

# Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project

---

Proposed Mitigated Negative Declaration and Initial Study  
Public Draft



*CEQA Lead Agency:*  
Paradise Irrigation District  
6332 Clark Road  
Paradise, CA 95969  
(530) 876-2067  
FAX: (530) 876-0483

*Prepared by:*  
 **Stantec**  
5000 Bechelli Lane, Suite 203  
Redding, California 96002  
(530) 222-5347  
FAX: (530) 222-4958  
File #2272006800

August 2018



## Project Information

---

- 1. Project Title:** Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project
- 2. Lead Agency Name and Address** Paradise Irrigation District  
6332 Clark Road  
Paradise, CA 9596
- 3. Contact Person and Phone Number** Jim Passanisi, Paradise Irrigation District (530) 876-2067
- 4. Project Location** The project is located in two disjunct sites, one in the community of Magalia and the other in the town of Paradise, Butte County; Township 22N, Range 3E, Sections 1 and 12, Township 23N, Range 3E, Sections 25 and 36, and Township 23N, Range 4E, Section 31, *Paradise East, California* U.S. Geological Survey topographic quadrangle, Mount Diablo Base and Meridian; existing Town of Paradise rights of way and multiple parcel numbers.
- 5. Project Sponsor's Name** Paradise Irrigation District
- 6. General Plan Designation** Community Commercial (C-C); General Commercial (G-C); Public (P); Rural Residential, 5-acre min. parcel size (RR-5)
- 7. Zoning** Community Commercial (C-C); Community Facilities (C-F); Multiple-Family Residential (M-F); Public (P); Rural Residential, 5-acre min. parcel size (RR-5)

### 8. Description of Project

Paradise Irrigation District (PID) operates a water treatment plant (WTP) and the accompanying distribution system for Paradise, CA. The distribution system supplies potable water to 10,507 connections, serving a population of approximately 26,000. This includes 7 distribution zones (Zones A through G) and 5 storage reservoirs (Reservoirs A through E) within PID, as well as wheeling water<sup>1</sup> to Del Oro Water Company. The distribution system is supplied by one gravity transmission line via Reservoir B. Zone A and Reservoir A are supplied by Reservoir B via Pump Station #2. The

---

<sup>1</sup> So named because pipelines can be laid out to connect different utility providers (like the spokes of a wheel), particularly during drought emergencies.

remaining zones and reservoirs are gravity fed from Reservoir B. Challenges to the existing system include:

1. WTP finished water hydraulics—the existing hydraulics at the WTP do not allow full use of Reservoir B, thus reducing the available storage volume from 3 million gallons (MG) to 2 MG.
2. The existing 42-inch transmission main alignment has no redundancy and is a vulnerability in the ability for PID to deliver water from the WTP to the distribution system.
3. Reservoir B operability and dependability are lacking efficiency due to the nature of the earthen reservoir design.
4. Reservoir A feed reliability—the system relies on a single pump station to feed Zone A via Zone B and Reservoir B.
5. Fire flow storage—Paradise is a wildland interface and therefore requires supplementary fire flow storage in addition to 4 hours of Peak Hourly Flow/Max Day Demand storage as required by the California Code of Regulations (Title 22) storage regulations.

The following features would be included in the project to address the challenges in the existing system:

1. Install new Zone A pumps at the WTP (Zone A Pump Station) adjacent to the treated water storage tank (TWST).
  - a. The new pump station would supply Zone A and the WTP water pumps, removing the restriction on the minimum water surface elevation at Reservoir B.
2. Install a new 16-inch transmission main from the WTP directly to Zone A along New Skyway (Zone A Transmission Main).
  - a. The Zone A Transmission Main (ZATM) would provide potable water supply redundancy to the existing 42-inch transmission main. The 16-inch ZATM would allow Zone A to be fed independently of Reservoir B.
3. Modify Pump Station #2 with a pressure regulating valve station to allow Zone A to feed Zone B.
  - a. Connecting Reservoir A to the rest of the distribution system would have a beneficial impact on overall fire storage capacity, increasing all other zone fire storage capacities by 1 MG.
4. Replace the existing Reservoir B with two 2.3 MG (each, minimum) tank reservoirs.
  - a. Fire storage and predicted growth storage capacity deficiencies would be solved by upsizing Reservoir B from 3 MG to at least 4.6 MG.

- b. The operability, dependability, and sanitary issues would be solved by replacing the earthen reservoir with two tank reservoirs.

## **9. Surrounding Land Uses and Setting**

Rural Residential/Mobile Home Park/Commercial/Public Facilities and Infrastructure/Light Industrial/Public Lands

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

- U.S. Environmental Protection Agency
- California State Water Resources Control Board, Division of Drinking Water
- California Department of Fish & Wildlife (Region 2)
- California Regional Water Quality Control Board (Central Valley Region)
- California Department of Transportation (District 3)
- California Office of Emergency Services



**Paradise Irrigation District  
 Zone A Pump Station, Transmission Main, and Reservoir B Replacement  
 Project**

**Contents**

---

**Project Information ..... Project Information - i**

**Acronyms .....iii**

**1. Introduction ..... 1**

1.1 Introduction and Regulatory Guidance..... 1

1.2 Lead Agency..... 1

1.3 Supporting Technical Studies ..... 1

1.4 Document Organization..... 2

**2. Project Description..... 3**

2.1 Location ..... 3

2.2 Project Purpose and Need ..... 3

2.3 Existing Facilities ..... 3

2.3.1 Problematic Operational Constraints ..... 11

2.4 Storage Capacity and Water Demand ..... 13

2.5 System Improvements..... 13

2.5.1 Direct Feed to Reservoir A ..... 13

2.5.2 Connecting Zone A to Zone B at Pump Station #2 ..... 14

2.5.3 Reservoir B Upgrade ..... 14

2.5.4 Site Improvements ..... 15

2.6 Project Design Criteria and Best Management Practices..... 15

2.6.1 Contractor Staging Areas/Construction Access Routes..... 15

2.6.2 Conservation Measures..... 15

2.7 Project Approvals ..... 18

2.7.1 Funding Sources ..... 18

2.7.2 Anticipated Permits and Regulatory Approvals ..... 18

2.8 Tentative Project Construction Schedule..... 19

2.9 Project Alternatives..... 19

2.9.1 No Project Alternative ..... 19

2.9.2 Zone A Transmission Line Alternative 2..... 19

2.9.3 Reservoir B Alternative 2: Raise Reservoir Walls ..... 20

**3. Environmental Setting, Impacts, and Mitigation Measures ..... 21**

3.1 Environmental Setting ..... 22

3.1.1 Regional Setting..... 22

3.1.2 Local Setting..... 22

3.2 Environmental Impacts and Mitigation Measures ..... 26

**4. Determination ..... 65**

**5. Mitigation Monitoring and Reporting Program..... 67**

5.1 Conservation Measures..... 69

5.2	Mitigation Measures .....	72
5.2.1	Biological Resources .....	72
5.2.2	Cultural Resources .....	73
<b>6.</b>	<b>Report Preparation .....</b>	<b>75</b>
6.1	Paradise Irrigation District – CEQA Lead Agency .....	75
6.2	North State Resources, Inc., now Stantec – Environmental Compliance.....	75
6.3	Water Works Engineers, LLC – Preliminary Design Engineering .....	75
<b>7.</b>	<b>References .....</b>	<b>77</b>

---

## Tables

---

Table 1.	PID Distribution System Reservoir Sizes .....	11
Table 2.	Soil Map Units in the Proposed Project Area .....	23
Table 3.	Maximum Allowable Noise Exposure to Non-Transportation Sources (Butte County 2012) .....	52

---

## Figures

---

Figure 1.	Project Location and Vicinity Map .....	4
Figure 2.	Project Layout Maps .....	5

## Acronyms and Abbreviations

---

°F	degrees Fahrenheit
AB 52	Assembly Bill 52
APE	area of potential effect
AQMD	Air Quality Management District
BRA	Biological Resources Assessment
BMP	Best Management Practice
C-C	Community Commercial
C-F	Community Facilities
Caltrans	California Department of Transportation
Cal OES	California Governor's Office of Emergency Services
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CO <sub>2</sub>	carbon dioxide
CRPR	California Rare Plant Rank
CWSRF	Clean Water State Revolving Fund
Corps	U.S. Army Corps of Engineers
County	Butte County
CVRWQCB	Central Valley Regional Water Quality Control Board
CWSRF	Clean Water State Revolving Fund
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
°F	degrees Fahrenheit
GHG	greenhouse gas
HDPE	high density polyethylene
IS	Initial Study
MG	million gallons
MGD	million gallons per day
MND	Mitigated Negative Declaration
M-F	Multiple-Family Residential
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Naturally Occurring Asbestos
NSR	North State Resources
PF	Public Facility
PID	Paradise Irrigation District
PM <sub>2.5</sub>	particulate matter 2.5 microns or less

PM <sub>10</sub>	particulate matter 10 microns or less
PRC	Public Resources Code
project	Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project
ROW	right of way
RR-5	Rural Residential
Stantec	North State Resources, now Stantec
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCR	Tribal Cultural Resource
Title 22	Title 22 of the California Code of Regulations
TWST	treated water storage tank
WTP	water treatment plant
ZATM	Zone A Transmission Main

# 1. Introduction

## 1.1 Introduction and Regulatory Guidance

This document is an Initial Study (IS) that summarizes the technical studies prepared for the proposed Paradise Irrigation District (PID) Zone A Pump Station, Transmission Main, and Reservoir B Replacement 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. Mitigation measures are proposed to avoid or minimize any significant impacts that were identified.

## 1.2 Lead Agency

The Lead Agency is the public agency with primary responsibility for implementing a project. The Lead Agency for the proposed project will be PID. It is anticipated that the project will be funded in part by the State Water Resources Control Board (SWRCB), Division of Financial Assistance under the Clean Water State Revolving Fund (CWSRF) program (Project No. 0410007-001P). Additional funding is being sought from the California Governor's Office of Emergency Services (Cal OES). This document was prepared in accordance with CEQA-Plus guidelines and serves to comply with the U.S. Environmental Protection Agency's (EPA) National Environmental Policy Act (NEPA) obligations for the CWSRF Program. The funding of the CWSRF Program by EPA creates a federal nexus for the proposed project and it is anticipated that EPA will be the NEPA Lead Agency for the purposes of any federal consultations (if necessary). Discretionary actions or funding source requirements having a federal nexus will be addressed by the relevant federal agency. It is anticipated that NEPA approval by the EPA will be in the form of a Categorical Exclusion or Environmental Assessment supported by technical studies and determinations of no adverse effect.

## 1.3 Supporting Technical Studies

Completed technical studies are available for review at the following locations:

State Water Resources Control Board  
Division of Financial Assistance  
Regional Programs Unit  
1001 I Street, 16th Floor  
Sacramento, California 95814  
Phone: (916) 341-5855

Paradise Irrigation District  
6332 Clark Road  
Paradise, CA 9596  
(530) 877-4971

Technical studies completed for this project include:

- Cultural Resources Investigation (confidential; available to qualified readers only)
- Biological Resources Assessment (BRA) Report
- Wetland Delineation 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 project is largely linear, extending from the community of Magalia, south to the town of Paradise, Butte County, California. Paradise is located approximately 12 road miles northeast of Highway 99 and the city of Chico in Butte County, California. The project is shown on the *Paradise East, California* 7.5 minute U.S. Geological Survey quadrangle, Township 22N, Range 3E, Sections 1 and 12, Township 23N, Range 3E, Sections 25 and 36, and Township 23N, Range 4E, Section 31 (Figure 1). The proposed project occurs on private properties and PID owned parcels, and within the Caltrans right of way (ROW). Figure 2 (maps 1–5) illustrates the proposed project layout.

The 15.4-acre project area is composed of a linear alignment along paved roads and areas containing existing water treatment, storage, and distribution infrastructure including a WTP and a covered reservoir (Reservoir B). The land in the project area is largely disturbed with small areas of semi-natural habitat located near the existing WTP and adjacent to existing road corridors.

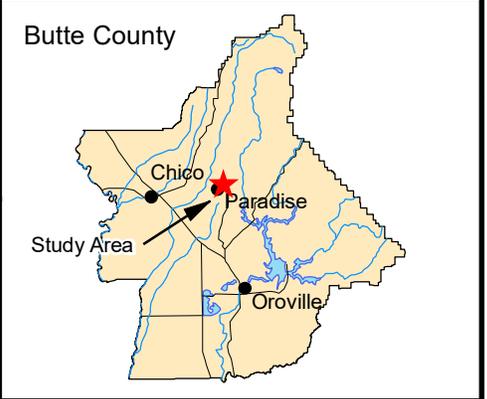
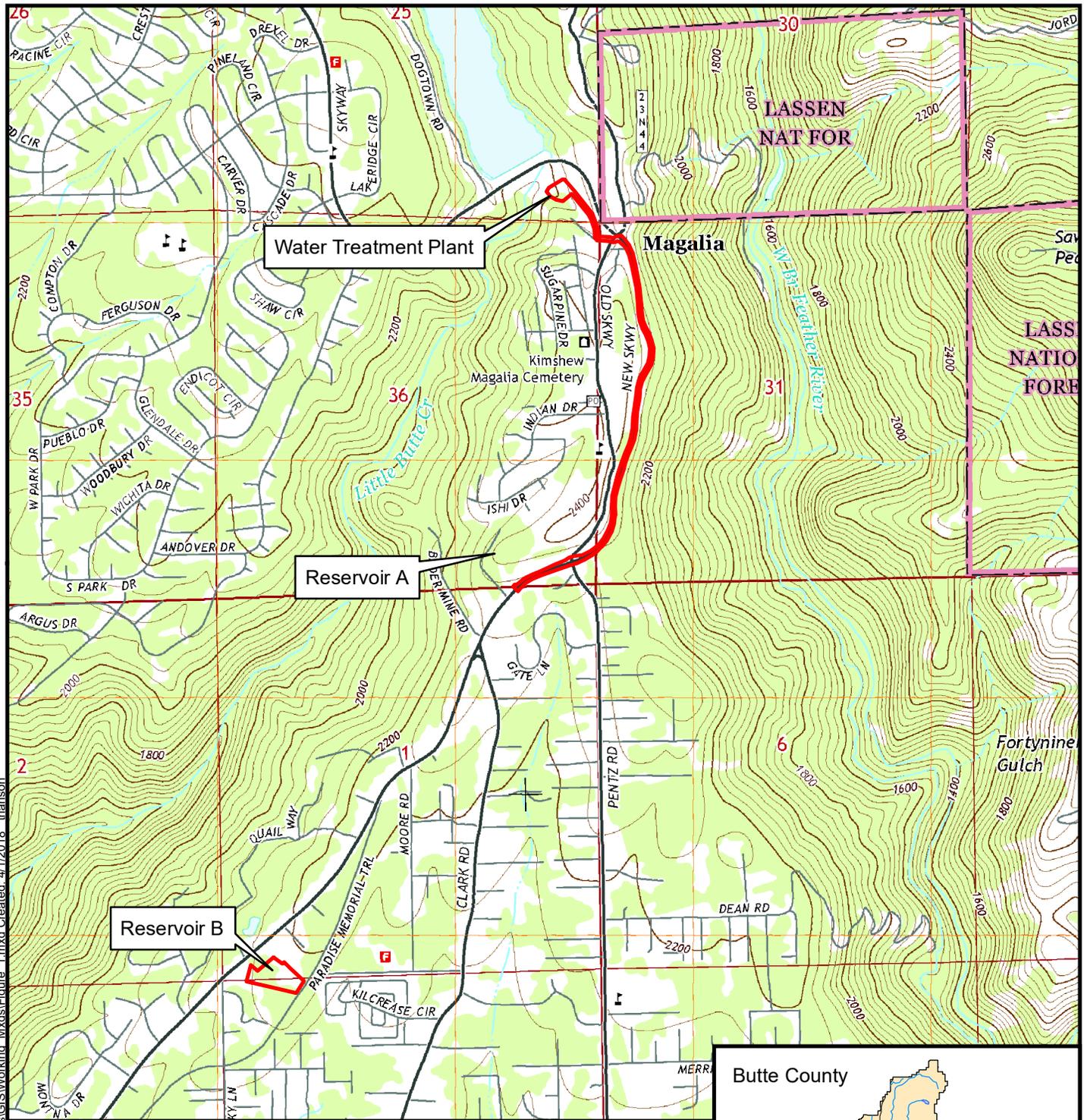
### 2.2 Project Purpose and Need

The purpose of the project is to address several problematic operational constraints that affect the operation and management, water quality compliance standards associated with the existing Reservoir B facility, and to increase the overall PID water storage capacity. The project is needed to improve operations, address maintenance and water quality issues, increase fire suppression storage, and provide for anticipated population growth within the PID service boundary.

### 2.3 Existing Facilities

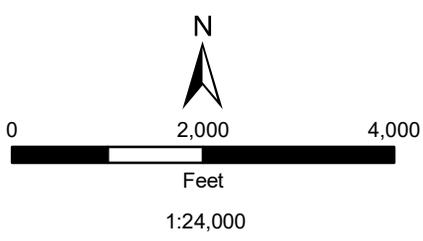
#### Water Treatment Plant

PID operates a WTP and the accompanying distribution system for the town of Paradise. The distribution system supplies potable water to 10,507 connections, serving a population of approximately 26,000. This includes seven distribution zones (Zones A through G) within PID, as well as wheeling water to Del Oro Water Company. The WTP currently treats a sustainable maximum flow of 15 million gallons per day (MGD) of surface water primarily from Paradise Lake and secondarily Magalia Reservoir. After clarification and filtration, the filtered water is sent through the Treated Water Storage Tank (TWST) for chlorine disinfection. The TWST is a 650,000-gallon serpentine chlorine contact basin that feeds the finished water into the PID distribution system.



Project Area (15.44 acres)

Public Land Survey:  
 T22N, R3E, Sec. 1 and 12  
 T23N, R3E, Sec. 25 and 36  
 T23N, R4E, Sec. 31



USGS 7.5 Quad: Paradise East, 2015

V:\2272\active\2272006800\07\_historical\GIS\Working\1.mxd Created: 4/1/2018 thanson

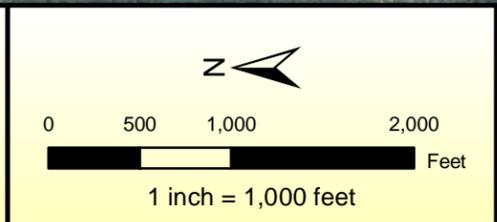


 Project Area (15.44 acres)

Prepared by:  
 North State Resources, Inc.  
now  
 Stantec  
5000 Bechelli Lane Suite 203  
Redding, CA 95002 Phone (530) 222-5347  
Fax (530) 222-4958 [www.nsrnet.com](http://www.nsrnet.com)

Prepared for:  
Paradise Irrigation District  
6332 Clark Road  
Paradise, CA 9596

Notes:  
Aerial Photograph Dated: NAIP 2016



**Paradise Irrigation District Zone A Pump Station,  
Transmission Main, and Reservoir B Replacement Project**

**Figure 2  
Map Index  
Project Layout  
April 2018**



**Project Area (15.44 acres)**

**Project Design Features**

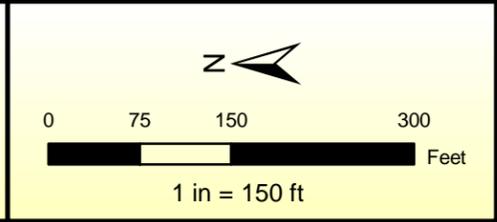
- Reservoir A Transmission Line
- Reservoir A Pump Station

(N) = New (Proposed)  
(E) = Existing

Prepared by:  
 North State Resources, Inc.  
 now  
 Stantec  
 5000 Bechelli Lane Suite 203  
 Redding, CA 95002 Phone (530) 222-5347  
 Fax (530) 222-4958 www.nsrnet.com

Prepared for:  
 Paradise Irrigation District  
 6332 Clark Road  
 Paradise, CA 9596

Notes:  
 Aerial Photograph: NAIP 2016  
 Locations of all proposed project features are approximate.



**Paradise Irrigation District Zone A Pump Station,  
 Transmission Main, and Reservoir B Replacement Project**

**Figure 2  
 Map 1 of 5  
 Project Layout  
 April 2018**



 Project Area (15.44 acres)

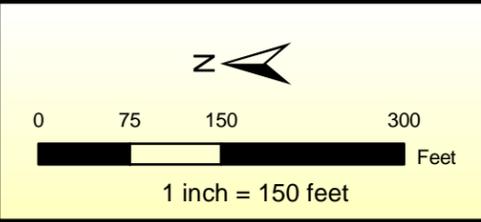
**Project Design Features**

 Reservoir A Transmission Line  
 (N) = New (Proposed)  
 (E) = Existing

Prepared by:  
 North State Resources, Inc.  
 now  
 Stantec  
 5000 Bechelli Lane Suite 203  
 Redding, CA 95002 Phone (530) 222-5347  
 Fax (530) 222-4958 [www.nsrnet.com](http://www.nsrnet.com)

Prepared for:  
 Paradise Irrigation District  
 6332 Clark Road  
 Paradise, CA 9596

Notes:  
 Aerial Photograph: NAIP 2016  
 Locations of all proposed project features are approximate.



**Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project**

**Figure 2**  
 Map 2 of 5  
 Project Layout  
 April 2018



 Project Area (15.44 acres)

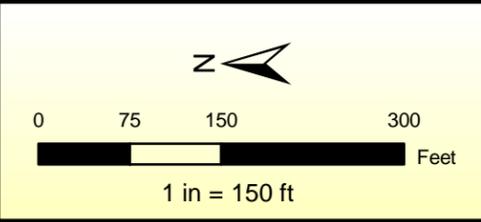
**Project Design Features**

 Reservoir A Transmission Line  
(N) = New (Proposed)  
(E) = Existing

Prepared by:  
 North State Resources, Inc.  
 now  
 Stantec  
 5000 Bechelli Lane Suite 203  
 Redding, CA 95002 Phone (530) 222-5347  
 Fax (530) 222-4958 [www.nsrnet.com](http://www.nsrnet.com)

Prepared for:  
 Paradise Irrigation District  
 6332 Clark Road  
 Paradise, CA 9596

Notes:  
 Aerial Photograph: NAIP 2016  
 Locations of all proposed project features are approximate.



**Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project**

**Figure 2**  
**Map 3 of 5**  
**Project Layout**  
**April 2018**



 Project Area (15.44 acres)

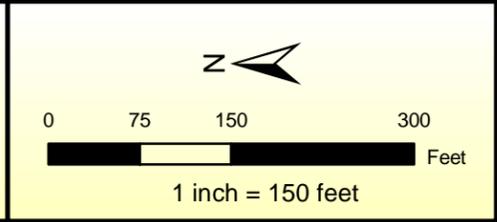
**Project Design Features**

 Reservoir A Transmission Line  
(N) = New (Proposed)  
(E) = Existing

Prepared by:  
 North State Resources, Inc.  
 now  
 Stantec  
 5000 Bechelli Lane Suite 203  
 Redding, CA 95002 Phone (530) 222-5347  
 Fax (530) 222-4958 www.nsrnet.com

Prepared for:  
 Paradise Irrigation District  
 6332 Clark Road  
 Paradise, CA 9596

Notes:  
 Aerial Photograph: NAIP 2016  
 Locations of all proposed project features  
 are approximate.



**Paradise Irrigation District Zone A Pump Station,  
 Transmission Main, and Reservoir B Replacement Project**

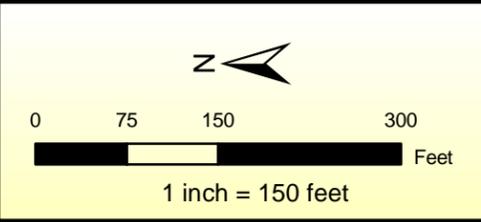
**Figure 2  
 Map 4 of 5  
 Project Layout  
 April 2018**



Prepared by:  
 North State Resources, Inc.  
 now  
 Stantec  
 5000 Bechelli Lane Suite 203  
 Redding, CA 95002 Phone (530) 222-5347  
 Fax (530) 222-4958 www.nsrnet.com

Prepared for:  
 Paradise Irrigation District  
 6332 Clark Road  
 Paradise, CA 9596

Notes:  
 Aerial Photograph: NAIP 2016  
 Locations of all proposed project features are approximate.



**Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project**

**Figure 2**  
**Map 5 of 5**  
**Project Layout**  
**April 2018**

## Distribution System and Storage

The PID distribution system is split into seven distribution zones that vary in the number of individual connections from 61 to 2,808. There are five water storage reservoirs in the distribution system (Table 1). All reservoirs except Reservoir B are steel tank reservoirs, with the latter being an earth embankment lined reservoir with a flexible membrane cover. A 0.94 million-gallon (MG) portion of Reservoir B is currently unusable due to hydraulic considerations required for potable water supply at the WTP.

**Table 1. PID Distribution System Reservoir Sizes**

Reservoir	Total Capacity (MG)	Usable Capacity (MG)
A	0.98	0.98
B	3.16	2.22
C	1.94	1.94
D	1.94	1.94
E	1.45	1.45
<b>Total</b>	<b>9.47</b>	<b>8.53</b>

Source: Water Works Engineering 2017

Finished water is transferred from the WTP via a 12,500-foot, 42-inch finished water transmission line to Zone B and Reservoir B. The 42-inch gravity transmission line alignment roughly parallels Little Butte Creek. Reservoir B gravity feeds to reservoirs C, D, and E. Reservoir A is supplied water via Pump Station #2 in Zone B of the distribution system.

Reservoir A was previously supplied by the 42-inch transmission line and Pump Station #1. Pump station #1 was removed from service in 1996 and was demolished in 2015. The Pump Station was past its useful life, and WTP upgrades at the time changed the hydraulic conditions related to Pump Station #1, so the pumps were no longer functional. Reservoir A is now supplied by Pump Station #2 only. Pump Station #2 is located to the east of Reservoir B on the corner of Moore Road and Forest Service Road, and is connected to Reservoir A through Zone A.

### 2.3.1 Problematic Operational Constraints

#### Water Treatment Plant Finished Water Hydraulics

The finished water hydraulics of the WTP are a critical part of implementing any upgrade project. For the plant water supply pumps to operate, Reservoir B must have a minimum water surface elevation of 2,174 feet, resulting in a water surface elevation of 2,173 at the plant. If the water surface elevation at Reservoir B drops below this level, the plant water pumps cannot pull suction from the 42-inch transmission main, and therefore cannot supply potable water to the WTP. This is the restriction for utilizing Reservoir B in its entirety.

#### 42-inch Transmission Main Alignment

The 42-inch transmission line was installed in 1955 and begins at Magalia Reservoir Dam.

After leaving the WTP, the 42-inch transmission pipeline follows the curvature of Little Butte Creek until it reaches Reservoir B, roughly 2.5 miles from the WTP. PID owns a 50-foot ROW along the alignment. There is a 15-foot-wide dirt road cut out above the 42-inch line, but the rest of the ROW is steep hillside. This alignment has been deemed an area with “High Fire Risk” by CalFire (California Department of Forestry and Fire Protection 2007). A fire in this area would leave the 42-inch transmission pipeline potentially inaccessible and subject to damage in the firefighting efforts.

There are also concerns that an earthquake or landslide in the area could affect the alignment of the 42-inch main. A preliminary geotechnical study (Vertical Sciences 2017) assessed the fault activity rating for the 42-inch alignment. It stated that no active faults have been mapped within the project region, and no potentially active faults have been mapped projecting beneath or across project improvements. Only unnamed inactive faults have been mapped projecting across the existing pipeline. Geomorphic features on the slopes adjacent to the transmission line imply that dormant, older landslide features may be present. According to the Butte County General Plan (Butte County 2012) this area has a moderate potential for slope instability. Landslides have been mapped within areas of similar geology west of the project site. Although the risk of earthquake or landslide is low, the resulting damage that would be caused would be catastrophic to the operation of the entire system, and the town of Paradise would be without water supply until the 42-inch transmission line can be repaired.

### **Reservoir A Feed Reliability and Redundancy**

Reservoir A is supplied potable water from Zone B. Water is pumped from Zone B at Pump Station #2, which sends the water through Zone A to Reservoir A. The steel suction pipeline for Pump Station #2 was installed in 1945. Pump Station #2 was constructed in 1967 and is past its expected service life of 50 years. There is no redundant water supply to Zone A if Pump Station #2 or its 1945-era suction pipeline fails.

### **Reservoir B Resiliency**

Reservoir B is a 3 MG earth embankment reservoir lined with reinforced polypropylene and with a floating high-density polyethylene (HDPE) cover. The reservoir was constructed in 1985. The cover and liner were replaced in 2005. Floating cover reservoirs are subject to many issues related to the integrity of the cover (e.g., tears, contamination, failures of other systems) that all pose a threat of drinking water contamination. The cover is subject to vandalism by trespassers and wildlife; it gathers rainwater, and the sump pump installed to drain the rainwater constantly requires maintenance; maintenance must be regularly scheduled to remove accumulated debris; the accumulation of debris attracts vectors and leads to decay and detritus sitting on the cover of the reservoir. The cover is currently 13 years old and the maximum life expectancy of the polypropylene liner and the HDPE cover is 20 years (as observed with the life span of the originally installed liner and cover).

Title 22 of the California Code of Regulations (Title 22) includes requirements for the design and construction of impervious reservoirs with a floating cover such as Reservoir B. Reservoir B complies with most of the current Title 22 requirements, however significant deficiencies concerning the adequacy of site security and the reservoir having a single inlet/outlet remain out of compliance.

Additionally, because Reservoir B is a single reservoir and the only reservoir which feeds Zone B (21 percent of customers) and Zone A (12 percent of customers), it is a critical “pinch point” in the system, which does not have any redundancy. If Reservoir B were to become inoperative during peak demand periods, the delivery of water to 33 percent of customers would rely entirely on continuous water treatment plant operation. In general, the long-term operability, and the resiliency and dependability of Reservoir B are of concern.

## **Fire Storage**

The total storage capacity for each distribution zone must include sufficient capacity for potential firefighting needs. Paradise is in a wildland interface area and in support of wildland firefighting, PID provides water storage for use in fighting wildfires should they enter the service area. Fire storage volume is intended to be available in all zones, at all times (including during peak demand).

The largest fire in recent history in Paradise was the Camp Fire in 2008. This fire burned into the PID service area and threatened to cause significant damage to the area. Reservoir storage levels for PID reservoirs A, B, C, and D and plant flow data were analyzed for the week of the Camp Fire to determine system demand during the fire. During the peak 24-hour period (July 8, 2008 at noon to July 9, 2008 at noon) of firefighting activities, a 4 MG maximum increase in system demand was observed (Water Works Engineering 2017). A 4 MG increase in system demand during firefighting activities has been determined to cause a usable water storage deficiency in four of the PID distribution zones (zones A, B, C, and D) (Water Works Engineering 2017).

## **2.4 Storage Capacity and Water Demand**

The current usable PID water storage capacity is 8.53 MG when considering all distribution zones (Water Works Engineers 2017). The required storage capacity for all distribution zones based on regulations included in Title 22 is 8.30 MG. This considers a 10 percent growth rate for the town of Paradise, the potential water demand for urban firefighting activities, and PID operational constraints. Although the total usable storage capacity for all distribution zones exceeds the required storage capacity, zones A, B, and C have usable storage deficiencies of 1.30 MG, 2.68 MG, and 0.99 MG, respectively. These distribution zones do not meet water storage requirements due to individual PID reservoir capacities and distribution constraints.

## **2.5 System Improvements**

The project would involve improvements to PID facilities that will address the problematic operational constraints discussed above and increase the overall PID water storage capacity. The system improvements are designed to increase the reliability and redundancy of the distribution system and bring the system into compliance with Title 22 regulations regarding distribution reservoirs and water storage capacity. The following system improvements are included in the project.

### **2.5.1 Direct Feed to Reservoir A**

Providing a direct feed of water between Reservoir A and the WTP would address some of the problematic operational constraints by providing the following benefits:

- New pressurized transmission line from the WTP to Reservoir A provides redundancy to the existing 42-inch transmission pipeline to Reservoir B and redundancy to Pump Station #2.
- Water needed for the operation of the WTP would be supplied by the new Reservoir A pipeline, eliminating hydraulic issues with the current plant water pump supply and allowing full use of Reservoir B down to elevation 2,168.

### **New Pipeline to Serve Zone A**

The new Zone A transmission line would be a pressurized line with the pump station located at the WTP. The pump station would be sized for 4 MGD. The new transmission line would be 16-inch with an average pipe velocity of 4.5 feet/second. The new pipeline alignment would be approximately 1.3 miles long and would follow existing roads including Pine Needle Drive, New Skyway, and a short portion of Skyway. This alignment is shown in Figure 2. The new transmission line would tie into the existing 12-inch Zone A pipeline approximately 20 feet northwest of Skyway. New Skyway is the main thoroughfare from Paradise to the community of Magalia and has steep slopes on either side of the roadway. The route is relatively flat, but there is little room within the shoulder for construction. The majority of the 16-inch pipeline would be installed within existing paved traffic lanes, requiring traffic control and lane repaving.

### **Zone A Pump Station**

The new 16-inch transmission line would be a pressurized line to Distribution Zone A. The pump station to feed the pressurized line would be located at the WTP. The new, enclosed pump station would be constructed on the northeastern side of the TWST in an existing planter area. New electrical infrastructure and controls for the pump station would be routed through paved or disturbed areas of the WTP to the existing Operations Building.

## **2.5.2 Connecting Zone A to Zone B at Pump Station #2**

A pressure regulating valve station would be added at Pump Station #2 to allow Zone A to feed Zone B during times when the 42-inch transmission main may be out of service. This would also allow Zone B to take full advantage of both Reservoir A and Reservoir B storage capacity during an emergency. The new pressure regulating valve would be installed in the existing Pump Station #2 building and no new ground disturbance would be required.

## **2.5.3 Reservoir B Upgrade**

Currently, the system has capacity to meet Title 22 minimum storage requirements with 10 percent population growth within each zone and as a system. However, as discussed in Section 2.3.1, Fire Storage, additional storage volume is required to meet demand during fire-fighting events. To meet these goals, the Reservoir B upgrade would increase the size of Reservoir B by 1.6 MG (from 3.0 to 4.6 MG). Although additional storage capacity would be a part of the proposed project, it should be noted that the need for the Reservoir B upgrades are driven more by deficiencies in the design of the existing earthen reservoir than inadequate storage.

To increase the storage capacity of Reservoir B, the existing 3.0 MG earthen reservoir would be replaced with two 2.3 MG bolted steel tanks. The bottom of the new tanks would remain at the current bottom elevation of the existing reservoir (2,168 feet). The placement of the of the new tanks partially outside of the existing Reservoir B footprint would require relocation of a portion of the existing 36-inch water line that currently runs around the exterior of the existing reservoir, and demolition of the exiting reservoir berms. Most woody vegetation would be removed from the Reservoir B site to accommodate the redistribution of soil material from the tank site grading.

Bolted steel water tanks of this size can be constructed in approximately 11 weeks, which would limit the period that Reservoir B is completely offline to one season (i.e., November to May). The tanks will meet all current regulatory requirements for potable water storage tank design, have a service life of at least 60 years, and be more easily maintained than the current earthen reservoir. The use of two tanks also provides increased system redundancy compared to the existing single reservoir and allows for inspections and repairs of individual tanks while maintaining water distribution capacity from the second tank.

### **2.5.4 Site Improvements**

It is anticipated that surface restoration of roadways, including driveways (when applicable), would be required following pipeline installation.

## **2.6 Project Design Criteria and Best Management Practices**

The project was designed to minimize potential impacts on sensitive biological resources. The proposed project improvements would be constructed primarily in existing disturbed areas including paved or graveled road ROWs and PID facilities and work areas. The following best management practices (BMPs) were incorporated into the project description.

### **2.6.1 Contractor Staging Areas/Construction Access Routes**

Contractor staging would make use of existing roads and paved or graveled areas at existing PID facilities. Potential staging areas are located on paved areas within the WTP and existing graveled work areas at the Reservoir B site. Construction access would make use of existing public and PID roads.

### **2.6.2 Conservation Measures**

#### **Conservation Measure #1—Air Pollution and Dust Control**

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

- Pursuant to California Vehicle Code (Section 23114) (California Legislative Information 2016), all trucks hauling soil and other loose material to and from the construction site shall

be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).

- Any soils that are removed during construction shall be stored onsite in piles not to exceed 4 feet in height. These spoil piles shall be clearly marked and flagged. Spoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Equipment and manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
- PID or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person shall also respond to any citizen complaints.

### **Conservation Measure #2—Naturally Occurring Asbestos**

If ultramafic rocks (e.g., serpentinite) or soils derived from ultramafic rocks are encountered during project design exploration or during construction, then testing for the presence of naturally occurring asbestos (NOA) shall be performed using randomized multi-increment sampling methods. If NOA concentrations are found to exceed established thresholds (California Geological Survey 2002), then mitigation measures shall be implemented to reduce the potential of inducing NOA to become airborne. In addition to *Conservation Measure #1—Air Pollution and Dust Control*, the following measure was incorporated into the proposed project to minimize the potential for adverse impacts in the event that NOA concentrations are found to exceed established thresholds.

- NOA-bearing soils and rock materials excavated during project activities shall be entombed as artificial fills within excavations (e.g., pipeline trench or suitable off-site disposal).

### **Conservation Measure #3—Water Pollution Prevention**

The project was designed to avoid impacts on U.S. Army Corps of Engineers (Corps) jurisdictional features (i.e., waters of the United States). The following BMPs have been incorporated into the proposed project to avoid and minimize the potential for adverse direct and indirect effects on water quality.

- Activities that increase the erosion potential within the project area shall be restricted to the relatively dry summer and early fall period (approximately May 15 to October 15) to the maximum extent practicable to minimize the potential for rainfall events to transport sediment to surface water features. If construction activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures must be in place and operational at the end of each construction day and maintained until the completion of the project.
- Within 10 days of completion of construction, weed-free mulch shall be applied to disturbed areas in order to reduce the potential for short-term erosion. Prior to a rain event or when there is greater than 50 percent possibility of rain forecasted by the National Weather Service

during the next 24 hours, weed-free mulch, tarps, or geotextile fabrics shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If spoil sites are used, they shall 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 shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall be in place prior to the onset of the rainy season (or no later than October 15) and will be monitored and maintained in good working condition until vegetation becomes established within the disturbed areas.
- Fueling construction equipment shall be done at a fixed fueling station to reduce the area exposed to the potential for fuel spills.
- Secondary containment, such as a drain pan or drop cloth, shall be used to catch spills or leaks when removing or changing fluids.
- Spill containment materials shall be kept onsite at all times to contain any accidental spill.
- Absorbent materials shall be used on small spills rather than hosing down or burying the spill. The absorbent material shall be promptly removed and disposed of properly.
- Onsite vehicles and equipment shall be regularly inspected for leaks and repaired immediately.
- If vehicle and equipment maintenance must occur onsite, it shall be done in designated areas, located away from drainage courses, to prevent the run-on of storm water and the run-off of spills.
- Equipment and materials shall be stored at least 50 feet away from surface water features.
- PID is responsible for compliance with applicable federal, state, or local laws or ordinances and shall obtain authorization from all applicable regulatory agencies.

#### **Conservation Measure #4—Greenhouse Gas Emissions**

PID shall include provisions in the construction bid documents to minimize project-related greenhouse gas emissions. The following measures shall 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 #5—Wildfire Potential**

PID shall include the following measure in the construction bid documents to minimize project-related potential for wildfire ignition:

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

### **Conservation Measure #6—Prevention of Spread of Invasive Species**

The following avoidance and minimization measures are recommended during project construction to reduce the potential spread of invasive species:

- All equipment used for construction activities off of paved surfaces will be weed-free prior to entering the project site.
- If project implementation calls for mulches or fill, they will be weed free.
- Any invasive plant species removed during construction will be properly disposed of to ensure the species does not spread to other areas.

## **2.7 Project Approvals**

### **2.7.1 Funding Sources**

The funding source for the project is expected to be partially through the State Water Resources Control Board – Division of Drinking Water, which administers the State Revolving Fund, and through a State of California – Offices of Emergency Services grant.

### **2.7.2 Anticipated Permits and Regulatory Approvals**

If construction activities result in soil disturbance on more than 1 acre, PID must comply with the provisions of the Construction General Permit [Order No. 2009-009-DWQ, as amended by 2010-0014-DWG] under the National Pollution Discharge Elimination System program.

### **California Environmental Quality Act**

Permits required for the project will be determined during preparation of the California Environmental Quality Act (CEQA) documents. Following is a list of authorizations and permits

anticipated for project compliance under CEQA. Additional permits and/or authorizations may be determined as a result of technical studies that would be conducted in support of project compliance.

- CEQA Notice of Determination to adopt either a Mitigated Negative Declaration or certify an Environmental Impact Report (Local Agency) following the CEQA-Plus State Revolving Funds Guidelines
- Stormwater Pollution Prevention Plan Approval (Central Valley Regional Water Quality Control Board [CVRWQCB])

If the project cannot be designed to avoid impacts (e.g., placement of fill, removal of vegetation, and/or ground disturbance) on the ephemeral stream or constructed drainage ditches in the project area, the following permits may be required.

- Clean Water Act Section 404 Permit (Corps)
- Clean Water Act Section 401 Water Quality Certification (CVRWQCB)
- Fish and Game Code Section 1600 Lake and Streambed Alteration Agreement with California Department of Fish and Wildlife (CDFW)

## **2.8 Tentative Project Construction Schedule**

Construction of the project would begin upon receipt of all necessary preconstruction authorizations, including completion of CEQA documentation and receipt of any regulatory permits determined to be required. In addition, funding source requirements will need to be met before and during project construction, as applicable. Construction is anticipated to begin in January 2019 with completion in October 2020.

## **2.9 Project Alternatives**

### **2.9.1 No Project Alternative**

In addition to the action alternative, PID also considered a “No Project” alternative in its evaluation of the project, pursuant to CEQA. Under the No Project alternative, PID would not proceed with the improvements to the water distribution system currently serving the residents of Paradise. No Project is not a feasible alternative since it fails to address problematic operational constraints and redundancy issues of the existing water distribution system. The proposed project is needed to improve operations, address maintenance and water quality issues, increase fire suppression storage, and provide for anticipated population growth within the PID service boundary.

### **2.9.2 Zone A Transmission Line Alternative 2**

Under the Zone A Transmission Line Alternative 2, the new pipeline would be installed in an existing PID ROW parallel to the existing 42-inch pipeline supplying Reservoir B. The existing 42-inch gravity transmission main is installed on a benched cut, with a severe side-slope the entire way along a significantly undulating alignment. Installing a parallel pipeline would involve considerable

excavation just for access and would be difficult to construct. Making the benched cut wider would result in steeper cut-slopes along the alignment, which would only add to the risk of landside in the future. Putting both pipelines in the same alignment also largely negates the benefit of redundancy—any earthquake, landslide, or fire related catastrophe along the alignment would likely impact both pipelines. Zone A Transmission Line Alternative 2 was not selected as the preferred alternative because of the problematic construction, potential for landslide damage, and lack of system redundancy.

### **2.9.3 Reservoir B Alternative 2: Raise Reservoir Walls**

Under the Reservoir B Alternative 2, a steel wall would be constructed around Reservoir B on top of the existing earthen reservoir berm. The high-density polypropylene (HDPE) reservoir liner would be extended up the inside face of the wall. A roof structure would be installed above the reservoir using columns and beams, replacing the floating cover. This alternative would require complicated construction sequencing due to the long construction period and having to leave half of the reservoir online during construction. This reservoir construction method would continue to rely on the HDPE liner that would require periodic repair and replacement. The columns required to support the roof structure would make the maintenance of the HDPE liner more complicated than maintenance of the existing Reservoir B. Reservoir B Alternative 2 was not selected because it was determined to be less cost efficient, have a more complicated service expectancy, and be more susceptible to water quality issues than the selected action alternative.

### 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 that would be used by PID 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 18 environmental categories and mandatory findings of significance:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- 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
- 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**

### **3.1.1 Regional Setting**

The project area lies in the central portion of Butte County, California in the Cascade Range foothills. This region is at the southern extent of the volcanic Cascades near the junction of Sierra Nevada. The topography of Butte County is quite varied and includes low elevation areas of the northern Sacramento Valley to rugged and steep terrain on the western slopes of the Cascades and Sierra Nevada. Butte County contains four incorporated cities and a total population of approximately 180,000.

The region supports an extensive system of rivers and streams. The Feather River watershed occupies a large part of eastern Butte County and streams in the northern part of the county drain into the Sacramento River, which represents a portion of the western border of the county. The region contains a diverse assemblage of vegetation communities due to the large elevational gradient. Developed agricultural lands are dominant in the Sacramento Valley and transition to grassland, woodland, and forest habitats as elevations increase in the mountainous regions. Mid- and upper-elevation regions of Butte County contain productive timberlands managed by private timber companies (e.g., Sierra Pacific Industries) and federal land managers (e.g., Lassen and Plumas national forests).

### **3.1.2 Local Setting**

The proposed project occurs in the community of Magalia and the town of Paradise in central Butte County, California. The project would be largely linear along existing roads, but also includes work at existing PID facilities including the WTP and Reservoir B. Current land ownership within the project area includes private and PID lands, and Town of Paradise ROW.

#### **Climate**

The climate is typical of the Cascade Range foothills in northern California with moderate winters and hot, dry summers. Approximately 55 inches of precipitation and 2 inches of snow fall occurs annually, most of which occurs between November 1 and March 30. Air temperatures range between an average January high of 54 degrees Fahrenheit (°F) and an average July high of 92°F. The average annual high is approximately 71°F. The average minimum temperature is approximately 50°F (Western Regional Climate Center 2018).

#### **Existing Land Uses**

The project area includes private residential lots, commercial properties, paved roads, PID lands, and undeveloped areas. Surrounding land uses consist of rural residential, mobile home, and urban residential development, commercial businesses, transportation corridors, forest, and local infrastructure (e.g., WTP and other PID facilities).

## Topography

The project area occurs on a broad ridgetop that separates the Feather River watershed to the east from the Butte Creek watershed to the west. The topography of the project area is gently sloping along road corridors and at the Reservoir B, and moderate to steeply sloping in many areas outside of the road corridors, including at the WTP. Elevation in the project area ranges from approximately 2,370 to 2,165 feet above mean sea level, with lower elevations located at the Reservoir B site and higher elevations located along the New Skyway.

## Hydrological Setting

No significant hydrologic features occur in the project area. Precipitation runoff from roads and adjacent hillsides in the project area contribute to the hydrology of the West Branch Feather River and Little Butte Creek.

## Soils

Six soil map units occur in the project area. They are described in the *Soil Survey of Butte Area, California, Parts of Butte and Plumas Counties* (Natural Resources Conservation Service 2006). These map units are summarized in Table 1.

**Table 2. Soil Map Units in the Proposed Project Area**

Map Unit Name Taxonomy	Drainage Class	Depth to Restrictive Layer	Hydric Soils
Schott-Rock outcrop, 30 to 50 percent slopes	Well drained	40 to 60 inches to lithic bedrock	No
Cerpone-Typic Haploxeralfs, magnesian-Earlal-Rock outcrop complex, 15 to 30 percent slopes	Well-drained	40 to 60 inches to lithic bedrock	No
Typic Haploxeralfs, magnesian-Earlal-Cerpone-Rock outcrop complex, 30 to 50 percent slopes	Well-drained	20 to 80 inches to lithic bedrock	No
Griffgulch-Surnuf-Spine taxadjunct , 30 to 50 percent slopes	Well-drained	More than 80 inches	No
Paradiso loam, 2 to 15 percent slopes	Well-drained	More than 80 inches	No
Paradiso loam, 15 to 30 percent slopes	Well-drained	More than 80 inches	No

## Geology

The project area is primarily underlain by Pleistocene-age volcanic flows that underlie the greater Paradise area, with small areas of metavolcanic and ultramafic substrates near the WTP (Saucedo and Wagner 1992). Artificial fill, colluvium, and alluvium may be present in each portion of the project area (Vertical Sciences 2017).

No active faults are mapped in the project area or immediate vicinity (Vertical Sciences, Inc. 2017). Although many potentially active and inactive faults have been mapped in the project area, none were mapped projecting beneath or across proposed project improvements. No landslides, incipient or otherwise, were observed during preparation of the project geotechnical study (Vertical Sciences, Inc. 2017). The potential for landslides in the project area and vicinity are low to moderate (Butte County 2012).

## Vegetation Community Types

The project area is generally located in urban habitats including roads and road shoulders, residential properties, and other previously disturbed areas. Areas of natural vegetation occur in the project area adjacent to proposed pipeline alignment and in the Reservoir B site. Vegetation communities occurring in the project area were characterized based on descriptions provided in *A Manual of California Vegetation* (Sawyer et al. 2009). Seven vegetation types occur in the project area: annual grassland, California bay forest, California black oak forest, canyon live oak forest, ponderosa pine forest, McNab cypress woodland, and urban/ruderal.

**Annual Grassland.** Annual grassland occurs along road shoulders and in other disturbed portions of the project area. This habitat is characterized by an open canopy cover and dense herbaceous layer dominated by annual grasses and forbs, including bristly dogtail grass (*Cynosurus echinatus*), rigput brome (*Bromus diandrus*), wild oats (*Avena fatua*), and yellow star-thistle (*Centaurea solstitialis*).

**California Bay Forest.** California bay forest occurs in a small portion of the project area directly southeast of the WTP. This habitat is characterized by a moderate cover of California bay (*Umbellularia californica*) and includes upland tree species such as Oregon oak (*Quercus garryana* ssp. *semota*) and foothill pine (*Pinus sabiniana*). The understory consists of a dense cover of shrubs such as Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobum*), pink honeysuckle (*Lonicera hispidula*), and toyon (*Heteromeles arbutifolia*). Herbaceous species in this community include annual and perennial grasses such as bristly dogtail grass, California melic (*Melica californica*), and rattail sixweeks grass (*Festuca myuros*).

**California Black Oak Forest.** California black oak forest occurs in low abundance in the project area on the slopes adjacent to the New Skyway. This habitat is strongly dominated by California black oak (*Quercus kelloggii*), with other trees such as canyon live oak (*Quercus chrysolepis*) and ponderosa pine (*Pinus ponderosa*) occurring in low abundance. This habitat has a relatively dense canopy cover and a sparse understory dominated by shrubs such as poison oak and toyon, and a mix of native and non-native grasses and forbs.

**Canyon Live Oak Forest.** Canyon live oak forest also occurs in relatively low abundance in the project area along the New Skyway. This habitat is dominated by dense stands of canyon live oak, but is otherwise similar in species composition to California black oak forest.

**McNab Cypress Woodland.** McNab cypress woodland occurs in areas of serpentine soils to the east of the WTP and along Pine Needle Drive. This habitat is dominated by McNab cypress (*Hesperocyparis macnabiana*) with scattered foothill pine. The understory is dominated by shrubs such as buckbrush (*Ceanothus cuneatus*), and poison oak with a wide variety of annual and perennial native species such as Ahart's buckwheat (*Eriogonum umbellatum* var. *ahartii*), azure penstemon

(*Penstemon azureus*), big squirrel tail (*Elymus multisetus*), bush poppy (*Dendromecon rigida*), and common woolly sunflower (*Eriophyllum lanatum*).

***Ponderosa Pine Forest.*** Ponderosa pine forest is present along portions of the new pipeline alignment and also at the Reservoir B site. This habitat is dominated by ponderosa pine with a relatively low abundance of other trees such as Douglas-fir (*Pseudotsuga menziesii*) and incense-cedar (*Calocedrus decurrens*). The understory is often relatively open with scattered shrubs such as poison oak and Scotch broom (*Cytisus scoparius*) with non-native annual grasses and ruderal herbaceous species.

***Urban/Ruderal.*** Urban/ruderal habitat is the most common land cover type in the project area and is represented by residential, commercial, and PID properties, and paved road corridors. This habitat is characterized by ornamental trees and shrubs in actively maintained landscapes and sparse cover of non-native annual plant species in continuously disturbed areas (e.g., road shoulders, graveled areas).

### 3.2 Environmental Impacts and Mitigation Measures

I. <b>AESTHETICS</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### Discussion of Impacts

- a, b) **No Impact.** The proposed project would not affect a scenic vista or scenic resources. Neither is present in the project area.
- c) **Less-than-Significant Impact.** Construction activities would temporarily degrade the quality of the visual setting in the project area. The pipeline would be installed underground and would not be visible after construction. Disturbed areas along the alignment would be restored to pre-disturbance conditions to retain the visual character of the area and offset temporary visual changes. The Zone A Pump Station would be constructed in areas of previous disturbance and would be aesthetically similar to other existing infrastructure at the WTP.

The new water tanks would be approximately 50 feet tall, but their visibility from nearby roads and residences would be masked by topography and vegetation. In addition, the exterior walls of the tanks would be painted a forest green color to blend with the surrounding vegetation. It is anticipated that the tanks domes would not be painted. Although trees would be removed to accommodate the new tanks at the Reservoir B site, the areas around the tank would be landscaped with vegetation to help mask the tank from nearby residences. Travelers along Skyway may have brief views of the top of the new tank as they pass by the project area, but the tanks would mostly blend in with the surrounding landscape and would not substantially alter views from the road.

- d) **Less-than-Significant Impact.** Nighttime lighting associated with the proposed tanks would be consistent with existing conditions and may be visible from some nearby residences and roads, and will only be activated if there is unexpected movement on the site or if PID staff are working onsite. However, surrounding topography, vegetation, and the distance between the

tank site and viewers would minimize the potential for light and glare to affect residents and travelers along the roads. Lighting would also comply with the Town of Paradise Municipal Code and would not create light pollution. The new tanks would be made of steel with a special coating that prevents glare. No lighting would be associated with the pipeline. The proposed project would have a less-than-significant impact on light and glare in the area.

### **Mitigation Measures**

No project-specific mitigation is required under this subject.

**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:**

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) **No Impact.** No parcels in the proposed project area are mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program (California Department of Conservation 2018a). Soils within the project area are not prime agricultural soils. The project would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.
- b) **No Impact.** No parcels in the proposed project area are zoned for agricultural use (Butte County Planning Department 2018; Town of Paradise Planning Department 2018). No parcels in the proposed project area are currently under a Williamson Act contract (California Department of Conservation 2016). The project would not conflict with existing zoning and would have no impact on agriculture.
- c, d, e) **No Impact.** The proposed project area does not contain any farmland, 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)). Although some tree removal would occur at Reservoir B, it would not have an impact on any designated timberland.

## Mitigation Measures

No project-specific mitigation is required under this subject.

**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:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

- a) **Less-than-Significant Impact.** The proposed project would result in minimal and temporary air emissions for the criteria pollutants regulated by the Butte County Air Quality Management District (BCAQMD) (reactive organic gases, nitrogen oxides, particulate matter), as discussed under item b) below. It would be consistent with and would not obstruct implementation of any BCAQMD management plans, or other applicable air quality plans and regulations for the region such as the Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan. The project would not induce unplanned growth in PID’s service area or conflict with assumptions made by BCAQMD when preparing its air quality management plans.
- b) **Less-than-Significant Impact.** Butte County is a non-attainment area for the state and federal ozone standards, the state and federal particulate matter (PM2.5) standards, and the state particulate matter (PM10) standards (California Air Resources Board 2017). Butte County is in attainment for the state and federal standards for sulfur dioxide, nitrogen dioxide, lead, and carbon monoxide in addition to the state standards for sulfates (California Air Resources Board 2016). Construction activities would result in short-term increases in emissions from the use of heavy equipment that generates dust, exhaust, and tire-wear emissions; soil disturbance; materials used in construction; and construction traffic. These activities would create short-term increases in fugitive dust (PM10 and PM2.5) and would generate both reactive organic compounds (ROG) and nitrogen oxides (NOx) emissions from vehicle and equipment operation. Fugitive dust emissions could affect local air quality near the project area, but would

not be expected to contribute substantially to regional air quality. Implementation of BCAQMD best management practices for dust and emissions reduction, as described in the project description would help minimize dust and emissions generated during construction activities, ensuring impacts are less than significant. Long-term emissions from pump and tank operations and periodic maintenance trips would be minimal based on the infrequent nature of these emissions.

- c) ***Less-than-Significant Impact.*** As discussed under item b) above, the proposed project would cause short-term air quality impacts as a result of construction activities; however, it would not result in substantial long-term or cumulatively considerable increases in air quality pollutant emissions for which Butte County is currently in nonattainment (ozone and particulate matter). *Conservation Measure #1 – Air Pollution and Dust Control* (described in Section 2.6.2) will be used to maintain air quality and to ensure that any project construction-related impacts would be less than significant.
- d) ***Less-than-Significant Impact.*** Sensitive receptors such as residences occur immediately adjacent to parts of the proposed pipeline alignment and Reservoir B site. However, the effect to air quality experienced by these sensitive receptors would be similar to the effect generated by motor vehicle traffic, which is common throughout the area, and existing conditions associated with operation of the existing WTP. In addition, *Conservation Measure #1 – Air Pollution and Dust Control* (described in Section 2.6.2) would further reduce the potential for impacts on air quality in the project area and vicinity. Impacts on air quality experienced by sensitive receptors as a result of project construction and operation would be less than significant.
- e) ***No Impact.*** The proposed project would not create any new or increased objectionable odors.

### **Mitigation Measures**

No project-specific mitigation is required under this subject.

IV. BIOLOGICAL RESOURCES — Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** A Biological Resources Assessment (BRA) report (North State Resources, now Stantec 2018a) that analyzes the project impacts on biological resources was prepared for the proposed project. The BRA includes a current U.S. Fish and Wildlife Service species list for the project area.

Although no federal or state listed as threatened or endangered plant species, or candidates for listing, were observed in the project area during the botanical survey, habitat for the following special-status plant species occurs within the project area:

- Jepson's onion (*Allium jepsonii*), California Rare Plant Rank (CRPR) 1B.2
- dissected-leaved toothwort (*Cardamine pachystigma* var. *dissectifolia*), CRPR 1B.2
- chaparral sedge (*Carex xerophylla*), CRPR 1B.2
- white-stemmed clarkia (*Clarkia gracilis* ssp. *albicaulis*), CRPR 1B.2
- Mildred's clarkia (*Clarkia mildrediae*), CRPR 1B.3
- Ahart's buckwheat (*Eriogonum umbellatum* var. *ahartii*), CRPR 1B.2
- Caribou coffeeberry (*Frangula purshiana* ssp. *ultramafica*), CRPR 1B.2
- Lewis Rose's ragwort (*Frangula purshiana* ssp. *ultramafica*), CRPR 1B.2
- Hall's rupertia (*Rupertia hallii*), CRPR 1B.2

No federal or state listed as threatened or endangered wildlife species, or candidates for listing were determined to have potential habitat in the project area. Pallid bat (*Antrozous pallidus*), a State Species of Special Concern is the only special-status wildlife species determined to have suitable habitat in the project area. Most breeding birds that are likely to be found in the project area are protected under state and federal regulations. Breeding birds may be found in vegetated habitats throughout the project area.

**Special-status Plants.** Nine special-status plant species were determined to have a potential to occur in the project area. A botanical survey of suitable habitats in the project area was conducted by North State Resources (NSR) on June 30 and October 20, 2017, and coincided with the blooming period of all potentially occurring special-status plants except dissected-leaved toothwort, which generally blooms February–May. One occurrence of Ahart's buckwheat was in the project area in serpentine derived soils adjacent to Pine Needle Drive. No other special-status plant species were observed during the botanical survey. The proposed project activities will be confined to paved surfaces and other disturbed areas and are not expected to encroach into natural habitats. As such, the project would have no effect on the Ahart's buckwheat occurrence or potential habitat for special-status plant species in the project area. Given that the project design is expected to avoid impacts on special-status plants, no additional avoidance or minimization measures are recommended.

**Pallid bat.** Potential roosting habitat for pallid bat occurs in buildings, snags, and tree hollows in the project area. The project could adversely affect pallid bat if individuals are present in the project area during construction. Potential direct effects include harassment, injury, mortality, and loss of roost sites if trees must be removed. The project may also result in a small, temporary reduction of foraging habitat for pallid bat. However, due to the limited nature of the work and regional occurrence of similar habitats, temporary loss of foraging habitat is not expected to result in an adverse effect on this species. *Mitigation Measure #1 – Bats* will be used to reduce any potential impacts on pallid bats to a less-than-significant level.

**Migratory Birds and Raptors.** Potential nesting habitat for migratory birds and raptors occurs in the trees and other natural vegetation in the project area. Adverse effects on migratory birds and raptors could occur if they are actively nesting in the project area during construction. Construction disturbance during the nesting season could result in the loss of fertile eggs or

nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or any activities resulting in nest abandonment, may adversely affect nesting birds. The project may also result in a small temporary reduction of nesting or foraging habitat for birds, particularly around Reservoir B where trees would be removed to allow for construction. However, due to the limited nature of the work and regional occurrence of similar habitats, temporary habitat loss is not expected to result in an adverse effect on migratory birds and raptors. *Mitigation Measure #2 – Migratory Birds and Raptors* will be used to reduce any potential impacts on pallid bats to a less-than-significant level.

- b) **No Impact.** The areas of California bay forest and McNab cypress woodland in the project area are considered rare natural communities by CDFW. These natural communities occur in low abundance near the WTP and along Pine Needle Drive. The proposed project activities would be confined to paved surfaces and other disturbed areas and are not expected to encroach into natural habitats. As such, the project is not anticipated to have a negative impact on the California bay forest or McNab cypress woodland in the project area. Given that the project design is expected to have no effect on rare natural communities, no additional avoidance or minimization measures are recommended.
- c) **No Impact.** A wetland delineation report (North State Resources, now Stantec 2018b) was prepared to document and describe potential waters of the United States, including wetlands, in the project area. A total of 0.003 acre (53 linear feet) of potential waters of the United States were mapped within the project area as ephemeral stream. Several segments of non-jurisdictional roadside ditches (0.039 acre, 855 linear feet) in the project area along Pine Needle Drive, Skyway, and New Skyway were mapped as excluded feature. Six wastewater treatment ponds (1.576 acres), considered excluded features, were also mapped within the project area.

No impacts on potential waters of the United States are anticipated as a result of the proposed project. Proposed project activities would occur in previously disturbed or paved areas and no dredge or fill materials would be placed into potential waters of the United States. The existing culverts in the project area would be avoided (e.g., trenched under).

- d) **Less-than-Significant Impact.** The proposed project would not impede movement of fish or wildlife, nor would it fragment migration corridors. The project would be constructed primarily within existing road and utilities alignments that are not likely used as migration corridors by wildlife and would not involve work in potential waters of the United States. Although project construction could temporarily discourage more localized wildlife from passing in close proximity to active construction sites, this impact would be temporary and less than significant. Alternative passage areas occur throughout the surrounding area. The project would have a less-than-significant impact on wildlife migration and or travel corridors; no mitigation is recommended. The project site does not support any native wildlife nursery sites (e.g., fawning grounds, waterfowl breeding sites, rookeries). Thus, the project would have no impact on wildlife nursery sites and no mitigation is recommended.
- e) **No Impact.** The project would not conflict with any local biological resource policies or ordinances. The project would have no impact on any local policies or ordinances.

- f) **No Impact.** 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 not conflict with any local, regional, or state conservation plans. The project would have no impact on any conservation plans.

## Mitigation Measures

### Mitigation Measure #1—Bats

The following avoidance and minimization measures are recommended to avoid the potential for project-related impacts on pallid bats:

- A pre-construction survey for roosting bats should be conducted prior to the demolition of any buildings or removal of trees or snags with a diameter at breast height of 12 inches or greater. The survey should be conducted by a qualified biologist and should occur no more than one week prior to demolition or tree removal work. If a maternity or hibernacula roost is found, the biologist in coordination with CDFW, will determine the extent of a construction free buffer zone around the roost. The buffer will remain in place until the bats are no longer dependent on the roost and have vacated the roost site.

<b>Timing/Implementation:</b>	Prior to and during construction
<b>Enforcement:</b>	CDFW, PID
<b>Monitoring:</b>	PID and 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:

- Project activities should be scheduled to avoid the nesting season to the extent feasible. The typical nesting seasons in northern California extends from February 15 through September 15. Thus, if project activities can be scheduled to occur outside of the nesting season, no impacts would be expected. If the nesting season cannot be completely avoided, the following measures shall be implemented.
- A qualified biologist shall conduct a minimum of one pre-construction survey for nesting migratory birds and raptors within the project area and a 250-foot buffer around the project area. The survey should be conducted no more than 14 days prior to the initiation of activities in any given area. The pre-construction survey should be used to ensure that no active bird nests occurring within or immediately adjacent to the project would be disturbed during project implementation. If an active nest is found, a qualified biologist should determine the extent of a construction-free buffer zone to be established around the nest. If it is anticipated that project activities will encroach on the buffer, a biological monitor will be present to ensure that the nesting birds are not disturbed by the activities.
- If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrates (e.g., trees and shrubs) that will be removed by the project should

be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

<b>Timing/Implementation:</b>	Prior to and during construction
<b>Enforcement:</b>	CDFW, PID
<b>Monitoring:</b>	PID and its contractor

V. CULTURAL RESOURCES — Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Cause a substantial adverse change in the significance of a Tribal resource pursuant to AB 52?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion of Impacts**

- a, b, and c) **No Impact.** The Cultural Resources Inventory and Evaluation Report (North State Resources, now Stantec 2017) determined that the proposed project would have no impact on historic, archaeological, or paleontological properties in the project area and vicinity. This confidential report is available only to qualified reviewers upon request. Although recorded historic and cultural sites occur in the Paradise and Magalia areas, the two recorded historic sites within the project area would not be impacted by the project. In accordance with Section 106 of the NHPA, there would be no adverse effect on cultural resources as a result of project implementation. The project would have no impact.
- d) **Less-than-Significant Impact.** Although no impacts on known cultural resources are anticipated, currently undetected cultural resources or evidence of human remains could be exposed during project excavation activities. *Mitigation Measure #3 – Cultural Resources* and *Mitigation Measure #4 - Human Remains* will be adhered to in the case of an unanticipated discovery of cultural resources or human remains. The project would have a less-than-significant impact.
- e) **Less-than-Significant Impact.** Assembly Bill 52 (AB 52), passed in 2014, amends sections of CEQA relating to Native Americans. AB 52 establishes a new category of cultural resources, named Tribal Cultural Resources (TCRs), and states that a project that may cause a substantial adverse change in the significance of a TCR may have a significant effect on the environment. Defined in Section 21074 (a, b, and c) of the Public Resources Code (PRC), TCRs are:

- A.1) Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:
  - a. Included or determined to be eligible for inclusion in the CRHR; or
  - b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- (A.2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- (B) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
- (C) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

On September 15, 2017, in accordance with the consultation provisions of Section 106 of the National Historic Preservation Act (NHPA) and Section 21080.3 of CEQA, NSR requested a list of local Native American groups and individuals who might have an interest in or concerns with the project from the Native American Heritage Commission (NAHC). Concurrently, NSR requested that NAHC conduct a review of its Sacred Lands database for culturally significant properties. NSR used the contact list provided by NAHC to solicit input from Native American representative and organizations. No specific information about traditional properties or locations of traditional cultural use in the APE was received. In addition, NAHC responded that no records of sacred lands were found as a result of its database search. Tribal outreach and archival research did not result in the identification any historical or cultural resources, historical or cultural properties, or locations of Native American traditional use in the project area. It was determined that the proposed project would not impact any known traditional cultural properties. However, if such resources are inadvertently discovered during project construction, *Mitigation Measure #3 – Cultural Resources* and *Mitigation Measure #4 - Human Remains* will be used to reduce any potential impacts on cultural resources to a less-than-significant level.

## Mitigation Measures

### Mitigation Measure #3—Cultural Resources

PID shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on cultural resources:

- If any unanticipated archaeological finds are made in the APE that are considered to be significant, a number of methods may be used to mitigate potential adverse effects. Avoidance through project redesign or some method of preservation is the preferred method. If redesign or preservation is not an option, it is recommended that any potential adverse effects on unanticipated finds be mitigated through data recovery, although actual mitigation would be determined through consultation with the State Historic Preservation Officer (SHPO) under the NHPA. It is also recommended that local Native American groups be consulted, and their input solicited and considered in all aspects of such testing and mitigation.

<b>Timing/Implementation:</b>	During construction
<b>Enforcement:</b>	NAHC, PID
<b>Monitoring:</b>	PID and its contractor

### Mitigation Measure #4—Human Remains

PID shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on inadvertently discovered human remains:

- If human remains are found, the California Health and Safety Code requires that excavation be halted in the immediate area and that the Butte County coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by telephone within 24 hours of making that determination (California Health and Safety Code Section 7050.5[c]).

<b>Timing/Implementation:</b>	During construction
<b>Enforcement:</b>	NAHC, PID
<b>Monitoring:</b>	PID and its contractor

VI. GEOLOGY AND SOILS — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

- a) i, ii, iii, iv) **No Impact.** The project area is not located within an Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2016b) and there are no active faults mapped in the project area (U.S. Geological Survey 2018). Several potentially active and inactive faults have been mapped near the project (California Geologic Society 2010), but since no faults pass through the project site, construction of the proposed project would not result in the rupture of any known fault. Due to the lack of active faults near the project site, the project would not expose people or structures to seismic ground shaking or seismic-related ground failure. Topography in the project area is relatively flat to moderately sloping, and moderately to densely forested. No landslides, incipient or otherwise, are present in the project area (Vertical Sciences 2017). The project area and vicinity have a low to moderate potential for slope instability (Butte County 2012). The project would have no impact.

- b) ***Less-than-Significant Impact.*** Construction activities would result in soil disturbance on approximately 4.83 acres and would redistribute topsoil in portions of the WTP and Reservoir B site to accommodate new project facilities. All excavated material is expected to be used to restore disturbed areas in the project area, so no topsoil would be lost.

Overall soil loss would be minimal with implementation of standard construction practices for dust control and stormwater pollution prevention. Erosion and sediment control measures included in *Conservation Measure #3 – Water Pollution Prevention* (described in Section 2.6.2) and a stormwater pollution prevention plan (SWPPP) will be used during construction to minimize the potential for erosion. Long-term erosion would be minimized around the tanks by drainage control devices and use of the existing stormwater system. The potential for erosion along the pipeline would be the same as current conditions once the pipeline is installed and the disturbed areas are repaved. Therefore, the project would result in less-than-significant impacts relating to soil erosion and loss of topsoil.

- c) ***No Impact.*** As discussed under items a-ii, iii, and iv) above, the proposed project would not create a substantial risk as a result of geologic hazards in the project area.
- d) ***Less-than-Significant Impact.*** Some of the soils in the project area are considered expansive (Natural Resources Conservation Service 2017) and could pose a constraint to construction of the proposed project. Design considerations for expansive soils, such as excluding highly plastic clays from engineered fill materials or lime- or cement-treatment of soils to reduce their expansive potential, would minimize the potential for shrink-swell conditions to affect project facilities.
- e) ***No Impact.*** The proposed project does not involve wastewater facilities.

### **Mitigation Measures**

No project-specific mitigation is required under this subject.

VII. GREENHOUSE GAS EMISSIONS — Would the Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 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 (CO<sub>2</sub>), methane, and nitrous oxide (Governor’s Office of Planning and Research 2008). 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 construction materials production (e.g., pipe) as well as onsite construction-related equipment emissions. The project would not increase the generation of emissions after construction is complete because services provided by the proposed project would be similar to current conditions. Emissions of GHGs resulting from off-road heavy-duty diesel engines during construction activities would be short-term and minor. Gas or diesel generators permitted by BCAQMD would be used at lift stations in the event of electrical failure and emergency; however, these alternative sources of power will be maintained and emissions outputs will comply with BCAQMD internal combustion engine permit requirements. Implementation of *Conservation Measure #1— Air Pollution and Dust Control* (described in Section 2.6.2) would reduce GHG emissions. This measure, combined with *Conservation Measure #4 – Greenhouse Gas Emissions* (described in Section 2.6.2), was incorporated into the project design and would be used during construction to ensure that project related impacts would remain less than significant.

- (b) ***No Impact.*** The BCAQMD has not adopted a plan, policy, or regulation for reducing GHG emissions. 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 operations would adhere to statewide efforts aimed at minimizing GHG emissions and would not conflict with any applicable plans,

policies, or regulations adopted for the purpose of reducing the emission of GHGs. The project would have no impact.

### **Mitigation Measures**

No project-specific mitigation is required under this subject.

<b>VIII. HAZARDS AND HAZARDOUS MATERIALS</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion of Impacts

- a, b) ***Less-than-Significant Impact.*** The use of diesel or gasoline powered construction equipment (trucks, excavators, etc.) and lubricants such as oil and hydraulic fluids could pose a

hazard to the public and the environments; however, construction-related hazards would be temporary and use of these materials for project operation would be consistent with existing conditions. All equipment, regardless of its use as temporary or permanent, would be routinely maintained and inspected to avoid leaks. Best management practices described in *Conservation Measure #3 – Water Pollution Prevention* (described in Section 2.6.2) will be used to reduce potential impacts associated with accidental spills of pollutants (i.e., fuels, oil, grease, etc.) on the project area environment.

Ultramafic rocks (serpentine) have been mapped and were observed in the project area at the WTP and along Pine Needle Drive. Ultramafic rock, such as serpentinite, can contain naturally occurring asbestos (NOA) that can cause lung cancer, mesothelioma, asbestosis, and other health-related issues if it becomes airborne. If ultramafic rocks or soils derived from ultramafic rocks are encountered during the project, then testing for the presence of NOA should be performed using randomized multi-increment sampling methods. If NOA concentrations exceed that threshold, then mitigation measures are typically required to reduce the potential of inducing NOA to become airborne. This includes consistent wetting of excavated soils, wetting excavation surfaces, use of surfactants or binding agents on soil and rock surfaces, and entombing NOA-bearing soils and rock materials as artificial fills within excavations (such as a pipeline trench). The measures described in *Conservation Measure #1—Air Pollution and Dust Control* and *Conservation Measure #2—Naturally Occurring Asbestos* will ensure that potential hazards from NOA related impacts would remain less than significant.

- c) **No Impact.** A segment of the proposed project pipeline alignment is within 0.25 mile of Ridgeview High School in Magalia. However, because the proposed project would be consistent with existing conditions, there would be no impact.
- d) **No Impact.** A search of the State Department of Toxic Substances Control (DTSC) EnviroStor database (California Department of Toxic Substances Control 2018) and the State Regional Water Quality Control Board's GeoTracker database (State Water Resources Control Board 2018) found no record of any contaminated sites in the project area. The nearest recorded hazardous site to the project area is a leaking underground storage tank site at 8710 Skyway Road in Paradise (approximately 500 feet west of the Reservoir B tank site). However, the site was cleaned-up and the case has been closed (State Water Resources Control Board 2018). The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The project would have no impact.
- e, f) **No Impact.** The privately-owned Paradise Skypark Airport is approximately 4.8 miles south of the proposed project area. No portion of the proposed project area is within the Paradise Skypark Airport Influence Area as defined in the Butte County Airport Land Use Compatibility Plan (Butte County Airport Land Use Commission 2017). The proposed project would have no impact on the airport.
- g) **Less-than-Significant Impact.** Pipeline installation activities would take place in ROWs along area roads. Prior to construction, a traffic control plan will be developed to ensure for the continuous safe routing of vehicular and pedestrian traffic for the duration of construction. The traffic control plan will apply continuously and not be limited to working hours.

Where road crossings and work within Pine Needle Drive and the Skyway would be necessary, controlled traffic flow would be maintained during the temporary construction period. Where work within New Skyway (between Pentz Road and Coutolenc Road) would be necessary, traffic would be diverted onto “Old” Skyway. Construction on New Skyway would begin in mid-June (after local schools are out for the summer) and work hours are proposed to be from 9:00 p.m. to 5:00 a.m., Sunday through Thursday. Although temporary, short duration disruptions to normal traffic operations could occur during construction, the impact would be less than significant. The project is not anticipated to 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. The impact would be less than significant.

- h) ***Less-than-Significant Impact.*** Although the project area is in a wildland-urban interface moderate to high fire hazard zone, the proposed infrastructure would store water and would not create a fire hazard. The project area contains several different vegetation types, ranging from annual grasslands to densely vegetated, coniferous forest. The use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. *Conservation Measure 5 - Wildfire Potential* (described in Section 2.6.2) will be used to reduce the risk of wildfire associated with project construction to a less-than-significant level. Operation of the project would have no impact on wildfire potential.

## **Mitigation Measures**

No project-specific mitigation is required under this subject.

3. Environmental Setting, Impacts, and Mitigation Measures

IX. HYDROLOGY AND WATER QUALITY — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation of seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) **Less-than-Significant Impact.** Construction and operation of the proposed water system improvements would not violate any water quality standards or waste discharge requirements set forth by the CVRWQCB in its water quality control plan for the Central Valley region. Water pollution control measures were incorporated into the project design to avoid and/or minimize impacts on water quality. In addition, project activities will comply with the requirements set forth in a 401 Water Quality Certification, which is required by the CVRWQCB prior to project implementation. These measures, in conjunction with *Conservation Measure #3 – Water Pollution Prevention* (described in Section 2.6.2) will reduce this impact to a less than significant level.
- b) **No Impact.** Construction and operation of the project would not result in any net changes in the current demand placed on the local aquifer or local groundwater table nor would construction and operation deplete groundwater supplies or interfere substantially with groundwater recharge. The project would have no impact.
- c, d) **Less-than-Significant Impact.** The proposed project would involve grading activities that would modify contours at the proposed Reservoir B tank site. The overall drainage patterns would remain similar to current conditions with surface runoff traveling east toward the existing connection to the stormwater system. The new Zone A pipeline would be below ground, and trenches used for installation of the pipeline would be backfilled and re-contoured to the original grade. Runoff patterns may increase slightly as a result of modifications (e.g., vegetation removal) to the Reservoir B site, but runoff would primarily infiltrate into the soils in the surrounding area or be conveyed to the existing stormwater drain on the east side of the Reservoir B site. The project would not create a substantial increase in stormwater runoff. The impact would be less than significant.
- e) **No Impact.** No substantial areas of new additional impervious surface areas would be created as a result of the project. The proposed Reservoir B tanks would cover a similar area as the existing Reservoir B facilities. The new pipeline alignment and the Zone A pump station would be constructed in previously disturbed areas such as road ROWs. The project would be consistent with existing conditions and would have no impact on runoff entering existing stormwater drainage systems.
- f) **Less-than-Significant Impact.** Construction and operation of the proposed project would involve the use of hazardous materials (i.e., petroleum-based fuels and lubricants) in uplands, away from any waterways. However, the project would not involve any activities that would substantially degrade water quality. The proposed project was designed to minimize environmental impacts to the extent practicable and includes measures to avoid adverse impacts on water quality. *Conservation Measure #3 – Water Pollution Prevention* (described in Section 2.6.2) will reduce this impact to a less than significant level.
- g, h, i, j) **No Impact.** The proposed project does not involve housing and would not expose people to flood hazards. The project area is not in an area with potential for a seiche, tsunami, or mudflow.

## Mitigation Measures

No project-specific mitigation is required under this subject.

X. <b>LAND USE AND PLANNING</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion of Impacts**

- a) **No Impact.** The project would not divide an established community. Construction would be temporary and a means for ingress/egress will be maintained to all properties through the duration of the project. The project would have no impact.
- b) **No Impact.** The project is consistent with applicable land use plans, policies, and regulations. The project would not conflict with any applicable conservation plans. The project would not involve a change in existing land use and would not conflict with any habitat conservation plans or natural communities' conservation plans. All necessary land use authorizations (i.e., landowner agreements), if required, will be in place prior to the onset of construction. The project would have no impact on land use.
- c) **No Impact.** The proposed project area is not included in any applicable habitat conservation plan or natural communities' conservation plan. The project would have no impact.

**Mitigation Measures**

No project-specific mitigation is required under this subject.

<b>XI. MINERAL RESOURCES</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

- a) **No Impact.** The project area has not been mapped by the State Division of Mines and Geology (California Department of Conservation 2001). The project would have no impact on any known mineral resource zones.
- b) **No Impact.** No locally important mineral resource recovery sites are located within the project area. The project would have no impact.

### Mitigation Measures

No project-specific mitigation is required under this subject.

3. Environmental Setting, Impacts, and Mitigation Measures

XII. NOISE — Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 of public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion of Impacts**

- a) ***Less-than-Significant Impact.*** Construction activities would temporarily increase noise levels in the vicinity of the project area. Actual noise levels would vary throughout the period of construction, depending on the type of construction equipment involved, activities being implemented, and distance between the source of the noise and receptors. Residences are located adjacent to the Reservoir B site and near the proposed pipeline alignment on Pine Needle Drive, New Skyway, and Skyway. Construction noise would temporarily expose residents to increased noise levels, but the steep topography along New Skyway and relatively dense vegetation near most of the project area would buffer noise levels in the project area.

Construction-related noise would be temporary and occur only during daylight hours (typically 7:00 a.m. to 7:00 p.m., Monday through Saturday) at the Reservoir B tank site. Construction of the proposed pipeline alignment within New Skyway would also be temporary and would be completed during nighttime hours (9:00 p.m. to 5:00 a.m. Sunday through Thursday) to minimize potential impacts on local traffic. Construction-related noise would be limited to levels lower than the maximum allowable noise exposure as defined in the Butte County General Plan Noise Element (Butte County 2012) as shown in Table 3.

**Table 3. Maximum Allowable Noise Exposure to Non-Transportation Sources (Butte County 2012)**

Noise Level Description	Daytime 7 a.m.—7 p.m.		Evening 7 p.m.—10 p.m.		Night 10 p.m.—7 a.m.	
	Zoning Designation					
	Urban	Non-Urban	Urban	Non-Urban	Urban	Non-Urban
Hourly Equivalent Sound Level, dB	55	50	50	45	45	40
Maximum Level, dB	70	60	60	55	55	50

Notes:

1. "Non-Urban designations" are Agriculture, Timber Mountain, Resource Conservation, Foothill Residential and Rural Residential. All other designations are considered "urban designations" for the purposes of regulating noise exposure.
2. Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).
3. The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.
4. In urban areas, the exterior noise level standard shall be applied to the property line of the receiving property. In rural areas, the exterior noise level standard shall be applied at a point 100 feet away from the residence. The above standards shall be measured only on property containing a noise sensitive land use. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all affected property owners and approved by the County.

Noise generated by construction and operation of the project from sources such as heavy equipment, stationary pumps, and occasional truck traffic are common to the existing daily operations of existing PID facilities and ambient noise in the Paradise and Magalia areas. New Skyway, which passes through the project area, and other area roads are permanent contributors to local ambient noise levels. Electrical equipment associated with proposed water pumps would be housed inside of buildings. Noise generated by project construction and operation would have a less-than-significant impact on the community.

- b) ***Less-than-Significant Impact.*** Construction-related groundborne vibration resulting from the movement of heavy equipment within the construction area would be temporary and localized. There is no potential for persons outside of the immediate construction area to be affected by groundborne vibration. Much of the proposed project alignment is within existing road ROW; therefore, operation of heavy equipment used in construction would be consistent with heavy trucks and other vehicles that pass through the area daily. Construction would not involve the use of explosives or pile driving activities. Groundborne vibrations associated with operation of the proposed water distribution improvements would be localized and consistent with existing conditions. Groundborne vibrations or noise levels generated by project construction and operation would have a less-than-significant impact on individuals.
- c, d) ***Less- than-Significant Impact.*** Construction and operation of the project would not result in a permanent (on-going) increase in ambient noise above those associated with existing PID operations. Construction-related noise would be less than significant and temporary. Existing PID operations are a permanent contributor to the project vicinity’s ambient noise levels.

Construction and project operation would have a less-than-significant impact on local ambient noise levels.

- e, f) **No Impact.** The project is not located in the vicinity of a private airport or landing strip and therefore would have no impact.

### **Mitigation Measures**

No project-specific mitigation is required under this subject.

<b>XIII. POPULATION AND HOUSING</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

The proposed project will comply with Environmental Justice, Executive Order No. 12898, and will have no adverse impacts on low-income, minority, or any racial, ethnic, or socioeconomic group.

- a) **No Impact.** The existing water distribution system that currently serves the PID service area has several deficiencies that would be remedied under this project. These improvements would increase system integrity and reliability, but are not intended to induce growth in the Paradise area. The project would have no impact on population growth.
- b) **No Impact.** Existing housing within the communities of Paradise and Magalia would not be displaced by the project and no replacement housing would be required. The project would have no impact on the numbers of existing housing.
- c) **No Impact.** No people would be displaced as a result of the proposed project and no replacement housing would be required. The project would have no impact.

### Mitigation Measures

No project-specific mitigation is required under this subject.

XIV. PUBLIC SERVICES — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion of Impact**

a) ***Less-than-Significant Impact.*** The proposed project would have a less-than-significant impact or no impact on public resources, including fire protection, police protection, schools, parks, and other public facilities. Proposed improvements to the community’s water distribution system would ensure that PID would be able to meet the daily demand of its users. Much of the proposed pipeline alignment would be within the existing ROW of area roads. Where work within New Skyway (between Pentz Road and Coutolenc Road) would be necessary, traffic would be diverted onto Old Skyway. Construction on New Skyway would begin in mid-June (after local schools are out for the summer) and work hours are to be from 9:00 p.m. to 5:00 a.m., Sunday through Thursday, to minimize the impact on public services. Therefore, impacts on emergency vehicle access would be less than significant. During construction, water distribution would continue for the affected areas included in the project. No significant adverse impacts on water distribution to the PID service area are anticipated. The project would have a less-than-significant impact on public services.

**Mitigation Measures**

No project-specific mitigation is required under this subject.

<b>XV. RECREATION</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion of Impacts**

a, b) *No Impact.* The project would not result in an increased demand for recreational facilities. The project would not require the construction or expansion of recreational facilities. The project would have no impact.

**Mitigation Measures**

No project-specific mitigation is required under this subject.

<b>XVI. TRANSPORTATION/TRAFFIC</b> — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion of Impacts**

- a) **No Impact.** Construction traffic (equipment and materials transport and daily worker traffic) would temporarily increase traffic on local roads during the construction phase and temporarily increase the use of the main access roads into the project area. Temporary construction traffic would be limited to periodic worker, and equipment and material transport during the construction phase and a few PID vehicles daily during the operational phase. Traffic-related impacts on nearby roads would be coordinated in advance with the County to minimize traffic disruptions or delays. Prior to construction, a traffic control plan will be developed to ensure for the continuous safe routing of vehicular and pedestrian traffic for the duration of

construction. The traffic control plan will apply continuously and not be limited to working hours. Where road crossings and work within Pine Needle Drive and Skyway would be necessary, controlled traffic flow would be maintained during the temporary construction period. Where work within New Skyway (between Pentz Road and Coutolenc Road) would be necessary, traffic would be diverted onto Old Skyway. Construction on New Skyway would begin in mid-June (after local schools are out for the summer) and work hours are proposed to be from 9:00 p.m. to 5:00 a.m., Sunday through Thursday, to avoid peak travel periods. The use of flaggers, barricades, and construction signing will comply with the California Manual on Uniform Traffic Control Devices (California Department of Transportation 2014).

The temporary construction-related impacts on traffic would not result in a significant increase in traffic on local roads and is not expected to reduce the levels of service for the roads. The project would be consistent with the goals and policies of the County's General Plan. Any impacts on traffic during construction would be temporary and less than significant.

- b) ***Less-than-Significant Impact.*** The volume and type of traffic associated with the project construction would not exceed the level of service for roads in the Paradise and Magalia areas. There is a potential for minor delays during construction. However, there would not be a lowered level of service during the construction phase of the project, as roadways along which the proposed project would be constructed in the existing ROWs would remain open or have a short detour during construction. The project would not conflict with the Butte County General Plan Circulation Element (Butte County 2012), including the future planned widening of New Skyway to four lanes. Any impacts on traffic during construction would be temporary and less than significant.
- c) ***No Impact.*** The proposed project is outside of the Paradise Skypark Airport Influence Area. The proposed project would not result in a change in air traffic patterns.
- d) ***No Impact.*** The proposed project would not involve activities that could increase hazards due to a design feature or incompatible uses, or affect parking capacity in the region. Construction vehicles would not need to park on streets outside the project area. The project would have no impact.
- e) ***Less-than-Significant Impact.*** The project would be in part, constructed within existing ROWs along New Skyway and other area roadways. A traffic control plan will be developed to ensure for the continuous safe routing of vehicular and pedestrian traffic for the duration of construction. A means for ingress/egress will be maintained to all properties through the duration of the project. All temporary traffic controls and the temporary nighttime detour of New Skyway will be properly signed and maintain emergency vehicle access through the region. The project would not impede emergency vehicle access and would have a less-than-significant impact.
- f) ***No Impact.*** The project does not conflict with any alternative transportation plan or policy. The project would have no impact.

## Mitigation Measures

No project-specific mitigation is required under this subject.

**XVII. 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:

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion of Impacts**

a, b) In accordance with Assembly Bill 52 (AB 52), tribes identified by the NAHC were contacted via letter and phone calls on behalf of PID pursuant to Section 106 of the National Historic Preservation Act and Section 21080.3 of CEQA. Additionally, the NAHC conducted a review of its Sacred Lands database for culturally significant properties and responded by email on September 20, 2017, indicating that the Sacred Lands File contained no records of Native American cultural resources in the immediate area. None of the persons identified by NAHC expressed concerns about the proposed project and no tribal cultural resources were identified in the project area as a result of consultation. Project construction would not impact any known tribal cultural resources.

**Mitigation Measures**

No mitigation measures are necessary.

<b>XVIII. UTILITIES AND SERVICE SYSTEMS —</b> Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion of Impacts

- a) **No Impact.** The project does not involve any actions that would generate wastewater. The project includes replacement of existing pipeline and storage tanks largely within the footprint of existing system infrastructure, and installation of several segments of new pipelines. The project would have no impact.
- b) **Less-than-Significant Impact.** The proposed project would involve the modification of existing, and construction of new water supply facilities, specifically storage tanks and a pipeline. These facilities would result in environmental effects as discussed in this document. Standard construction measures and mitigation measures described in this document will be implemented to minimize or avoid adverse impacts, and overall impacts to the environment would be less than significant. The project would also not encourage growth or expansion of

other facilities because the water system improvements have been designed to meet the anticipated growth in the PID service area. The impact would be less than significant.

- c) ***Less-than-Significant Impact.*** The proposed project would involve modification of the existing stormwater drainage system at the Reservoir B site. The system would convey runoff from the tank site to an existing storm drain on the east side of the Reservoir B site. The stormwater system would not significantly expand on the existing stormwater system at the Reservoir B site. The impact would be less than significant.
- d) ***No Impact.*** No new or expanded water entitlements would be required for the project. The project would have no impact.
- e) ***No Impact.*** The project would not involve the treatment or creation of wastewater. The project would have no impact.
- f, g) ***Less-than-Significant Impact.*** Construction activities associated with the proposed project would generate solid waste in the form of demolished materials and other trash. Any solid waste generated by the proposed project would be disposed of at an approved landfill or recycling center (e.g., Neal Road Landfill), in compliance with local, state, and federal regulations pertaining to solid waste disposal. Construction and operation of the proposed project is not likely to generate solid waste in amounts that would adversely affect the existing capacity of the local landfill. The project would have a less-than-significant impact.

### **Mitigation Measures**

No project-specific mitigation is required under this subject.

<b>XVIV. MANDATORY FINDINGS OF SIGNIFICANCE</b> — (To be filled out by Lead Agency if required)	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) ***Less than Significant with Mitigation Incorporated.*** Construction-related activities could result in impacts on special-status species, nesting migratory birds and raptors, and previously undiscovered cultural resources. Mitigation measures described in Section 3.2, Biological Resources, will be used to avoid or minimize potential impacts on wildlife. Although no cultural resources are anticipated to be impacted by project construction, mitigation measures described in Section 3.2, Cultural Resources, will be used in the event of an inadvertent discovery of cultural resources or human remains. Conservation measures were included in the project design (as described in Section 2.6.2) and will be used to further reduce potential project-related environmental effects. The project would have a less-than-significant impact with mitigation incorporated.
- b) ***Less-than-Significant Impact.*** The proposed project would not result in cumulatively considerable impacts with implementation of standard construction measures and mitigation measures described in this Initial Study. The project would not introduce any new land uses or would result in the need for any reasonably foreseeable future projects within the community of Magalia or town of Paradise. 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 for at the project level. As a result, cumulative impacts are considered to be less than significant.

- c) ***Less-than-Significant Impact.*** The proposed project, particularly during the construction phase, would result in temporary impacts to human beings. Potential adverse effects would be related to temporary increases in air pollutants, traffic delays, water quality impacts, and any accidental spills of hazardous materials. Construction would occur primarily within previously disturbed areas and would not involve any actions that would have a substantial direct or indirect impact on the human environment. The implementation of standard construction measures described in this Initial Study would ensure construction-related impacts on human beings are minimized, and no long-term or operational-related impacts are anticipated.



## 4. Determination

On the basis of this initial evaluation:

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

- X I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a “Potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Ed Fortner, District Manager  
Paradise Irrigation District

August 16, 2018

Date

*This page intentionally left blank.*

## 5. Mitigation Monitoring and Reporting Program

This chapter comprises the Mitigation Monitoring and Reporting Program (MMRP) for the Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project (project). The purpose of this MMRP is to memorialize the mitigation responsibilities of PID in implementing the proposed project. The mitigation measures listed herein are required by law or regulation and will be adopted by PID as part of the overall project approval. Mitigation is defined by the California Environmental Quality Act (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 PID 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 PID staff by providing the most usable monitoring document possible.

**Authorities and Responsibilities:** PID, functioning as the CEQA Lead Agency, will have the primary responsibility for the execution and proper implementation of the MMRP and will be responsible for the following activities:

- coordination of monitoring activities
- maintenance of records concerning the status of all approved mitigation measures

PID, 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 PID.

**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 shall be directed to PID, Mr. Jim Passanisi (6332 Clark Road, Paradise, CA 95969), in written form describing the purported violation in detail. PID shall conduct an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, PID shall take the necessary action(s) to remedy the violation. Complaints shall be responded to in writing including descriptions of PID's investigation findings and the corrective action(s) taken, if applicable.

**Summary of Monitoring Requirements:** Following this discussion are the mitigation measures and associated monitoring requirements for the proposed project. The mitigation measures are organized by environmental issue area (i.e., Air Quality, Biological Resources, etc.) and consist of the following:

- 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

PID is committed to implementing the following conservation measures during construction of the Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project:

### Conservation Measure #1—Air Pollution and Dust Control

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

- Pursuant to California Vehicle Code (Section 23114) (California Legislative Information 2016), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Any soils that are removed during construction shall be stored onsite in piles not to exceed 4 feet in height. These spoil piles shall be clearly marked and flagged. Spoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Equipment and manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
- PID or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person shall also respond to any citizen complaints.

### Conservation Measure #2—Naturally Occurring Asbestos

If ultramafic rocks (e.g., serpentinite) or soils derived from ultramafic rocks are encountered during project design exploration or during construction, then testing for the presence of naturally occurring asbestos (NOA) shall be performed using randomized multi-increment sampling methods. If NOA concentrations are found to exceed established thresholds (California Geological Survey 2002), then

mitigation measures shall be implemented to reduce the potential of inducing NOA to become airborne. In addition to *Conservation Measure #1—Air Pollution and Dust Control*, the following measure has been incorporated into the proposed project to minimize the potential for adverse impacts in the event that NOA concentrations are found to exceed established thresholds.

- NOA-bearing soils and rock materials excavated during project activities shall be entombed as artificial fills within excavations (e.g., pipeline trench or suitable off-site disposal).

### **Conservation Measure #3—Water Pollution Prevention**

The project has been designed to avoid impacts on U.S. Army Corps of Engineers (Corps) jurisdictional features (i.e., waters of the United States). The following BMPs have been incorporated into the proposed project to avoid and minimize the potential for adverse direct and indirect effects on water quality.

- Activities that increase the erosion potential within the project area shall be restricted to the relatively dry summer and early fall period (approximately May 15 to October 15) to the maximum extent practicable to minimize the potential for rainfall events to transport sediment to surface water features. If construction activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures must be in place and operational at the end of each construction day and maintained until the completion of the project.
- Within 10 days of completion of construction, weed-free mulch shall be applied to disturbed areas in order to reduce the potential for short-term erosion. Prior to a rain event or when there is greater than 50 percent possibility of rain forecasted by the National Weather Service during the next 24 hours, weed-free mulch, tarps, or geotextile fabrics shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If spoil sites are used, they shall 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 shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall be in place prior to the onset of the rainy season (or no later than October 15) and will be monitored and maintained in good working condition until vegetation becomes established within the disturbed areas.
- Fueling construction equipment shall be done at a fixed fueling station to reduce the area exposed to the potential for fuel spills.

- Secondary containment, such as a drain pan or drop cloth, shall be used to catch spills or leaks when removing or changing fluids.
- Spill containment materials shall be kept onsite at all times to contain any accidental spill.
- Absorbent materials shall be used on small spills rather than hosing down or burying the spill. The absorbent material shall be promptly removed and disposed of properly.
- Onsite vehicles and equipment shall be regularly inspected for leaks and repaired immediately.
- If vehicle and equipment maintenance must occur onsite, it shall be done in designated areas, located away from drainage courses, to prevent the run-on of storm water and the run-off of spills.
- Equipment and materials shall be stored at least 50 feet away from surface water features.
- PID is responsible for compliance with applicable federal, state, or local laws or ordinances and shall obtain authorization from all applicable regulatory agencies.

#### **Conservation Measure #4—Greenhouse Gas Emissions**

PID shall include provisions in the construction bid documents to minimize project-related greenhouse gas emissions. The following measures shall 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 #5—Wildfire Potential**

PID shall include the following measure in the construction bid documents to minimize project-related potential for wildfire ignition:

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

#### **Conservation Measure #6—Prevention of Spread of Invasive Species**

The following avoidance and minimization measures are recommended during project construction to reduce the potential spread of invasive species:

- All equipment used for construction activities off of paved surfaces will be weed-free prior to entering the project site.
- If project implementation calls for mulches or fill, they will be weed free.
- Any invasive plant species removed during construction will be properly disposed of to ensure the species does not spread to other areas.

## 5.2 Mitigation Measures

PID is committed to implementing the following mitigation measures during construction of the Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project:

### 5.2.1 Biological Resources

#### Mitigation Measure #1—Bats

The following avoidance and minimization measures are recommended to avoid the potential for project-related impacts on pallid bats:

- A pre-construction survey for roosting bats should be conducted prior to the demolition of any buildings or removal of trees or snags with a diameter at breast height of 12 inches or greater. The survey should be conducted by a qualified biologist and should occur no more than one week prior to demolition or tree removal work. If a maternity or hibernacula roost is found, the biologist in coordination with CDFW, will determine the extent of a construction free buffer zone around the roost. The buffer will remain in place until the bats are no longer dependent on the roost and have vacated the roost site.

<b>Timing/Implementation:</b>	Prior to and during construction
<b>Enforcement:</b>	CDFW, PID
<b>Monitoring:</b>	PID and its contractor

**Verification (sign and date):** \_\_\_\_\_

#### 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:

- Project activities shall be scheduled to avoid the nesting season to the extent feasible. The typical nesting seasons in northern California extends from February 1 through August 31. Thus, if project activities can be scheduled to occur outside of the nesting season, no impacts would be expected. If the nesting season cannot be completely avoided, the following measures shall be implemented.
  - A qualified biologist shall conduct a minimum of one pre-construction survey for nesting migratory birds and raptors within the project area and a 250-foot buffer around the

project area. Preconstruction surveys shall be conducted no more than seven days prior to the start of activities or the re-start of temporarily suspended construction, vegetation removal, or ground disturbance activities in any given area. Preconstruction surveys shall be used to ensure that no active bird nests occurring within or immediately adjacent to the project will be disturbed during project implementation. If an active nest is found, a qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest. If it is anticipated that project activities will encroach on the buffer, a biological monitor will be present to ensure that the nesting birds are not disturbed by the activities.

- If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrates (e.g., trees and shrubs) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

**Timing/Implementation:** Prior to and during construction  
**Enforcement:** CDFW, PID  
**Monitoring:** PID and its contractor

**Verification (sign and date):** \_\_\_\_\_

## 5.2.2 Cultural Resources

### Mitigation Measure #3—Cultural Resources

PID shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on cultural resources:

- If any unanticipated archaeological finds are made in the APE that are considered to be significant, a number of methods shall be used to mitigate potential adverse effects. Avoidance through project redesign or some method of preservation is the preferred method. If redesign or preservation is not an option, it is recommended that any potential adverse effects on unanticipated finds be mitigated through data recovery, although actual mitigation would be determined through consultation with the SHPO under the NHPA. It is also recommended that local Native American groups be consulted and their input solicited and considered in all aspects of such testing and mitigation.

**Timing/Implementation:** During construction  
**Enforcement:** NAHC, PID  
**Monitoring:** PID and its contractor

**Verification (sign and date):** \_\_\_\_\_

## Mitigation Measure #4—Human Remains

PID shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on inadvertently discovered human remains:

- If human remains are found, the California Health and Safety Code requires that excavation be halted in the immediate area and that the Butte County coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by telephone within 24 hours of making that determination (California Health and Safety Code Section 7050.5[c]).

**Timing/Implementation:** During construction  
**Enforcement:** NAHC, PID  
**Monitoring:** PID and its contractor

**Verification (sign and date):** \_\_\_\_\_

## 6. Report Preparation

### 6.1 Paradise Irrigation District – CEQA Lead Agency

Jim Passanisi

Treatment Plant Superintendent

### 6.2 North State Resources, Inc., now Stantec – Environmental Compliance

Wirt Lanning

Program Director

Connie MacGregor

Project Manager/Environmental Analyst

Tim Hanson

Biologist/Wetland Delineator/GIS Analyst

Julie Cassidy

Cultural Resources Principal Investigator

Sylvia Langford

Desktop Publisher

### 6.3 Water Works Engineers, LLC – Preliminary Design Engineering

Sami Kader, P.E.

Project Manager

Kristina Alacon, P.E

Staff Engineer

Sheila Magladry, EIT

Project Engineer

*This page intentionally left blank.*

## 7. References

- Butte County. 2012. Butte County general plan 2030. Adopted October 26, 2010, amended November 6, 2010.
- Butte County Airport Land Use Commission. 2017. Butte County Airport Land Use Compatibility Plan.
- Butte County Planning Department. 2018. Online Parcel Lookup Tool. Available at <http://gis.buttecounty.net/Public/index.html?viewer=dssearch> (accessed February 9, 2018).
- California Air Resources Board. 2018. Area designations maps/state and national. <https://www.arb.ca.gov/desig/adm/adm.htm> (accessed February 9, 2018).
- California Department of Conservation. 2018a. California important farmland finder. California Department of Conservation, Division of Land Resource Protection. Sacramento, California. Available at <http://maps.conservation.ca.gov/ciff/ciff.html> (accessed February 9, 2018).
- California Department of Conservation. 2016b. Regional geologic hazards and mapping program – Alquist-Priolo. Available at <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/index.aspx> (accessed February 9, 2018).
- California Department of Conservation. 2001. Publications of the SMARA mineral land classification project dealing with mineral resources in California. California Department of Conservation, California Geologic Survey, Minerals Program, SMARA Mineral Land Classification Project. Sacramento, California.
- California Department of Conservation. 2016. Butte County Williamson Act FY 2015/2016. Available at [ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Butte\\_15\\_16\\_WA.pdf](ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Butte_15_16_WA.pdf) (accessed February 9, 2018).
- California Department of Forestry and Fire Protection. 2007. Fire hazard severity zones in SRA, Butte County. Available at [http://frap.fire.ca.gov/webdata/maps/butte/flszs\\_map.4.pdf](http://frap.fire.ca.gov/webdata/maps/butte/flszs_map.4.pdf) (accessed April 3, 2018).
- California Department of Toxic Substances Control. 2018. DTSC's hazardous waste and substances site list - site cleanup (Cortese list). [http://www.dtsc.ca.gov/SiteCleanup/Cortese\\_List.cfm](http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm) (accessed February 9, 2018).
- California Department of Transportation. 2014. California Manual on Uniform Traffic Control Devices. Available at <http://www.dot.ca.gov/trafficops/camutcd/>.
- California Geologic Society. 2010. Fault Activity Map of California. Available at <http://maps.conservation.ca.gov/cgs/fam/> (accessed March 1, 2018).

- California Legislative Information. 2016. California vehicle code. Division 11 rules of the road, chapter 12 public offenses, article 1 driving offenses. Available at <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=veh&group=23001->
- Environmental Protection Agency. 2002. Onsite wastewater treatment system manual, revised. EPA/625/R-00/008. United States Environmental Protection Agency. Washington, D.C.
- 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> (accessed February 9, 2018).
- Mayer, K. E., and W. F. Laudenslayer, Jr., eds. 1988. A guide to wildlife habitats of California. Sacramento: California Department of Forestry and Fire Protection.
- Natural Resources Conservation Service. 2018. Web soil survey. Butte Area, Parts of Butte and Plumas Counties, California. Available at: <http://websoilsurvey.nrcs.usda.gov/app/> (accessed February 9, 2018).
- North State Resources, now Stantec. 2017. Paradise Irrigation District Reservoir B, Draft Cultural Resources Report. Prepared for Water Works Engineers and the Paradise Irrigation District.
- North State Resources, now Stantec. 2018a. Biological Resources Assessment for the Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project. Prepared for Water Works Engineers and the Paradise Irrigation District.
- North State Resources, now Stantec. 2018b. Delineation of Waters of the United States for the Paradise Irrigation District Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project. Prepared for Water Works Engineers and the Paradise Irrigation District.
- Saucedo, G. J. and D. L. Wagner. 1992, Geologic Map of the Chico Quadrangle, California Division of Mines and Geology Regional Map 7A, Scale 1:250,000.
- State Water Resources Control Board. 2018. Geotracker. <https://geotracker.waterboards.ca.gov/> (accessed February 9, 2018).
- Town of Paradise Planning Department. 2018. Interactive Zoning Map. Available at: <http://www.townofparadisemapping.com/> (accessed March 1, 2018).
- U.S. Geological Survey. 2018. Earthquake fault map - quaternary faults. <http://earthquake.usgs.gov/hazards/qfaults/map/#qfaults> (accessed March 1, 2018).
- Water Works Engineers. 2017. Conceptual Design Report. Paradise Irrigation District Reservoir B Replacement Project. Unpublished design report.

Vertical Sciences, Inc. 2017. Preliminary (desktop) geotechnical services, Reservoir B replacement – planning & design, Paradise Irrigation District, town of Paradise & unincorporated Butte County, California. Prepared for Water Works Engineers by Vertical Sciences, Inc. Redding, California.

Western Regional Climate Center. 2018. Paradise, California (046685) period of record monthly climate summary, 05/01/1957 to 06/10/2016. Available at: <http://www.wrcc.dri.edu/> (accessed March 1, 2018).