by northwest-trending faults. Topography is highly varied in this area today, ranging from nearly level to steep.

SOILS IN THE PROJECT AREA

According to the United States Department of Agriculture, Natural Resources Conservation Service mapping, Benridge-Sodabay series make up the majority of the soils. They are generally composed of thin of well drained loams formed in amorphous material primarily weathered from dacite, volcanic ash, or pyroclastic tuff and breccia on hill and mountainous slopes.

LIQUEFACTION

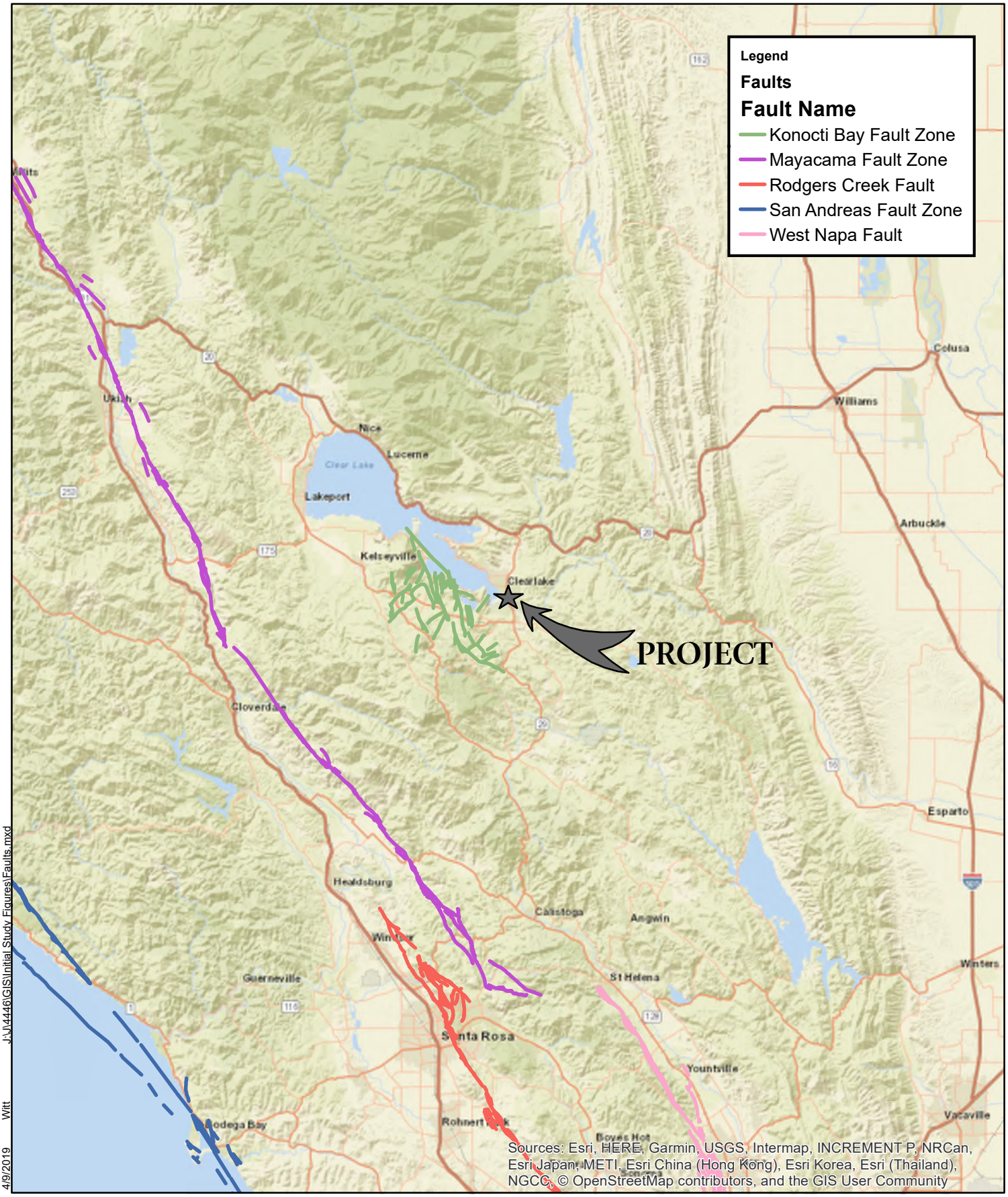
Liquefaction is the process where water is combined with unconsolidated soils, generally from ground motions and pressure, which causes the soils to behave like quicksand. Liquefaction potential is determined from a variety of factors including soil type, soil density, depth to the groundwater table, and the expected duration and intensity of ground shaking. Liquefaction is most likely to occur in deposits of water-saturated alluvium or areas of considerable artificial fill.

SEISMIC CONDITIONS

Similar to all of Lake County, the project area is within a seismically active area. The nearest faults considered to be 'Holocene-active' (experiencing surface rupture within about the last 11,000 years) are shown below and on Figure 12. Other faults in the project area are considered to be in the 700,000 to two million year old range and considered less likely to result in seismic activity. Faults with the potential to produce earthquakes are described below.

Fault	Approximate Distance to Fault (miles)	Direction to Fault
Konocti	4.5	West
Mayacama	22	West
Rodgers Creek	26	Southwest
W. Napa	31	South
San Andreas	44	West

Throughout Lake County and entire Northern California region, ground shaking from earthquakes represents a significant geologic hazard to developments. The intensity of ground shaking will be dependent on several factors such as: 1) distance from the site to the earthquake focus; 2) depth of earthquake focus; 3) earthquake magnitude; 4) response of the underlying soil and rock; and, 5) topography and local geologic structure.



4/9/2019 Witt J:\J\4446\GIS\Initial Study Figures\Faults.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
USGS

NORTH

0 5 10 20 Mile

Brelje & Race
CONSULTING ENGINEERS
475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE 12

FAULTS

LOWER LAKE CWD

MAY 2019

Regulatory Setting

FEDERAL REGULATIONS

Clean Water Act 402 and National Pollutant Discharge Elimination System

The CWA is discussed in detail in the Hydrology and Water Quality section of this document. However, because CWA Section 402 is directly relevant to excavation, additional information is provided below. Amendments to the CWA in 1987 added Section 402p, which establishes a framework for regulating municipal and industrial stormwater discharges under National Pollutant Discharge Elimination System (NPDES) program. The EPA has delegated to the State Water Resources Control Board (SWRCB) the authority for the NPDES program in California, which is implemented by the state's nine regional water quality control boards. Under the NPDES Phase II Rule, construction activity disturbing one acre or more must be permitted under the state's General Construction Permit. General Construction Permit applicants are required to prepare a Notice of Intent and a Stormwater Pollution Prevention Plan (SWPPP) and implement and maintain Best Management Practices (BMPs) to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork.

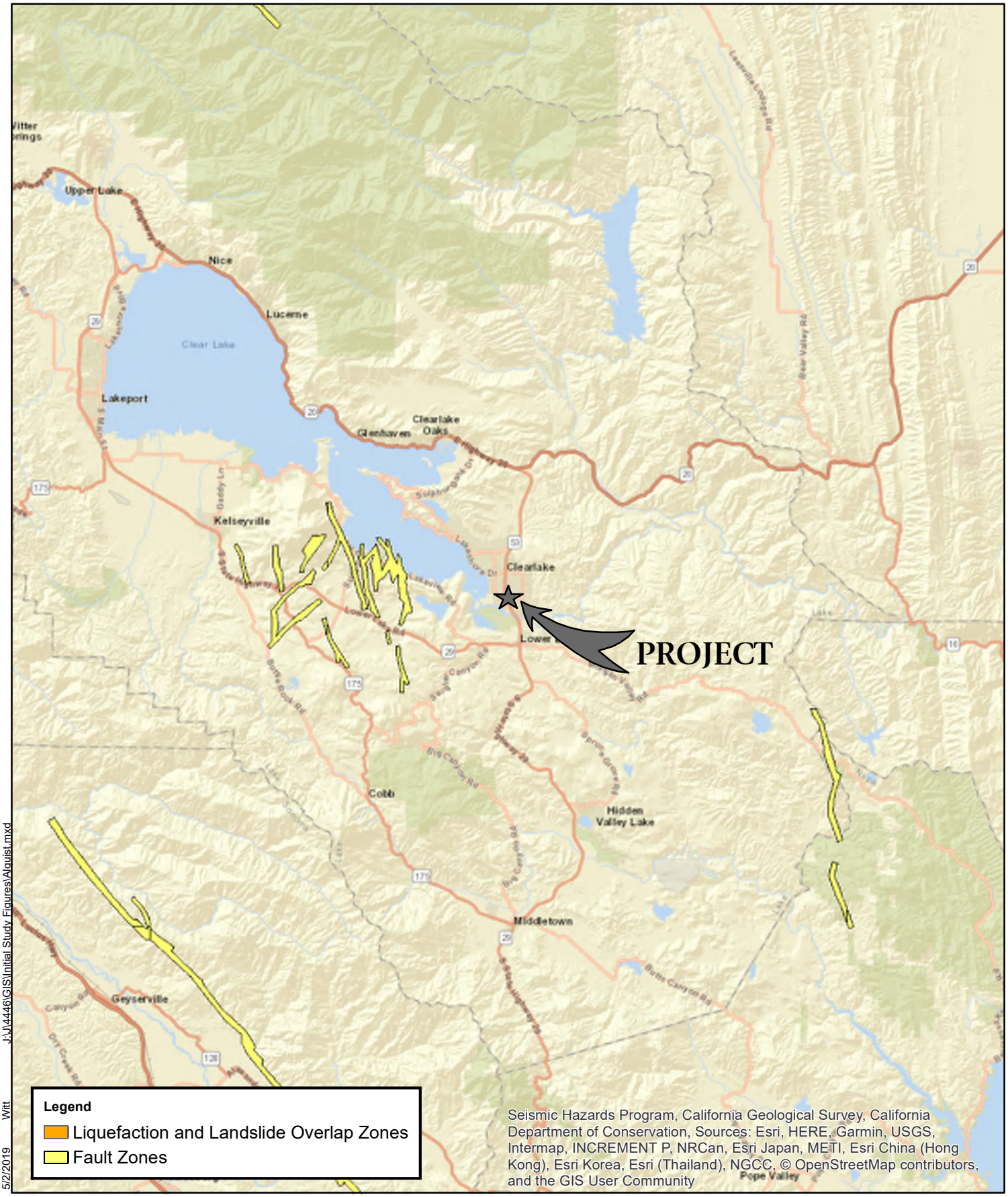
STATE REGULATIONS

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (prior to January 1, 1994, known as the Alquist-Priolo Special Studies Zones Act – CCR, Title 14, Section 3600) sets forth the policies and criteria of the State of California in regard to building within active fault zones mapped pursuant to the Act. The Alquist-Priolo Earthquake Fault Zoning Act outlines cities' and counties' responsibilities in prohibiting the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones delineated on maps officially issued by the State Geologist. Figure 13 shows the project relative to the nearest mapped fault zone.

Seismic Hazard Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690 2699.6) is intended to reduce damage resulting from earthquakes. The Seismic Hazards Mapping Act addresses earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites in Seismic Hazard Zones until appropriate site-specific geologic or geotechnical investigations have been carried out, and measures to reduce potential damage have been incorporated into the development plans.



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
State of California

NORTH

0 2.5 5 10 Mile

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FIGURE 13

ALQUIST PRIOLO FAULTS

LOWER LAKE CWD

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California Building Code

The California Code of Regulations, Title 24, also known as the California Building Standard Code or the California Building Code (CBC), establishes guidance for foundation design, shear wall strength, and other structurally related concerns. The CBC modified regulations for specific conditions found in California and included a large number of more detailed and/or more restrictive regulations. For example, CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. The CBC requires structures to be built to withstand ground shaking in areas of high earthquake hazards and the placement of strong motion instruments in larger buildings to monitor and record the response of the structure and the site of the seismic activity. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage requirements in order to control surface drainage and to reduce seasonal fluctuations in soil moisture content.

Analysis

a. Would the project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:

a.i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo 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.

The project area is not located within an Alquist-Priolo Zone, as shown on Figure 13. None of the project components are intended for human occupancy. The project would be required to implement California Building Code Seismic Design Category Requirements standards into the project design for applicable features to minimize hazards associated with potential fault rupture, ground shaking, and liquefaction. Based on incorporation of appropriate geotechnical design recommendations and engineering standards, the risk to the project from fault rupture is considered to be less than significant.

a.ii. Strong seismic ground shaking?

Similar to all of Lake County, the project location is subject to strong seismic ground shaking. The Konocti Fault system is approximately 1.5 miles west of the project area. The Mayacama Fault is located approximately 22 miles west of the project area. The Rodgers Creek Fault is located approximately 26 miles southeast and the San Andreas Fault is located approximately 44 miles west of the project.

As indicated in a.i.) above, the project would be designed and constructed in strict adherence with current standards for earthquake-resistant construction, as is standard practice. Risk to the project is considered to be less than significant.

a.iii. Seismic-related ground failure, including liquefaction?

As indicated in a.ii.) above, seismic ground shaking could occur in the project area. The project is not located in an area subject to liquefaction. Any risks of ground failure would be remediated, as indicated in a.i.) above.

a.iv. Landslides?

The project would primarily be constructed within areas with existing infrastructure and residential development. Landslides are not evident at current project locations and the project would not increase the risk of landslides.

b. Would the project result in substantial soil erosion or the loss of topsoil?

With the exception of the proposed pump station on Dam Road, proposed project locations are all within existing roads or existing developed water infrastructure sites. Stormwater drainage in the area primarily consists of overland flow over the ground and roadway surfaces that concentrate in man-made drainage elements such as roadside gutters and drainage ditches. Some underground stormwater system exists near the Konocti View Road pipeline (in Old Highway 53) but would not be impacted by the project. Surfaces would be restored to existing conditions once construction is complete to ensure there is no long-term erosion.

Construction of the pump station on Dam Road would involve minor grading adjacent to Cache Creek on a currently undeveloped site. Site work would involve placement of a retaining wall to support the pump station, sidewalks and parking space.

The project's small construction footprint results in it being exempt from the local Standard Urban Stormwater Mitigation Plan (SUSMP) and Low Impact Design standards (LID) that typically regulate erosion on project sites. Additionally, the project's total disturbance is approximately 0.25 acre, and under the one acre threshold that is required to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB). While the project is exempt or under trigger thresholds for standard procedures for larger development projects, soil erosion could still occur. To ensure erosion is minimized to the extent practicable and does not enter waterways, an erosion control plan would be prepared. Mitigation Measure GS1 requires that those actions occur and would reduce any potential soil erosion impact to a less than significant level.

c. Would the project 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?

The project area currently supports the existing development and water systems. The proposed project components would intertie the three systems to provide additional reliability. Appropriate design according to professional standards and regulations contained in the most recent edition of the California Building Code would ensure that any risk from on- or off-site landslide, lateral spreading,

subsidence, liquefaction or collapse is less than significant. A site-specific geotechnical report[16] was prepared for the Dam Road pump station due to its currently undeveloped status. Geotechnical recommendations related to removal of existing fill materials, replacement with engineered fill and ensuring foundations and the retaining wall have been incorporated into the project to mitigate any issues at the undeveloped site associated with unstable soils.

d. Would the project 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?

Appropriate design according to professional standards and regulations contained in the most recent edition of the California Building Code would ensure that any risk from expansive soils is less than significant. Bauer Associates determined that expansive soils are not present at the undeveloped Dam Road pump station.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Wastewater service in the project area is provided by the City of Clear Lake and individual septic systems. No new wastewater would be generated by the proposed project.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no known paleontological resources or unique geologic features in the project area. Mitigation Measure GS2 is included to preserve any such features discovered during construction and reduces any potential impact to less than significant.

Cumulative Impacts

There are no adverse cumulative environmental impacts to geology and soils resulting from implementation of the proposed project.

Mitigation Measures

GS1

The District shall prepare an erosion control plan for the project. Appropriate BMPs will be implemented by the project to minimize construction-related erosion and runoff. BMPs include, but are not limited to:

- Schedule construction activities during dry weather. Keep grading operations to a minimum during the rainy season (October 15 through April 15).
- Protect and establish vegetation.

[16] *Geotechnical Investigation—Pump Station, Dam Road/Lake Street Intersection, Lower Lake, California*. Bauer Associates, Inc. Draft Report January 7, 2019.

- Stabilize construction entrances and exits to prevent tracking onto roadways.
- Protect exposed slopes from erosion through preventative measures. Cover the slopes to avoid contact with storm water by hydroseeding, applying mulch or using plastic sheeting.
- Install straw wattles and silt fences on contour to prevent concentrated flow. Straw wattles should be buried 3 to 4 inches into the soil, staked every 4 feet, and limited to use on slopes that are no steeper than 3 units horizontal to 1 unit vertical. Silt fences should be trenched 6 inches by 6 inches into the soil, staked every 6 feet, and placed 2 to 5 feet from any toe of slope.
- Designate a concrete washout area to avoid wash water from concrete tools or trucks from entering gutters, inlets or storm drains. Maintain washout area and dispose of concrete waste on a regular basis.
- Establish a vehicle storage, maintenance and refueling area to minimize the spread of oil, gas and engine fluids. Use oil pans under stationary vehicles.
- Protect drainage inlets from receiving polluted storm water through the use of filters such as fabrics, gravel bags or straw wattles.
- Check the weather forecast and be prepared for rain by having necessary materials onsite before the rainy season.
- Inspect all BMPs before and after a storm event. Maintain BMPs on a regular basis and replace as necessary.

GS2

The project plans and specifications shall provide that in the event paleontological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. After cessation of excavation, the contractor shall immediately contact the District. The District shall contact a qualified professional geologist or paleontologist immediately after the find. Such consultant shall conduct an evaluation of significance of the site, and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from the District.

VIII GREENHOUSE GAS EMISSIONS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	□	□	■	□
b. Would the project Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	□	□	□	■

To fully understand global climate change it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHG) that contribute to this phenomenon. The temperature on Earth is regulated by this "greenhouse effect," which is so named because the Earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. Like glass, the gases in the atmosphere let in light yet prevent heat from escaping.

Greenhouse gases are naturally occurring gases such as water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) that absorb heat radiated from the Earth's surface. Greenhouse gases are transparent to certain wavelengths of the Sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to Earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the Sun) before releasing it back toward space as infrared radiation. The greenhouse gases and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near the Earth's surface where it warms the lower atmosphere.

In addition to natural sources, human activities are exerting a major and growing influence on climate by changing the composition of the atmosphere and by modifying the land surface. Particularly, the increased consumption of fossil fuels (natural gas, coal, gasoline, etc.) has substantially increased atmospheric levels of greenhouse gases. Measured atmospheric levels of certain greenhouse gases such as CO_2, NH_4, and N_2O have risen substantially in recent decades. This increase in atmospheric levels of greenhouse gases unnaturally enhances the "greenhouse effect" by trapping more infrared radiation as it rebounds from the Earth's surface and thus trapping more heat near the Earth's surface.

California Implications

According to the Air Resources Board's 2016 California GHG Emissions Inventory, in 2014, total California GHG emissions were 441.5 million metric tons of CO2 equivalent (MMTCO2e), a decrease of 2.8 MMTCO2e compared to 2013. This represents an overall decrease of 9.4 percent since peak levels in 2004. During the 2000 to 2014 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 13.9 tons per person to 11.4 tons per person in 2014; an 18 percent decrease[17]. State regulations

[17] https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

have begun lowering GHG California's contribution to global GHG levels but managing GHG emissions remains an ongoing priority in California.

State Regulations

CLIMATE CHANGE REGULATORY FRAMEWORK

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act, which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required the California Air Resources Board (ARB) to develop a Scoping Plan, adopted in 2008, that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. In 2016, the Legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels by 2030. The Scoping Plan was updated in 2017. In 2018, Senate Bill 100 set a planning target of 100 percent zero-carbon electricity resources by 2045 and increased the 2030 renewables target from 50 percent to 60 percent. Executive Order B-55-18 set a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter. The Scoping Plan recognizes that local GHG reduction commitments and climate action plans are essential to the state meeting its targeted emissions reductions

California's energy policies are intertwined with goals of reducing greenhouse gases. These goals were accelerated in 2016 with passage of SB 32 requiring lowering greenhouse gas emissions to 40 percent below 1990 levels by 2030. Further, "In 2018, Senate Bill 100...set a planning target of 100 percent zero-carbon electricity resources by 2045 and increased the 2030 renewables target from 50 percent to 60 percent. On the same day of signing SB 100, then-Governor Brown signed Executive Order B-55-18 with a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter. The executive order covers all sectors of the economy... Executive Order B-55-18 follows the spirit of what is required at a global scale to achieve the climate goals of the Paris Agreement, in which signatory nations worldwide agree to sufficiently reduce GHG emissions to avoid catastrophic climate change. This is also consistent with a special report by the Intergovernmental Panel on Climate Change, which found that to avoid catastrophic climate change, global carbon dioxide emissions must decline by about 45 percent below 2010 levels by 2030 and reach net zero by about 2050[18]."

LOCAL REGULATIONS

ARB works with 35 air pollution districts in California to enforce air pollution regulations. The LCAQMD enforces air quality regulations in Lake County. More metropolitan air pollution districts, cities and counties have adopted Local Climate Action Plans consistent with ARB Scoping Plan goals. Due to the rural nature of the project area, neither the County of Lake nor the City of Clearlake have developed a Climate Action Plan.

Because the LCAQMD has not developed GHG regulations or a Climate Action Plane, it has not identified a significance threshold for GHG emissions or a methodology for analyzing air quality impacts related to greenhouse gas emissions. Similarly, the county has not prepared a climate action plan so there is no established local threshold of significance for GHGs. The adjacent Sacramento Metropolitan Air Quality

[18] Ibid.

Management District[19] (SMAQMD) adopted GHG thresholds of significance in 2014 that are contained in the SMAQMD's CEQA Guide[20]. For land development and construction projects, that threshold has been established as 1,100 metric tons per (MT/yr) year for construction and operational phases. Stationary sources (projects that don't involve transportation impacts) have been determined to have an operational threshold of 10,000 MT/yr. While neither the LCAQMD nor Lake County has adopted these thresholds, they are a useful guideline for assessing this project's potential impacts.

Analysis

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Project construction GHG emissions were modeled using the Roadway Construction Emissions Model developed by SMAQMD for transportation and pipeline projects. Modeled construction-related CO2e emissions are shown below and are expected to be 135 MT/yr CO2e, under SMAQMD's 1,100 MT/yr threshold and therefore are considered to be less than significant. Because the project interties existing water distribution systems and does not induce growth, operational emissions would be essentially unchanged and were not quantified.

SMAQMD Thresholds of Significance			**Project Emissions**	
	Construction Average Daily Emissions (MT/yr)	Operational Annual Emissions (MT/yr)	RoadMod[21] Construction Emission Estimates (MT/yr)	RoadMod Operational Emission Estimates (MT/yr)
GHG as CO2e	1,100	1,100	135	Not quantified

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

Neither the City of Clearlake nor Lake County have adopted a Climate Action Plan. Because the project does not exceed the SMAQMD's construction threshold of 1,100 MT/yr and operational emissions would be essentially unchanged, the project would not impede implementation of a local climate action plan, should one be developed.

[19] The Sacramento Metropolitan Air Quality Management District is used here because the BAAQMD has not adopted a threshold for construction-related GHG emissions in its CEQA Guidelines utilized in the Air Quality section of this document.
[20] http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/CEQA-Guidance-Tools
[21] Roadway Construction Emissions Model v 8.1.0

Cumulative Impacts

As indicated in a.) above, the project would result in short-term emission of GHGs associated with project construction. Construction-related emissions are not considered to be cumulatively considerable based on the limited nature of the construction project and emissions expected to below the 1,100 MT/yr threshold.

Mitigation Measures

No adverse environmental impacts to greenhouse gas emissions have been identified; therefore, no mitigation is required.

IX HAZARDS & HAZARDOUS MATERIALS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	□	□	■
b. Would the project 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?	□	■	□	□
c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	□	□	□	■
d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	□	■	□	□
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?	□	□	□	■
f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	■	□
g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	□	□	□	■

Environmental Setting

There are no known hazardous materials sites within 500 feet of the project sites. Sites listed on California's Geotracker system are shown on Figure 14. Implementation of the project would require the use of small quantities of hazardous materials, including petroleum and other chemicals, to operate and maintain construction equipment.

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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
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Datum: North American 1983
Units: Foot US

DATA SOURCES
California Water Resources Control Board

NORTH

0 0.125 0.25 0.5 Miles

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FIGURE 14

GEOTRACKER SITES

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REGULATORY SETTING

Federal Regulations

Hazardous materials in the project area are subject to applicable federal regulations, including the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Liability Act. Other applicable federal regulations are contained primarily in CFR Titles 29, 40, and 49.

State Regulations

California regulations are as stringent as or more stringent than federal regulations. The EPA has granted the State of California primacy oversight responsibility for administering and enforcing hazardous waste management programs. State regulations require planning and management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human and environmental health.

Analysis

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The project would intertie three existing water systems and is not associated with hazardous materials. Construction of the proposed project would include the use and short-term storage of hazardous materials. These materials include, but are not limited to, lubricants, adhesives, paints, asphalt, fuel, and toxic solvents. The proposed project is required to comply with federal, state, and local regulations regarding the storage, handling, disposal, and cleanup of hazardous materials. No routine transport, use or disposal of hazardous materials is associated with this project. The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b. Would the project 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?

As indicated above, the project would not introduce new long-term hazardous materials or hazardous materials handling. There is the potential for a fuel/oil spill during construction from construction vehicles and equipment. Mitigation Measure HM1 would reduce such impact to a less than significant level.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The project would not result in emissions or handling of hazardous materials within one quarter mile of an existing or proposed school. The project includes the intertie of three existing water systems with modifications to existing infrastructure and construction of limited new infrastructure and would not emit hazardous emissions or handle hazardous or acutely hazardous materials.

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

The proposed project is in the not in the vicinity of hazardous materials sites listed by the State Water Resources Control Board GeoTracker system as shown on Figure 14. There are no listed sites within 500 feet of any of the proposed project components. There is the possibility with any construction project that contaminated soils would be found during construction. In that event, Mitigation Measure HM1 requires the contractor to cease work and contact the District and the Regional Board to develop a plan to dispose of the soils and ensure worker safety and protection of the environment.

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?

The nearest public use airport, Lampson Field, is located between the communities of Kelseyville and Lakeport and is approximately 15 linear miles northwest of the project area. The project is not located within Lampson Field's airport land use plan area. Therefore, there would be no impact.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Lake County Emergency Response Plan facilitates response by the Lake County Department of Health Services when medical and health services are required as a result of catastrophic events. Areas within the City of Clearlake are served by the Lake County Fire District and the Clearlake Police Department. The primary threats to Lake County include earthquakes and aftershocks, hazardous materials releases, transportation accidents, levee or dam failure and floods, landslides, national security incidents, and wildfires. An efficient roadway and circulation system is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles. The District shall require that the contractor develop a traffic management plan that ensures the existing roadway system within the project areas shall be kept accessible to residents and to all first responder units in the case of a wildland fire, earthquake event, hazardous materials release, transportation accident, landslide or national security incident by the incorporation of half-width improvements and traffic control utilization. Additionally, encroachment permits required from the City and County would ensure appropriate traffic control and emergency access are maintained. As such, this impact would be less than significant.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project is intertying three existing water systems. Once completed, the project would primarily be underground and would not increase the risk of wildland fires. Above ground construction would utilize fire resistant concrete masonry buildings with metal roofs. Implementation of the project would increase the community's ability to respond to fires by increasing emergency water supplies available to each water system.

Cumulative Impacts

There are no adverse cumulative environmental impacts to or from hazards/hazardous materials resulting from implementation of the proposed project.

Mitigation Measures

HM1

The contractor shall be required to follow the provisions of § 5163 through 5167 of the General Industry Safety Orders (California Code of Regulations, Title 8) to protect the project area from being contaminated by accidental release of any hazardous materials.

In general, the Contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the District immediately upon discovery of any potential soil or groundwater contamination.

If hazardous materials are encountered during construction or occur as a result of an accidental spill, the contractor shall halt construction immediately, notify the District, and implement remediation in accordance with the project specifications and applicable requirements of the Regional Board. Disposal of all hazardous materials shall be in compliance with current California hazardous waste disposal laws.

X HYDROLOGY & WATER QUALITY

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	□	■	□	□
b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	□	□	□	■
c. Would the project 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?	□	□	□	■
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	□	□	□	■
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?	□	□	□	■
iv. impede or redirect flows?	□	□	□	■
d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	□	□	□	■
e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	□	■	□	□

Environmental Setting

SURFACE WATER

The proposed project site is located within the Sacramento River Basin. This basin covers approximately 27,210 square miles and includes the entire area drained by the Sacramento River, including all watersheds tributary to the Sacramento River north of the Cosumnes River watershed. The basin also includes the closed basin of Goose Lake and the drainage sub- basins of Cache and Putah creeks. The principal streams are the Sacramento River and its larger tributaries, the Pit, Feather, Yuba, Bear, and American rivers to the east, and

Cottonwood, Stony, Cache, and Putah creeks to the west. Major reservoirs and lakes include Shasta, Oroville, Folsom, Clear Lake, and Lake Berryessa.

There are no designated wild or scenic rivers in the immediate project area. Cache Creek is designated as a wild or scenic river approximately three miles downstream of the project, as shown on Figure 15.

GROUNDWATER RESOURCES

The District's water supply is from wells. Konocti and Highlands are both supplied directly from Clear Lake. As shown on Figure 16, the project is located above the Clear Lake Cache Formation and Lower Lake Valley aquifers.

FLOODING

A portion of the parcel where the proposed pump station along Dam Road would be located is within the designated FEMA floodplain, as shown on Figure 17. The remainder of the project is not located within designated flooding areas.

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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
State of California

NORTH

0 5 10 20 Mile

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FIGURE 15

SCENIC RIVERS

LOWER LAKE CWD

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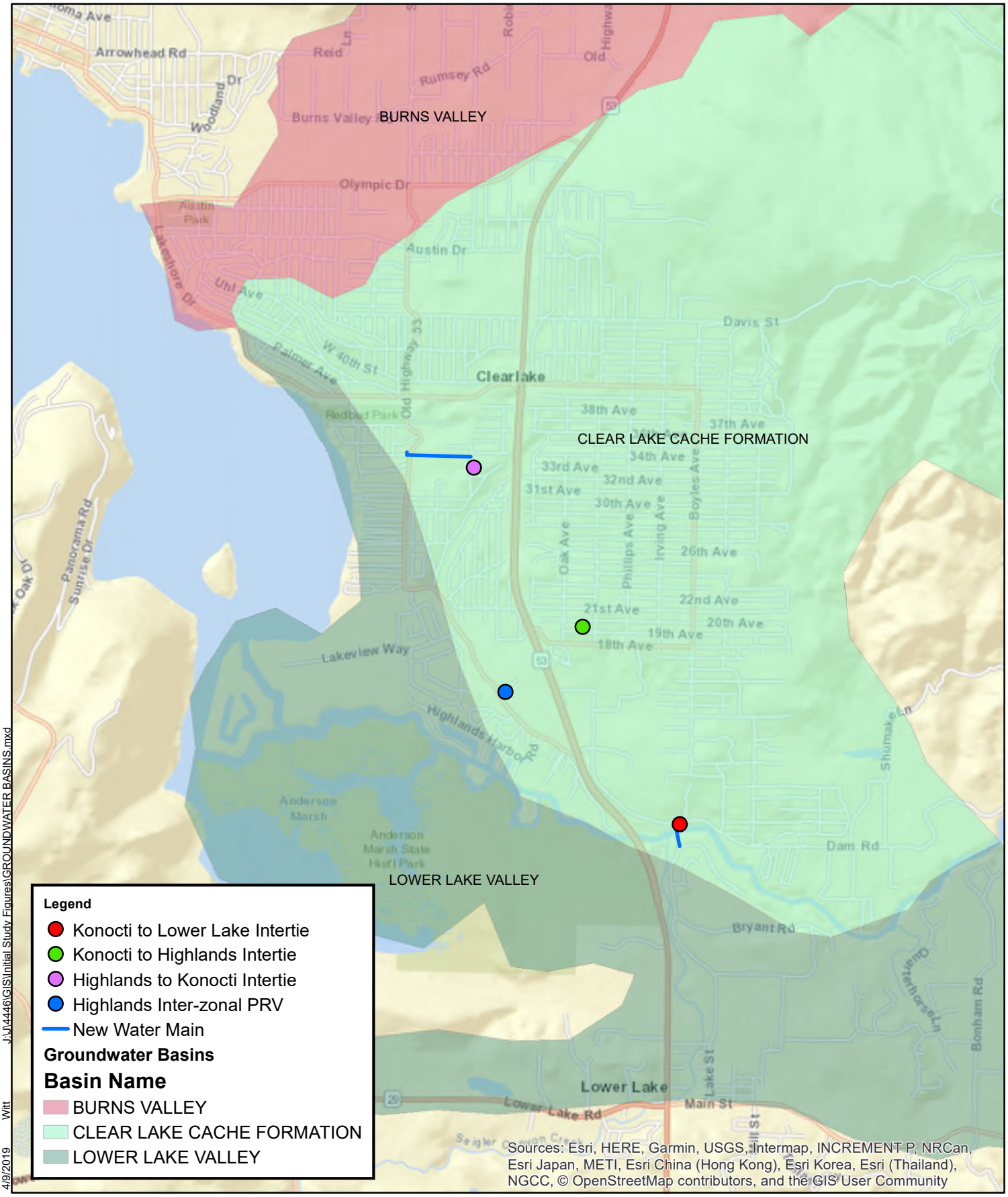

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Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
California Water Resources Control Board

NORTH

0 0.25 0.5 1 Miles

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FIGURE 16

GROUNDWATER BASINS

LOWER LAKE CWD

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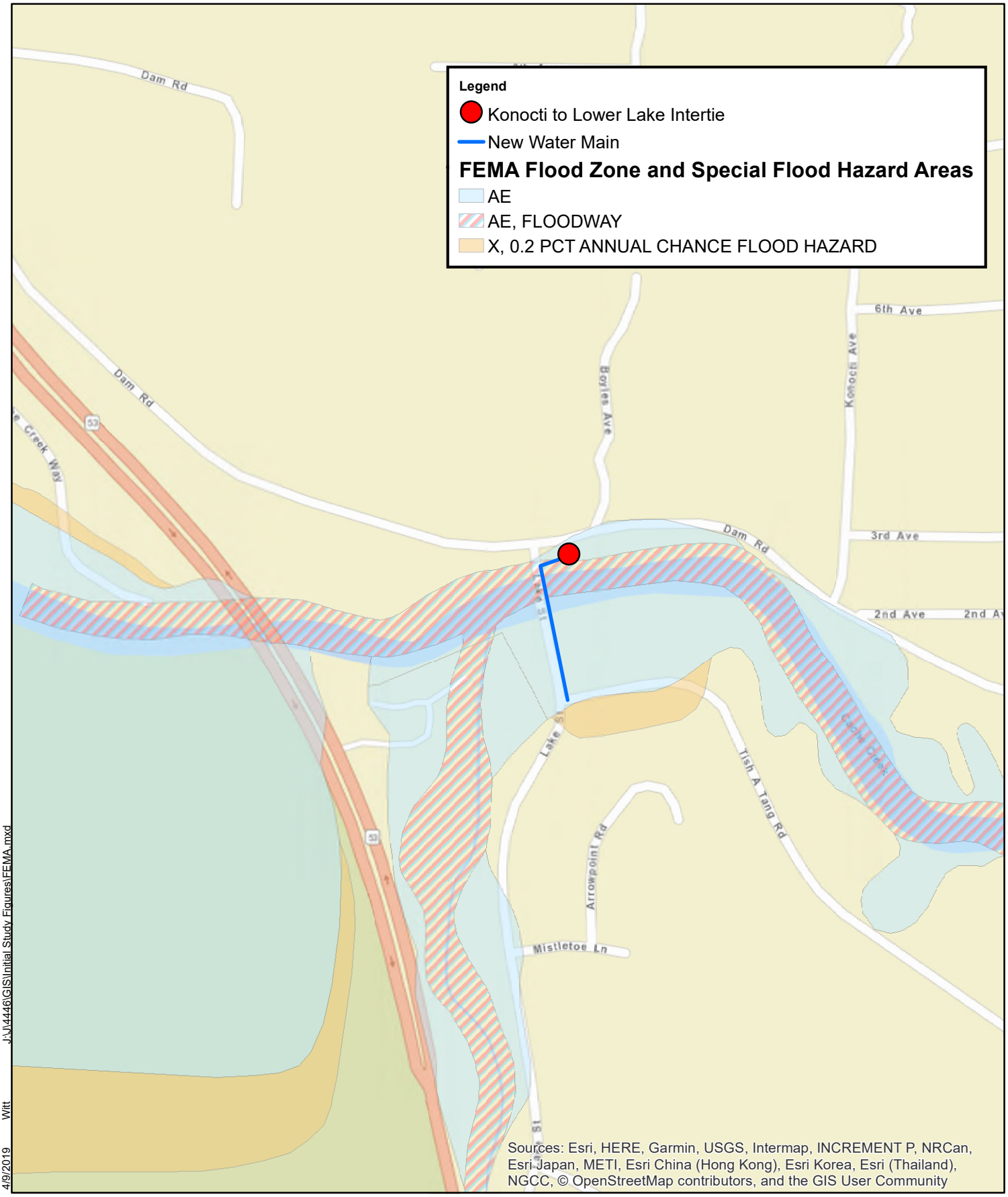

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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
FEMA

NORTH

0 200 400 800 Feet

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FIGURE 17

FEMA Flood Map

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Regulatory Setting

FEDERAL REGULATIONS

Clean Water Act

Important applicable sections of the federal CWA (33 USC 1251–1376) are identified below:

- Sections 303 and 304 provide water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the CWA. Certification is provided by the Regional Water Quality Control Board (RWQCB).
- Section 402 establishes the NPDES permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the RWQCB.

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through regional water quality control boards. The project location is regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB).

The SWRCB has issued a statewide General Permit (Water Quality Order No. 99-08-DWQ) for construction activities within the state. The Construction General Permit (CGP) is implemented and enforced by the RWQCBs. The CGP applies to construction activity that disturbs one acre or more and requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) to minimize pollutants from discharging from the construction site to the maximum extent practicable.

The SWRCB has also issued a statewide General Permit (Water Quality Order No. 97-03-DWQ) for regulating stormwater discharges associated with industrial activities. This General Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable and best conventional pollutant control technology. It also requires the development of a SWPPP, a monitoring plan, and the filing of an annual report.

Certain actions during construction may also need to conform to a General Permit (Water Quality Order No. 5-00-175) that requires that a permit be acquired for dewatering and other low threat discharges to surface waters, provided that they do not contain significant quantities of pollutants and are either (1) four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 million gallons per day (mgD). Examples of activities that may require the acquisition of such a permit include construction dewatering, pump testing, pipeline/tank pressure testing, pipeline/tank flushing or dewatering, and other miscellaneous dewatering/low threat discharges.

Lake County is listed by the CVRWQCB as an NPDES Phase II program municipality that must comply with Water Quality Order No. 2013-0001-DWQ pertaining to post-construction stormwater best management

practices (BMPs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. Permitees must meet the requirements in Provision D of the General Permit which require the development and implementation of a Storm Water Management Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The SWMP must include the following six minimum control measures:

- Public Education and Outreach on Stormwater Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in New Development
- Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations.

A SWMP was completed by Lake County, and a complete application was acknowledged by the SWRCB with a staff recommendation for approval, effective October 2003. The Lake County Clean Water Program (LCCWP) Stormwater Program was also established as a joint effort among the Lake County Watershed Protection District, Lake County, the City of Clearlake, and the City of Lakeport in an effort to reduce the impacts of increases in peak flows from development and damage caused by polluted stormwater runoff.

STATE REGULATIONS

Porter-Cologne Water Quality Act

The State of California's Porter-Cologne Water Quality Control Act (California Water Code, Section 13000 et seq.) provides the basis for water quality regulation in California. This Act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Based on the report, the RWQCBs issue waste discharge requirements to minimize the effect of the discharge.

Analysis

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The project has the potential to cause construction-related violations of water quality standards. Implementation of the proposed project would involve excavation, grading, and other construction activities involving slope and soil disturbance at all locations that may impact water quality by increasing the potential for erosion and sedimentation. Slope and soil disturbance associated with construction activities may cause accelerated soil erosion and sedimentation and/or the release of pollutants to downstream properties and facilities that could impact water quality standards or waste discharge requirements.

The State General Construction Activity Storm Water Permit (CGP) applies to construction activities that disturb one acre or more and requires the preparation and implementation of a SWPPP. The project is under the one acre threshold and not required to preparer a SWPPP. Mitigation Measure

GEO1 requires the preparation of an erosion control plan to ensure that water quality impacts would be less than significant.

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

Water has and will be provided by the three water systems from each system's independent water supply. The proposed intertie system would allow the water systems to transfer water from one service area to another to provide reliability and system resiliency. The project is not growth inducing and would not impact existing demands or groundwater levels in the project area or elsewhere. The project does not introduce any significant impervious surfaces (approximately 0.03 acre) and would not substantially interfere with groundwater recharge or groundwater basin management.

c. Would the project 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:

c.i. result in a substantial erosion or siltation on- or off-site?

The project would not substantially alter the existing area drainage at any of the project locations. New impermeable surface would be introduced at the Dam Road pump station but drainage would be provided to ensure no substantial erosion or siltation occurs. Total impervious surfaces introduced by the project is approximately 0.03 acre.

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

The project would not alter the course of a stream or river and would not substantially alter the existing drainage pattern of the sites or areas. As shown on Figure 17, the Dam Road pump station is located adjacent to the Cache Creek designated floodway but would not impact flows within the floodway.

c.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?

The project does not significantly alter existing grades in the project area or introduce any significant impervious surfaces that would impact local stormwater systems or result in substantial additional sources of polluted runoff. There is currently no post-construction stormwater treatment in the project area and none is proposed by the project due to its subterranean nature and lack of significant impervious surfaces.

c.iv. Would the project impede or redirect flows?

The majority of the project area is not within a mapped 100-year flood hazard area. As shown on Figure 17, the Dam Road pump station is located adjacent to the Cache Creek designated floodway but would not impede or redirect flows within the floodway.

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

The majority of the project area is not within a mapped 100-year flood hazard area. As shown on Figure 17, the Dam Road pump station is located adjacent to the Cache Creek designated floodway but would not risk release of pollutants in the unlikely event it is inundated. The project is not in an area subject to inundation by seiche, tsunami or mudflows.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Please see a.), above.

Cumulative Impacts

There are no adverse cumulative environmental impacts to hydrology/water quality resulting from implementation of the proposed project.

Mitigation Measures

Please see GS1 in the Geology and Soils section.

XI LAND USE & PLANNING

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project physically divide an established community?	□	□	□	■
b. Would the project 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?	□	□	□	■

Development in the project area is governed by the City of Clearlake and County of Lake General Plans, zoning ordinances and the Lower Lake Area Plan.

Analysis

a. Would the project physically divide an established community?

The project would not physically divide an established community. The project occurs within existing roadways, a water tank site and an undeveloped lot in a residential area of an existing developed community. Roadways would be restored upon completion of the project. Implementation of the project would improve water availability across the existing water systems, a beneficial impact.

b. Would the project 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?

The project would not conflict with any applicable land use plan, policy or regulation. All project components occur within public right of way or on parcels owned by project water systems. Water systems are consistent uses with applicable planning policies.

Cumulative Impacts

There are no adverse cumulative environmental impacts to land use and planning resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to land use and planning have been identified; therefore, no mitigation is required.

XII MINERAL RESOURCES

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	□	□	□	■
b. Would the project 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?	□	□	□	■

Environmental Setting

Lake County is historically known for quicksilver mining operations that occurred in the 19th and 20th Centuries. Gold was also a mineral that was mined in Lake County. The most notable quicksilver mine was the Sulphur Bank Mine located near Clearlake Oaks. This mine started operations in 1856 and was established to originally mine borax, but was then retooled to mine for sulfur. Mercury was mined intermittently from 1873 to 1957, when the mine ceased operations. The Sulphur Bank Mine is both a California Historical Landmark and a superfund site. More recently, the McLaughlin Gold Mine located east of the unincorporated community of Lower Lake and within both Lake and Napa Counties was operated by the Homestake Mining Company from 1985 until 1996. Previously the site also was used for mercury mining. The nearest known operating mine today is the Point Lakeview Rock and Redi-mix lava rock operation in the vicinity of Lower Lake. No mineral resources are currently mapped within the project area.

REGULATORY SETTING

LAKE COUNTY GENERAL PLAN

No applicable general plan or specific plan indicates that there are mineral resources of value or importance in the project area.

Analysis

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The project site does not include any known mineral resource that would be of value to the region and the residents of the state. The project would not affect the availability of any such resource.

b. Would the project 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?

The project area is not delineated in the County's General Plan, City's General Plan or Lower Lake Area Plan as a locally important mineral resource recovery site.

Cumulative Impacts

There are no adverse cumulative environmental impacts to mineral resources resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to mineral resources have been identified; therefore, no mitigation is required.

XIII NOISE

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in 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?	□	■	□	□
b. Would the project result in generation of excessive ground borne vibration or ground borne noise levels?	□	□	□	■
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?	□	□	□	■

Environmental Setting

This section includes a description of the terminology and concepts related to noise, blasting, and vibration impacts that are considered in the analysis. This section also includes a discussion of the existing environmental conditions related to noise-sensitive receptors and ambient conditions found in rural areas such as the project vicinity.

NOISE-SENSITIVE USES

Noise-sensitive land uses in the project area are nearby single and multi-family residences. There are residential uses located adjacent to all of the proposed project locations.

NOISE CONDITIONS

Existing ambient sound levels in the project area can be considered typical of a residential environment. Sources of noise in the area come primarily from traffic along local two-lane roadways and Highway 53.

CONSTRUCTION NOISE

The types of equipment that would be used to construct the proposed pipeline include asphalt/concrete trucks, backhoes, compactors, compressors, 10-wheel dump trucks, tracked excavators, forklifts, front-end loaders, jackhammers, paving equipment, flat-bed delivery trucks (pickup trucks), and water trucks.

The table below presents the typical noise levels for the construction equipment listed above based on a worst-case scenario including several pieces of the loudest equipment (running simultaneously). This includes

the typical measured A-weighted Lmax noise levels (maximum noise level) that would occur at a 50-foot distance from the construction site. The acoustical use factor is the fraction of time that the equipment would typically be in use over a 1-hour period.

Equipment	Acoustical Use Factor	Typical Noise Level (Lmax)[1]
Asphalt/Concrete Truck[2]	40%	76
Backhoe	40%	78
Compactor	20%	83
Compressor	40%	78
Crane	16%	81
Dump Truck	40%	76
Excavator	40%	81
Forklift[3]	40%	75
Front-End Loader	40%	79
Jackhammer	20%	89
Paver	50%	77
Pickup Truck	40%	75
Roller	20%	80
Water Truck[2]	40%	76

Source: Federal Highway Administration 2006

1 dBA, A-weighted decibel level (measured at 50 feet)

2 Based on data for dump truck

3 Based on data for pickup truck

OPERATIONAL NOISE

During operation, the proposed project would not create noise that would be audible. Water mains would be installed below ground and do not emit noise. The pump station would be placed inside of a building to attenuate noise and modifications to existing piping would not alter operational noise conditions.

Regulatory Setting

LOCAL REGULATIONS

Lake County General Plan Noise Exposure Limits

In accordance with the State Guidelines for General Plans, the Lake County General Plan provides guidance for the acceptability of projects within specific noise level criteria. Noise associated with construction activities occurring between 7:00 a.m. and 7:00 p.m. are exempted from the provisions of the Lake County noise ordinance.

City of Clearlake Noise Restrictions

Section 5-4.4 of the City code states:

I. No person shall produce any noise by any means between the hours of 10:00 p.m. and 7:00 a.m. which when measured within fifty (50') feet of any dwelling or transient accommodation exceeds 55 decibels. "Dwelling" includes apartments, duplexes, mobile homes, and conventional single-family residences. "Transient accommodation" includes hotels, motels, hospitals, travel trailer parks and campgrounds.
II. No person shall produce any noise by any means which measures in excess of 65 decibels at a distance within fifty (50') feet of any dwelling or transient accommodation between the hours of 7:00 a.m. and 10:00 p.m. with the following exceptions:

A. Pursuant to permission granted by the Building Official in any case where a building permit has been obtained, or by the City Engineer in any case where public work not requiring a building permit is being performed, construction equipment may be operated during daylight hours which produces noise up to a level of 80 decibels when measured at a distance of one hundred (100') feet from the source. The Building Official and City Engineer may impose a lesser maximum permissible level in any situation where local complaints demonstrate the existence of a problem and where, in the opinion of the official involved, the lesser limit would not impose an unreasonable burden on the work of construction. The preceding noise limit shall not apply to impact tools and equipment if the official is satisfied that the contractor or other builder has taken reasonable steps to control and reduce noise, such as mufflers and acoustically attenuating shields.

Analysis

a. Would the project result in 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?

The project would not result in any significant long-term increases in noise levels in the project vicinity. Homes in the project vicinities would be subject to construction-related noise. Proposed improvements at the intertie locations would not involve heavy construction equipment that would violate the County or City noise standards outlined above.

Provided the general construction activities (as defined by the County's noise ordinance) occur between 7:00 a.m. and 7:00 p.m., there would be no statutory noise impact related to general construction activities along the pipeline installation in Lake Street or the Dam Road pump station. Implementation of Mitigation Measure N1 would further reduce construction-related noise.

Construction of the 8-inch transmission main in Konocti View Road would likely result in periodic exceedances of the City's noise standard of 80 decibels when measured at a distance of 100 feet from the source. Based on typical noise levels associated with equipment used to construct pipelines contained in the table above, construction activities are expected to result in a temporary increase in noise levels that exceed the City's established noise criteria by one to five decibels. It is anticipated that the pipeline construction would average approximately 100 feet per day so no one location would be impacted by excessive noise levels for more than a few days at a time. Construction and demolition at the pump stations would last longer but the majority of the loud construction equipment utilized for demolition would be short-term. While construction-related noise would likely exceed the City's

thresholds, Mitigation Measure N1 would reduce such temporary construction-related noise to a less than significant level.

b. Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

Implementation of the project would not result in the exposure of people to or the generation of groundborne vibration or noise levels. No pile driving, blasting or similar construction techniques that would generate such vibration are required.

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?

There are no active public use airports within two miles of the project area. The abandoned airport in Clearlake is not part of an airport land use plan and is not operational. The project would not alter the existing noise environment resulting from air traffic.

Cumulative Impacts

There are no adverse cumulative environmental impacts to noise resulting from implementation of the proposed project.

Mitigation Measures

N1

The following measures shall be implemented at the construction site to reduce the effects of construction noise on adjacent residences:

- Noise-generating activities at the construction sites or in areas adjacent to the construction sites associated with the project in any way shall generally be restricted to the hours of 7:00 a.m. to 7:00 p.m. Any work outside of these hours shall require a special permit from the City of Clearlake. There should be a compelling reason for permitting construction outside the designated hours.
- For work along Konocti View Road, Spruce Avenue, and Lake Street, the District shall provide notice to all residents within 100 feet of the construction activities at least 48 hours prior to commencing construction. The notice shall include the contact information for the District's noise disturbance coordinator and the anticipated construction schedule.
- Equip all internal combustion engine driven equipment with intake and exhaust mufflers which are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Staging of construction equipment and all stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be staged as far as practical from existing noise sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

- Control noise from construction workers' radios to the point where radio noise is not audible at existing residents bordering the project site.
- Notify adjacent residents to the project site of the construction schedule in writing.

XIV POPULATION & HOUSING

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project 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)?	□	□	□	■
b. Would the project displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	□	□	□	■

Analysis

a. Would the project 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)?

The project would not induce population growth. The project provides an intertie between the three existing water systems to improve reliability.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No housing would be displaced by the project. The project is specifically intended to facilitate the long-term ability to provide the existing community with water service.

Cumulative Impacts

There are no adverse cumulative environmental impacts to population and housing resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to population and housing have been identified; therefore, no mitigation is required.

XV PUBLIC SERVICES

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project 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:				
i. Fire protection?	□	□	□	■
ii. Police protection?	□	□	□	■
iii. Schools?	□	□	□	■
iv. Parks?	□	□	□	■
v. Other public facilities?	□	□	□	■

Environmental Setting

The project area falls within the jurisdiction of the Clearlake Police Department and the Lake County Sheriff. Fire protection services to the project area are provided by Lake County Fire Protection District with fire stations in Clearlake and Lower Lake. The project area is served by the Konocti Unified School District

Analysis

a. Would the project 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:

a.i. Fire protection?

The project would not have any negative effect on fire protection services. The project does not alter above ground conditions or access to/from the project area. The project provides the benefit of increased water availability within the project area available to each water system.

a.ii. Police protection?

The project is not growth inducing and would not impact police protection.

a.iii. Schools?

The proposed project is a water system intertie project and would not have a long-term impact to schools.

a.iv. Parks?

The project would not impact any parks.

a.v. Other public facilities?

The project would not impact other public facilities.

Cumulative Impacts

There are no adverse cumulative environmental impacts to public services resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to public services have been identified; therefore, no mitigation is required.

XVI RECREATION

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
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?	□	□	□	■
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?	□	□	□	■

Environmental Setting

There are no neighborhood or regional parks or other recreational facilities in the immediate project areas. The closest recreation areas include Anderson Marsh Historical Park and Redbud Park.

Analysis

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?

The project is not growth inducing and would not increase use of existing neighborhood and regional parks or other recreational facilities. The project would not impact any parks.

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?

The project does not include recreational facilities or alter such facilities in any way.

Cumulative Impacts

There are no adverse cumulative environmental impacts to recreation resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to recreation have been identified; therefore, no mitigation is required.

XVII TRANSPORTATION

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	□	□	□	■
b. Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	□	■	□	□
c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	□	□	□	■
d. Would the project result in inadequate emergency access?	□	■	□	□

Environmental Setting

The project area is located in the northerly portion of the community of Lower Lake and within the City of Clearlake. State Highway 53 provides access to the area and internal roads provide access to individual residences within the community.

Analysis

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project does not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The project is partially located within roadways but would not have a long-term impact on an applicable transportation plan, ordinance or policy.

b. Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

The project does not conflict with and is not inconsistent with CEQA Guidelines § 15064.3, subdivision (b). The project does not increase vehicle trips to or from the project area. Where the project impacts roadways, roadway surfaces would be restored to existing conditions or improved upon project completion.

Roadways would be impacted by short-term construction associated with transmission main construction. Construction would reduce access to vehicle, pedestrian and bike traffic within those

locations. Standard traffic control mitigation provided in TT1 would reduce these impacts and ensure traffic flow and access to driveways when active construction is not underway.

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

The project would not increase design hazards. Road surfaces would be restored to existing conditions in the portions of the transmission main constructed in roadways.

d. Would the project result in inadequate emergency access?

The project would not have any long-term impact to emergency access since roadways would be restored to existing conditions. Construction in roadways could impact emergency response during construction. Mitigation Measure TT2 requires the contractor to maintain emergency access and reduces such impact to less than significant.

Cumulative Impacts

There are no adverse cumulative environmental impacts to transportation/traffic resulting from implementation of the proposed project.

Mitigation Measures

TT1

The contractor shall develop and submit an appropriate Traffic Control Plan (TCP) in accordance with the California Manual of Uniform Traffic Control Devices (MUTCD) for review and approval by the District, County and City for all project elements that impact traffic circulation. The TCP shall also include notifying adjacent businesses and residents of the construction schedule and when it will impact access. The TCP shall ensure thru traffic and temporary driveway access during periods where active construction is not taking place.

TT2

The contractor shall provide advanced notice regarding timing, location and the duration of construction activities to local emergency responders. The contractor shall ensure emergency responders can have access through construction areas in roadways at all times.

XVIII TRIBAL CULTURAL RESOURCES

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 Resources Code section 5020.1(k), or	□	■	□	□
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 Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	□	■	□	□

REGULATORY SETTING

Assembly Bill 52 (AB52), the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. AB52 established a formal consultation process for California Native American Tribes to be conducted with the CEQA process. All projects that file a notice of intent to adopt a mitigated negative declaration after July 1, 2016, are subject to AB52 which added tribal cultural resources (TCR) protection under CEQA. A TCR is defined as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register, or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a TCR. AB52 also mandates lead agencies to consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

Analysis

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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:

a.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 Resources Code section 5020.1(k)?

As described in the Cultural Resources section, the Archaeological Research Center (ARC) reports that previous research has determined that one historic site (CA- LAK-1798H) lies within the APE. The archaeological field survey did not find any new resources or relocate any surface remains associated with CA- LAK-1798H in or directly adjacent to the project area.

CA-LAK-1798H was located in the vicinity of one proposed pump house location. The original site record describes a mid-twentieth century debris scatter, rock lined well, boat ramp, and stone foundation (Meyer 1993). During the field investigation, none of the features were relocated, and only a short segment of galvanized pipe was found on the site. It appears ongoing creek bank erosion and stabilization work has completely destroyed the site. CA-LAK-1798H has been destroyed by a combination of natural erosion and creek side maintenance.

ARC determined there would be no impact to existing known historical resources. However, there is always the possibility of accidental discovery of historical resources during construction. In the event resources are discovered, mitigation measure CR1, contained in the Cultural Resources section, would reduce such impact to less than significant.

a.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 Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Known archaeological resources were described in the Cultural Resources section of this document. As currently designed, the Project APE encompasses portions of four archaeological sites and one archaeological district. CA-LAK-509 (P-17-000025) and CA-LAK-510 (P-17-000026) are both listed as contributing elements of the National Register listed Anderson Marsh Archaeological District (P-17- 002627). Proposed work within CA-LAK-509 is limited to a peripheral area that has been shown through prior field studies to contain only redeposited cultural material. Proposed work at CA-LAK-510 is limited to material staging within an existing developed shopping center parking lot. CA-LAK-1818/H (P-17- 000051) is outside of the ADI and is included within the APE only because its boundaries are encompassed by those of CA-LAK-510. The remaining site, CA-LAK-1798H (P-17-001899) has been destroyed by a combination of natural erosion and creek side maintenance.

As part of the AB52 tribal consultation process, project information was sent via certified mail to the following tribes by the District on January 24, 2019:

- Elem Indian Colony of Pomo Indians
- Koi Nation of Northern California
- Middletown Rancheria of Pomo Indians of California
- Mishewal-Wappo Tribe of Alexander Valley

Certified mail receipts were received for the Middletown Rancheria of Pomo Indians of California and the Middletown Rancheria of Pomo Indians of California on January 31, 2019. Follow up calls were made to the Middletown Rancheria of Pomo Indians of California and the Koi Nation of Northern California on February 7, 2019. Subsequent materials were sent to the Koi Nation of Northern California electronically by their request. No further comments have been received.

Based on the ARC conclusion that no archaeological resources would be impacted and none of the contacted tribes requesting consultation, it is considered unlikely that the project would impact Tribal Cultural Resources. However, there is always the possibility of accidental discovery of archaeological resources during construction. In the event resources are discovered implementation of mitigation measure CR1, contained in the Cultural Resources section, would reduce such impact to less than significant.

Cumulative Impacts

There are no adverse cumulative environmental impacts to tribal cultural resources resulting from implementation of the proposed project.

Mitigation Measures

Please see Mitigation Measure CR1 contained in the Cultural Resources section.

XIX UTILITIES & SERVICE SYSTEMS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project 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?	□	□	□	■
b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	□	□	□	■
c. Would the project 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?	□	□	□	■
d. Would the project 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?	□	□	□	■
e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	□	□	■

Environmental Setting

The water systems currently provide water service to the project areas. The major Lake County landfill is the South Lake Refuse and Recycling Center, located in the City of Clearlake, approximately ten miles from the project area. Wastewater treatment in the project area is provided by public sewer and by individual septic systems.

Analysis

a. Would the project 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?

The project would not require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. The project includes intertie of three existing water service areas and is subject to environmental review in this document. The project is not growth inducing and would not increase demand for utilities in the service areas.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project is a water intertie project, is not growth inducing and would not increase demand for water. Existing water supplies are sufficient to meet existing demands and no new entitlements are required.

c. Would the project 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?

The project does not alter the existing septic systems or the wastewater treatment in the project area.

d. Would the project 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 increase in solid waste generation would occur as the project would not increase solid waste demands or impair attainment of solid waste reduction goals. Demolition materials would be processed according to state regulations.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would comply with federal, state and local statutes and regulations related to solid waste.

Cumulative Impacts

There are no adverse cumulative environmental impacts to utilities and service systems resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to utilities and service systems have been identified; therefore, no mitigation is required.

XX WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	□	■	□	□
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	□	□	□	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	□	□	□	■
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	□	□	□	■

Environmental Setting

The Lake County Emergency Response Plan facilitates response by the Lake County Department of Health Services when medical and health services are required as a result of catastrophic events. Areas within the City of Clearlake are served by the Lake County Fire District and the Clearlake Police Department. The primary threats to Lake County include earthquakes and aftershocks, hazardous materials releases, transportation accidents, levee or dam failure and floods, landslides, national security incidents, and wildfires.

The project is located within the Lake County Fire Protection District and included in the County's 2018 Lake County Emergency Operations Plan[22] and the Draft 2017 Lake Operational Area, Lake County Emergency Operations Plan, Urban and Wildland Interface Annex[23]. Fire protection in the area is divided among three responsibility areas: Federal, CalFire and Local (Lake County Fire Protection District). Lake County Fire Protection District operates three fire stations near the project area. CalFire has also designated fire hazard risks for land within their responsibility area. This information is portrayed on Figure 18.

[22] 2018 Lake County Emergency Operations Plan. Office of Emergency Services. May 1, 2018.
[23] Draft 2017 Lake Operational Area Lake County Emergency Operations Plan, Urban and Wildland Interface Annex. Lake County Fire Chief's Association.

Lake County has been subject to multiple wildfires each year over the last several years. More than half of the county has burned since 2012. Historic wildfires in the project area reported by CalFire are listed below and shown on Figure 19.

Year	Fire Name	Acres
1950	SEIGLER CANYON	7243
1961	DUMP #2 (HIGHLANDS)	608
1967	39TH STREET	3399
1981	SCHOOLTEACHER HILL	551
2000	MORGAN	3316
2016	CANYON	11
2016	KUGELMAN	62
2016	CLAYTON	3928

Analysis

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

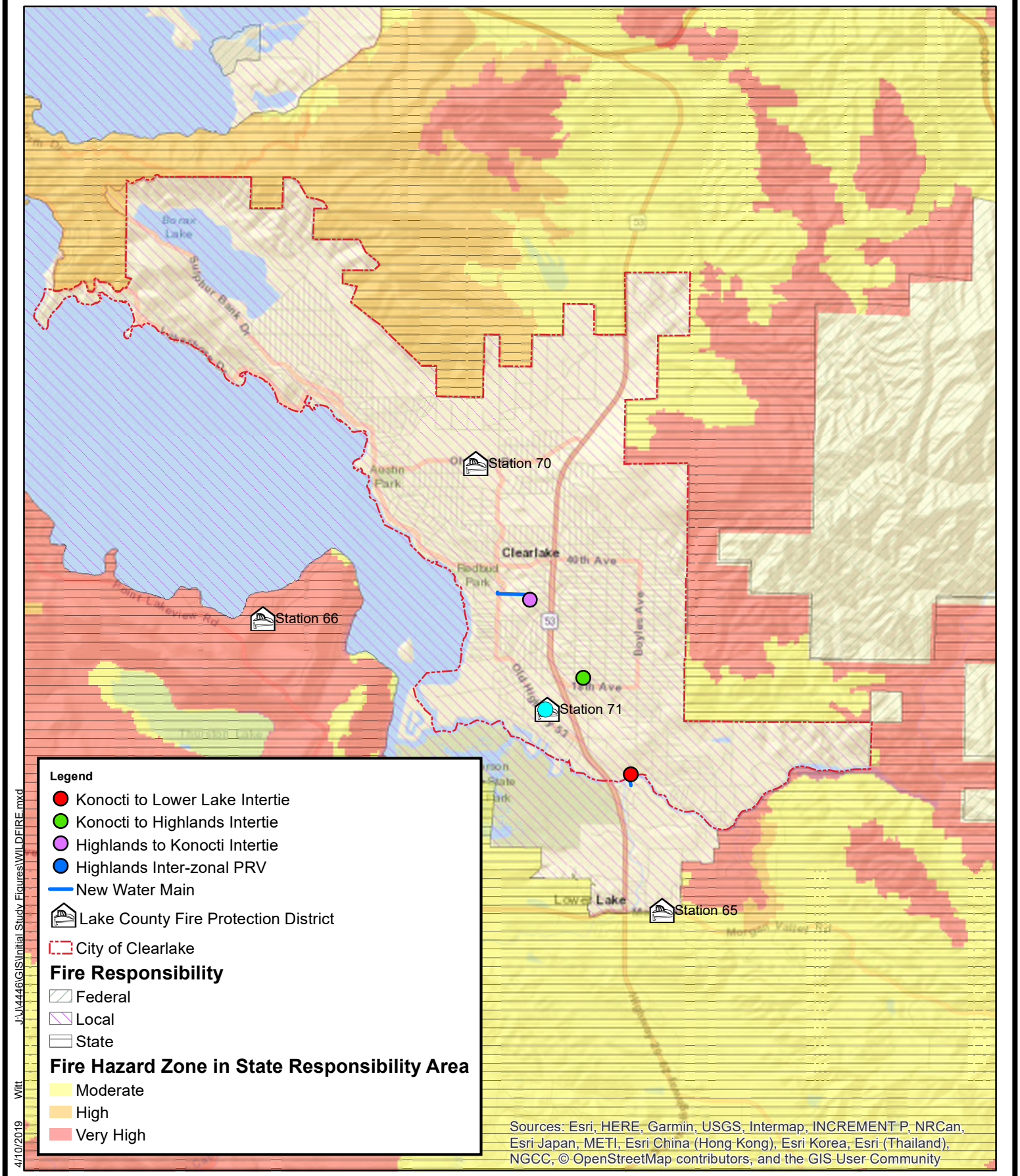
The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The project would bolster water supplies across the three existing water service areas by proving a way to transfer water from one service area to another, improving firefighting capacities within the service acres. The project would not have any long-term impact to emergency access since roadways would be restored to existing conditions. Construction in roadways could impact emergency response during construction. Mitigation Measure TT2, in the Transportation section, requires the contractor to maintain emergency access and reduces such impact to less than significant.

b. Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project modifies existing infrastructure and includes construction of below ground water mains to intertie the three existing water service areas. The project would improve firefighting ability by increasing water available to firefighters.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project modifies existing infrastructure and includes construction of below ground water mains to intertie the three existing water service areas. The project does not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. The project would improve firefighting ability by increasing water available to firefighters.



JJJ\4446\GIS\Initial Study Figures\WILDFIRE.mxd
Witt
4/10/2019

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
CalFire

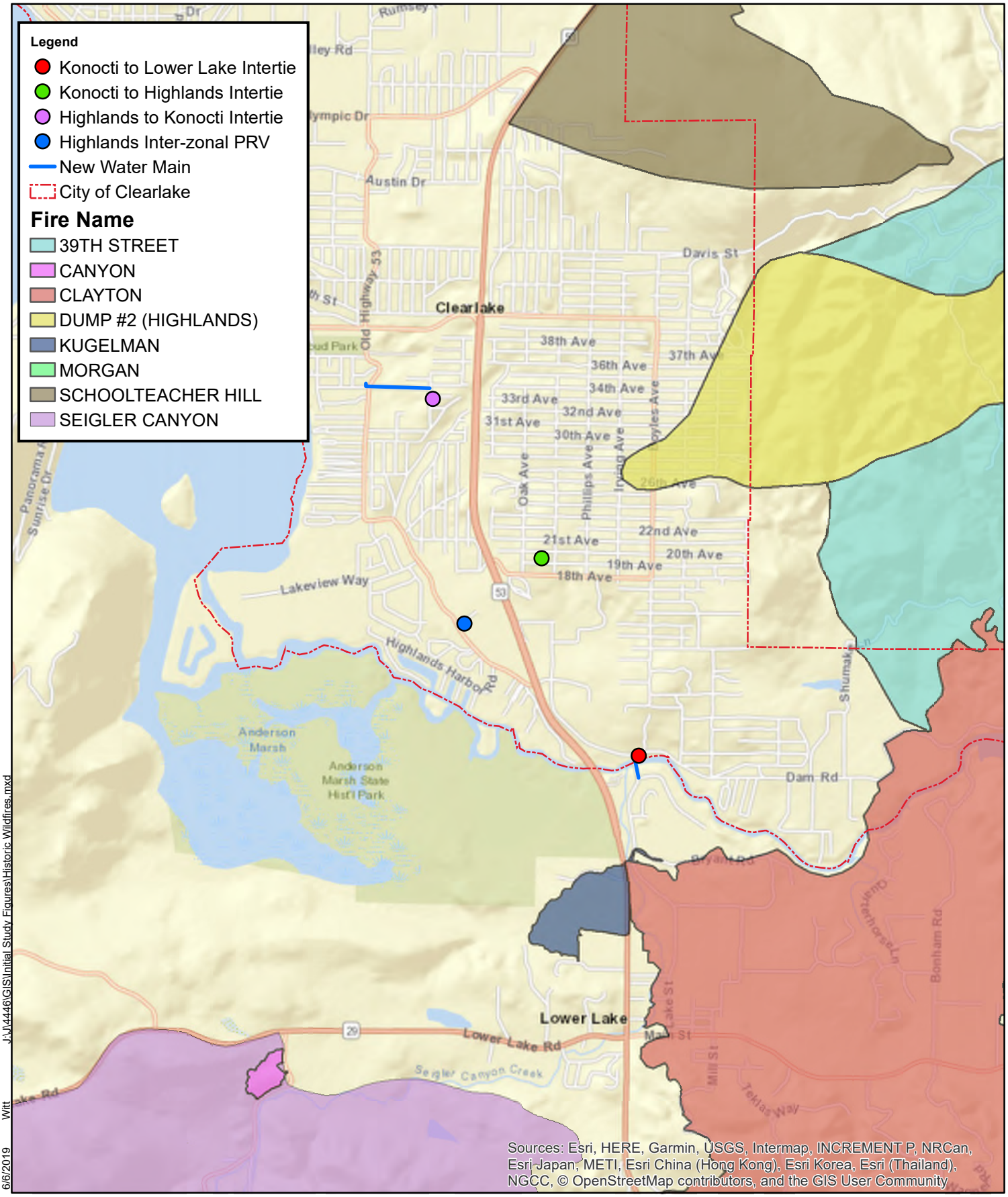
NORTH

0 0.5 1 2 Miles

Brelje & Race
CONSULTING ENGINEERS
475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE 18
WILDFIRE RISK AND RESPONSIBILITY AREAS

LOWER LAKE CWD
MAY 2019



6/6/2019 Witt J:\J4446\GIS\Initial Study Figures\Historic Wildfires.mxd

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

DATA SOURCES
Parcels: County of Lake
Streets: County of Lake
California Water Resources Control Board

NORTH

0 0.25 0.5 1 Miles

Brelje & Race CONSULTING ENGINEERS
475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE 19

HISTORIC WILDFIRES

LOWER LAKE CWD

MAY 2019

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project does not alter existing risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project increases firefighting capabilities in the area.

Cumulative Impacts

There are no adverse cumulative environmental impacts from wildfire resulting from implementation of the proposed project.

Mitigation Measures

Please see Mitigation Measure TT1 contained in the Traffic section.

XXI 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?

With implementation of the mitigation measures provided in this document, the project is not expected to have a significant adverse impact on the habitat of any plant or animal species, humans or historic or prehistoric resources. Furthermore, the project would not substantially degrade the environment or reduce the level of an endangered or otherwise important plant or animal population below self-sustaining levels. This impact is considered less than significant with incorporation of the proposed mitigation measures.

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 probable future projects)?

Implementation of the proposed mitigation measures would reduce impacts to less than significant levels. Because no impact is considered to be individually significant, there would be no contribution to a significant cumulative effect. Therefore, this impact is less than significant with incorporation of the proposed mitigation measures.

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

With implementation of the mitigation measures provided in this document, the project is not expected to cause substantial adverse effects on human beings either directly or indirectly. Mitigation measures reduce any such potential to less than significant.

DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ■ I find that although 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.

Todd Fiora

Signature

6/25/19

Date

Todd Fiora, General Manger

Printed Name

For:

Lower Lake County Waterworks District No. 1

DOCUMENT PREPARATION AND SOURCES

2018 Lake County Emergency Operations Plan. Office of Emergency Services. May 1, 2018.

Biological Resources Report, Lower Lake/Konocti Highlands Emergency Intertie Project, Lake County, CA. SolEcology, Inc. March 28, 2019.

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Lake County General Plan. Lake County Community Development Department. 2008.

Lake County Zoning Ordinance

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Lake County Important Farmland 2016. California Department of Conservation Farmland Mapping and Monitoring Program. 2016.

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Paleontological Collecting. 1987. National Academy Press. Washington, DC.

Websites

http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/

https://www.energy.ca.gov/renewables/history.html

https://www.energy.ca.gov/2018_energypolicy/

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https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2018/10-18_PowerContent.pdf

https://www.energy.ca.gov/2018publications/CEC-100-2018-001/Exec_Sumry_CEC-100-2018-001-V2-CMF.pdf

http://www.arb.ca.gov/desig/adm/adm.htm

https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

Prepared by:

Justin Witt—Environmental Planner

APPENDIX A: MITIGATION MONITORING AND REPORTING PLAN

Lower Lake Emergency Water Intertie
June 2019

Pursuant to Section 21081.6 of the State CEQA Guidelines[1], the mitigation measures listed in this Mitigation Monitoring and Reporting Plan (MMRP) are to be implemented as part of the proposed project. The MMRP identifies the time at which each mitigation measure is to be implemented and the person or entity responsible for implementation. The initials of the designated responsible person will indicate completion of their portion of the mitigation measure. The Lower Lake County Water District (District) project manager's signature on the Certification of Compliance will indicate complete implementation of the MMRP.

The mitigation measures included in the MMRP are considered conditions of approval of the proposed project. The District agrees to implement the mitigation measures proposed in the MMRP. Implementation of the mitigation measures included in the MMRP is expected to avoid, minimize, rectify, reduce, or compensate potentially significant impacts to a less than significant level.

TIME OF IMPLEMENTATION

Project Design:	The mitigation measure will be incorporated into the project design and/or included in the project specifications and contract special provisions prior to issuing final permits.
Pre-construction:	The mitigation measure will be implemented prior to project construction.
Construction:	The mitigation measure will be implemented during construction.

RESPONSIBLE PERSONS AND DEPARTMENTS

The District as Lead Agency will be responsible for the overall implementation of the MMRP. The District's project manager will oversee the project's compliance with the MMRP. The District's project manager will sign off on the mitigation measures included in the MMRP. Periodically, other District staff, consultants or regulatory agencies will be involved in the implementation of specific mitigation measures. In these instances, the staff, department, or agency will be identified in the MMRP.

CERTIFICATION OF COMPLIANCE

The District will be responsible for providing signatures on the Certification of Compliance. The Certification of Compliance is a double-check to ensure that the MMRP was fully implemented.

RECORD KEEPING

The District's project manager will maintain the records of the MMRP. When the MMRP is fully implemented, the original signed copy will be maintained by the District.

1 California Code of Regulations Title 14.

CERTIFICATION OF COMPLIANCE

Complete the Certification of Compliance after mitigation measures have all been initialed. Use this Certification of Compliance to ensure the full implementation of each mitigation measure.

Project Design

The District's project manager has reviewed the project design, the plans, and the contract special provisions to verify that designated mitigation measures have been incorporated.

Signature & title Date

Pre-construction

The District's project manager has verified that designated mitigation measures were implemented prior to construction.

Signature & title Date

Construction

The District's project manager has verified that designated mitigation measures were implemented during construction.

Signature & title Date

AIR QUALITY

AQ1 The following Feasible Control Measures, as described by the Bay Area Air Quality Management District, shall be implemented during construction to minimize fugitive dust and 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 or be covered.
- 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 day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed or stabilized as soon as possible. Building slabs shall be poured as soon as possible after grading unless seeding or soil binders are used to stabilize the pad.
- 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 airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with the telephone number and person to contact at the District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The LCACMD's phone number shall also be visible to ensure compliance with applicable regulations.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Construction: The District's project manager or District grading inspector and building inspector(s) shall ensure that Mitigation Measure AQ1 is being complied with during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials Date

BIOLOGICAL RESOURCES

BIO1 To avoid impacts to migratory birds (Protected under MBTA and CDFG Code), all construction-related activities shall be initiated during the non-nesting season from September 1 to January 31 to prevent any impacts to nesting birds. If work cannot be initiated outside the nesting season, the following measures are recommended:

- A qualified biologist should conduct a pre-construction nesting bird survey in accessible areas within 100 feet of the project Sites.
- If nests are detected, an appropriate no-disturbance buffer should be established around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Factors to be considered for determining buffer size will include: status of the nest and species; the presence of natural buffers provided by vegetation or topography; nest height; and baseline levels of noise and human activity. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.
- Bird deterrent methods may be employed under the direction of a qualified biologist to prevent birds from nesting under the Lake Street Bridge.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Pre-construction: The District's project manager shall ensure that Mitigation Measure BIO1 is being complied with prior to construction. Failure to comply shall result in inspections or issuance of a stop work order until corrective action is taken to comply.

Initials Date

BIO2 To avoid potential impacts to fringed myotis bat and pallid bats, work on the Lake Street Bridge shall occur outside the maternity and/or hibernation season to the extent practical. If work cannot occur within the work window between September 1 and November 15, then the following measures are recommended to ensure impacts to special status bats are avoided:

1. A nighttime bat emergence survey with acoustic monitoring should be performed. If bats are observed exiting the roost, bridge work (as well as any noise-producing activities in close proximity) should be delayed until outside the maternity season to ensure impacts are avoided.
2. Alternatively, a nighttime bat emergence survey may be performed prior to the maternity season and if no bats are present, the entrance holes may be blocked off to prevent bats from entering the bridge cell prior to construction activities.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Pre-construction: The District's project manager shall ensure that Mitigation Measure BIO4 is being complied with during construction. Failure to comply shall result in inspections or issuance of a stop work order until corrective action is taken to comply.

Initials Date

CULTURAL RESOURCES

CR1 The project plans and specifications shall provide that in the event prehistoric-era or historic-era archaeological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. Prehistoric-era archaeologic site indicators could include chipped chert and obsidian tools and tool manufacture waste flakes, grinding implements such as mortars and pestles, and locally darkened soil containing the previously mentioned items as well as fire altered stone and dietary debris such as bone and shellfish fragments. Historic-era archaeologic site indicators could include items of ceramic, glass and metal, and features such as structural ruins, wells and pits containing such artifacts. After cessation of excavation, the contractor shall immediately contact the District. The District shall contact a qualified professional archaeologist immediately after the find. Such archaeologist shall conduct an evaluation of significance of the site, and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from the District.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals. District shall confirm that tribal consultation has resulted in the required monitoring plan.

Initials Date

Construction: The District's project manager will verify that the mitigation measure is implemented during construction through routine inspections of during ground disturbing work. Failure to comply shall result in issuance of a stop work order until corrective action is taken.

Initials Date

CR2 If human remains are encountered during grading, excavation or trenching, all construction activity shall cease and the contractor shall immediately contact the District and the Lake County Coroner's Office. If the remains are determined by the Coroner's Office to be of Native American origin, the Native American Heritage Commission shall be contacted and the procedures outlined in CEQA §15064.5 (d) and (e) shall be implemented by the District or its designee.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Construction: The District's project manager will ensure that required measures are followed in the event of discovery of human remains.

Initials Date

GEOLOGY AND SOILS

GS1 The District shall prepare an erosion control plan for the project. Appropriate BMPs will be implemented by the project to minimize construction-related erosion and runoff. BMPs include, but are not limited to:

- Schedule construction activities during dry weather. Keep grading operations to a minimum during the rainy season (October 15 through April 15).
- Protect established vegetation where possible.
- Stabilize construction entrances and exits to prevent tracking onto roadways.
- Protect exposed slopes from erosion through preventative measures. Cover the slopes to avoid contact with storm water by hydroseeding, applying mulch or using plastic sheeting.
- Install straw wattles and silt fences on contour to prevent concentrated flow. Straw wattles should be buried 3 to 4 inches into the soil, staked every 4 feet, and limited to use on slopes that are no steeper than 3 units horizontal to 1 unit vertical. Silt fences should be trenched 6 inches by 6 inches into the soil, staked every 6 feet, and placed 2 to 5 feet from any toe of slope.
- Designate a concrete washout area to avoid wash water from concrete tools or trucks from entering gutters, inlets or storm drains. Maintain washout area and dispose of concrete waste on a regular basis.
- Establish a vehicle storage, maintenance and refueling area to minimize the spread of oil, gas and engine fluids. Use oil pans under stationary vehicles.
- Protect drainage inlets from receiving polluted storm water through the use of filters such as fabrics, gravel bags or straw wattles.
- Check the weather forecast and be prepared for rain by having necessary materials onsite before the rainy season.
- Inspect all BMPs before and after a storm event. Maintain BMPs on a regular basis and replace as necessary.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials _____ Date _____

Construction: The District's project manager or inspector(s) shall verify that the mitigation measure is implemented during construction periods and respond to any erosion issues.

Initials _____ Date _____

GEOLOGY AND SOILS

GS2 The project plans and specifications shall provide that in the event paleontological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. After cessation of excavation, the contractor shall immediately contact the District. The District shall contact a qualified professional geologist or paleontologist immediately after the find. Such consultant shall conduct an evaluation of significance of the site, and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from the District.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Construction: The District's project manager or inspector(s) shall verify that the mitigation measure is implemented during construction periods.

Initials Date

HAZARDS/HAZARDOUS MATERIALS

HM1 The contractor shall be required to follow the provisions of § 5163 through 5167 of the General Industry Safety Orders (California Code of Regulations, Title 8) to protect the project area from being contaminated by accidental release of any hazardous materials.

In general, the Contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the District immediately upon discovery of any potential soil or groundwater contamination.

If hazardous materials are encountered during construction or occur as a result of an accidental spill, the contractor shall halt construction immediately, notify the District, and implement remediation in accordance with the project specifications and applicable requirements of the Regional Board. Disposal of all hazardous materials shall be in compliance with current California hazardous waste disposal laws.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Construction: The District's project manager will verify that the mitigation measure is incorporated into project construction, as appropriate.

Initials Date

NOISE

N1 The following measures shall be implemented at the construction site to reduce the effects of construction noise on adjacent residences:

- Noise-generating activities at the construction sites or in areas adjacent to the construction sites associated with the project in any way shall generally be restricted to the hours of 7:00 a.m. to 7:00 p.m. Any work outside of these hours shall require a special permit from the City of Clearlake. There should be a compelling reasons for permitting construction outside the designated hours.
- For work along Konocti View Road, Spruce Avenue, and Lake Street, the District shall provide notice to all residents within 100 feet of the construction activities at least 48 hours prior to commencing construction. The notice shall include the contact information for the District's noise disturbance coordinator and the anticipated construction schedule.
- Equip all internal combustion engine driven equipment with intake and exhaust mufflers which are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Staging of construction equipment and all stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be staged as far as practical from existing noise sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to the point where radio noise is not audible at existing residents bordering the project sites.
- Notify adjacent residents to the project site of the construction schedule in writing.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Construction: The District's project manager or inspectors shall verify that the mitigation measure is implemented during construction periods and respond to any noise complaints.

Initials Date

TRAFFIC/TRANSPORTATION

TTI The contractor shall develop and submit an appropriate Traffic Control Plan (TCP) in accordance with the California Manual of Uniform Traffic Control Devices (MUTCD) for review and approval by the District for all project elements that impact traffic circulation. The TCP shall also include notifying adjacent businesses and residents of the construction schedule and when it will impact access. The TCP shall ensure thru traffic and temporary driveway access during periods where active construction is not taking place.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Preconstruction: The District's project manager shall review and approve the Traffic Control Plan prior to construction.

Initials Date

Construction: The District's project manager or inspectors shall verify that the mitigation measure is implemented during construction periods.

Initials Date

TT2 The contractor shall provide advanced notice regarding timing, location and the duration of construction activities to local emergency responders. The contractor shall ensure emergency responders can have access through construction areas in roadways at all times.

Implementation & Monitoring

Project Design: The District's project manager will verify that the mitigation measure is incorporated into the project design and included in the project documents prior to issuing final project approvals.

Initials Date

Construction: The District's project manager shall ensure appropriate notice is given and that emergency access is maintained.

Initials Date