

FEB 28 2020

NOTICE OF EXEMPTION

~~TERRY A. HANSEN, Clerk~~BY MANDY LUIS

Deputy Clerk

To: Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044

From: North Yuba Water District
8691 La Porte Road
Brownsville, CA 95919

County Clerk
County of Butte
155 Nelson Avenue
Oroville, CA 95965



Project Title: Oroleve Ditch Line Pipe Project

Project Location - Specific:

Refer to Figure 1: Location Map. The project is located approximately 4.60 miles northeast of the community of Forbestown, California. More specifically, the project is located adjacent to Oroleve Creek just north of La Porte Road with the headworks at approximately 39°31'14.5"N 121°10'47.9"W and the terminus of the Oroleve Ditch at approximately 39°32'34.4"N 121°11'8.2"W. Additionally, Woodleaf Tunnel Road bisects the Oroleve Ditch at approximately the half way point along the ditch.

Project Location - City: near Woodleaf, CA **Project Location - County:** Butte

Description of Nature, Purpose, and Beneficiaries of Project:

Purpose and Need

The purpose of the project is to improve the existing water conveyance system and increase its efficiency by reducing raw water loss and minimize environmental contamination. The open unlined conveyance system is susceptible to both natural and man-made pollutants, vandalism, damage due to fire, unauthorized withdrawals, and significant water losses. The current conveyance does not reliably deliver raw water capacities due to losses.

In addition to storm related emergencies that can overwhelm the water delivery system, another risk associated with the open and unlined channel are significant water losses due to surge flows that cannot be utilized during storm events, leakage, evaporation, evapotranspiration, and unpermitted water diversion. It is estimated that between 50-70% of flows are lost to leakage and evaporation respectively.

The open and unlined ditches are causing water quality concerns at NYWD's Forbestown Water Treatment Plant. The treatment plant's Waste Discharge Requirements from the NYWD's permit renewal requires significantly reduced aluminum concentrations from overflows at the treatment plant's on-site storage reservoir.

The project provides the following benefits: 1) Improves existing water supply reliability in all years and especially during dry and extended drought years and; 2) Removes the potential for contamination.

End point water users within the North Yuba Water District would benefit from the piping of Oroleve Ditch with a more reliable drinking water supply. Additionally, the water district will benefit with lowered water losses during the use of the Oroleve Ditch.

Pipeline Overview

The project involves the piping of the Oroleve Ditch from its origination at the headworks from Oroleve Creek to the Forbestown Ditch near the Oroleve Siphon. The project will involve the placement of 36-inch high density polyethylene (HDPE) pipe within the current ditch alignment. The pipe utilized will be HDPE ADS N-12, this pipe provides a smooth interior wall and corrugated exterior wall providing durability and hydraulic efficiency. This type of pipe was selected because of its ease of installation and flexibility which

allows for minor sagging and deformation. Additionally, the integrated bell and gasket makes it a cost-effective option as it does not require an extra coupler, grout, or special equipment for installation.

The pipe would be stabilized with anchor blocks and pipe straps approximately every 10 feet. The anchor block would be precast concrete with a saddle that the pipe would seat within. The blocks are approximately 6 inches tall, 12 inches deep, and 48 inches long with an insert on each end for pipe straps. The insert would be a 3/8" by 8" galvanized bolt and washer that would provide an attachment point for the straps. The straps would be a 2" galvanized metal strap. Minor excavations within the existing ditch may be necessary to remove organic material and sediment to a competent subgrade material that will allow for the level placement of the anchor blocks.

Access into the pipe for maintenance and observation will be achieved through the placement of two pipe access ports. The access ports will be constructed utilizing an ADS HDPE pipe tee fitting pointing upward to provide continuity within the conveyance system. The top of the tee fitting will have a cast-in-place or pre-fabricated concrete frame around the pipe with a lockable diamond plate cover or equivalent.

One open channel to pipe transition occurs along the alignment near the Oroleve ditch headworks. To facilitate water flows into the piped ditch from the open channel, the construction of headwalls to direct water into the pipe will be necessary. The headwalls will utilize quickcrete bags anchored into the toe of the ditch for stabilization to direct flows. The 36-inch HDPE pipe would be mitered to provide a smooth transition from the headwall into the pipe. The mitered section will be approximately 97 inches in length. A trash rack will be constructed to prevent large debris and trash from entering the pipe from the open channel section. The trash rack will be constructed utilizing 1.5-inch galvanized pipe where four vertical bars spaced approximately six inches apart would cover the opening of the pipe. The rack would be attached to a 12-inch by 12-inch metal plate and through the HDPE pipe which would be sealed to prevent leakage.

At the terminus of the Oroleve Ditch the pipe transitions back to an open channel. A rock lined ditch would be placed just upstream of the end point to turn out overland sheet flow from the trough and backfill material would be added near the end of the pipe to cover the pipe to a minimum depth of 12 inches. The backfill material would have side slopes of 1:1 and would tie into the existing top of the ditch berm. The outfall at the end of the pipe would be protected with rock slope protection to prevent scour of the outfall.

An equipment and supply staging area is proposed approximately half way along the Oroleve Ditch in an clearing that occurs adjacent to Woodleaf Tunnel Road.

Turnouts

Overland sheet flow and excess water within the ditch alignment will be channeled into a small trough that is approximately two feet wide at the top with side slopes of 1:1 with a bottom width of one foot, it would be approximately six inches deep. The trough would be located on the opposite side of the pipe from the ditch berm adjacent to the toe of ditch. A downstream ditch flow barrier would be constructed to ensure accumulated flow could exit the trough. Accumulated over land sheet flow within the trough would exit via a rock lined ditch that travels beneath the pipe. The rock lined ditch would be approximately five feet wide and have a slope of approximately three percent. The existing berm would need to be excavated to accommodate the rock lined ditch. The side slopes of the excavation would be 3:1 to create a smooth transition from the top of the berm into the bottom of the rock lined ditch and would continue to allow maintenance vehicles to travel along the ditch berm if necessary. These rock lined ditches will be located just upstream of the pipe turnouts.

Once the pipeline is installed, surface water may enter the ditch. In the event any portion of the pipeline requires surface water flows to be diverted and released out of the ditch system, one turnout structure will be installed. The turnout structure will be a 60-inch by 60-inch precast concrete box with two Waterman C-10 canal gates installed at each outlet. The structure will be within the pipe alignment and will have a 36-inch HDPE outlet pipe. The outlet of the pipe will be protected with rock slope protection and geotextile fabric.

The outlet pipe will be installed at approximately 2% slope to facilitate water flow from the turnout. The existing ditch berm will have to be excavated to accommodate the new outlet pipe, backfill from the berm will be placed on top of the outlet pipe to a depth of one foot.

Wooden Flume Section

A wooden flume is present within the ditch alignment, this wooden flume will need to be modified for the piping of the ditch. To facilitate placement of the 36-inch HDPE pipe in this structure the existing supports on the flume will be removed and replaced. New top supports will be approximately 2 inches by 4 inches by 80 inches while side supports will be approximately 2 inches by 4 inches by 55 inches. New wood supports for the bottom of the pipe will be approximately 2 inches by 4 inches by 34 inches and will connect to the side supports to stabilize the pipe within the flume. Additionally, wood shims may be installed below the pipe to maintain a positive slope facilitating flow. New supports for the pipe will be installed approximately every 10 feet within the wooden flume section.

Name of Public Agency Approving Project: North Yuba Water District

Name of Person or Agency Carrying Out Project: North Yuba Water District

Exempt Status:

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3) 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption (type and section number); Section 15301(b): Existing Facilities and Section 15302 (c): Replacement or Reconstruction

☐ Statutory Exemption (state code number): _____

Reason why project is exempt:

The project involves an existing facility that is used to deliver water to the Forbestown Treatment Plant where it is treated and utilized as drinking water by residents within the water district's service area. Additionally, the project involves the replacement of an existing utility system with one that involves negligible or no expansion of capacity. The piping of the Oroleve Ditch will not expand the existing capacity of the ditch, it will instead reduce water loss from the existing open channel. The project involves the placement of a 36-inch HDPE pipe within the existing ditch alignment and will serve the same purpose as the existing ditch. The existing ditch moves water from the Oroleve Ditch headworks located on Oroleve Creek to the Forbestown Ditch at the Oroleve Siphon, the new piped ditch will serve the exact same purpose.

Lead Agency

Contact: Jeff Maupin Phone: (530) 675-2567

If filed by applicant:

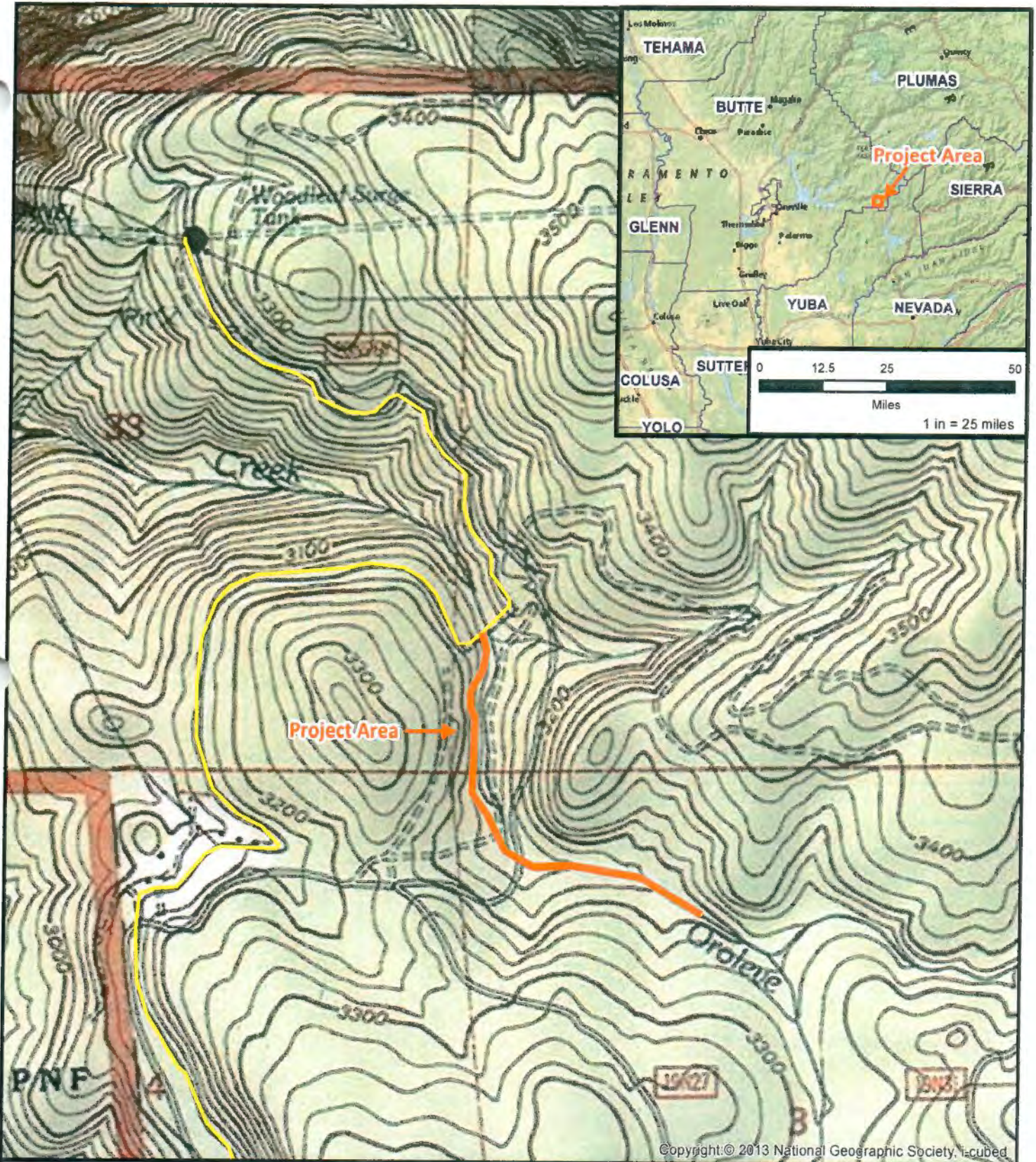
1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature: [Signature] Title: GENERAL MANAGER Date: 01/14/2020

☐ Signed by Lead Agency

☐ Signed by Applicant

Date received for filing at OPR: _____



Legend

- Oroleve Ditch
- Forbestown Ditch

Within:
 Sections 33 & 34, T20N, R07E;
 Sections 3 & 4, T19N, R07E;
 CLIPPER MILLS USGS 7.5' QUAD

Location Map

Oroleve Ditch Project
 North Yuba Water District
 -Butte County, CA -



0 0.15 0.3 Miles
 1 in = 0.19 miles (printed at 8.5 x 11)



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Imagery Source: USGS Topo	Map Date: 11/06/2019	Drawn By: BSA	NSE Project # 18-026
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PHOTO - 1

Headworks of the Oroleve Ditch with inlet from the Oroleve Creek.

-Standing at the southernmost section looking west downstream.

5 NOV 2019



PHOTO - 2

Culvert from the Oroleve Ditch headworks and beginning portion of the ditch.

-Standing between the creek and ditch looking east.

5 NOV 2019

Supporting Documentation:
CEQA Notice of Exemption

Representative
Site Photos

Oroleve Ditch Piping Project- Butte
County, CA



PHOTO - 3

Ditch monitoring station on the left and water turnout on the right (mid-photo) approximately 50 feet down from the beginning inlet.

-Standing on the south side of the ditch looking west.

5 NOV 2019



PHOTO - 4

The open ditch ranged from approximately 2-4 feet in depth and approximately 6-7 feet in width at varying points.

-Standing on the Southern edge of the ditch looking west inline with the direction of flow.

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Oroleve Ditch Piping Project- Butte
County, CA



PHOTO - 5

A visqueen lined section of the ditch approximately 200 feet in length downstream from the beginning of the ditch.

-Standing on the southern side of the ditch looking west.

5 NOV 2019



PHOTO - 6

Piped sections of the ditch downstream from the end of the visqueen lined section. The left section of pipe opens around a curve leading into a shorter section on the right (approximately 8-10 feet), which leads into a wooden flume.

-Standing on the southern side of the ditch looking north.

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PHOTO - 7

A wooden flumed section of the ditch.

-Standing on the southern side of the ditch/flume looking northeast.

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PHOTO - 8

A second, smaller section of the ditch also lined with visqueen approximately 10-15 feet in length.

-Standing on the southern side of the ditch looking west.

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Oroleve Ditch Piping Project- Butte
County, CA



PHOTO - 9

A culvert allows flow to cross underneath a dirt road.

-Standing on the southern side of the ditch looking Southeast.

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PHOTO - 10

Water staff gage in the Oroleve Ditch immediately downstream of the culvert beneath the dirt road.

-Standing in the ditch looking north downstream.

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Site Photos

Oroleve Ditch Piping Project- Butte
County, CA



PHOTO - 11

A cement portion of the ditch with a turnout.

-Standing in the ditch looking north downstream.

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PHOTO - 12

Ditch turnout with boards in place.

-Standing in the ditch looking east.

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Supporting Documentation:
CEQA Notice of Exemption

Representative
Site Photos

Oroleve Ditch Piping Project- Butte
County, CA



PHOTO - 13

The end of the Oroleve ditch leads into the Forbestown Ditch with a cemented section in conjunction with a syphon.

-Standing on the west side of the ditch looking north.

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PHOTO - 14

Junction between the Oroleve Ditch (left), Forbestown Ditch (right), and syphon (foreground).

-Standing on the syphon junction on the east side of the ditch, looking northwest.

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Site Photos

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