Starlite Pines Mutual Water Company Storage Capacity Improvements Project

Initial Study/Mitigated Negative Declaration — Public Draft

October 28, 2020

Prepared for:
California State Water Resources Control Board - Division of Financial Assistance
1001 I Street
Sacramento, CA 95814

On behalf of:
Starlite Pines Mutual Water Company, Inc.
8074 Starlite Pines Road
Shingletown, CA 96088

Prepared by:
Stantec
Attn.: Connie MacGregor, Project Manager
376 Hartnell Avenue, Suite B
Redding, California 96002
Phone: (530) 280-8376
Fax: (530) 222-4958
STN #185704664

Project Information

1. Project Title:	Starlite Pines Mutual Water Company Storage Capacity Improvements Project
2. Lead Agency Name and Address	California State Water Resources Control Board - Division of Financial Assistance 1001 I Street Sacramento, California 95814 (916) 327-9978
3. Contact Person, Phone Number/Email	Gabriel Edwards, Environmental Scientist (916) 449-5990/Gabriel.Edwards@Waterboards.ca.gov
4. Project Location	In the rural community of Shingletown, Shasta County, California; Township 31 North, Range 2 East, Sections 2, 3, 10, and 11, *Hagaman Gulch, California,* U.S. Geological Survey quadrangle, Mount Diablo Base and Meridian; Assessor Parcel Numbers: 700-190-024, 700-190-023, and 700-150-008.
5. Project Sponsor's Name	Starlite Pines Mutual Water Company
6. General Plan Designation	RA (Rural Residential A)
7. Zoning	R-R-T (Rural Residential- Mobile Home)

8. Description of Project

Starlite Pines Mutual Water Company (SPMWC) would construct a new 236,000-gallon welded steel water storage tank and a block building pump station at Well Site 1. Construction of the tank and pump station would require the removal of approximately 44 trees ranging in size from 8 to 24 inches in diameter. Three vertically mounted pumps and a motor control center would be built inside the pump station and an emergency power generator would be located outside, adjacent to the building under the roof extension. At both well sites 1 and 2, 40-foot tall radio tower antennas would be constructed to facilitate communication between the two pump stations. The foundations for the radio towers will be concrete and installed to a depth of 4 feet and measure 4 feet wide by 4 feet long. Construction of the radio tower antenna at Well Site 2 would occur in a previously disturbed area, and no tree removal will be required at Well Site 2. The project also includes replacing five 4-inch dry barrel fire hydrants with five full-size 6-inch hydrants located on Starlite Pines Road and Constellation Drive to provide better flow for fire suppression.

Once the new tank and pump station are fully operational, the existing in-ground reservoir and pump station at Well Site 1 will be demolished; and the removed material will be brought to an approved landfill. Soil and rock excavated to accommodate the new tank and pump station will be used to backfill the area occupied by the existing in-ground reservoir once it is removed.

9. Surrounding Land Uses and Setting

Land uses in and around the project area include Shasta County road right-of-way, SPMWC facilities, and rural residential subdivision development, including the Starlite Pines and Starlite Woods subdivisions. State Route 44 is adjacent to the extreme southern end of the project area boundary.

10. Other Public Agencies Whose Approval May Be Required (e.g., permits, financing approval, or participation agreement.)

- California Department of Fish & Wildlife (Region 1)
- California State Regional Water Quality Control Board (Central Valley Region)
- Shasta County Planning Department

Starlite Pines Mutual Water Company Storage Capacity Improvements Project
Initial Study/Mitigated Negative Declaration — Administrative Draft

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Acronyms and Abbreviations

APN	Assessor's Parcel Number
AQMD	Air Quality Management District
BMP	Best Management Practice
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CRPR	California Rare Plant Rank
dBA	decibels A-weighted
°F	degrees Fahrenheit
GHG	greenhouse gas
GPD	gallons per day
GPM	gallons per minute
IS	Initial Study
MCV	Manual of California Vegetation
MDD	maximum day demand
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
NAHC	Native American Heritage Commission
NOx	oxides of nitrogen
PG&E	Pacific Gas and Electric
PM	particulate matter
$PM_{2.5}$	particulate matter 2.5 microns or less
PM_{10}	particulate matter 10 microns or less
project	Starlite Pines Mutual Water Company – Storage Capacity Improvements Planning Project
PSI	pounds per square inch
PWS	public water system
ROG	reactive organic gases
ROW	Right-of-way
SCADA	supervisory control and data acquisition
SPMWC	Starlite Pines Mutual Water Company
SR	State Route
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board

1. INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study (IS) that summarizes the technical studies prepared for the proposed Starlite Pines Mutual Water Company (SPMWC) Storage Capacity Improvements Project (project). It includes an evaluation of potential environmental impacts that could result from project implementation and provides justification for a Mitigated Negative Declaration (MND) for the project. This document was prepared in accordance with the current California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines (14 California Code of Regulations 1500 et seq.) that require all state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. Mitigation measures are proposed to avoid or minimize any significant impacts that are identified.

1.2 LEAD AGENCY

The Lead Agency is the public agency with primary responsibility for carrying out or approving a project. The California State Water Resources Control Board (SWRCB) will be the CEQA Lead Agency. SPMWC is working with PACE Engineering, Inc., to apply for funding for the proposed improvements using the State Revolving Fund administered by the California SWRCB – Division of Financial Assistance to make the proposed water system improvements. SPMWC will be the project applicant and will be responsible for implementing the project. The SPMWC is a not-for-profit public water system that services the Starlite Pines and Starlite Woods subdivisions in the rural community of Shingletown, Shasta County, California.

1.3 SUPPORTING TECHNICAL STUDIES

The technical studies listed below are available for review at the following locations:

State Water Resources Control Board
Division of Financial Assistance
1001 I Street
Sacramento, California 95814
Phone: (916) 327-9978

Starlite Pines Mutual Water Company
33775 Constellation Drive
Shingletown, California 96088-1123
(530) 474-9355

Technical studies conducted for this project are available to the public upon request (with the exception of the cultural report) include:

- Cultural Resources Survey Report *(This report is confidential and available to qualified readers only.)*
- Biological Resources Assessment
- Engineering Report
- Geotechnical Exploration Report

1.4 DOCUMENT ORGANIZATION

The IS consists of the following chapters:

Chapter 1.0 – Introduction describes the purpose and content of this document.

Chapter 2.0 – Project Description provides a comprehensive description of the project, tentative schedule, required permit approvals, and project alternatives.

Chapter 3.0 – Environmental Impacts and Mitigation Measures describes the environmental impacts of the project using the CEQA Environmental Checklist. Where appropriate, mitigation measures are provided that would reduce potentially significant impacts to a less-than-significant level.

Chapter 4.0 – Determination provides the environmental determination for the project.

Chapter 5.0 – Summary of Mitigation Commitments provides a comprehensive list of all mitigation measures proposed for the project.

Chapter 6.0 – Report Preparation identifies the individuals responsible for preparation of this document.

Chapter 7.0 – References provides a list of references used to prepare this document.

2. PROJECT DESCRIPTION

2.1 LOCATION

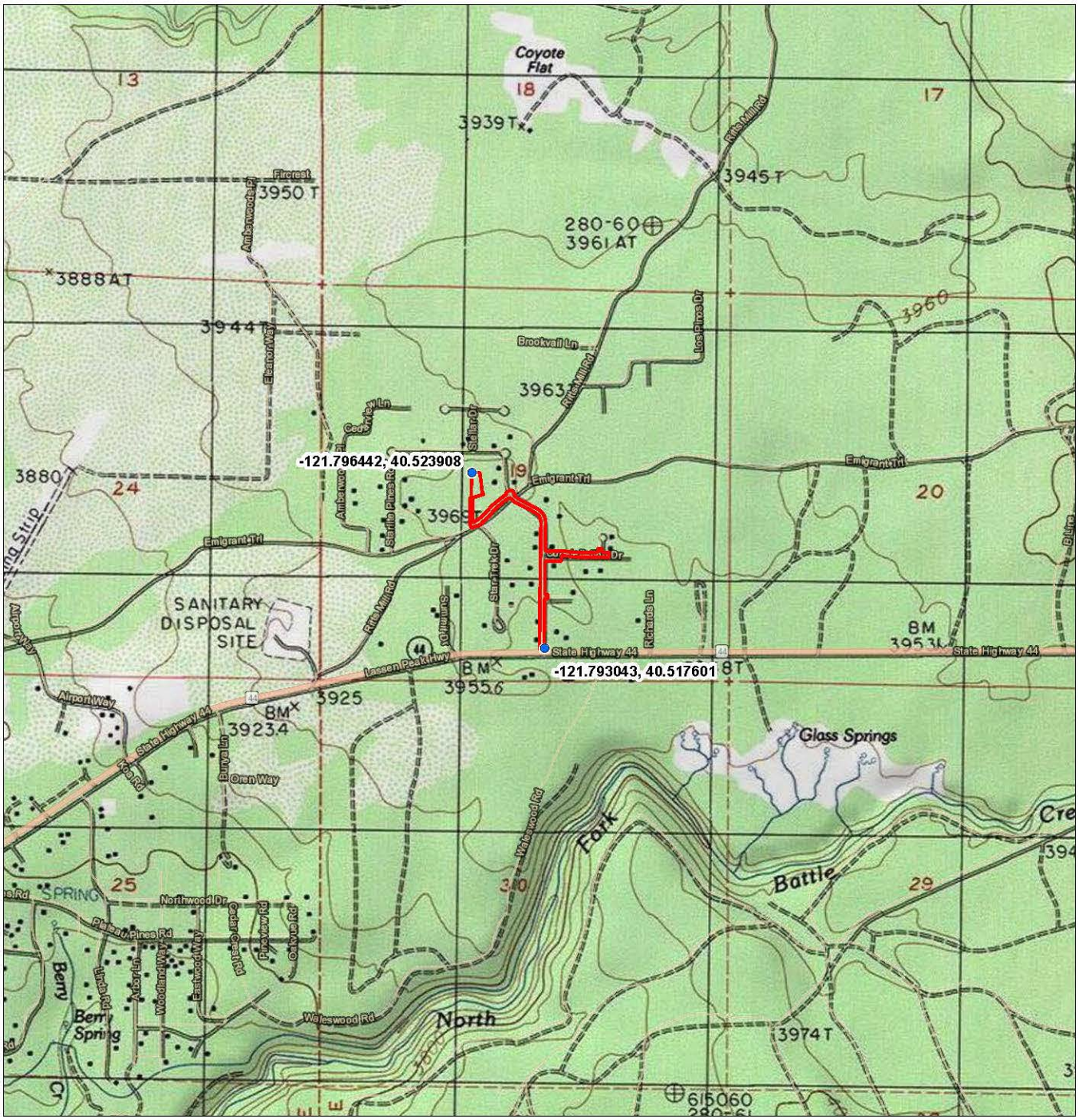
The approximately 7.28-acre project area (comprised of the larger study area used for the technical support studies includes the two well sites, hydrant replacement locations, and adjacent roadways) is located on the north side of State Route (SR) 44, approximately 5.8 miles northeast of the rural community of Shingletown, Shasta County, California in the Starlite Pines and Starlite Woods subdivisions. The project area is shown on the *Hagaman Gulch, California,* 7.5-minute U.S. Geological Survey quadrangle, Mount Diablo Base and Meridian; Township 31 North, Range 2 East, Section 19 (Figure 1). It includes the existing SPMWC water system facilities (well sites 1 and 2) and associated infrastructure accessed via Starlite Pines Road, Constellation Drive, and Ritts Mill Road, and the public right of way (ROW) easements along these roads (Figure 2). The SPMWC water system serves the Starlite Pines and Starlite woods subdivisions. Assessor Parcel Numbers (APN) included in the project area are 700-190-024, 700-190-023, and 700-150-008. The project is not located within any state or federally maintained lands (e.g., Bureau of Land Management or United States Forest Service land).

2.2 EXISTING FACILITY CONDITIONS

SPMWC is a not-for-profit [503(c)(12)] public water system (PWS) (PWS Permit CA4500195) serving a total population of approximately 510 via 163 unmetered connections, of which, 136 are active service connections. The existing water system facilities include Wells 1 and 2; Pump Stations 1 and 2; one 33,000-gallon lined, in-ground reservoir located at Well 1; four 5,000-gallon polybutylene tanks at Well 2; and approximately 2.1 miles of polyvinyl chloride distribution pipe with 17 fire hydrants.

SPMWC does not currently meet Section 64554(a)(2) of the California Waterworks Standard, which requires systems with less than 1,000 service connections to have storage capacity equal to or greater than its maximum day demand (MDD) (176,000 gallons), unless the system can demonstrate that it has an additional source of supply or an emergency source connection that can meet the MDD requirement (PACE 2019). Currently, SPMWC does not have an additional source supply or an emergency source connection. An additional 60,000 gallons of fire storage is needed in addition to the required MDD storage volume. California Fire Code, Title 24, Part 9, requires a minimum fire flow of 1,000 GPM for one hour for one- and two-family dwellings with no automatic sprinkler systems, which equates to 60,000 gallons.

In addition, the Starlite Pines area is subject to Pacific Gas and Electric's (PG&E's) new Public Safety Power Shutoff Program. Starlite Pines is located in an area of extreme fire risk according to the CPUC Fire-Threat District Map (CPUC 2020). Pre-emptive shutoffs during high fire danger conditions are anticipated to be more frequent and more extended than they were prior to 2020. The Starlite Pines subdivision and vicinity will lose power even if not within a fire evacuation area. Water storage and an emergency power generators are needed to sustain service during impending power outages.



0 2,000 Feet

1 inch = 2,000 feet (At page size of 8.5"x11")

N

Stantec

Project Location
Shasta County, California

185704664
Prepared by TM on 2020-08-24

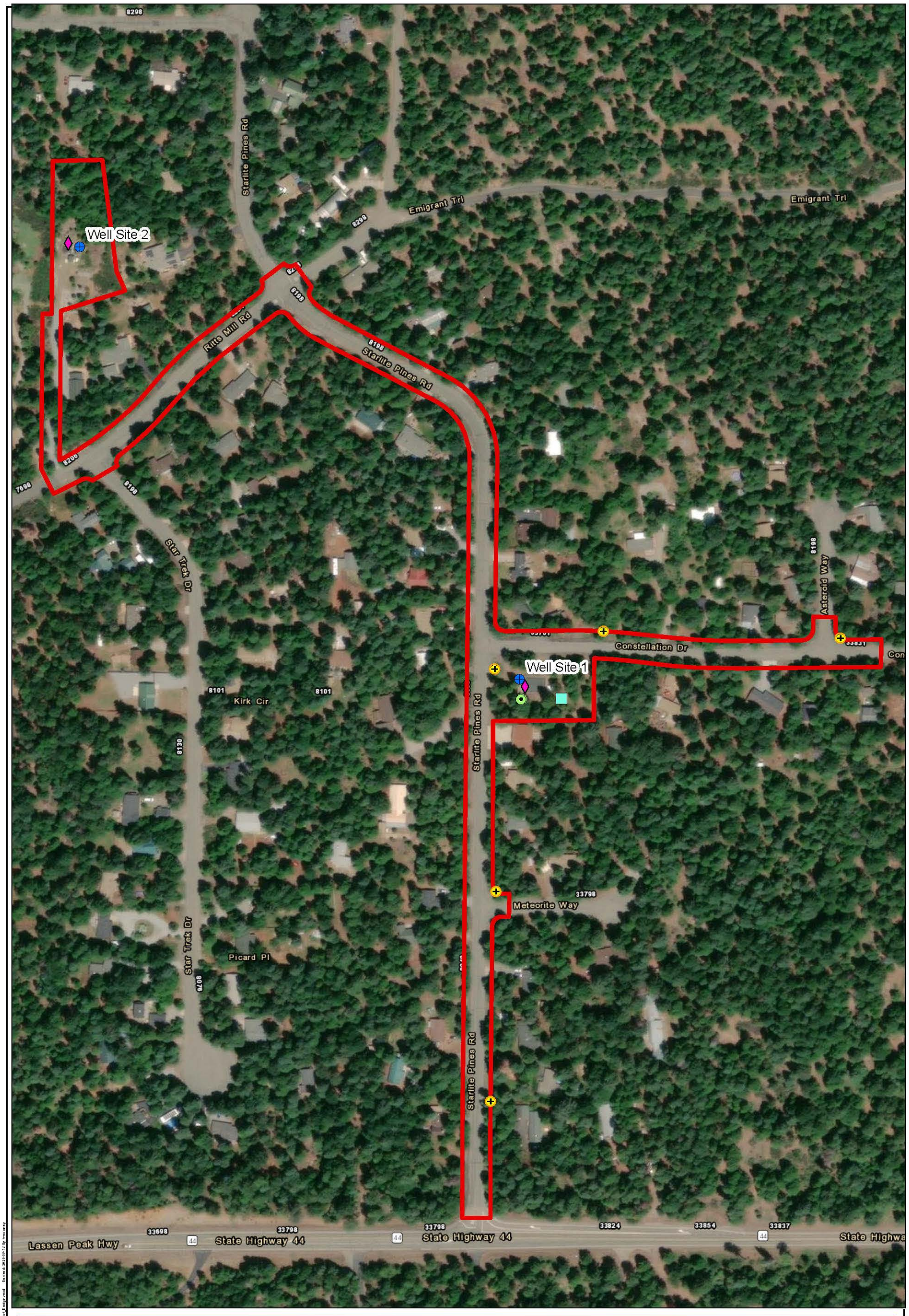
Client/Project
University Enterprises, Inc.
Starlite Pine Mutual Water Company Storage Improvements Project

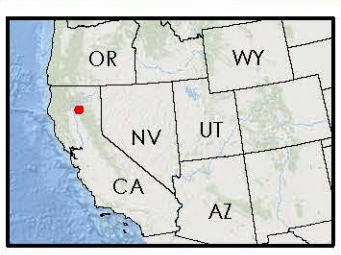
Figure No.
1

Title
Project Location

Notes

1. Coordinate System: NAD 1983 StatePlane California I FIPS 0401 Feet
2. Base map: ESRI USA Topo Map web mapping service, 10/24/2019
3. Public Land Survey: T31N, R02E, Sec. 19
4. USGS 7.5 Quad: Hagaman Gulch 1985





Study Area (7.28 acres)
New Radio Tower Antennae
New Pump Station
New Water Tank
Existing Well
Existing 4" Fire Hydrant

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W E
S

0 200 Feet
1 inch = 200 feet (At original document size of 8.5x11)

Stantec

Notes
1. Coordinate System: NAD 1983 StatePlane California I FIPS 0401 Feet
2. Aerial imagery: DigitalGlobe, 8/10/2017

Project Location
Shasta County, California

185704664
Prepared by JP on 2019-12-13
Reviewed by ST on 2019-12-13
Revised by TM on 2020-09-15

Client/Project
Starlite Pines Mutual Water Company, Inc.
Starlite Pines Mutual Water Company Storage Capacity Improvements Project

Figure No.
2

Title
Project Design

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2.3 PROJECT PURPOSE AND NEED

The purpose of this project is to improve both the storage and distribution components of SPMWC's existing water system, and increase overall system safety and reliability. The project is needed to update the current water system in order to provide better distribution of potable water and defense against wildland fires.

2.4 PROPOSED PROJECT

Proposed Project Features

The project consists of the following major components:

Well 1 Site

- At-grade, 236,000-gallon welded steel tank with concrete foundation
- Distribution pump station with three vertically mounted pumps
- 22-foot x 18-foot concrete masonry unit block building
- Separate room for new chlorination equipment
- Spare submersible pump for Well 1
- Emergency generator with double-wall diesel fuel containment
- Power improvements to operate new motor control center and controls
- Radio tower antenna and supervisory control and data acquisition (SCADA) equipment to work with the Well 2 Pump Station
- Demolition of existing 33,000-gallon in-ground reservoir
- Demolition of existing distribution system pump station

Well 2 Site

- Radio tower antenna and SCADA improvements to work with the Well 1 Pump Station

The proposed project at Well 1 would consist of constructing a 236,000-gallon welded steel tank with a concrete foundation at grade and a 22- by 18-foot block building pump station with an emergency generator. The building roof and foundation would be extended 8 feet to the south to cover the emergency generator. The new tank dimensions would be 45 feet in diameter by 25 feet in height. Approximately 44 trees ranging from 8 to 24 inches in diameter would be removed from the site. Loose native soil, significant organic material, and loose soil created by structure, tree root, and boulder removal are anticipated within the proposed tank and pump station building areas. The entire tank pad would be over-excavated approximately 3 feet below the existing grades with the pump station building being over-excavated approximately 2 feet below grade. Over-excavation limits would extend a minimum of 5 feet beyond the tank and building perimeter. The prepared excavation would be replaced with an engineered fill using imported material.

Three vertically mounted pumps and a motor control center would be located inside the pump station. The building would include an interior room to store 12.5% sodium hypochlorite storage and dosing equipment for disinfection of drinking water. The diesel-powered emergency generator would be

equipped with an automatic transfer switch that would automatically start the generator when there is a power outage. The emergency generator would include double-wall diesel fuel containment and an enclosure to reduce noise generated by operation to 70 A-weighted decibels (dBA) at 25 feet away. In addition, a 40-foot-tall radio tower antenna would be constructed to communicate with the existing Well 2 pump station. The concrete antennae foundation would measure 4 feet deep and would be 4 feet square.

Once the new tank and pump station are fully operational, the contractor would demolish the existing 33,000-gallon in-ground reservoir and pump station, both of which have exceeded their useful service lives. Wood from the structures and debris from the concrete foundations would be hauled away to an appropriate landfill. The reservoir excavation would be backfilled with soil and rocks excavated from the new tank and pump station structures.

A radio tower antenna and SCADA control system would be added to the Well 2 pump station to allow it to work in conjunction with the Well 1 pump station. The antennae and foundation would be the same as that used at the Well 1 pump station. SCADA improvements would be located inside the existing building.

The original Starlite Pines Subdivision did include five 4-inch, dry barrel hydrants. These hydrants are located on Starlite Pines Road and Constellation Drive. The project includes replacement of these five hydrants with full-size 6-inch hydrants to provide better fire flow.

2.5 PROJECT DESIGN CRITERIA

Contractor Staging Areas/Construction Access Routes

Project construction activities would be located entirely within the boundaries of existing SPMWC facilities. Staging of equipment and materials would be confined to the existing facilities boundaries, property lines, and the public ROW. Construction access would be along three paved Shasta County roads within the subdivision: Starlite Pines Road, Constellation Drive, and Ritts Mill Road. Construction activities would not require the need for additional staging or access roads outside of the project area. SPMWC owns both parcels—Well 1 (APN 700-150-008) and Well 2 (APN 700-190-024)—therefore, no land, easements, or ROW would need to be acquired as part of this project.

Design Standards

Construction standards that will apply to the new tank (AWWA D100-11 Welded Carbon Steel Tanks for Water Storage) and pump station building (California Building Code and the National Electrical Code) will be adhered to as part of this project. Pursuant to Government Code, Section 53091(b), building ordinances of a county or city will not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency. SPMWC does not qualify as a local agency; therefore, a building permit from Shasta County would be required.

Project design criteria is summarized in Table 1.

Table 1. Project Design Criteria

	Existing Design (Year 2019 Data)	New Design
Number of Service Connections	151	163
Annual Water Production (gallons) (2017)	23,315,976	25,169,000
Average Day Demand (GPD) (2017)	63,879	69,000
Average Day Demand (GPM)	44	48
Maximum Month Demand (GPD) (July 2016)	108,387	117,000
Maximum Month Demand (GPM)	75	81
Maximum Day Demand (GPD)	162,581	176,000
Maximum Day Demand (GPM)	113	122
Peak Hour Demand (GPM)	169	183
Fire Flow Demand (GPM)	500	500
Average Day Demand/Connection (GPD/Connection)	423	
Maximum Day Demand/Connection (GPD/Connection)	1,100	
Required Storage Volume = Max Day Demand (gallons)	176,000	
Required Fire Storage Volume (gallons)	60,000	
Total Tank Volume (gallons)	236,000	
Tank Diameter (feet)	45	
Maximum Water Height (feet)	20	
Total Tank Height (feet)	24	
Well 1 Capacity (GPM)	190	
Well 1 Capacity (GPD)	273,600	
Well 2 Capacity (GPM)	120	
Well 2 Capacity (GPD)	172,800	
Target Distribution Pressure During Peak Hour (PSI)	60	
Target Distribution Pressure During Fire Flow (PSI)	40	
Pump Station 1 Number of Pumps	3	
Pump 1 Flow/Head (GPM/foot)	500/192	
Pumps 2 and 3 Flow/Head (GPM/foot)	190/160	
Pump 1 Motor Nameplate Horsepower	30	
Pumps 2 and 3 Motor Nameplate Horsepower	15	
Target Distribution Pressure During Peak Hour (PSI)	60	
Chlorine Dose (milligrams per liter)	1	
Sodium Hypochlorite 12.5% Dosing Pump Capacity (GPD)	26	
Sodium Hypochlorite Storage Drums (2x) (gallons)	50	
Well 1 Emergency Generator Diesel Fuel Storage (gallons)	200	
Well 1 Emergency Generator Run Time (hours)	36	

Source: PACE Engineering, Inc. 2019
Notes: GPD = gallons per day, GPM=gallons per minute, PSI=pounds per square inch

Equipment

The types of construction equipment and vehicles to be used during construction activities would be determined by the construction contractor. Equipment typically used for this type of project includes pick-up trucks, dump trucks, graders, backhoes, excavators, bulldozers, front-end loaders, jack hammers, generators, welders, circular saws, concrete vibrators, compactors, water trucks, truck-mounted drills, concrete delivery trucks, asphalt concrete paving machines, rollers, a crane, and service vehicles. The number of construction workers needed for the proposed project would also be determined by the contractor.

2.6 CONSERVATION MEASURES

The following conservation measures and best management practices (BMPs) will be followed during project construction to avoid or minimize potential environmental impacts:

Conservation Measure #1—Air Quality/Fugitive Dust and Emissions Controls

Air pollution control will conform to all applicable air pollution control rules, regulations, ordinances, and statutes. Dust will be controlled during construction activities and subsequent operation of the project. Dust controls may include, but will not be limited to the following elements, as appropriate:

- Water inactive construction sites and exposed stockpile sites at least twice daily, including non-workdays, until soils are stable.
- Pursuant to California Vehicle Code (Section 23114) (California Legislative Information 2020), all trucks hauling soil and other loose material to and from the construction site will be covered or will maintain at least 6 inches of freeboard (i.e., minimum vertical distance between the top of the load and the upper edge of the trailer).
- Any topsoil that is removed for the construction operation will be stored on-site in piles not to exceed 4 feet in height to allow development of microorganisms prior to re-soiling of the construction area. These topsoil piles will be clearly marked and flagged. Topsoil piles that will not be immediately returned to use will be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill will be marked and flagged separately from native topsoil stockpiles. These soil piles will also be surrounded by silt fencing, straw wattles, or other sediment barriers, or covered unless they are to be immediately used.
- Equipment and manual watering will be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
- Contractors will commit to using the best available emissions control technology. The use of diesel construction equipment meeting the California Air Resources Board (CARB) 1996 or newer certification standard for off-road heavy-duty diesel engines and having Tier 4 engines will be maximized to the extent feasible. Equipment may be electrified if feasible, and gasoline-powered equipment should be substituted for diesel-powered equipment when feasible, unless alternatively fueled construction equipment can be used. If the use of all equipment with Tier 4 engine standards is

not feasible, the contractor should commit to using CARB and Environmental Protection Agency-verified particulate traps, oxidation catalysts, and other appropriate controls when suitable to reduce emissions of diesel particulate matter and other pollutants during construction.

- The construction contractor will designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to any citizen complaints.

Conservation Measure #2—Erosion and Sedimentation Control

Best management practices (BMPs) for erosion control will be implemented during project construction. Provisions do not include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), because the disturbed area is less than one acre in area.

Erosion control measures included in the construction contract and to be implemented by the contractor include the following:

- To the maximum extent practicable, activities that increase the erosion potential in the action area will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. Upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein for the protection of sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures will be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.

- Areas where upland vegetation need to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by SPMWC. Exclusionary fencing will be installed around areas that do not need to be disturbed.

- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch will be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch will be applied to all exposed areas upon completion of the day's activities. Soils will not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins will be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures will be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.

- If spoil sites are used, they will be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins will be constructed to intercept sediment before it reaches the feature. Spoil sites will be graded and vegetated with native species to reduce the potential for erosion.

- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated with native species.

Conservation Measure #3—Prevention of Accidental Spills of Pollutants

Construction specifications will include the following measures to reduce potential impacts on vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, and grease):

- A site-specific spill prevention plan will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials will be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling will be conducted within an adequate fueling containment area.

Conservation Measure #4—Prevention of Spread of Invasive Species

The following measures will be implemented to prevent the spread of invasive species in the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the project area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.
- Non-native and invasive species removed during project construction should be properly disposed of to prevent the spread of non-native and invasive species.

Conservation Measure #5—Cultural Resources and Human Remains

Surface surveys are not infallible and buried resources may be overlooked. Implementation of the following conservation measures will avoid or minimize the potential for significant effects to newly discovered resources:

- Construction contract documents include provisions to respond to archaeological resources discovered during the project. In the event that previously unknown archaeological resources are discovered during project activities, all work in the immediate vicinity of the discovery will be stopped immediately and the contractor will notify the SPMWC and SWRCB. An archaeologist meeting the Secretary of Interior's Professional Qualifications Standards will be retained to evaluate the discovery and recommend appropriate treatment. The conservation measures will be implemented prior to re-

initiation of activities in the immediate vicinity of the discovery. If the resource that is discovered is prehistoric or Native American in nature, a Native American monitor will be present during subsequent project ground disturbance.

- If human remains are discovered during project activities, all activities near the find will be suspended and the Shasta County Sheriff–Coroner will be notified. If the coroner determines that the remains may be those of a Native American, the coroner will contact the Native American Heritage Commission (NAHC). Treatment of the remains will be conducted in accordance with the direction of the County Coroner and/or NAHC as appropriate.

Conservation Measure #6—Greenhouse Gas Emissions

Construction contract documents include provisions to minimize project-related greenhouse gas emissions. The following measures will be implemented to reduce construction-related greenhouse gas emissions:

- Reuse and recycle construction and demolition waste including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard.
- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation (e.g., bicycles, pedestrians) through proper pre-construction planning.
- Protect existing trees to the extent possible and encourage the planting of new trees.

Conservation Measure #7—Wildfire Potential

Construction contract documents include measures to minimize project-related potential for wildfire ignition:

- Per the requirements of Public Resources Code Section 4442, SPMWC will include a note on all construction plans that internal combustion engines will be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Conservation Measure #8—Construction Noise

Construction contract documents include provisions to minimize project-related noises. The following measures will be implemented to reduce construction-related noises generated:

- Construction activities (excluding activities that would result in a safety concern to the public or construction workers) will be limited to between the daylight hours of 7:00 A.M. and 7:00 P.M., Monday through Friday, and 8:00 A.M. and 5:00 P.M. on Saturdays. Construction activities will be prohibited on Sundays and federal/state recognized holidays.
- Construction equipment will be properly maintained and equipped with noise-reduction intake and exhaust mufflers in accordance with manufacturers' recommendations.
- When not in use, motorized construction equipment will not be left idling for more than 5 minutes.

- Stationary equipment (generators, compressors, etc.) will be located at the furthest practical distance from nearby noise-sensitive land uses. If necessary, noise attenuation measures sufficient to achieve compliance with the Shasta County General Plan (Shasta County 2018) Noise Element will be implemented.

2.7 TENTATIVE SCHEDULE

The project is expected to begin in spring/summer of 2021 or 2022 predicated on available environmental clearance, funding, and reasonable response periods for permits and will take about one and one-half years to construct.

2.8 REQUIRED PERMITS AND APPROVALS

The following permit will be required to implement the project:

- Shasta County Building Permit

2.9 NO PROJECT ALTERNATIVE

In addition to the proposed project, SPMWC also considered a “No Project” alternative in its evaluation, pursuant to CEQA. Under the No Project alternative, SPMWC would not proceed with water system upgrades. Deficiencies in the existing water distribution and storage system would not be addressed.

3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter incorporates the Environmental Checklist contained in Appendix G of the CEQA Guidelines, including the CEQA Mandatory Findings of Significance. Each resource section provides a brief description of the setting, a determination of impact potential, and a discussion of the impacts. Where appropriate, mitigation measures are provided to reduce potential impacts to a less-than-significant level. A discussion of cumulative impacts is included at the end of this chapter.

Addressed in this section are the following 20 environmental categories and mandatory findings of significance:

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

Each of these issue areas was fully evaluated and one of the following four impact determinations was made:

- **No Impact:** No impact to the environment would occur as a result of implementing the proposed project.
- **Less-than-Significant Impact:** Implementation of the proposed project would not result in a substantial and adverse change to the environment and no mitigation is required.
- **Less than Significant with Mitigation Incorporated:** A “significant” impact that can be reduced to a less-than-significant level with the incorporation of project-specific mitigation measures.
- **Potentially Significant Impact:** Implementation of the proposed project could result in an impact that has a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (CEQA Guidelines Section 15382).

3.1 ENVIRONMENTAL SETTING

Regional Setting

The project area lies within the southeastern portion of Shasta County, California, in the Cascade Range. This geomorphic region is bounded by the Modoc Plateau to the east, the Sierra Nevada to the south, the Great Central Valley to the southwest, and the Klamath Mountains to the northwest. The project area is located within Battle Creek watershed (sub basin) and the Millseat Creek–North Fork Battle Creek subwatershed. The region supports an extensive system of rivers and streams. The Battle Creek watershed drains an area of approximately 370 square miles and flows southwesterly to its confluence with the Sacramento River near Cottonwood, California.

Local Setting

Starlite Pines is a rural, single-family residential subdivision in the foothills of the southern extent of the Cascade Range, west of Lassen Peak. Topography in the project area is relatively flat and densely forested with mixed conifer dominated by pine and fir stands. The project area consists of widely spaced rural residences, paved road and adjacent ROWs, barren areas, and the existing SPMWC facilities. The area is largely bounded by pine and fir stands. SR 44 is located approximately 0.5-mile south of the project area and runs east/west from Redding to Lassen Volcanic National Park, which is about 20 miles east of the proposed project area.

Climate

The climate in the project area and general vicinity is characterized as Mediterranean with cool, wet winters and warm, dry summers. Precipitation primarily occurs as rain and snow; the average annual rainfall is approximately 33.65 inches and the average snowfall is approximately 10.40 inches (Western Regional Climate Center 2019). Air temperatures range between an average January high of 52.7 degrees Fahrenheit (ºF), and an average July high of 93.7ºF. The year-round average high is approximately 71.8ºF (Western Regional Climate Center 2019).

Existing Land Uses

The project area encompasses the residential Starlite Pines and Starlite Woods subdivisions, and SPMWC's existing facilities. Land uses in the project area and immediate vicinity include dispersed rural residences consisting of stick-frame and manufactured housing. Surrounding land uses are similarly characterized as residential to the southwest. The remaining land uses include undeveloped timber lands to the north and south, undeveloped public lands to the west, and small agricultural grazing lands to the southeast. There are three paved Shasta County roads in the project area (Starlite Pines Road, Constellation Drive, and Ritts Mill Road), rocked one-lane roads, and dirt roads. Water fire hydrants and overhead utilities follow some of these road corridors.

SPMWC's well stations consist of pump houses, sheds, and an in-ground reservoir at Well Station 1. The Well Station 1 facility is fenced.

Topography

The topography of the land surrounding Starlite Pines and Starlite Woods subdivisions in Shingletown is relatively flat with only minor elevational changes. The project area occurs at elevations between 3,940 and 4,000 feet above mean sea level.

Hydrological Setting

No hydrologic features occur within the proposed work areas or immediately adjacent. North Fork Battle Creek is the closest water source, approximately 1/2-mile south of the project area within the Battle Creek watershed. North Fork Battle Creek flows west approximately 20 miles to the Sacramento River, a traditionally navigable water (Heiman and Knecht 2010).

Soils

One soil map unit described in the *Soil Survey of Shasta County, California* (CA607) occurs in the project area (Natural Resources Conservation Service 2019):

- Windy and McCarthy Stony Sandy Loams, 0 to 30 Percent Slopes (WeD). This soil map unit consists of deep, well drained soils formed in material weathered from andesitic mudflows. Permeability is moderately rapid and is hydrophobic when dry. The depth to a restrictive layer (i.e., lithic bedrock) is between 48 to 52 inches.

Geology

The project area is located centrally in the Cascade Range geomorphic province (U.S. Geological Survey 1960). This province is underlain primarily by volcanic and sedimentary rocks from the Cenozoic Era—more than 66 million years ago (Department of Water Resources 1984). The underlying geology of the project area is comprised of younger andesite volcanic rocks from the Quaternary Pleistocene era (Jennings et al. 1977; Luedke and Smith 1981; U.S. Geological Survey 1960). In the project area, cobbly, sandy loams and gravelly sandy loams are common throughout the soil profile overlain on unweathered bedrock (Natural Resources Conservation Service 2019).

Vegetation Community Types

Natural vegetation community mapping followed the technical approach and vegetation alliance classification system described in *A Manual of California Vegetation, Second Edition* (MCV) (Sawyer et al. 2009). The MCV does not include descriptions for areas that are devoid of vegetation (i.e., barren or urban areas) or landscaped areas; therefore, classifications based on habitat descriptions provided in *A Guide to Wildlife Habitats of California* were used to characterize these areas. These habitat classifications describe the various wildlife habitats that constitute the California Wildlife Habitat Relationship System classification system (Mayer and Laudenslayer 1988).

Vegetation communities are based on descriptions provided in the MCV and in some cases California Wildlife Habitat Relationship System, where an MCV type does not exist. Three vegetation communities or other habitats occur in the study area and are described below.

Barren

Barren occurs as paved roads and their associated road shoulders and driveways. Vegetation is usually absent, although sparse opportunistic grasses and forbs or weedy species including St. Johnswort (*Hypericum perforatum*) occur sporadically along the narrow-graveled road shoulders.

Ponderosa pine – Douglas fir – Incense Cedar Forest Association

Ponderosa pine–Douglas fir–incense cedar forest association occurs in the very northwestern portion of the study area. The dominant overstory trees include incense cedar (*Calocedrus decurrens*), Douglas-fir (*Pseudotsuga menziesii*) (both occurring with a relative cover in the canopy of greater than 30 percent), and ponderosa pine (*Pinus ponderosa*) (occurring with a continuous canopy). Within the study area, this forest type has an intermittent shrub layer of primarily Mahala mats (*Ceanothus prostratus)* and common manzanita (*Arctostaphylos manzanita*) with a scattered herbaceous layer. Species common to the herbaceous layer include St. Johnswort, pearly everlasting (*Anaphalis margaritacea*), and turkey-mullein (*Croton setiger)*.

Urban

Urban occurs on the northwestern corner of the study area and at Well Site 1 in the middle of the study area. Urban habitat includes maintained landscaped areas or areas associated with residences where native trees and shrubs have been retained. In addition to native vegetation, Aaron's beard (*Hypericum calycinum*) is present in a few residential yards.

3.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
I. AESTHETICS — Would the project:				
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 non-urbanized 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?	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** There are no scenic areas or resources within the project area. The project consists of replacing the existing water supply facilities and infrastructure along the County's ROW and within pre-existing SPMWC facilities locations. The project would be constructed in a manner consistent with the existing aesthetic.

b) **Less-than-Significant Impact.** No roads in the project area are designated as scenic; however, SR 44, which intersects with Starlite Pines Road outside of the project area at its southern end is listed by Caltrans as eligible for designation as a state scenic highway (California Department of Transportation 2020). The project would require the removal of 45 mature trees to allow for construction at Well Site 1; however, project activity would not be visible from SR 44 due to distance and intervening forest density. There are no documented historic buildings in the immediate Project area. Because tree removal would be localized and consistent with existing land uses (i.e., SPMWC facilities and rural residential development), and adjacent forest would be retained as a visual buffer, project impacts on existing scenic qualities would be less than significant.

c) **Less-than-Significant Impact.** The project components would be consistent with the surrounding visual environment, which has been subject to use as SPMWC facilities and rural urban development. Construction of the proposed water tank, radio antenna, and new supporting infrastructure at the Well 1 site would permanently modify the visual environment by removing trees, replacing the existing in-ground reservoir with an above-ground tank, and adding new block buildings; however, the retention of trees throughout the well site to the extent possible and the density of the adjacent forest would buffer the visual changes related to project construction. In

addition, the tanks would be painted using an earth tone color (e.g., forest green or beige) to blend with its surrounding landscape; brick buildings would be constructed of natural-colored materials consistent with the existing environment (e.g., brown brick); and the radio antenna would be constructed on non-glare, natural-colored materials. Proposed improvements at Well Site 2 consist only of the addition of a radio antenna, which would be constructed as previously described for Well Site 1. The visual aesthetic of replacement hydrants would be consistent with existing hydrants throughout the Starlite Pines subdivision. Impacts of the proposed project on the existing visual character and quality of existing views would be less than significant.

d) **No Impact.** No new lighting is proposed as part of the project. All construction activities would be limited to daylight hours and would not require the use of construction lights. The proposed water storage tank and supporting infrastructure would not contrast sharply with the surrounding environment or be a source of glare.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
II. AGRICULTURAL AND 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. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by 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) Result in loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** All lands within the project area, including the existing County ROW within the project area, are mapped by the Farmland Mapping and Monitoring Program as Urban and Built-Up Land (California Department of Conservation 2016 a, b). Land immediately surrounding the project area is mapped as "Other Land," which is vacant and nonagricultural land greater than 40 acres and surrounded on all sides by urban development. The project would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) **No Impact.** The project area and surrounding area are not designated under Williamson Act lands or agricultural uses (California Department of Conservation 2013). The project would have no impact on zoning for agricultural land uses.

c) **No Impact.** The project would not cause rezoning of forestland, timberland, or timberland zoned for timber production. The project area is not zoned for timber production or as forest land (Shasta County 2020).

d) **No Impact.** The project area does not include any designated forestland (Shasta County 2020). The project would not convert any forestland to non-forest uses and would not result in the loss of forestlands in Shasta County.

e) **No Impact.** The project would have no additional direct or indirect effects on farmland other than those impacts previously described.

Mitigation Measures

No project-specific mitigation is required under this subject.

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

Discussion of Impacts

a) **Less-than-Significant Impact.** Shasta County is in the Sacramento Valley Air Basin, Currently, Shasta County is designated as "unclassified/attainment" for all federal and state ambient air quality standards, including ozone, particulate matter $PM_{2.5}$ and PM_{10} (i.e., fine airborne particles that are less than 2.5 microns and less than 10 microns in diameter, respectively), carbon monoxide, and lead (California Air Resources Board 2020). The operation of project construction equipment would be contained within localized areas and would result in temporary emissions (i.e., confined to short-term grading and construction activities) of Reactive Organic Gases (ROG), oxides of nitrogen (NOx), which are ozone precursors, and carbon monoxide. Specifically, ROG and NOx emissions are associated with construction activity vehicle trips, delivery of materials, and construction equipment exhaust. Additionally, earth moving activities could result in localized increased levels of fugitive dust and particulate matter (PM), which includes $PM_{2.5}$ and PM_{10}. Such localized PM is generated during site grading, excavation, and exhaust from construction equipment. However, equipment used for construction and operation of the proposed project will conform to the rules and regulations of the Shasta County Air Quality Management District (AQMD). The project would not increase long-term operational emissions. The project would not conflict with or obstruct implementation of the current Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan (SVAQEEP 2018) or any other applicable air quality plan. Temporary emissions resulting from the proposed project would not exceed Shasta County AQMD thresholds (SCAQMD 2020). *Conservation Measure #1—Air Quality/Fugitive Dust and Emission Controls* (described in Section 2.6) will further reduce air quality impacts; the project's air quality impacts will be less than significant.

b) **Less-than-Significant Impact.** Although Shasta County is designated as "unclassified/attainment" for all federal and state ambient air quality standards, construction activities associated with the proposed project would result in a relatively minor net increase in PM_{10} and $PM_{2.5}$. When the project is complete, it will not significantly contribute PMs into the air. However, construction activities that generate fugitive dust could contribute to the region's cumulative PM levels. In addition, diesel particulates emitted from heavy equipment is an identified Toxic Air Contaminant. Construction emissions would be temporary and primarily localized around the construction areas. The proposed project would not increase operational emissions (i.e., long-term). The Shasta County General Plan requires that standard air quality measures be applied to all projects. *Conservation Measure #1 – Air Quality/Fugitive Dust and Emission Controls* (described in Section 2.6) includes these standard air quality measures and will further maintain air quality; project construction-related impacts would be less than significant.

c) **Less-than-Significant Impact.** Sensitive receptors such as schools, hospitals, or day care centers would not be impacted by project construction and operation. The nearest school is Black Butte Elementary School, which is located east of the Starlite Pines subdivision, approximately 7 miles west from the project boundary.

However, sensitive receptors such as residences are present adjacent to the project area. These residents could be exposed to temporary air pollutants from construction activities, such as fugitive dust, ROG, NOx, and CO. However, construction activities would be temporary. *Conservation*

Measure #1 – Air Quality/Fugitive Dust and Emission Controls (described in Section 2.6) will be used to maintain air quality. Sensitive receptors would not be exposed to substantial pollutant concentrations.

d) **Less-than-Significant Impact.** Construction activities would involve the use of gasoline or diesel-powered equipment that emits exhaust fumes. Construction could also involve asphalt paving, which has a distinctive odor during application. These activities would take place intermittently throughout the workday and the associated odors are expected to dissipate within the immediate vicinity of the work area. Persons near the construction work area may find these odors objectionable. The infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the construction activities would result in less-than-significant odor impacts. Operation of the project facilities (e.g., electric pumps) would have no odor impact.

Mitigation Measures

Conservation Measure #1 – Air Quality/Fugitive Dust and Emission Controls (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion of Impacts

a) **Less than Significant with Mitigation Incorporated.** A Biological Resources Assessment report (Stantec 2020a) was prepared to assess the impacts of the project on special-status biological resources known to occur in the project area.

Special-Status Plants and Sensitive Natural Communities. Based on database and information review, habitat mapping, and a reconnaissance-level survey of the project area conducted by Stantec on October 30, 2019, habitat for three special-status plant species having California Rare Plant Rank (CRPR) designations is present in the project area and vicinity:

- Shasta clarkia (*Clarkia borealis* ssp. *arida*), CRPR[1] 1B.1: occurs in cismontane woodland, and lower montane coniferous forest openings; the blooming period is typically between June–August at an elevation of approximately 1,600–2,000 feet.
- Sierra blue grass (*Poa sierrae*), CRPR 1B.3: occurs in lower montane coniferous forest openings; the blooming period is typically between April-July at an elevation of approximately 1,200–5,000 feet.
- Long-stiped campion (*Silene occidentalis* ssp. *longistipitata*), CRPR 1B.2: occurs in chaparral, montane coniferous forest, and upper montane coniferous forest openings; the blooming period is typically between June-August at an elevation of approximately 3,200–6,500 feet.

Shasta Clarkia, Sierra Blue Grass, and Long-Stiped Campion. The woodlands and lower montane coniferous forest within the project area provide suitable habitat for these species. However, the botanical field survey was conducted on June 30, 2020, found no special-status plant species in the project area (Stantec 2020b). The field survey was conducted at a time when all potentially occurring special-status plant species could be identified if they were present.

Special-Status Wildlife. Three special status animal species were determined to potentially occur in the study area based on database and information review, vegetation and habitat mapping, and the field assessment conducted on October 30, 2019 (Stantec 2020a). Based on review of the U.S. Fish and Wildlife Service's online Critical Habitat Portal and the California Department of Fish and Wildlife's (CDFW) Biogeographic Information and Observation System, no U.S. Fish and Wildlife Service-designated critical habitat for special-status animal species occurs in or immediately adjacent to the study area. Habitat for the following special-status wildlife species was found within the project area:

- Olive-sided flycatcher (*Contopus cooperi*): Species of Special Concern
- Northern goshawk (*Accipiter gentilis*): Species of Special Concern
- Ring-tailed cat (*Bassariscus astutus*): Species of Special Concern

[1] California Rare Plant Rank 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere. Threat Ranks: 0.2-Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat); 0.3-Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Northern Goshawk and Olive-Sided Flycatcher. Neither northern goshawk nor olive-sided flycatcher were observed during the field assessments conducted for the project (Stantec 2020a) despite the presence of nesting habitat (coniferous forest) in and immediately adjacent to the project area. However, the potential for either species to nest in the project area is low due to ongoing human activities, general lack of forest stand characteristics that support nesting northern goshawk (e.g., complex understory with downed woody debris, mature forest stands), and lack of adjacent open habitats and associated edge habitats often used by olive-sided flycatcher.

Construction activities (e.g., vegetation removal and equipment noise) occurring during the northern goshawk and olive-sided flycatcher breeding season could disturb nesting pairs in or adjacent to the project area. Construction-related disturbance could result in the incidental loss of nesting adults, fertile eggs, or nestlings which could lead to nest abandonment and might affect local or regional populations of these special-status species. The project may also result in a small, temporary reduction of foraging and/or roosting habitat for these species. Impacts could result from tree and vegetation removal to accommodate the new water tank and pump station or from noise or visual disturbance from construction activities. *Mitigation Measure #1—Northern Goshawk and Olive-Sided Flycatcher* (described below) will be used to reduce any impacts on these species to a less-than-significant level.

Ring-Tailed Cat. Although ring-tailed cat was not observed during the field assessments conducted for the project, a rocky outcrop in the northwestern portion of the project area provides potential denning habitat for this species. Construction activities could take place during ring-tailed cat natal and maternal denning period (May 1 through June 30). However, no construction activities are planned in the area where potential ringtail denning habitat (i.e., rocky outcrop area) occurs; therefore, no potential impacts on ringtail are expected. Since construction activities will not take place in the rocky outcrop area (e.g., potential ringtail denning habitat) nor in the forested area surrounding the outcrop, no avoidance or minimization measures are recommended.

Migratory Birds and Raptors. All migratory birds and their nests are protected from take under the federal Migratory Bird Treaty Act. All raptor species, including relatively common species and their nests, are protected from take according to California Fish and Game Code. No passerine or raptor nests were observed in the project area; however, vegetation communities or other habitat types present in the project area provide suitable nesting habitat for a variety of migratory birds, including songbirds and raptors. The local avian breeding season generally extends from February 1 to August 31.

If migratory bird or raptor species are nesting in or adjacent to the project area, construction disturbance (e.g., vegetation removal, ground-disturbing activities, equipment noise or visual disturbance) during the breeding season could result in the loss of fertile eggs or nestlings or otherwise lead to nest abandonment which could affect local or regional populations of resident and migratory birds and result a significant impact. Foraging birds and individuals present in or adjacent to the project area outside of the

avian breeding season would not be adversely impacted by construction activities due to their mobility and the availability of comparable or higher quality habitats outside of the study area. *Mitigation Measure #2—Migratory Birds and Raptors* (described below) will be used to ensure that any impacts on migratory birds, including raptors, would be reduced to a less-than-significant level.

b) **Less-than-Significant Impact.** Proposed work locations within the project area have been subjected to previous development-related disturbance and are characterized as being in urban, barren, or ponderosa pine habitats. Riparian habitat does not exist in the project area. No federal- or state-listed plant species have the potential to occur in the project area. However, three CRPR species have the potential to occur in the study area including Shasta clarkia, Sierra blue grass, and long-stiped campion. Additionally, one California sensitive natural community occurs in the study area: ponderosa pine–Douglas fir–incense cedar forest association.

The project would require the removal of 45 mature trees to allow for construction at Well Site 1 including ponderosa pine and incense cedar; however, this removal would be localized within the SPMWC parcel which has been subjected to previous development and is surrounded by urban and rural development. As such, the effect of project implementation on the ponderosa pine-Douglas fir-incense cedar sensitive natural community would be less than significant.

c) **No Impact.** Stantec conducted a reconnaissance-level assessment of potential waters of the United States on October 30, 2019. No potential waters of the United States, including wetlands, occur in the project area (Stantec 2020a).

d) **No Impact.** Proposed activities will be confined to the existing SPMWC water system facility, its associated infrastructure, and along public Shasta County road ROWs within the subdivision: Starlite Pines Road, Constellation Drive and Ritts Mill Road. These activities would not impede movement of wildlife or fragment migration corridors**.** The project area does not encompass any wildlife nursery sites. No hydrologic features or salmonid habitat occur within the proposed work areas or immediately adjacent to them. During project construction. wildlife will be able to move around the project area or move through it at night. The project would have no impact on fish or wildlife movement or nursery sites.

e) **No Impact.** The project will comply with the goals and objectives described in the County's General Plan (Shasta County 2018), including measures for water quality and biological resources protection. The project would not conflict with any local biological resource policies or ordinances.

f) **No Impact.** Currently, there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans that cover the project area. The project would have no impact on local, regional, or state conservation plans.

Mitigation Measures

Mitigation Measure #1—Northern Goshawk and Olive-Sided Flycatcher

The following measures will be implemented to avoid or minimize the potential for significant impacts on northern goshawk and olive-sided flycatcher:

- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project will be removed before the onset of the nesting season (i.e., February 1 through August 31), if practicable. This will help preclude nesting and substantially decrease the likelihood of direct impacts.
- If construction occurs during the nesting season (February 1 through August 31), a qualified biologist will conduct a pre-construction survey for nesting northern goshawk and olive-sided flycatcher. The effort will include surveying the study area and area within 250 feet for northern goshawk nests and 50 feet for olive-sided flycatcher nests, where access is permitted. The pre-construction survey will be performed no more than 7 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities of 7 days or longer occurs between those dates, another pre-construction survey will be performed.
- If an active northern goshawk or olive-sided flycatcher nest is found, a qualified biologist in consultation with CDFW will determine the extent of a construction-free buffer zone to be established around the nest.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, SWRCB
Monitoring:	SPMWC and/or its contractor

Mitigation Measure #2—Migratory Birds and Raptors

The following measures will be implemented to avoid or minimize the potential for adverse impacts on nesting migratory birds and raptors:

- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season (February 1 through August 31), if practicable. This will help preclude nesting and substantially decrease the likelihood of direct impacts.
- If construction occurs during the nesting season (February 1 through August 31), a qualified biologist will conduct a pre-construction survey of the study area, as access is available, that will include an assessment for all raptor species and an assessment for all other species within a 50-foot buffer from the outer edges of the project area in order to locate any active bird nests and, if necessary, identify measures to protect the nests. The pre-construction survey will be performed between February 1 and August 31, but no more than 7 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities of 7 days or longer occurs between those dates, another pre-construction survey will be performed.

- If an active nest is found, a qualified biologist (in consultation with CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

  Timing/Implementation: Prior to and during construction
  Enforcement: CDFW, SWRCB
  Monitoring: SPMWC and its contractor

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion of Impacts

a, b) **No Impact.** A segment of the Nobles Emigrant Trail was originally mapped as being in the APE, but this linear segment was not identified in the project area (Stantec 2020c). There are no known cultural resources in the project area. In accordance with Section 106 of the National Historic Preservation Act and CEQA Article 5, subsection 15064.5, no historic or known cultural properties would be affected by project implementation. *Conservation Measure #5—Cultural Resources and Human Remains* (described in Section 2.6) was incorporated into the project design to address any inadvertent discovery of cultural resources during project excavation.

c) **No Impact.** Human remains were not identified during the cultural study; however, the potential for encountering human remains during project construction can never be entirely ruled out. State law prescribes protective measure that must be taken in the event that any subsurface human remains are discovered. *Conservation Measure #5—Cultural Resources and Human Remains* (described in Section 2.6) was incorporated into the project design to address any inadvertent discovery of human remains during project excavation.

Mitigation Measures

Conservation Measure #5—Cultural Resources and Human Remains (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VI. ENERGY — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	☐	☐	☐	☒

Discussion of Impacts

a, b) **No Impact.** During construction, it would be necessary to use diesel-powered equipment. This would not be considered wasteful, inefficient, or unnecessary consumption of energy resources. The water systems capacity improvement project will comply with state and Shasta County plans for energy efficiency, and it includes the installation of energy efficient motors.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VII. GEOLOGY AND SOILS — Would the project:				
a) Expose people or structures to 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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on strata 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) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Discussion of Impacts

a, i-iv) **Less-than-Significant Impact.** While there are pre-quaternary faults with Holocene displacement (i.e., potentially active within the last 11,000 years) near the project area, no faults are mapped that pass through the project area and the site is not within an Alquist-Priolo area for fault-rupture hazard (U.S. Geological Survey 2019; Bryant 2005; Jennings et al. 1977). The project location is in a region that experiences lower levels of and less frequent ground-shaking (Branum et al. 2016). The nearest mapped quaternary fault with Pleistocene displacement (i.e., potentially active within the last 1.6 million years) is the eastern extension of the Battle Creek fault approximately 5 miles south of the project area, south of Shingletown (Helley et al. 1981). The Shingletown area is located in a seismically-active region and earthquake-related ground shaking should be expected during design of life structures on site (KC Engineering Company 2019). However, the risk of

seismic activity occurring would not change with the implementation of the proposed project and the project would not expose people or structures to seismic ground shaking or seismic-related ground failure. The potential for liquefaction related hazards at the site is unlikely (KC Engineering 2019). Implementation of the project would not increase the likelihood of landslides or expose people to substantial adverse effects from landslides. The potential for seismic and other ground failures tied to geologic events would be less than significant.

b) **Less-than-Significant Impact.** Construction activities would result in soil disturbance in portions of the project area to accommodate the new well and water system improvements. Project designs and geotechnical considerations would reduce soil erosion. Overall soil loss would be minimal with implementation of standard construction practices for dust control and stormwater pollution prevention. Erosion and sediment control measures described in *Conservation Measure #2—Erosion and Sedimentation Control* (described in Section 2.6) will be used during construction to minimize the potential for erosion. Project operation would be consistent with existing conditions (i.e., low potential for erosion). The potential for soil erosion and loss of topsoil as a result of project implementation would be less than significant.

c) **Less-than-Significant Impact.** The project area is underlain by silty sands with gravel or silty gravels with sands and are Group A soils with relatively low run-off potential (Natural Resources Conservation 2019). These soils are unlikely to experience liquefaction or lateral spreading. The project area has not been identified as having significant potential for landslides by the California Department of Conservation (U.S. Geological Survey 2016) or by the Shasta County General Plan (Shasta County 2018). The potential for site instability would be less than significant.

d) **No Impact.** Expansive soils are defined as those soils with a plasticity index of 15 percent or greater; soil unit types within the project area do not exceed a plasticity index of 6 percent (Natural Resources Conservation Service 2019). Furthermore, project designs specify that Class 2 aggregate base or non-expansive soils will be used for import material within the tank and building pad over-excavation (KC Engineering Company 2019). As such, there is no potential for expansive soils that would be substantial risks to life or property.

e) **No Impact.** The project does not involve septic or wastewater systems.

f) **No Impact.** There are not unique paleontological or geologic features in the project area.

Mitigation Measures

Conservation Measure #2—Erosion and Sedimentation Control (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS — Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion of Impacts

a) **Less-than-Significant Impact**. Greenhouse gases (GHGs) are recognized by wide consensus among the scientific community to contribute to global warming/climate change and associated environmental impacts because of their ability to trap heat in the atmosphere and affect climate. The major GHGs that are released from human activity include carbon dioxide, methane, and nitrous oxide (Governor's Office of Planning and Research 2008, 2018). The primary sources of GHGs are vehicles (including planes and trains), energy plants, and industrial and agricultural activities (such as dairies and hog farms).

Emissions of GHGs from the proposed project would be generated offsite from the production of materials used for the project (e.g., antenna towers, pumps), as well as onsite construction-related equipment emissions. While the project would have an incremental contribution within the context of the county and region, the emissions of GHGs resulting from construction activities would be short term and minor. *Conservation Measure #1—Air Quality/Fugitive Dust and Emissions Controls* and *Conservation Measure #6—Greenhouse Gas Emissions* (described in Section 2.6) were incorporated into the project design to avoid or minimize construction-related GHG emissions. Project operation would be consistent with existing conditions.

b) **Less-than-Significant Impact.** The Shasta County AQMD has not adopted a plan, policy, or regulation for reducing GHG emissions (Shasta County Air Quality Management District 2020). However, the State of California has adopted several regulations related to GHG emissions reduction. These include efforts to reduce tailpipe emissions and diesel exhaust produced by fuel-combustion engines. Project construction and operation would adhere to statewide efforts aimed at minimizing GHG emissions and, therefore, would not conflict with any applicable plans, policies, or regulations adopted for reducing the emission of GHGs. The project would have a less-than-significant impact.

Mitigation Measures

Conservation Measure #1—Air Quality/Fugitive Dust and Emissions Controls, Conservation Measure #2—Erosion and Sedimentation Control, and *Conservation Measure #6—Greenhouse Gas Emissions* (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) 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 compatibility 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 for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Discussion of Impacts

a, b) **Less-than-Significant Impact**. Project operation would require diesel fuel and sodium hypochlorite. These materials will also be stored onsite. Diesel would be stored in a 200-gallon double-walled container under the generator at Well Site 1. Sodium hypochlorite would be store in two 50-gallon drums, on pallets to capture leaks, also at Well Site 1. Construction could pose a potential hazard to the public and the environment through the use of diesel or gasoline powered construction equipment (e.g., trucks, excavators) and lubricants such as oil and hydraulic fluids. The potential for such hazards would be temporary since equipment will be routinely maintained and inspected to avoid leaks, and this is similar to the impacts associated with the vehicles operating daily on nearby roads. BMPs described in *Conservation Measure #3—Prevention of Accidental Spills of Pollutants* (described in Section 2.6) will further reduce the potential impacts associated with the accidental spills of pollutants (e.g., fuel, oil, grease) during construction and operation. The potential for the accidental spill of pollutants would be less than significant.

c) **No Impact.** The nearest school, Black Butte Union Elementary, is located greater than 2 miles west of the project area.

d) **No Impact.** Review of the California Department of Toxic Substances Control EnviroStor database (California Department of Toxic Substances Control 2020) and the State Regional Water Quality Control Board's GeoTracker database (State Water Resources Control Board 2020) found no record of any known contaminated sites, regulated landfill sites, underground tank sites, or hazardous-waste generators in the project vicinity. The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No potential hazardous materials or waste sites are listed in the project vicinity.

e) **No Impact.** The Shingletown Airport, a retired airstrip, is located approximately 1 mile west of the project area (Freeman 2019). The airport was closed in 2002 and the County allowed its year-to-year lease on the property to lapse. The asphalt runway was removed in 2010. The project would have no impact on public or private airports or present a safety hazard for people working or residing in the project area.

f) **No Impact.** Ritts Mill Road is a designated fire access and escape route (Western Shasta Resource Conservation District 2010). However, during project construction, roads within the project area would remain open to through traffic. Work at well sites 1 and 2 would be away from area roads. Hydrant replacements would be adjacent to, but outside of the paved Starlite Pines Road corridor. Construction and operation traffic would access SPMWC facilities via area roads, but would not interfere with traffic passage. The project would not impair implementation of, nor physically interfere with, an adopted emergency response plan or emergency evacuation plan because vehicular access would be maintained through the project area during construction. Project operation would be consistent with existing conditions.

g) **Less-than-Significant Impact.** The project area is in a rural-residential subdivision surrounded by a densely vegetated, multi-storied, mixed coniferous forest. Although some forest thinning has occurred in the project area to allow for rural residential development, the area, in general, has retained its closed-canopy structure. Based on current mapping, the fire hazard potential of lands in the project area is mapped as having "high" fire hazard potential by the California Office of Emergency Services (2018) and "extreme" fire risk according to the California Public Utilities Commission Fire-threat District Map (PACE 2019). The use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. However, *Conservation Measure #7—Wildfire Potential* (described in Section 2.6) will further reduce the risk of wildfire associated with project construction. The potential for accidental wildfire ignition during construction would be less than significant. Project operation would be consistent with existing conditions and would not increase the potential for wildfire ignition.

Mitigation Measures

Conservation Measure #3—Prevention of Accidental Spills of Pollutants and *Conservation Measure #7—Wildfire Potential* (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality??	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in 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; or	☐	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Discussion of Impacts

a) **Less-than-Significant Impact.** The proposed project would involve ground disturbance and other activities that could discharge pollutants in storm water runoff; however, there is no hydrologic connectivity within the project area to any surface water features. Project construction would not alter the existing topography or existing drainage patterns in a way that would result in increased erosion, surface runoff, flooding on or off site, or otherwise degrade water quality. Construction and operation of the proposed project would involve the minor use of hazardous materials (i.e., petroleum-based fuels and lubricants) for fueling and maintenance of equipment in uplands (i.e., urban habitat) away from any waterways. Implementation of *Conservation Measure #2—Erosion and Sediment Controls* and *Conservation Measure #3—Prevention of Accidental Spills of Pollutants* (described in Section 2.6) will further reduce potential impacts on water quality; project-related impacts on water quality would remain less than significant.

b) **Less-than-Significant Impact.** The project would increase water storage capacity from the current 53,000 gallons (33,000 gallons at the Well 1 reservoir and four 5,000 gallon tanks at Well 2) to a total of 236,000 gallons. The project's engineering report (PACE 2019) determined that SPMWC does not currently meet Section 64554(a)(2) of the California Waterworks Standard, which requires systems with less than 1,000 service connections to have storage capacity equal to or greater than its MDD (176,000 gallons), unless the system can demonstrate that it has an additional source of supply or an emergency source connection that can meet the MDD requirement. SPMWC does not currently have an additional source supply or an emergency source connection. In addition to the required MDD storage volume, an additional 60,000 gallons of fire storage needs to be added to the proposed tank for a total storage volume of 236,000 gallons.

Although the source of water used by SPMWC would continue to be groundwater and the proposed water storage capacity would be greater than the existing conditions, the average daily demand and MDD would remain the same (PACE 2019). The project is not intended to induce growth. The impact on groundwater recharge would be less than significant.

c i-ii) **Less-than-Significant Impact.** The proposed project would be constructed in the existing SPMWC facilities boundary and throughout the Starlite Pines residential subdivision. The layout for the project would not alter the existing drainage pattern of the site. Facilities improvements such as the above-ground water storage tank and building expansion at Well 1 and the antenna tower footings at well sites 1 and 2 would slightly increase the amount of impervious surface at SPMWCs facilities, but there would be no significant alterations to the existing topography or existing drainage patterns that would result in increased erosion, surface runoff, flooding on or off site, or otherwise degrade water quality.

Tree removal throughout the Well 1 site would potentially increase the area of pervious surface; however, enough forested canopy would be retained throughout the site to moderate the possibility of splash erosion on exposed soils. Precipitation would percolate directly into soils, reducing further the potential for surface runoff. Because of the flat topography and low potential for splash erosion, the potential for project-related erosion, flooding, and other impacts on water quality would be less than significant.

c iii-iv) **No Impact.** Although the project would slightly increase the amount of impervious surface area and storm water runoff, proposed system improvements would not substantially alter the existing drainage patterns of the project area or substantially increase the amount of surface runoff from the well sites. There are no storm water drainage systems in the project area. Topography throughout the project area is nearly level, and work would be confined to existing roads and SPMWC facilities. There are no surface water features in the project area with the potential to flood. The project would not substantially increase the rate or quantity of surface runoff that could result in flooding.

d) **No Impact.** The project site is not at risk of seiche, tsunami, or mudflow.

e) **No Impact.** Construction and operation of the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Mitigation Measures

Conservation Measure #2—Erosion and Sedimentation Controls and *Conservation Measure #3—Prevention of Accidental Spills of Pollutants* (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** The project would not divide an established community. Construction would be temporary, and roads would remain passable.

b) **No Impact.** The proposed project would not require any changes to land uses or zoning and would not conflict with the Shasta County General Plan or Zoning Ordinances. The project would not conflict with any applicable conservation plans.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XII. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion of Impacts

a, b) **No Impact.** The project area has not been mapped by the California Department of Conservation as containing marketable aggregate (Shasta County 2018; Dupras 1997). The project area is not designated as a mineral resource area, as depicted in the Shasta County Map Viewer (Shasta County 2018). Gravel mining activities do not occur at this location. Project implementation would not result in the loss of availability of a valuable mineral resource.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne 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?	☐	☐	☐	☒

Discussion of Impacts

a) **Less-than-Significant Impact.** During project construction, there would be a minor increase in ambient noise levels. Based on the Shasta County General Plan Noise Element, the maximum allowable noise exposure from stationary sources is up to 65 dBA during daylight hours. The types of construction equipment and vehicles to be used during construction activities would be determined by the construction contractor and would likely include pick-up trucks, 10-wheeled dump trucks, cranes, graders, backhoes, excavators, front-end loaders, jack hammers, pneumatic compressors and equipment, generators, welders, circular saws, concrete vibrators, compactors, water trucks, truck-mounted drills, concrete delivery trucks, asphalt concrete paving machines, rollers, and service vehicles. Installation of the welded steel tank at the Well 1 site could require the additional use of welders, a single nozzle sand blaster, and painting equipment.

Heavy construction equipment such as may be used for this project can generate noise levels as high as 88 dBA at a distance of 50 feet (Federal Transit Administration 2006; Federal Highway Administration 2006). Construction-related noise would be temporary and would occur only during

daylight hours (typically 7:00 a.m. to 7:00 p.m., Monday through Friday). The nearest residences are located approximately 110 feet east of the SPMWC Well 1 facility, and about 130 feet both east and west of Well 2. Given the distances to the nearest residences and the temporary nature of the construction activities, noise generated by project construction and would have a less-than-significant impact on the community. Construction activities associated with hydrant replacement will involve minor mechanical and hand digging and would not result in noise impacts on nearby residences.

Noise from construction between equipment and receptors generally attenuates more quickly with longer distances and through denser vegetation, as is the case surrounding the immediate project area of the SPMWC site. However, to account for any localized and temporary increases in noise levels during construction activities (i.e., greater than 65 dBA), implementation of *Conservation Measure #8—Construction Noise* (described in Section 2.6) would further reduce noise; project noise during construction would be less-than-significant.

Ambient noise associated with project operation would be consistent with existing conditions.

b) **Less-than-Significant Impact.** During excavation and construction activities for the proposed project, groundborne vibration would be produced by the heavy-duty construction equipment such as jackhammers, backhoes, and loaded trucks. Therefore, short-term, construction-related groundborne vibration impacts would be less than significant. Implementation of *Conservation Measure #8—Construction Noise* (described in Section 2.6) will further reduce the potential for groundborne vibration. Project impacts related to groundborne vibration would be less than significant.

c) **No Impact.** The Shingletown Airport was retired from use in 2002 and is unlikely to reopen. The project would not expose area residents to excessive noise during construction or operation.

Mitigation Measures

Conservation Measure #8—Construction Noise (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. POPULATION AND HOUSING — Would the project:				
a) Induce substantial 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) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** This project is intended to improve storage and distribution components of SPMWC's existing water system, and the improvements are intended to serve the existing residences in the Starlite Pines and Starlite Woods subdivisions. The project would not induce growth.

b) **No Impact.** Existing housing within the community of the Starlite Pines and Starlite Woods subdivisions would not be displaced by the project and no replacement housing would be required.

Mitigation Measures

No project-specific mitigation is required under this subject.

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

Discussion of Impact

a) **No Impact.** The project would not cause substantial adverse physical impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. Although the Shingletown Volunteer Fire Department is located immediately adjacent to the Well 1 site, no project construction activities would interfere with ingress/egress to the fire department or its operation. The project would have no impact on any public recreational facilities in the project area and vicinity. Proposed improvements to the existing water facility would ensure that SPMWC would be able to meet the daily demand of its users and have adequate storage for fire. No road closures would be needed during project construction; impacts on emergency vehicle access would not be expected. No significant adverse impacts on service ratios, response times, or service objectives for any of the public services are anticipated.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. RECREATION — Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion of Impacts

a, b) **No Impact.** There are no parks or other recreational facilities in the project area or adjacent to the project area that would be affected by the proposed project; therefore, no impact would occur.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. TRANSPORTATION/TRAFFIC — Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometeric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** The project is not anticipated to increase either the number of vehicle trips, volume-to-capacity ratio, or congestion at intersections within the Starlite Pines subdivision. The project does not conflict with any alternative transportation plan or policy. The project is consistent with the goals and policies of the Regional Transportation Plan for Shasta County and the Shasta County General Plan.

b) **No Impact.** The primary purpose of the project is to provide for improved water storage capacity for the Starlite Pines and Starlite Woods subdivisions. The project would have no impact on vehicle miles traveled since through traffic would be maintained throughout construction and operation. The project would not conflict with Section 15064.3, subdivision (b).

c) **No Impact.** The project would not result in the creation of sharp curves, dangerous intersections, or incompatible uses.

d) **No Impact.** Construction would occur within the existing SPMWC facilities boundaries and existing public ROW along a stretch of Starlite Pines Road (for the replacement of hydrants). While roadwork is not anticipated, should it occur, traffic control measures such as signage will be used to route traffic flow around the project activities. The project would not result in inadequate emergency access.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES — 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) 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	☐	☐	☐	☒
b) 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.	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** There are no tribal cultural resources listed or eligible for listing on the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

b) **No Impact.** In accordance with Public Resources Code sections 5024.1, 5097.94, 21074, and 21080.3, commonly known as Assembly Bill 52, Stantec sent notification letters and a map via e-mail to the Native American tribes who may have knowledge of cultural resources in the area of potential effect on November 26 and December 4, 2019. The following tribes were contacted based on a list of tribes provided by the NAHC: Round Valley Reservation, Pit River Tribe, and Redding Rancheria. Follow-up phone calls were made to each tribal representative on December 16, 2019, and January 13, 2020. Messages were left, and there were no responses from any of the tribes.

In accordance with Public Resources Code Section 21080.3.1 and Assemble Bill 52, the SWRCB also sent consultation initiation letters via email to the Shasta Indian Nation and the Winnemem Wintu Tribe on August 7, 2020. Neither tribe responded requesting consultation under AB 52.

Additionally, the NAHC conducted a review of its Sacred Lands database for culturally significant properties and responded by email on November 21, 2019, indicating that the Sacred Lands File contained no records of Native American cultural resources in the immediate area, and no tribal cultural resources were identified in the project area. Project construction and operation would not cause a substantial adverse change in the significance of tribal cultural resources.

Mitigation Measures

No project-specific mitigation is required under this subject.

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

Discussion of Impacts

a) **Less-than-Significant-Impact**. The project consists of improvements to the water storage capabilities and distribution system of an existing SPMWC water system. Proposed improvements would include construction of a new water tank and supporting infrastructure within SPMWC's existing facility boundary and replacing several hydrants in the Starlite Pines subdivision. The project would require the removal of 45 mature trees to allow for construction at Well Site 1 including ponderosa pine and incense cedar; however, this removal would be localized within the SPMWC parcel which has been subjected to previous development and is surrounded by urban and rural development. As such, the effect of project implementation on the ponderosa pine-Douglas fir-incense cedar sensitive natural community would be less than significant. The proposed project does not involve any actions that would require or result in new wastewater treatment facilities.

b) **No Impact.** No new or expanded water entitlements would be required for the project.

c) **No Impact.** The project does not in involve any actions that would generate wastewater.

d) **Less-than-Significant Impact.** Construction activities associated with the project would generate solid waste in the form of demolished materials, metal pilings, and other trash. Solid waste generated at the project site would be disposed of at a suitable facility such as the Waste Management Landfill site located in Anderson, California, approximately 30 miles west of the project area. The project would not generate solid waste in amounts that would adversely affect the

existing capacity of the local landfill or would violate regulations related to solid waste. The contractor will be responsible for removing solid waste from the site. Project impacts on landfills would be less than significant.

e) **Less-than-Significant Impact.** Any solid waste generated by the project would be disposed of at an approved landfill in compliance with local, state, and federal regulations pertaining to solid waste disposal.

Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XX. WILDFIRE — Would the project result in:				
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?	☐	☐	☐	☒

Discussion of Impacts

a) **No Impact.** Ritts Mill Road is a designated fire access and escape route (Western Shasta Resource Conservation District 2010). However, during project construction, roads within the project area would remain open to through traffic. The project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan because vehicular access would be maintained through the project area during construction. Project operation would be consistent with existing conditions.

b, c) **Less-than-Significant-Impact**. The project site is within a region designated by the Shasta County General Plan as a very-high fire hazard severity zone. However, all project activities would be within existing ROW and existing SPMWC facilities, and would not exacerbate fire risks or result in ongoing impacts to the environment. The removal of approximately 45 mature trees within the Well 1 site would create a discontinuity in the canopy overstory at the site. Implementation of

Conservation Measure #7—Wildfire Potential (described in Section 2.6) will further reduce the potential for wildfire. The project's wildfire risk potential would be less than significant.

d) **No Impact.** Construction and operation of the project would be within existing SPMWC water facilities. The project profile would provide sufficient gradient for drainage of roadway surfaces, and as such, the project would not expose people or structures to significant risks as a result in drainage changes, runoff, or slope instability.

Mitigation Measures

Conservation Measure #7—Wildfire Potential (described in Section 2.6) will be used if necessary; however, no project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE (To be filled out by Lead Agency if required)				
a) Does the project have the potential to 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, 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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) **Less than Significant with Mitigation Incorporated.** As discussed in the preceding sections, the proposed project has a potential to impact biological resources. Although no federally listed plant or animal species would be affected by the project, migratory birds could be impacted by construction. Habitat for several state-listed species of special concern could be impacted by project construction, but mitigation measures described in the Biological Resources section (Section 3.2, IV) and conservation measures described in Section 2.6 will be used to avoid or minimize potential impacts on wildlife and avian species. No cultural resources are anticipated to be impacted by project construction; however, the use, if necessary, of conservation measures described in Section 2.6 will be used in the event of an unexpected discovery of cultural resources or human

remains. The project would have no impact or a less-than-significant impact on environmental resources with mitigation and conservation measures incorporated.

b) **Less-than-Significant Impact.** The project consists of improvements to an existing water storage and distribution system. Impacts associated with the project would be limited primarily to the construction phase, with no significant operational impacts on the environment. All impacts resulting from project implementation can be fully mitigated at the project level. As a result, cumulative impacts would be less than significant.

c) **Less-than-Significant Impact.** Construction and operation of the project would not involve any actions that would have a substantial direct or indirect impact on the human environment. The project would have a less**-than-**significant impact.

4. DETERMINATION

Based on 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature
Bridget Binning, Senior Environmental Scientist
Division of Financial Assistance
State Water Resources Control Board

Date

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5. MITIGATION MONITORING AND REPORTING PROGRAM

This chapter comprises the Mitigation Monitoring and Reporting Program (MMRP) for the SPMWC Storage Capacity Improvements Project (project). The purpose of this MMRP is to memorialize the mitigation responsibilities of the SPMWC in implementing the proposed project. The mitigation measures listed herein are required by law or regulation and will be adopted by the SWRCB as part of the overall project approval. Mitigation is defined by CEQA Section 15370 as a measure that

- avoids the impact altogether by not taking a certain action or parts of an action;
- minimizes impacts by limiting the degree or magnitude of the action and its implementation;
- rectifies the impact by repairing, rehabilitating, or restoring the impacted environment;
- reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project; or
- compensates for the impacts by replacing or providing substitute resources or environments.

Mitigation measures provided in this MMRP have been identified in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures of the Initial Study (IS)/Mitigated Negative Declaration (MND) and are considered feasible and effective in mitigating Project-related environmental impacts.

This MMRP includes discussions of the following: legal requirements, intent of the MMRP; development and approval process for the MMRP; the authorities and responsibilities associated with implementation of the MMRP; a method of resolution of noncompliance complaints; and a summary of monitoring requirements.

Legal Requirements: The legal basis for the development and implementation of the MMRP lies within CEQA (including the California Public Resources Code). Sections 21002 and 21002.1 of the California Public Resources Code state:

- Public agencies are not to approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects.

- Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.

Section 21081.6 of the California Public Resources Code further requires that:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.

- The monitoring program must be adopted when a public agency makes its findings under CEQA so that the program can be made a condition of project approval in order to mitigate significant effects on

the environment. The program must be designed to ensure compliance with mitigation measures during project implementation to mitigate or avoid significant environmental effects.

Intent of the Mitigation Monitoring and Reporting Program: The MMRP is intended to satisfy the requirements of CEQA as they relate to the project. It will be used by SWRCB staff, participating agencies, project contractors, and mitigation monitoring personnel during implementation of the project. The primary objective of the MMRP is to ensure the effective implementation and enforcement of adopted mitigation measures and permit conditions. The MMRP will provide for monitoring of construction activities as needed, onsite identification and resolution of environmental problems, and proper reporting to lead agency staff.

Development and Approval Process: The timing elements for implementing mitigation measures and the definition of the approval process are provided in detail throughout this MMRP to assist the SPMWC by providing the most usable monitoring document possible.

Authorities and Responsibilities: The SWRCB, functioning as the CEQA Lead Agency, will have the primary responsibility for overseeing the implementation of the MMRP and will be responsible for the following activities:

- coordination of monitoring activities
- reviewing and approving status reports
- maintenance of records concerning the status of all approved mitigation measures

The SPMWC, as implementing agency, is responsible for implementing the mitigation measures by incorporating them into the project specifications (contract documents) and enforcing the conditions of the contract in the field during construction. Some pre- and post-construction activities may be implemented directly by the SPMWC.

Resolution of Noncompliance Complaints: Any person or agency may file a complaint that alleges noncompliance with the mitigation measure(s) adopted as part of the approval process for the proposed project. The complaint will be directed to the SWRCB, Division of Financial Assistance, Environmental Section in written form describing the purported violation in detail. The SWRCB will investigate and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, the SWRCB will take the necessary action(s) to remedy the violation. Complaints will be responded to in writing including descriptions of SWRCB's investigation findings and the corrective action(s) taken, if applicable.

Summary of Monitoring Requirements: Following this discussion are the conservation measures, mitigation measures and associated monitoring requirements for the proposed project. Conservation measures include standard BMPs that will be used during construction. Mitigation measures are organized by environmental issue area (e.g., Air Quality, Biological Resources).

- Conservation Measures: describes the schedules of activities, prohibitions of practices, maintenance procedures, and structural or managerial practices, that will be used either singly or in combination to prevent or reduce the release of pollutants, or otherwise minimize the potential for adverse effects on environmental resources. The same conservation numbering system used in the IS/MND is carried forward in this MMRP.

- Mitigation Measure(s): lists the mitigation measure(s) identified for each potentially significant impact discussed in the IS/MND. The same mitigation numbering system used in the IS/MND is carried forward in this MMRP.
- Timing/Implementation: Indicates at what point in time or project phase the mitigation measure will need to be implemented.
- Enforcement: Indicates which agency or entity is responsible for enforcement of the mitigation measure(s).
- Monitoring: Indicates which agency or entity is responsible for implementing and monitoring each mitigation measure.
- Verification: Provides a space to be signed and dated by the individual responsible for verifying compliance with each mitigation measure.

5.1 CONSERVATION MEASURES

The following conservation measures and BMPs will be followed during project construction to avoid or minimize potential environmental impacts:

Conservation Measure #1—Air Quality/Fugitive Dust and Emissions Controls

Air pollution control will conform to all applicable air pollution control rules, regulations, ordinances, and statutes. Dust will be controlled during construction activities and subsequent operation of the project. Dust controls may include, but will not be limited to the following elements, as appropriate:

- Water inactive construction sites and exposed stockpile sites at least twice daily, including non-workdays, until soils are stable.
- Pursuant to California Vehicle Code (Section 23114) (California Legislative Information 2020), all trucks hauling soil and other loose material to and from the construction site will be covered or will maintain at least 6 inches of freeboard (i.e., minimum vertical distance between the top of the load and the upper edge of the trailer).
- Any topsoil that is removed for the construction operation will be stored on-site in piles not to exceed 4 feet in height to allow development of microorganisms prior to re-soiling of the construction area. These topsoil piles will be clearly marked and flagged. Topsoil piles that will not be immediately returned to use will be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill will be marked and flagged separately from native topsoil stockpiles. These soil piles will also be surrounded by silt fencing, straw wattles, or other sediment barriers, or covered unless they are to be immediately used.
- Equipment and manual watering will be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

- Contractors will commit to using the best available emissions control technology. The use of diesel construction equipment meeting the California Air Resources Board (CARB) 1996 or newer certification standard for off-road heavy-duty diesel engines and having Tier 4 engines will be maximized to the extent feasible. Equipment may be electrified if feasible, and gasoline-powered equipment should be substituted for diesel-powered equipment when feasible, unless alternatively fueled construction equipment can be used. If the use of all equipment with Tier 4 engine standards is not feasible, the contractor should commit to using CARB and Environmental Protection Agency-verified particulate traps, oxidation catalysts, and other appropriate controls when suitable to reduce emissions of diesel particulate matter and other pollutants during construction.

- SPMWC or its contractor will designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to any citizen complaints.

Conservation Measure #2—Erosion and Sedimentation Control

Best management practices (BMPs) for erosion control will be implemented during project construction. Provisions do not include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), because the disturbed area is less than one acre in area.

Erosion control measures included in the construction contract and to be implemented by the contractor include the following:

- To the maximum extent practicable, activities that increase the erosion potential in the action area will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. Upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein for the protection of sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures will be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.

- Areas where upland vegetation need to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by SPMWC. Exclusionary fencing will be installed around areas that do not need to be disturbed.

- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch will be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch will be applied to all exposed areas upon completion of the day's activities. Soils will not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins will be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures will be installed prior to any clearing or grading activities. Further,

sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.

- If spoil sites are used, they will be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins will be constructed to intercept sediment before it reaches the feature. Spoil sites will be graded and vegetated with native species to reduce the potential for erosion.
- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated with native species.

Conservation Measure #3—Prevention of Accidental Spills of Pollutants

Construction specifications will include the following measures to reduce potential impacts on vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, and grease):

- A site-specific spill prevention plan will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials will be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling will be conducted within an adequate fueling containment area.

Conservation Measure #4—Prevention of Spread of Invasive Species

The following measures will be implemented to prevent the spread of invasive species in the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the project area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.
- Non-native and invasive species removed during project construction should be properly disposed of to prevent the spread of non-native and invasive species.

Conservation Measure #5—Cultural Resources and Human Remains

Surface surveys are not infallible and buried resources may be overlooked. Implementation of the following conservation measures will avoid or minimize the potential for significant effects to newly discovered resources:

- Construction contract documents include provisions to minimize project impacts on unique archaeological resources. In the event that previously unknown archaeological resources are discovered during project activities, all work in the immediate vicinity of the discovery will be stopped immediately and the contractor will notify the SPMWC and the State Water Board. An archaeologist meeting the Secretary of Interior's Professional Qualifications Standards will be retained to evaluate the discovery and recommend appropriate treatment. If the resource is potentially significant, the State Water Board will contact the State Historic Preservation Office and consulting parties and decide a course of action. The conservation measures will be implemented prior to re-initiation of activities in the immediate vicinity of the discovery. If the resource that is discovered is prehistoric or Native American in nature, a Native American monitor will be present during subsequent project ground disturbance.
- If human remains are discovered during project activities, all activities near the find will be suspended and the Shasta County Sheriff–Coroner will be notified. If the coroner determines that the remains may be those of a Native American, the coroner will contact the Native American Heritage Commission (NAHC). Treatment of the remains will be conducted in accordance with the direction of the County Coroner and/or NAHC as appropriate.

Conservation Measure #6—Greenhouse Gas Emissions

Construction contract documents include provisions to minimize project-related greenhouse gas emissions. The following measures will be implemented to reduce construction-related greenhouse gas emissions:

- Reuse and recycle construction and demolition waste, including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard.
- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation (e.g., bicycles, pedestrians) through proper pre-construction planning.
- Protect existing trees to the extent possible and encourage the planting of new trees.

Conservation Measure #7—Wildfire Potential

Construction contract documents include measures to minimize project-related potential for wildfire ignition:

- Per the requirements of Public Resources Code Section 4442, SPMWC will include a note on all construction plans that internal combustion engines will be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Conservation Measure #8—Construction Noise

Construction contract documents include provisions to minimize project-related noises. The following measures will be implemented to reduce construction-related noises generated:

- Construction activities (excluding activities that would result in a safety concern to the public or construction workers) will be limited to between the daylight hours of 7:00 A.M. and 7:00 P.M., Monday through Friday, and 8:00 A.M. and 5:00 P.M. on Saturdays. Construction activities will be prohibited on Sundays and federal/state recognized holidays.
- Construction equipment will be properly maintained and equipped with noise-reduction intake and exhaust mufflers in accordance with manufacturers' recommendations.
- When not in use, motorized construction equipment will not be left idling for more than 5 minutes.
- Stationary equipment (generators, compressors, etc.) will be located at the furthest practical distance from nearby noise-sensitive land uses. If necessary, noise attenuation measures sufficient to achieve compliance with the Shasta County General Plan Noise Element will be implemented.

5.2 MITIGATION MEASURES FOR BIOLOGICAL RESOURCES

This MMRP includes the following mitigation measures to be implemented during construction of the SPMWC Storage Capacity Improvements Project:

Mitigation Measure #1—Northern Goshawk and Olive-Sided Flycatcher

The following measures shall be implemented to avoid or minimize the potential for significant impacts on northern goshawk and olive-sided flycatcher:

- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season (i.e., February 1 through August 31), if practicable. This will help preclude nesting and substantially decrease the likelihood of direct impacts.
- If construction occurs during the nesting season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey for nesting northern goshawk and olive-sided flycatcher. The effort shall include surveying the study area and area within 250 feet for northern goshawk nests and 50 feet for olive-sided flycatcher nests, where access is permitted. The pre-construction survey shall be performed no more than 7 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities of 7 days or longer occurs between those dates, another pre-construction survey shall be performed.
- If an active northern goshawk or olive-sided flycatcher nest is found, a qualified biologist in consultation with CDFW shall determine the extent of a construction-free buffer zone to be established around the nest.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, SWRCB
Monitoring:	SPMWC and/or its contractor

Mitigation Measure #2—Migratory Birds and Raptors

The following measures shall be implemented to avoid or minimize the potential for adverse impacts on nesting migratory birds and raptors:

- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season (February 1 through August 31), if practicable. This will help preclude nesting and substantially decrease the likelihood of direct impacts.
- If construction occurs during the nesting season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey of the study area, as access is available, that shall include an assessment for all raptor species and an assessment for all other species within a 50-foot buffer from the outer edges of the project area in order to locate any active bird nests and, if necessary, identify measures to protect the nests. The pre-construction survey shall be performed between February 1 and August 31, but no more than 7 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities of 7 days or longer occurs between those dates, another pre-construction survey shall be performed.
- If an active nest is found, a qualified biologist (in consultation with CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, SWRCB
Monitoring:	SPMWC and its contractor

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6. REPORT PREPARATION

6.1 STATE WATER RESOURCES CONTROL BOARD CEQA LEAD AGENCY

Bridget Binning	Senior Environmental Scientist
Nabiul Afrooz	Water Resources Control Engineer
Gabriel Edwards	Environmental Scientist

6.2 STARLITE PINES MUTUAL WATER COMPANY PROJECT SPONSOR

Leroy Bench	Director
Diane Spear	Chief Financial Officer
Denise Orear	Secretary
Brian Krecsy	Board Member
Mariana Litvinenko	Board Member
John Orear	Maintenance Supervisor
William Cobine	Maintenance Assistant

6.3 PACE ENGINEERING ENGINEERING CONSULTANT

Tom Warnock	Principal Engineer/Project Manager
Nicole Humphreys	Staff Engineer

6.4 UNIVERSITY ENTERPRISES, INC. – SACRAMENTO STATE

Anne Kernkamp	Consultant

6.5 STANTEC CONSULTING SERVICES ENVIRONMENTAL COMPLIANCE SUBCONSULTANTS

Wirt Lanning	Program Manager
Connie MacGregor	Project Manager
Leticia Morris	Environmental Analyst
Jaqueline Phipps	Biologist
Kurt Bainbridge	Biologist
Julie Cassidy	Principal Investigator/Archaeologist
Teri Mooney	GIS Analyst
Sylvia Langford	Editing and Formatting

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7. REFERENCES

Branum, D., R. Chen, M. Peterson, and C. Wills. 2016. Map Sheet 48 (Revised 2016): Earthquake shaking potential for California. California Geological Survey.

Bryant, W.A. 2005. Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0: California Department of Conservation. California Geological Survey Web Page. Available at https://www.conservation.ca.gov/cgs/Pages/Publications/QuaternaryFaults_ver2.aspx (accessed February 19, 2020).

California Air Resources Board. 2020. Maps of state and federal area designations. Available at https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations (accessed March 11, 2020).

California Department of Conservation. 2013. State of California Williamson Act contract land, data submissions current to 2007 for Shasta County. State of California, The Natural Resources Agency, Department of Conservation, Sacramento, California.

---. 2016a. Shasta County important farmland. 2016. California Department of Conservation, Division of Land Resource Protection. Sacramento, California. Available at http://maps.conservation.ca.gov/ciff/ciff.html (accessed February 17, 2020).

---. 2016b. Shasta County farmland conversion report 2016. California Department of Conservation, Division of Land Resource Protection. Sacramento, California. Available at https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2014-2016/field_reports/sha16.pdf (accessed February 17, 2020).

California Department of Fish and Wildlife. 2018. Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities. California Natural Resources Agency Department of Fish and Wildlife.

California Department of Toxic Substances Control. 2020. DTSC's hazardous waste and substances site list - site cleanup (Cortese list). Available at http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm (accessed February 19, 2020).

California Department of Transportation (Caltrans). 2020. List of eligible and officially designated state scenic highways. Available at https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed March 11, 2020).

California Legislative Information. 2020. Vehicle code, division 11, chapter 12, article 1, section 23114. Available at https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=23114 (accessed March 3, 2020).

California Office of Emergency Services. 2018. Rocky Mountain Research Station wildfire hazard potential, ArcGIS, version 2018 classified. Available at http://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fapps.fs.usda.gov%2Farcx%2Frest%2Fservices%2FRDW_Wildfire%2FRMRS_WildfireHazardPotential_2018%2FMapServer&source=sd (accessed March 17, 2020).

California Public Utilities Commission (CPUC). 2020. CPUC fire threat district map. Available at https://ia.cpuc.ca.gov/firemap/ (accessed April 16, 2020).

Department of Water Resources. 1984. Eastern Shasta County Ground Water Study. State of California, The Resource Agency. Department of Water Resources: Northern District. Red Bluff, California.

Dupras, D. 1997. Mineral land classification of alluvial sand and gravel, crushed stone, volcanic cinders, limestone, and diatomite within Shasta County, California. DMG Open-File Report 97-03. California Department of Conservation. Division of Mines and Geology. Sacramento, California.

Federal Emergency Management Agency. 2011. Flood Insurance Rate Map. Map Number 06089C1675G. Shasta County. U.S. Department of Homeland Security. March 17, 2011. Available at https://msc.fema.gov/portal/home# (accessed February 20, 2020).

Federal Highway Administration. 2006. Construction noise handbook. FHWA-HEP-06-015-DOT-VNTSC-FHWA-06-02 NTIS No. PB2006-109102. U.S. Department of Transportation. Office of Natural and Human Environment. Washington D.C. Updated August 24, 2017. Available at https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/handbook/handbook09.cfm (accessed February 21, 2020).

Federal Transit Administration. 2006. Transit noise and vibration impact assessment. FTA-VA-90-1003-06. U.S. Department of Transportation. Office of Planning and Environment. Washington, DC. Available at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf (accessed February 21, 2020).

Freeman, P. 2019. Abandoned and little-known airfields: northwestern California. Shingletown airport (0q6), Shingletown, CA. Available at http://www.airfields-freeman.com/CA/Airfields_CA_NW.htm (accessed March 17, 2020).

Governor's Office of Planning and Research. 2008. Technical advisory: CEQA and climate change: Addressing climate change through California Environmental Quality Act Review. Sacramento, CA. Available online at: <http://opr.ca.gov/docs/june08-ceqa.pdf>. Prepared June 19, 2008. (accessed January 2016).

---. 2018. Discussion Draft: CEQA and Climate Change Advisory. Sacramento, CA. Available at http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf (accessed February 19, 2020).

Heiman, D, and M. L. Knecht. 2010. The Sacramento River Basin: A roadmap to watershed management. Sacramento River Watershed Program. October 2010. Chico, CA.

Helley, E.J, D.S. Harwood, J.A., Barker, and E.A. Griffin. 1981. Geologic map of the Battle Creek fault zone and adjacent parts of the northern Sacramento Valley, California: scale 1:62,500. U.S. Geological Survey.

Jennings, C.W., R.G. Strand, and T.H. Rogers. 1977. Geologic map of California, scale 1:750,000. Division of Mines and Geology.

KC Engineering Company. 2019. Geotechnical Exploration Report on Proposed Water System Improvements Project for Starlite Pines Mutual Water Company. October 30, 2019.

Luedke, R.G and R.L. Smith. 1981. Map showing distribution, composition, and age of late Cenozoic volcanic centers in California and Nevada. U.S. Geologic Survey. Miscellaneous Investigations Series Map I-1091-C, scale 1:1,000,000. Available at https://pubs.er.usgs.gov/publication/i1091C (accessed February 11, 2020).

Mayer, K. E., and W. F. Laudenslayer Jr., eds. 1988. *A guide to wildlife habitats of California*. California Department of Forestry and Fire Protection. Sacramento, California.

---. 2019. Web soil survey. Custom Soil Resources Report for Shasta, County Area, California. Starlite Pines Mutual Water Company Storage Capacity Improvements Project. U.S. Department of Agriculture. Version 14, September 16, 2019. Available at https://websoilsurvey.sc.egov.usda.gov/WssProduct/n5duzpctwcjsp2t4mbriykks/GN_00001/20200214_17481905438_14_Soil_Report.pdf (accessed February 14, 2020).

Sacramento Valley Air Quality Engineering and Enforcement Professionals (SVAQEEP). 2018. Northern Sacramento Valley planning area 2018 triennial air quality attainment plan. Available at https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/aq-docs/2018_triennial_air_quality_attainment_plan.pdf (accessed February 21, 2020).

PACE Engineering, Inc. 2019. Engineering report for Starlite Pines Mutual Water Company storage capacity improvements planning project. Redding, CA. November 2019.

Sawyer, J., T. Keeler-Wolf, J. Evens. 2009. A manual of California vegetation, second edition. California Native Plant Society, Sacramento, California.

Shasta County. 2018. General Plan (5.0 Public Safety Group, as amended through December 11, 2018). Available at https://www.co.shasta.ca.us/index/drm/planning/general-plan (accessed February 21, 2020).

Shasta County. 2020. Shasta County interactive map. Available at https://maps.co.shasta.ca.us/ShastaCountyMap/ (accessed March 31, 2020).

Shasta County Air Quality Management District (SCAQMD). 2020. Shasta County Department of Resource Management, Air Quality Management District. Available at https://www.co.shasta.ca.us/index/drm/air-quality (accessed February 21, 2020).

State Water Resources Control Board. 2020. Geotracker: Shingletown. Available at https://geotracker.waterboards.ca.gov/ (accessed February 20, 2020).

Stantec. 2020a. Biological resources assessment for the Starlite Pines Mutual Water Company

Stantec. 2020b. Starlite Pines Mutual Water Company storage capacity improvements project, botanical survey report. Prepared for the California State Water Resources Control board on behalf of Starlite Pines Mutual Water Company. Redding, CA. July 1, 2020.

Stantec. 2020c. Starlite Pines Mutual Water Company Water System Improvements Project, draft cultural resources survey report. Prepared for the California State Water Resources Control Board on behalf of Starlite Pines Mutual Water Company. Redding, CA. February 19, 2020.

U.S. Geological Survey. 1960. Geologic Map of California: Olaf P Jenkins Edition, Westwood Sheet. U.S. Geological Survey, Division of Mines.

---. 2016. USGS National Hydrography Dataset (NHD) Downloadable Data Collection - National Geospatial Data Asset (NGDA) National Hydrography Dataset (NHD): USGS - National Geospatial Technical Operations Center (NGTOC): Rolla, MO and Denver, CO. Available at https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/ (accessed February 11, 2020).

---. 2019. Quaternary fault and fold database for the United States. Bureau of Mines and Mineral Resources. Available at https://www.usgs.gov/natural-hazards/earthquake-hazards/faults (accessed February 19, 2020).

Western Regional Climate Center. 2019. Volta Powerhouse (049390) period of record monthly climate summary, period of record: 11/01/1926 to 05/31/2016. Available at https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9390 (accessed on January 22, 2020).

Western Shasta Resources Conservation District. 2010. Updated fire safe plan for the Shingletown community. Available at http://www.battle-creek.net/docs/fire/ShingletownRevisedDraft_11_09_09.pdf (accessed February 19, 2020).