

Initial Study
Hemphill Diversion Structure Project

September 2020

Lead Agency:



Nevada Irrigation District
1036 West Main Street
Grass Valley, California 95945

Prepared by:



2525 Warren Drive
Rocklin, California 95677

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INITIAL STUDY HEMPHILL DIVERSION STRUCTURE PROJECT

Lead Agency: Nevada Irrigation District (NID)

Project Proponent: NID

Project Location: The Hemphill Diversion Structure is located on Auburn Ravine northeast of the City of Lincoln, California. The structure diverts water from Auburn Ravine into the Hemphill Canal located south of the ravine for delivery to NID raw water customers. The Hemphill Diversion Structure is located in Section 13, Township 12 North, and Range 6 West (Mount Diablo Base and Meridian) of the "Lincoln" 7.5-minute quadrangle (Figure 1. *Regional Location* and Figure 2. *Site Location*). The structure is located at latitude 38.896731° and longitude -121.251885°.

NID proposes to remove or replace the existing diversion structure by implementing one of four alternatives being considered by the NID. Based on the four alternatives, there are essentially three "project sites" as two of the alternatives are located in the same area. Elements of all four projects are located within the project site that encompasses the diversion structure and surrounding area.

Alternative 1 would include removal of the Hemphill Diversion Structure and construction of an infiltration gallery within the north or south bank of Auburn Ravine to facilitate continued water deliveries to Hemphill Canal. The gallery is anticipated to be located approximately 75 feet downstream of the existing diversion structure.

Alternative 2 would include the potential replacement or alteration of the Hemphill Diversion Structure to accommodate a fish ladder within the Auburn Ravine. The fish ladder is anticipated to be located adjacent to or on the existing diversion structure.

Alternative 3 would remove the existing diversion structure and construct an underground pipeline extending from existing NID facilities on Gold Hill Road to Hemphill Canal. Construction of Alternative 3 would include installation of a 24-inch raw water pipeline in the Fruitvale Road, Fowler Road and Virginiatown Road rights-of-way (ROWs). This alternative would also include an above-ground stream crossing downstream and west of the existing diversion. The majority of the pipeline is within Placer County jurisdiction for encroachment permits.

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Alternative 4 would remove the Hemphill Diversion Structure and decommission Hemphill Canal and would include the Hemphill Canal as it travels through Turkey Creek Golf Course as well as adjacent land to the west. Additionally, this alternative would affect existing Hemphill Canal raw water users within the City of Lincoln.

Because of the four possible Alternatives, areas potentially affected by all of the Alternatives being considered range in elevation from 177 to 477 feet above mean sea level (AMSL).

Project Description: The Proposed Project includes analysis of four potential alternatives including: 1) Riverbank Infiltration Gallery Alternative, 2) Fish Passage Alternative, 3) Pipeline Alternative, and 4) Abandonment of Hemphill Canal Alternative. The alternatives vary as far as construction attributes and areas of potential disturbance. All of these alternatives are designed to allow for fish passage beyond the Hemphill Diversion Structure.

Public Review Period: September 3, 2020 to October 2, 2020

Public Scoping Meeting: September 21, 2020 from 4:00pm to 6:00pm.

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ACRONYMS AND ABBREVIATIONS

AF	Acre-feet
AMSL	Above mean sea level
AR/CC	Auburn Ravine/Coon Creek
Assessment	Watershed Assessment
BMPs	Best Management Practices
CAL FIRE	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CARP	County Aquatic Resources Program
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	Cubic feet per second
CGS	California Geological Society
CH ₄	Methane
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO ₂	Carbon Dioxide
CO ₂ e	carbon dioxide equivalents
dBA	A-weighted decibels
Diesel PM	Diesel particulate matter

ACRONYMS AND ABBREVIATIONS

DOC	California Department of Conservation
DOE	California Department of Education
DOF	California Department of Finance
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
ECHO	Enforcement and Compliance History Online
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERP	Ecosystem Restoration Plan
ESA	Endangered Species Act
F-B-X 10 AC. MIN	Farm-Building site - 10 acre minimum
FEMA	Federal Emergency Management Agency
General Permit	General Construction Activity Stormwater Permit
GHG	Greenhouse Gas
HCP	Habitat Conservation Plan
IS	Initial Study
kWh	kilowatt-hours
L_{eq}	Equivalent noise level
LFD	Lincoln Fire Department
LOS	Level of service
LPD	Lincoln Police Department
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
N_2O	Nitrous Oxide
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NID	Nevada Irrigation District
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
PCAPCD	Placer County Air Pollution Control District
PCCP	Placer County Conservation Program
PCFD	Placer County fire Department
PCSO	Placer County Sheriff's Office
PCT	Placer County Transit
PG&E	Pacific Gas and Electric
PM_{10}	coarse particulate matter

ACRONYMS AND ABBREVIATIONS

PM _{2.5}	fine particulate matter
PRC	Public Resources Code
Project or Proposed Project	Hemphill Diversion Structure Project
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SR	State Route
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminants
UCMP	California Museum of Paleontology
USACE	United States Army Corp of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Service
VLDR	Village Low Density Residential
VMT	Vehicle miles traveled
VPR	Village Park and Recreation
WPUSD	Western Placer Unified School District
WPWMA	Western Placer Waste Management Authority

SECTION 1.0 BACKGROUND

1.1 Summary

Project Title: Hemphill Diversion Structure Project

Lead Agency Name and Address: Nevada Irrigation District
1036 West Main Street
Grass Valley, California 95945

Contact Person and Phone Number: Tonia M. Tabucchi Herrera
NID Project Manager
530-271-6815

Project Location: The Hemphill Diversion Structure is located on Auburn Ravine in the City of Lincoln, California. The structure diverts water from Auburn Ravine into the Hemphill Canal located south of the ravine for delivery to NID raw water customers. The Hemphill Diversion Structure is located in Section 13, Township 12 North, and Range 6 West (Mount Diablo Base and Meridian) of the "Lincoln" 7.5-minute quadrangle (Figure 1. *Regional Location* and Figure 2. *Project Location*). The structure is located at latitude 38.896731° and longitude -121.251885°. (Figure 1. *Regional Location* and Figure 2. *Site Location*).

NID proposes to remove or replace the existing diversion structure by implementing one of four alternatives being considered by the District. Based on the four alternatives, there are essentially three "project sites" as two of the alternatives are located in the same area. Elements of all four projects are located within the project site that encompasses the diversion structure and surrounding area.

Alternative 1 would include removal of the Hemphill Diversion Structure and construction of an infiltration gallery within the north or south bank of Auburn Ravine to facilitate continued water deliveries to Hemphill Canal. The gallery is anticipated to be located approximately 75 feet downstream of the existing diversion structure.

Alternative 2 would include the potential replacement or alteration of the Hemphill Diversion Structure to accommodate a fish ladder within Auburn Ravine. The fish

ladder is anticipated to be located adjacent to the existing diversion structure.

Alternative 3 would remove the existing diversion structure and construct an underground pipeline extending from existing NID facilities on Gold Hill Road to Hemphill Canal. Construction of Alternative 3 would include installation of 24-inch raw water pipeline in the Fruitvale Road, Fowler Road and Virginiatown Road ROWs. This alternative would also include an above-ground stream crossing downstream and west of the existing diversion. The majority of the pipeline is within Placer County jurisdiction for encroachment permits.

Alternative 4 would remove the Hemphill Diversion Structure and decommission Hemphill Canal and would include the Hemphill Canal as it travels through Turkey Creek Golf Course as well as adjacent land to the west. Additionally, this alternative would affect existing Hemphill Canal raw water users within the City of Lincoln.

Because of the four possible Alternatives, areas potentially affected by all of the Alternatives being considered range in elevation from 177 to 477 feet AMSL .38.896731° and longitude -121.251885°. The Hemphill Diversion Structure project site elevation varies from 198 to 214 feet AMSL.

General Plan Designation:

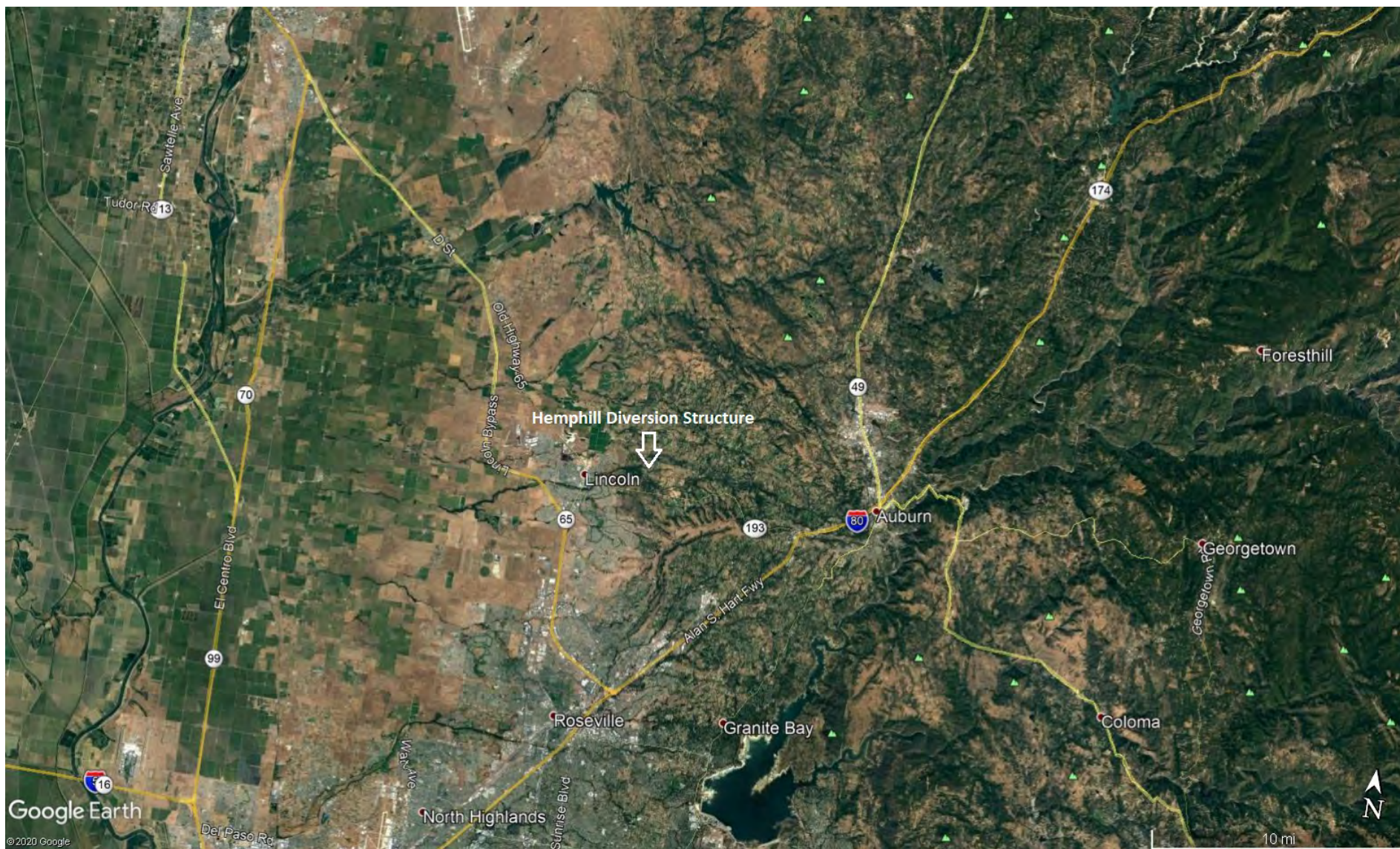
City of Lincoln: Village 1 (V-1) (portions of all four alternatives are within Lincoln City limits)

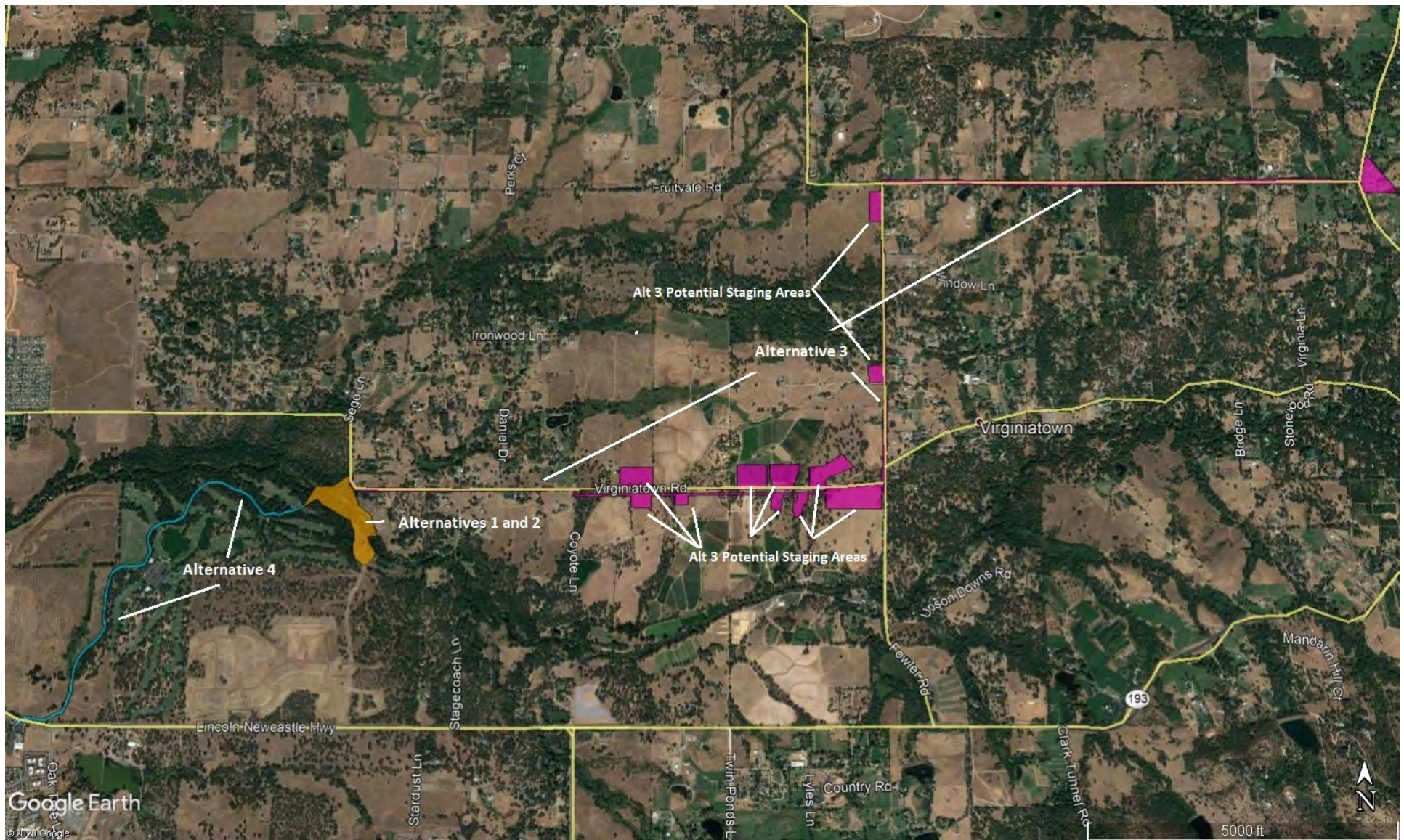
Placer County: Agriculture/Timberland – 10 ac min. (includes portions of Alternative 3 within the Placer County unincorporated area)

Zoning:

City of Lincoln: Village 1 Specific Plan – VPR (Village Park and Recreation), VLDR (Village Low Density Residential) (portions of all four alternatives are within Lincoln city limits)

Placer County: Farm-Building site - 10 acre minimum (-F-B-X 10 AC. MIN.) (includes portions of Alternative 3 in Placer County) within the Placer County unincorporated area)





1.2 Introduction

The Initial Study has been prepared to identify and assess the anticipated environmental impacts of the Hemphill Diversion Structure Project (Project or Proposed Project). The NID is the Lead Agency for this Initial Study.

The analysis for this Project includes four different alternatives including Alternative 1 - Riverbank Infiltration Gallery Alternative, Alternative 2 - Fish Ladder Alternative, Alternative 3 - Pipeline Alternative, and Alternative 4 - Abandonment of Hemphill Canal Alternative. All of these alternatives are described in Section 2.0 Project Description.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resources Code [PRC], § 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study is generally used to determine which CEQA document is appropriate for a Project (Negative Declaration, Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]). NID has already determined that an EIR will be prepared for the Project. The purpose of the Hemphill Diversion Structure Project Initial Study is to eliminate from further analysis those areas listed in CEQA Guidelines Appendix G shown as having no impact or a less than significant impact, from further consideration in the EIR. The EIR will include a full analysis of all four alternatives to provide the NID Board of Directors with information necessary to approve their preferred alternative.

1.3 Environmental Setting and Surrounding Land Uses

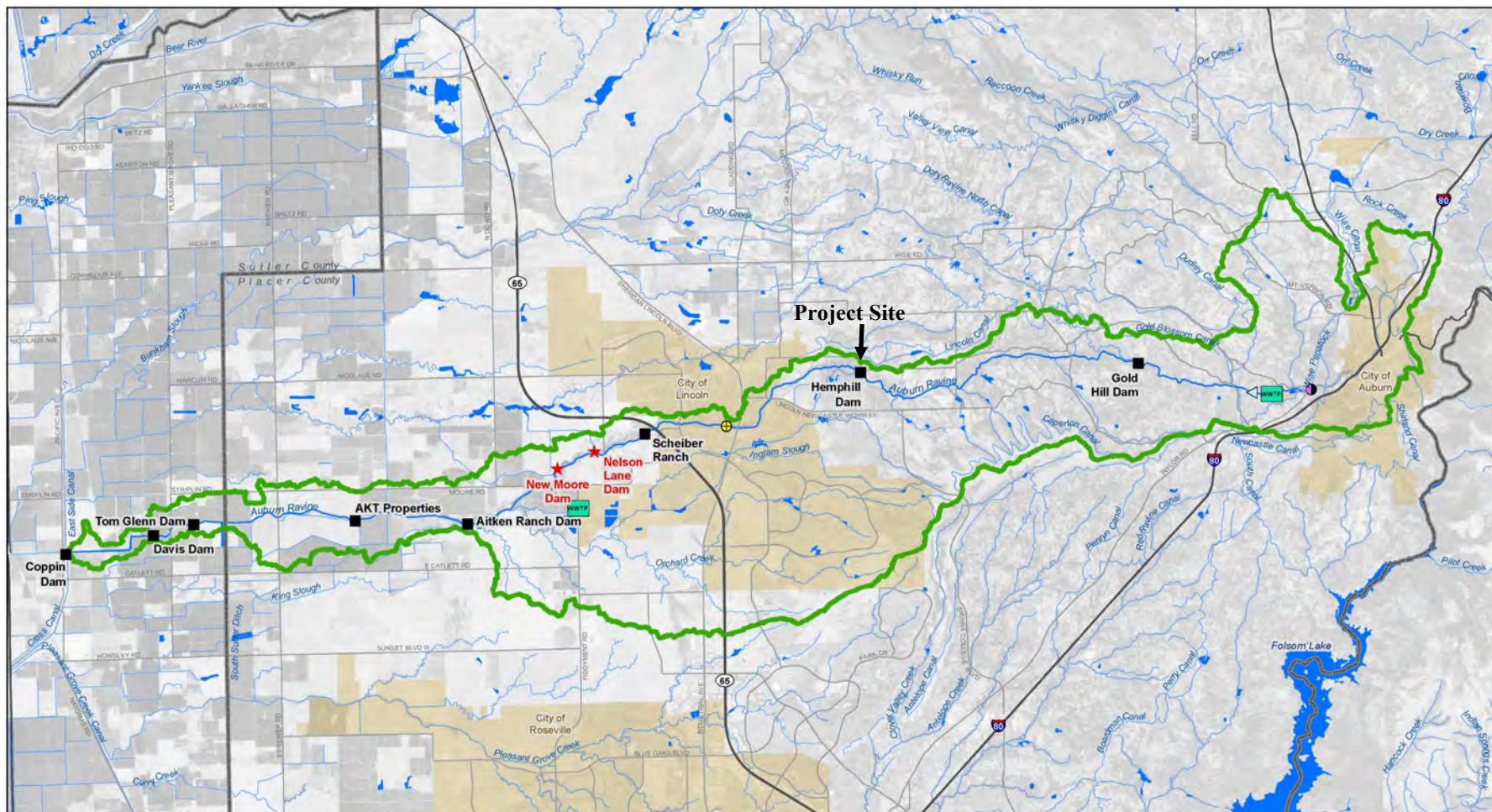
The headwaters of Auburn Ravine are located just north of the City of Auburn at an elevation of approximately 1,600 feet. Auburn Ravine emerges from the Sierra foothills as it flows west through the City of Lincoln to its confluence with the East Side Canal. The East Side Canal flows into the Cross Canal, which joins the Sacramento River immediately downstream from the confluence of the Feather and Sacramento rivers near Verona. Auburn Ravine, which drains approximately 79 square miles, has a change in elevation from 1,600 to 30 feet AMSL. See Figure 3. *Auburn Ravine Watershed*.

The Hemphill Diversion Structure is located within the Auburn Ravine and is bounded by the Turkey Creek Golf Course to the southwest, undeveloped land to the northwest, and rural residential land developments to the east and northeast. The Lincoln Newcastle Highway (State Route [SR] 193) is located approximately 0.7 mile south of the project site, while Virginatown Road is located 250 feet north of the site.

The project site for Alternatives 1 and 2, which are in the same general area, is relatively flat, with elevations ranging from 196-225 feet AMSL. In the Project area, Auburn Ravine is a perennial stream with a cobbly/rocky/sandy bottom in an incised channel that averages approximately 100 feet in width. When the Hemphill Diversion Structure is in place during the spring and summer, the stream is impounded to form a slack pond behind the diversion structure. The stream supports a band of riparian vegetation dominated by narrow-leaved willow and red alder below the ordinary high-water mark. Incising of the channel has resulted in the stream being mostly isolated from its historic floodplain in the Project area.

The Alternative 3 project site includes the area surrounding the Hemphill Diversion Structure, as well as, four to five feet of roadway ROW for pipeline trenching, potentially one lane width of roadway for repaving and 11 potential staging areas. The environmental setting along these roadways is low density rural residential development surrounded by grassland (often grazed) and agricultural fields. Grassland areas also include patches of valley oak woodland as well as other tree species. Elevations range from 185 feet AMSL at the most western portion of the Alternative 3 site to 425 feet AMSL at the NID Gold Hill Road facility.

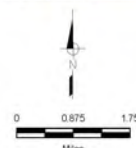
The Alternative 4 project site includes the area surrounding the Hemphill Diversion Structure, as well as the Hemphill Canal as it extends for the Auburn Ravine south through the Turkey Creek Golf Course and vacant land and terminates where the canal crosses SR 193. The more regional setting is primarily characterized by built-out subdivisions to the south and west and agricultural and rural residential development to the north and east of the Alternative 4 project site. See Figure 4. *Surrounding Uses*.



Symbology

- | | | |
|-----------------------------|--------------------|----------------|
| ★ Assessed Dam | Water Features | Other Features |
| ■ Dam | Waterbody | Freeway |
| ● NID Gaging Station BR-200 | Watershed Boundary | Road |
| ● PG&E Wise Powerhouse | | City Limit |
| Wastewater Treatment Plant | | County Line |
| ◁ Ophir Cataract | | |

Notes:
1. The location of PG&E Wise Powerhouses is also the approximate location of USGS Gage Station 11425415.



Assessment Vicinity Map

Auburn Ravine
Fish Passage
Improvement Assessment



ECORP Consulting, Inc.
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Figure 3. Auburn Ravine Watershed
2020-104 Hemphill Diversion Structure Project

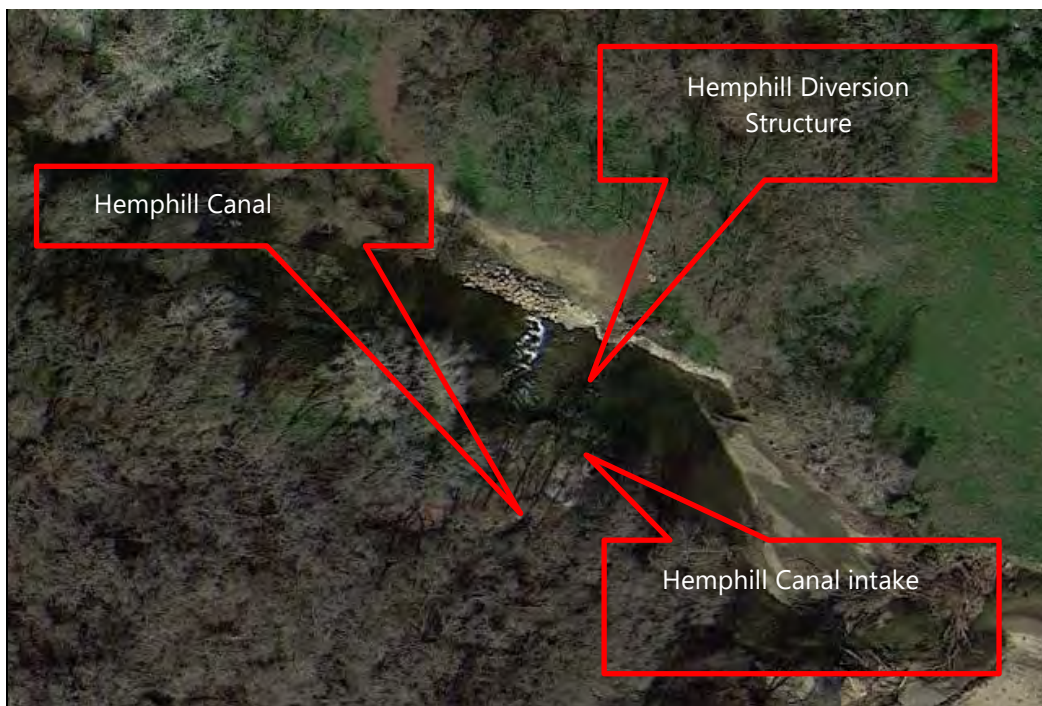


SECTION 2.0 PROJECT DESCRIPTION

2.1 Project Characteristics

The Hemphill Diversion Structure has been operated by NID since its purchase in 1933. The diversion structure is an approximately eight-foot-high concrete structure, with an approximately 40-foot-long concrete apron extending downstream. During irrigation season (mid-April through mid-October), three-foot flashboards are installed on top of the diversion structure in order to facilitate flow into the Hemphill Canal, which is located just upstream of the diversion structure along the left bank (looking downstream) of Auburn Ravine. Figure 5. *Hemphill Diversion Features* below illustrates the location of these features.

Figure 5. Hemphill Diversion Features



Source: NV5 2020

2.1.1 Project Site Definition

Based on the four alternatives discussed below, there are essentially three “project sites”. The project sites for Alternatives 1 and 2, as defined in Figure 6. *Alternatives 1 and 2 Project Sites*, are essentially the same as these two alternatives would occur in the same general area. The 14.9-acre project site includes areas subject to construction/improvement, access routes and laydown/staging.

The Alternative 3 project site, the pipeline alternative, includes two potential Auburn Ravine crossing locations, as shown in Figure 9a. *Alternative 3: Pipeline Crossings*. This project site also includes the area around the Hemphill Diversion structure as shown in Figure 9b. *Alternative 3: Pipeline Project Site*. Most of this project site is within the Placer County jurisdictional boundaries. However, the middle of Auburn Ravine appears to be the dividing line in the diversion structure area between the City of Lincoln and Placer County; so those parts of the pipeline west of Virginiatown Road are actually in the City.

The Alternative 4 project site includes the area around the Hemphill Diversion Structure as well as the Hemphill Canal, as discussed below. and shown in Figure 10a.

2.1.2 *Proposed Project Alternatives*

As noted, NID is considering implementing one of four Project alternatives. Three of the alternatives would require the permanent removal of the Hemphill Diversion Structure, while one does not. All are designed to allow for anadromous fish migration beyond the Hemphill Diversion Structure site. NID has not yet identified a preferred alternative. The four alternatives assessed in this Initial Study are listed below.

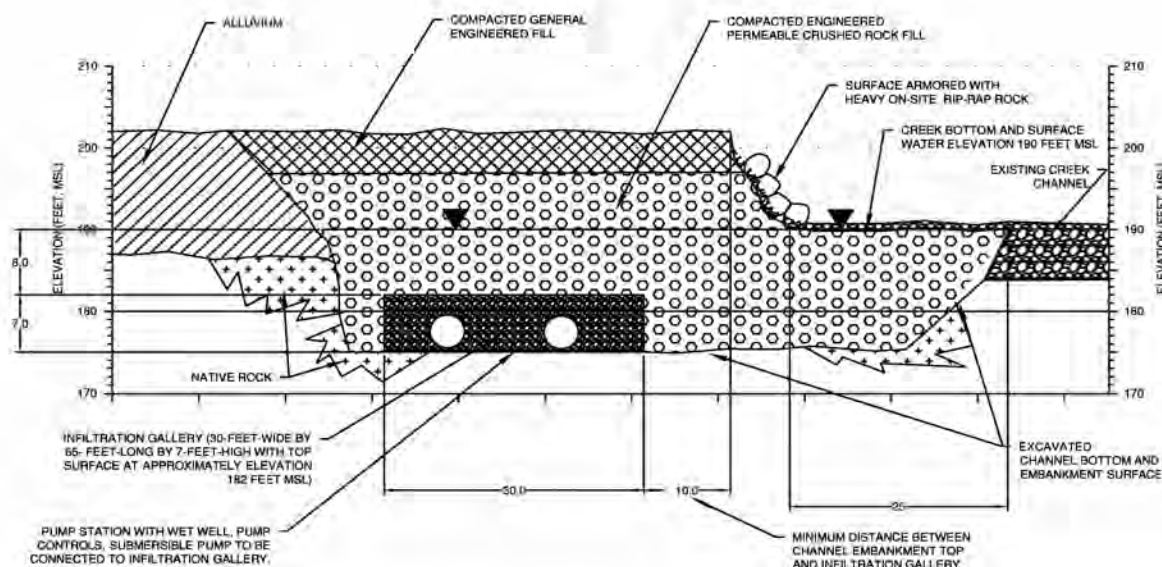
Alternative 1: Riverbank Infiltration Gallery Alternative

Alternative 1 would construct an infiltration gallery downstream of the existing diversion structure along the south bank and extending approximately within 25 feet of the existing creek bed and channel. Work would include excavation to weathered granitic rock at approximately 15 feet, installation of infiltration gallery, placement of compacted engineered rock fill, placement of riprap along the bank, and installation of a wet well pump station. Installation of the gallery on the south side of the bank would require an extension of electrical service across Auburn Ravine from a newly set electrical pole to the pump station. The new pole would be located outside the creek banks. Shown in Figures 7a and 7b. *Infiltration Gallery Structure*, are preliminary designs of the riverbank infiltration gallery.

The infiltration gallery pump system would discharge water into the Hemphill Canal via either an armored canal or concrete distribution box located within the creek bank so as to not erode the existing canal. The existing gauge station would have to be relocated downstream and a portion of the canal would be filled.

Construction would occur with the existing Hemphill Diversion Structure in place, allowing for irrigation service to continue until the infiltration gallery is completed and functioning. After testing and proving of the infiltration gallery function, the existing diversion structure will be removed. The existing headwalls most likely will also be removed.





- Notes: 1. ALL FEATURES AND DIMENSIONS SHOWN ON THIS FIGURE ARE APPROXIMATE AND ARE PROVIDED FOR GENERAL CONCEPT ILLUSTRATION PURPOSES.
2. WIDTH OF RAVINE IS VARIABLE OVER TIME, DESIGN ASSUMES EXISTING ROCK ELEVATION AS CONTROL DUE TO VARIABLE DEPTH OF WATER.



NIVIS

792 Sears Avenue
Nevada City, California
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CROSS-SECTION A-A'
DIVERSION STRUCTURE CONCEPT

Nevada Irrigation District
Hemphill Diversion Structure
Lincoln, Placer County, California

DRAWN BY: DMO
CHECKED BY: CRK
PROJ. NO.: 4794.00
DATE: 03-05-2020

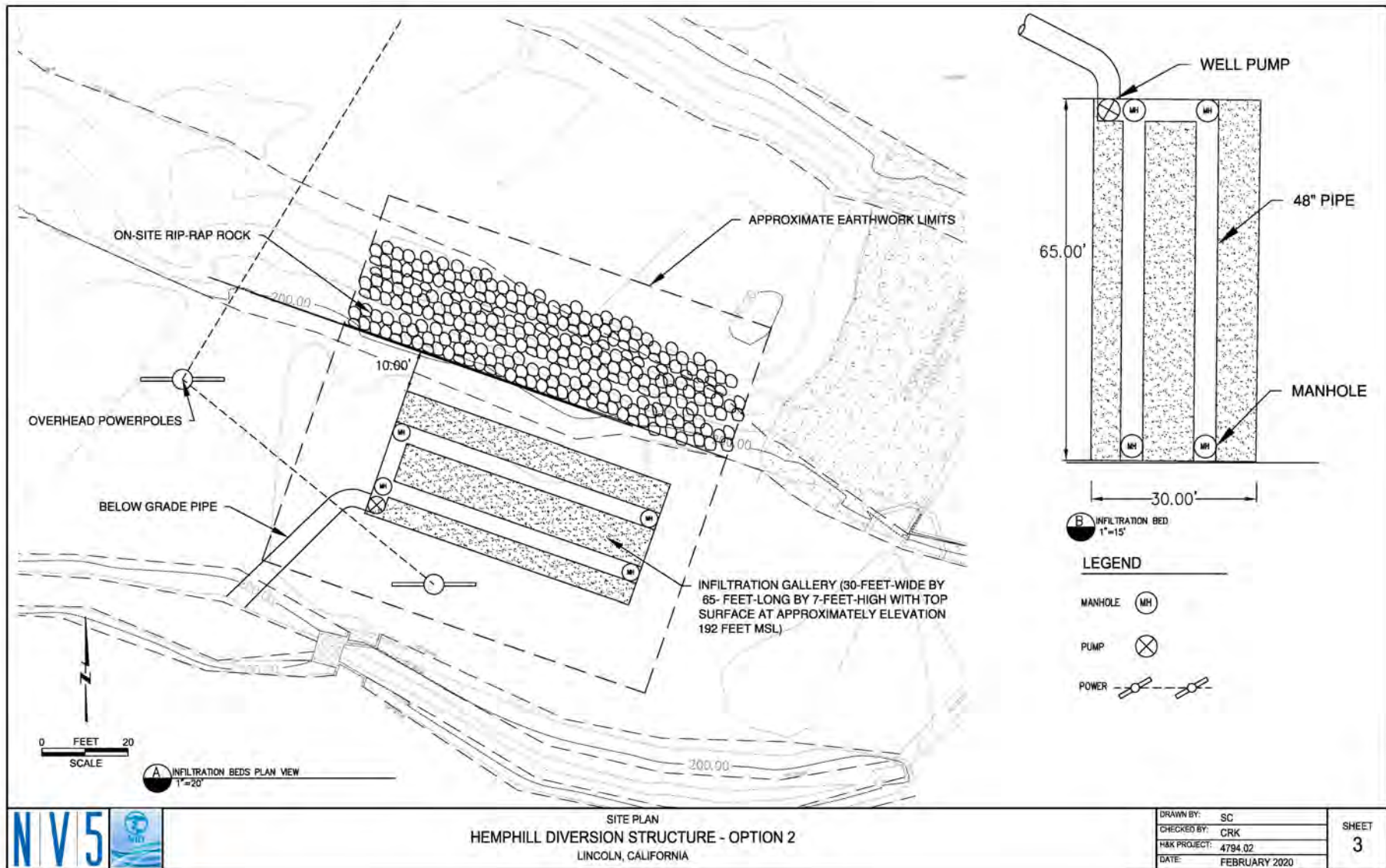
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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 7a. Infiltration Gallery Structure
2020-104 Hemphill Diversion Structure Project



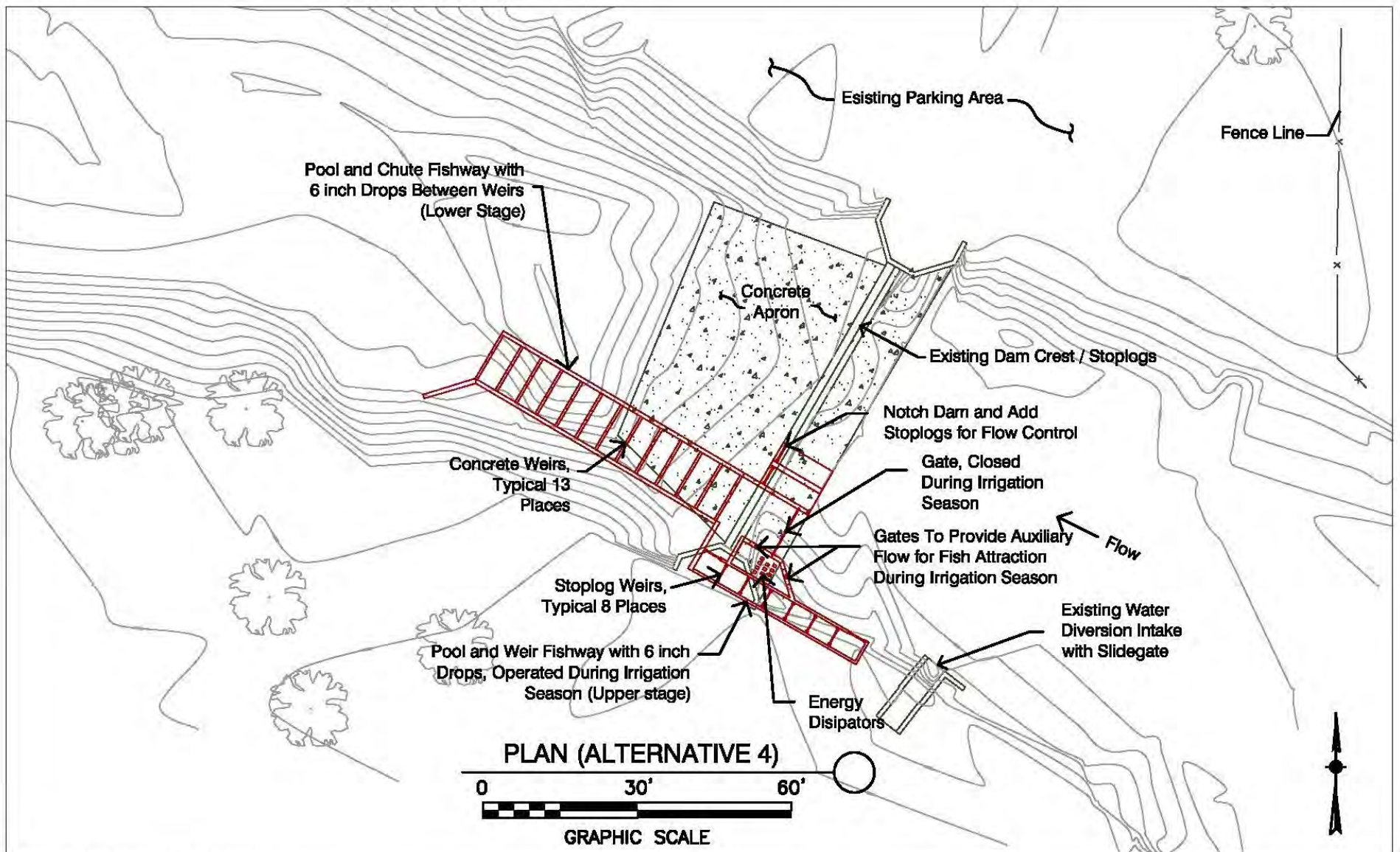
Alternative 2: Fish Passage Alternative

Alternative 2 is to install a fish ladder within Auburn Ravine. An evaluation of installation of a fish ladder was completed by Placer County in 2009, with consideration of four alternatives. Of the four alternatives, two provided year round passage for fish – either a bypass or two-stage fish ladder. As Auburn Ravine is identified for both fall run salmon and steelhead, selection of one of the two year-around passages would improve anadromous fish migration conditions. The two stage fish ladder is more desirable as it does not significantly increase the footprint of NID’s operation. Due to the existing condition of the diversion structure, there is a potential that the existing Hemphill Diversion Structure may need replacement to construct a viable fish ladder facility.

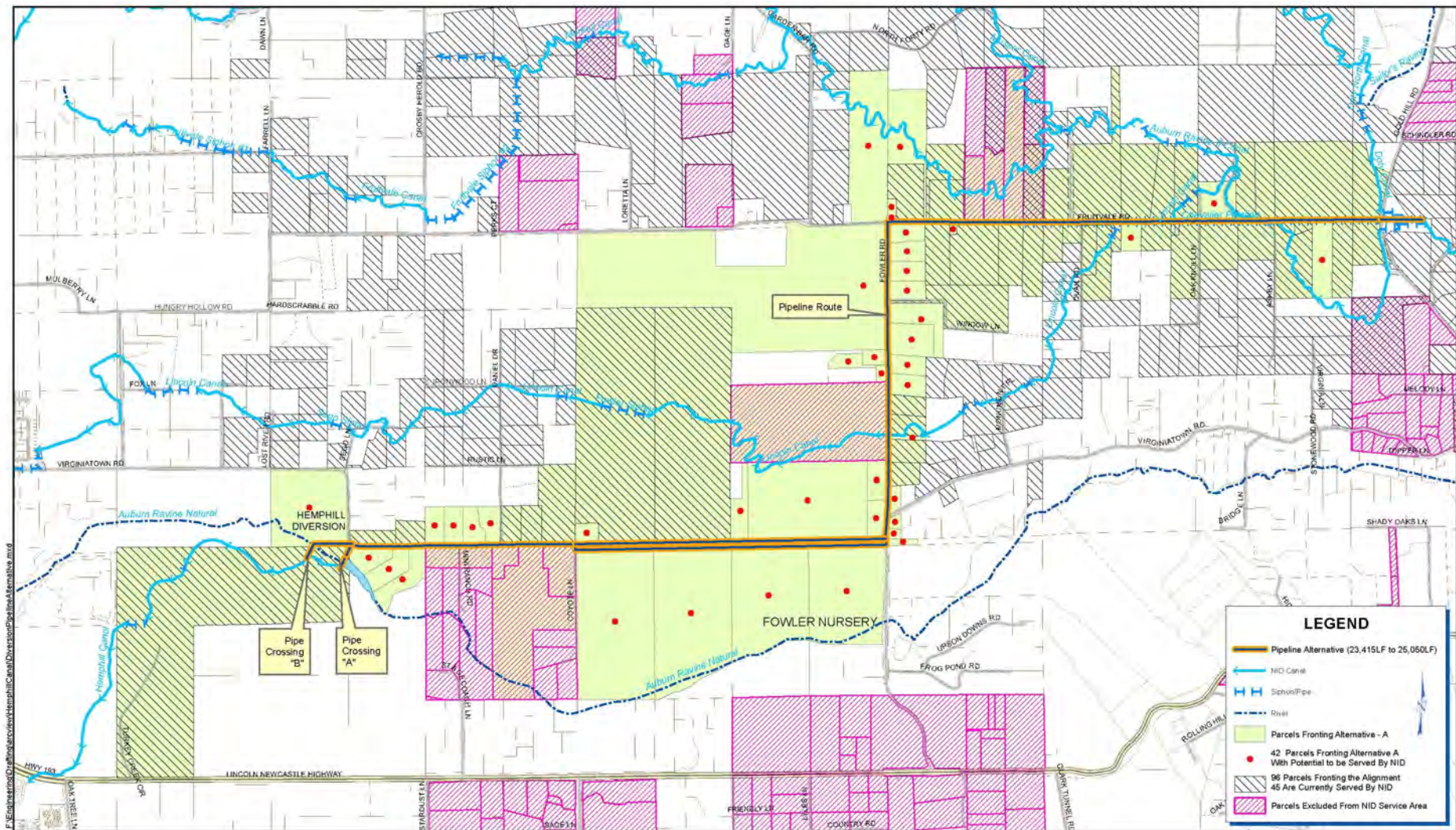
Figure 8 Alternative 2: Fish Ladder Conceptual Design provides a conceptual design for the fish ladder. Further analysis and design of a fish ladder at this location is being completed at this time and actual design of the ladder may change. However, the location of the fish ladder will remain within the Alternatives 1 and 2 project site as illustrated in Figure 6.

Alternative 3: Pipeline Alternative

Alternative 3 would construct a 24-inch pipeline from NID’s Placer Yard on Gold Hill Road and then along Fruitvale Road, Fowler Road, Virginiatown Road, and the access road to the Hemphill Canal. The Alternative 3 project site includes two potential Auburn Ravine crossing locations, as shown in Figure 9a. This project site also includes the area around the Hemphill Diversion Structure, the pipeline routes, and the staging areas, as shown in Figure 9b. Figure 9a illustrates the potential alignment for a pipeline(s) to provide raw water to the Hemphill Canal. Work is anticipated to occur within the Placer County ROW along Fruitvale, Fowler and Virginiatown roads. Trenching will be approximately 3.5 to 4 feet wide. This alternative may require construction within private property adjacent to Virginiatown Road, which would necessitate easement acquisitions within these properties. An additional approximately 25-foot easement may also be required in the vicinity of the access road and pipeline crossing. The pipeline would cross Auburn Ravine via either an aerial pipe or jack-and-bore construction to serve the Hemphill Canal. Two possible locations for the crossing of Auburn Ravine have been identified: Pipe Crossing A and Pipe Crossing B, as shown in Figure 9a. Pipe Crossing A is located in the same area as the existing Hemphill Diversion Structure. Pipe Crossing B is located approximately 550 feet downstream of the diversion structure. This location was selected as it represents the narrowest span over/under the creek for the pipe. Additionally, this alternative includes 11 potential staging areas for environmental review along Fruitvale, Fowler and Virginiatown roads. However, not all of these staging areas will be used as some will be eliminated as result of the biological and cultural surveys or lack of property access. The restoration of the roadway would occur upon completion of construction as shown in Figure 9a. An initial constraint analysis is being completed to evaluate the staging areas. This information will assist in determining the preferred staging area locations. Easements will be required, and additional surveys may be needed depending on site conditions.



Source: Michael Love and Associates 2009



DRAFT ADA IRRIGATION DISTRICT
NEVADA COUNTY -- PLACER COUNTY
GRASS VALLEY, CALIFORNIA

HEMPHILL DIVERSION PIPELINE ALTERNATIVE

Drawn By: D. HUNT

Date: 6/24/2020

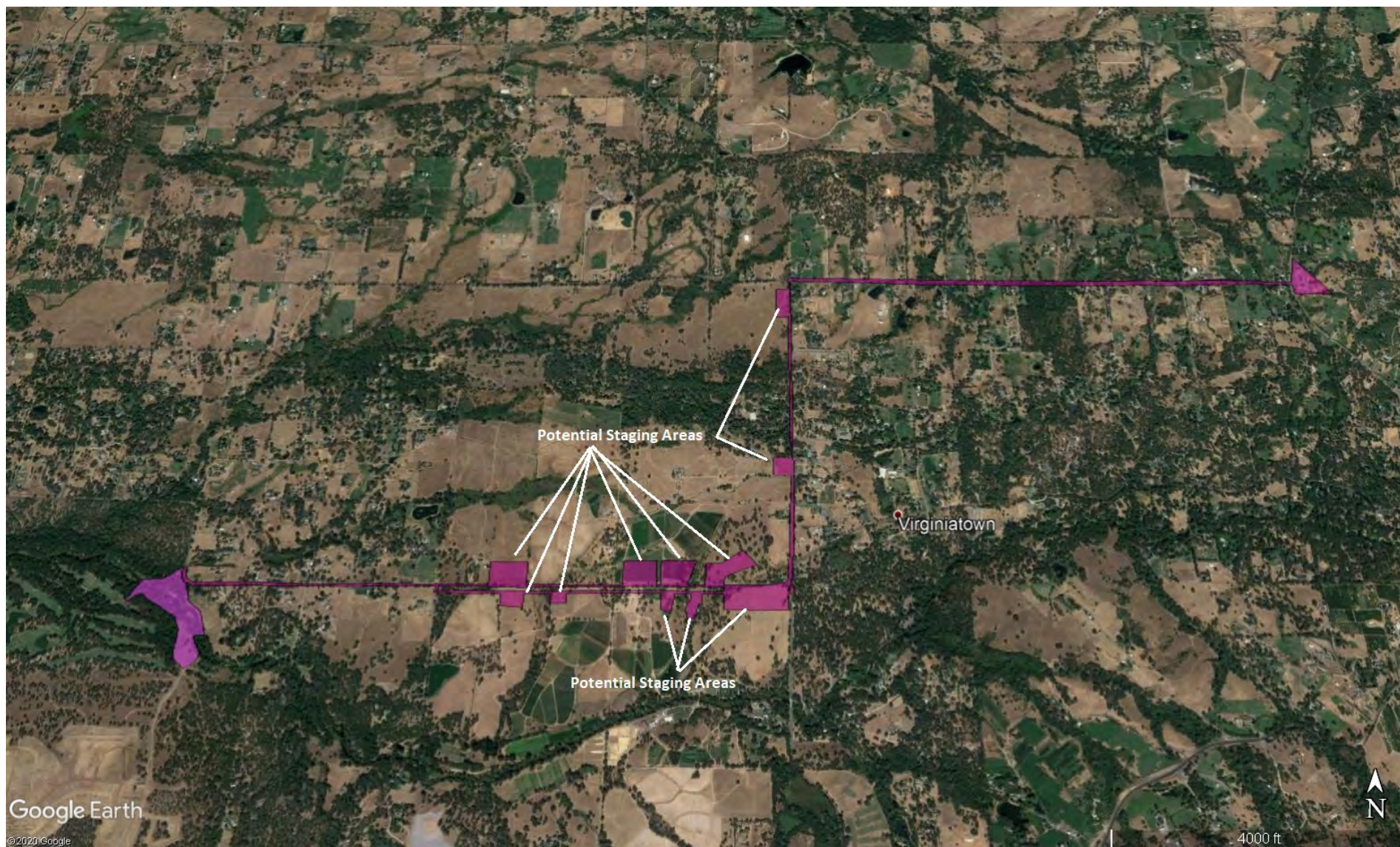
Scale: 1" = 1,500' @ 11x17

Sheet: 1 of 1



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ENVIRONMENTAL CONSULTANTS

Figure 9a. Alternative 3: Pipeline Route and Crossings
2020-104 Hemphill Diversion Structure Project



Alternative 4: Abandonment of Hemphill Canal Alternative

The Alternative 4 project site includes the Hemphill Canal as well as the area around the Hemphill Diversion Structure as shown in *Figure 10a. Alternative 4: Project Site*. Hemphill Canal provides irrigation water for multiple parcels including, but not limited to Turkey Creek Golf Course, Lincoln Hills Golf Course, Lincoln Crossing Community Association, and Lincoln Land Holdings, as shown in *Figure 10b. Affected Parcels*. Alternative 4 would abandon the Hemphill Canal and, as an option to the various property owners for the abandonment of the canal, NID historically offers to fill in the canal with soil through the leveling of existing berms or the importing of soil to level out the canal area. As such, this Initial Study analysis is based on the leveling of the canal. This would extend from where the canal connects to Auburn Ravine down to SR 193. South of SR 193, the canal is undergrounded, so no leveling of the canal is required beyond that point.

With this Alternative, no NID irrigation water would be provided down the Hemphill Canal, which would affect those properties listed above. The canal is currently master-planned for 18 cubic feet per second (cfs). There are six existing service boxes on the canal with a peak summer delivery of 12 cfs. Historically, NID's goal is to keep the customer "whole" with modification projects such as these. A replacement municipal well was considered for delivery into the Hemphill Canal, but was rejected due to sustainability. Private well owners would have the same concern. There is the potential of evaluating pump accounts for individuals. For a pump account, NID would import water to Auburn Ravine and the individual property owner would own and maintain smaller pump systems. This alternative would remove the Hemphill Diversion and Hemphill Canal inlet structures from the Auburn Ravine.

Removal of Hemphill Diversion Structure

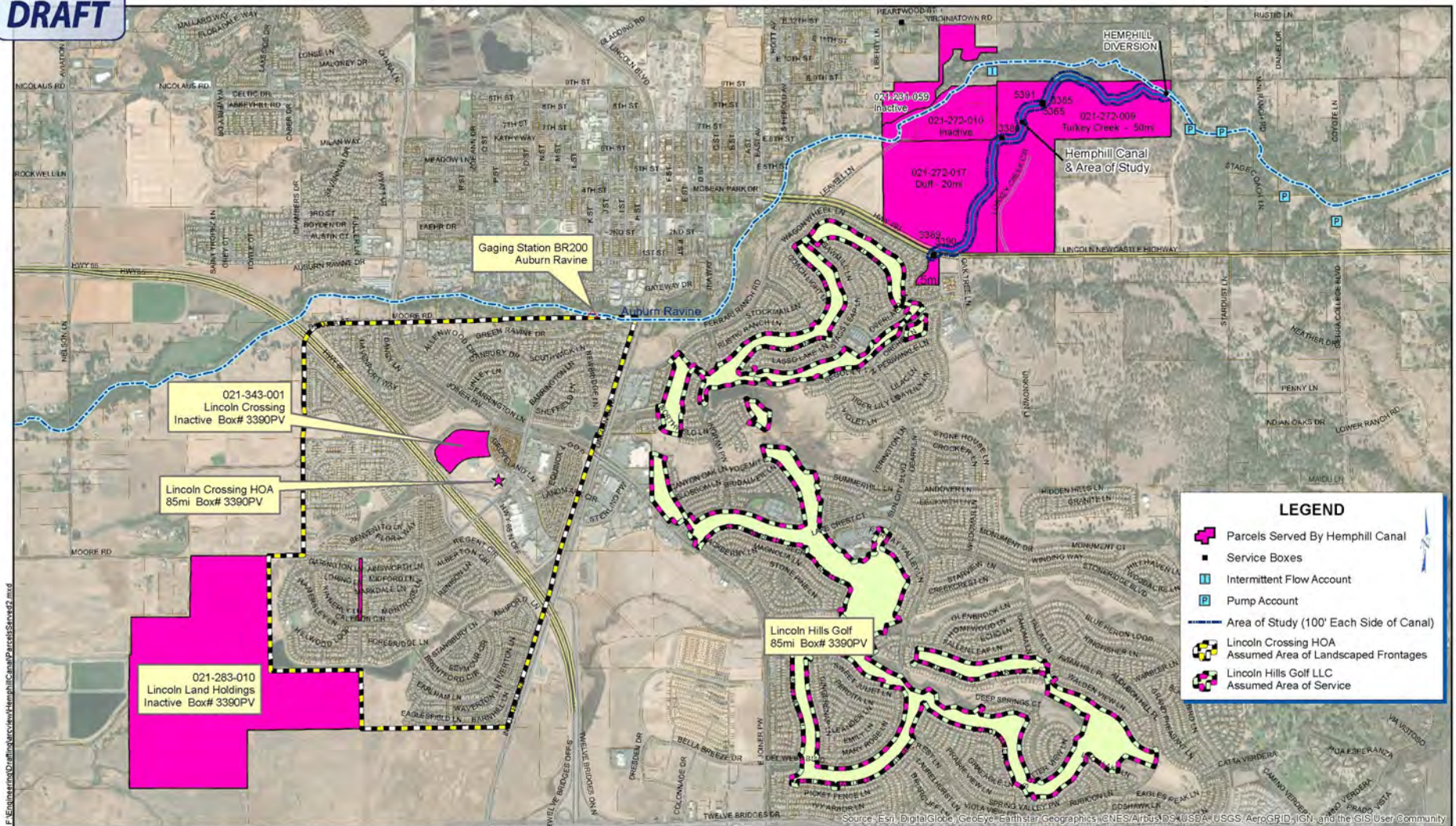
As discussed above, Alternatives 1, 3, and 4 would include the removal of the existing Hemphill Structure. As noted above, there is a potential that the existing diversion structure would be reconstructed under Alternative 2 as well. Removal of the existing diversion structure can occur either all at once or in increments, after implementation of the selected alternative. A key consideration will be determining whether manual sediment removal will be required or if natural processes will be relied on to disperse sediment trapped behind the diversion downstream. A sedimentation transport study considering these options from a geomorphic perspective has been completed and will be considered in the environmental review process. Additionally, stabilization of upstream banks may be required and will be considered in the environmental review process.

Project Construction Timing and Workers

Construction timing, anticipated work force, and equipment requirements to implement the Proposed Project will vary based on which one of the four alternatives is chosen by NID. Because the alternatives scope and complexity vary schedule, staffing and equipment required to implement the alternatives can't be determined at this time. However, construction details and timing will be more precisely defined in the EIR.



DRAFT



NEVADA IRRIGATION DISTRICT

NEVADA COUNTY -- PLACER COUNTY
GRASS VALLEY, CALIFORNIA

Date: 6/25/2020

Drawn By: D. HUNT

**HEMPHILL DIVERSION PROJECT
DISCONTINUATION OF SERVICES
AND/OR CONVERT TO PUMP ACCOUNTS**

Scale: 1" = 2,000' @ 11x17



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 10b. Affected Parcels
2020-104 Hemphill Diversion Structure Project

2.2 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project.

2.2.1 Lead Agency Approval

As the lead agency, NID has the ultimate authority for Project approval or denial. The Proposed Project may require the following discretionary approvals and permits by the NID for actions proposed as part of the Project:

- Certification of the EIR
- Selection of a preferred Alternative

In addition to the above NID actions, the Project may require approvals, permits, and entitlements from other public agencies for which this Initial Study may be used, including, without limitation, the following:

- California Department of Fish and Wildlife (CDFW), Region 2
- California Regional Water Quality Control Board (RWQCB), Region 5
- Placer County Air Pollution Control District (PCAPCD)
- United States Army Corp of Engineers
- National Marine Fisheries Service (NMFS)
- Placer County Community Development Department

2.3 Relationship of Project to Other Plans and Projects

2.3.1 City of Lincoln General Plan 2050

Portions of the Proposed Project are located within the jurisdiction of the City of Lincoln and therefore may be subject to the Lincoln General Plan goals and policies. The City of Lincoln General Plan 2050 is the primary document governing land use development in the City. The General Plan 2050 was adopted in March 2008. The City's General Plan includes numerous goals and policies pertaining to sustainability; land use; circulation; community design; downtown; economic development; housing; parks, public facilities, and services; open space and environment; cultural resources and historic preservation; safety; and noise.

2.3.2 Placer County General Plan

Portions of the Proposed Project are located within the jurisdiction of Placer County and therefore may be subject to the Placer County General Plan goals and policies. The Placer County General Plan consists of two types of documents: the Countywide General Plan (which consists of a policy document and land use diagram) and a set of more detailed community plans (including one "area" plan) covering specific areas of the unincorporated County. The Countywide General Plan provides an overall framework for development of the County and protection of its natural and cultural resources. The goals and policies

contained in the Countywide General Plan are applicable throughout the County, except to the extent that County authority is preempted by cities within their corporate limits. Community and area plans (hereafter referred to as community plans), adopted in the same manner as the Countywide General Plan, provide a more detailed focus on specific geographic areas within the unincorporated County. The goals and policies contained in the community plans supplement and elaborate upon, but do not supersede, the goals and policies of the Countywide General Plan.

2.3.3 *Auburn Ravine/Coon Creek Ecosystem Restoration Plan*

The Proposed Project is located in the area covered by the Auburn Ravine/Coon Creek Ecosystem Restoration Plan (ERP). The ERP is composed of a Watershed Assessment Report and a Restoration Program. The Introduction section provides guiding principles for the preparation of the ERP, ERP goals and objectives, and general descriptions of the watersheds located within the planning area. The Watershed Assessment (Assessment) section identifies growth projections and land uses within the ERP planning area, summarizes the water resources present, and provides a description of current watershed conditions as they pertain to stream sediment and water quality. Plant communities established within the ERP planning area and special-status fish and wildlife species potentially occurring are also included in the Assessment. The final section of the ERP, the Restoration Program, identifies specific restoration projects within the ERP planning area and presents the goals, opportunities, and requirements established for individual project implementation. In addition, monitoring guidelines are provided for the restoration project.

2.3.4 *Placer County Conservation Program*

The project site is located in the area identified as being within the Placer County Conservation Program (PCCP). The PCCP is a County-proposed solution to coordinate and streamline the permitting process by allowing local entities to issue state and federal permits. The proposed PCCP is a Habitat Conservation Plan (HCP) under the federal Endangered Species Act (ESA) and a Natural Community Conservation Plan (NCCP) under the California Natural Community Conservation Planning Act. As proposed, the PCCP would include the County Aquatic Resources Program (CARP) to issue permits related to the Federal Clean Water Act and the California Fish and Game Code. At this time, the PCCP has not been adopted and is currently undergoing environmental review under CEQA and National Environmental Policy Act (NEPA). The Final PCCP Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is currently out of public review until June 22, 2020 (Placer Conservation 2020). The PCCP has not yet been adopted.

SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

Determination

On the basis of this initial evaluation:

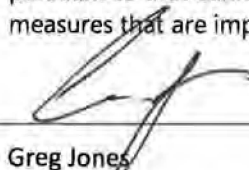
I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

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

I find that the 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 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 Project, nothing further is required. ☐


Greg Jones


Date

NID Interim General Manager

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SECTION 4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 *Environmental Setting*

Views from the Alternatives 1 and 2 sites are limited to the area immediately surrounding the Hemphill Diversion Structure. Views beyond the structure are largely obstructed by trees and dense vegetation. Views of the creek and immediate adjacent area are generally unobstructed.

Views available from the Alternative 3 pipeline route include the rolling grasslands intermixed with stands of trees and private ponds. The area is largely developed with large lot rural residential uses. While distant views of the Sierra Nevada may be available, views are fairly limited by trees and buildings.

Views from Alternative 4 include the Turkey Creek Golf Course as well as distant views of the Sierra Nevada. The views of the Sierra Nevada, however, are fairly limited by vegetation and buildings.

4.1.2 *Regional Setting*

City of Lincoln

While the City of Lincoln General Plan Background Report identifies views of Telegraph Hill and background views of the Sierra Nevada from SR-65 to be of scenic quality, the General Plan does not include any policies for the protection of views or identify any viewsheds, or scenic vistas that should be protected.

Placer County

The Placer County General Plan does not identify any specific scenic viewsheds that should be protected to allow for public enjoyment. However, Policy 1.K.1 does require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines and steep slopes) be planned and designed in a manner that employs design, construction, and maintenance techniques that:

- a. avoids locating structures along ridgelines and steep slopes;
- b. incorporates design and screening measures to minimize the visibility of structures and graded areas; and
- c. maintains the character and visual quality of the area.

Additionally, Policy 1.K.2 requires that new development in scenic areas be designed to utilize natural landforms and vegetation for screening structures, access roads, building foundations, and cut-and-fill slopes.

State Scenic Highways

The intent of the California Scenic Highway Program is to protect and enhance the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if

development impacts the enjoyment of the view. No officially designated scenic highways are located within the vicinity of any of the Project's alternative sites (Caltrans 2020).

Visual Character of the Project Alternatives Sites

The Alternative 1 and 2 site surrounds the existing Hemphill Diversion Structure. The Hemphill Diversion Structure is located in the Auburn Ravine. At this location, the Auburn Ravine is a fairly shallow tree-lined creek with elevations ranging from 198-214 feet AMSL. The Diversion Structure consists of two, approximately eight-foot-tall concrete structure located on either side of Auburn Ravine and concrete dam within the ravine. During irrigation season (April to October) three-foot-tall flashboards are installed in the diversion to increase the water surface elevation upstream and direct flow into the Hemphill canal. The canal intake is located 40 feet upstream of the structure on river-left (looking downstream). See Figures 11a through 11d for the visual character of the site with and without the flashboards installed.

For the most part, the Alternative 3 pipeline route occurs within the ROW of existing roadways and potential staging areas are located on private property adjacent to the roadway with the exception of the area west of Virginiatown Road, which includes the proposed pipeline crossing location on Auburn Ravine. The Project area roadways are typical rural two-lane paved roads. Portions of the roads have defined shoulders, while other areas have narrow or no shoulders. The Alternative 3 project site also includes the Hemphill Diversion Structure removal.

The Alternative 4 project site includes the Hemphill Diversion Structure area and the Hemphill Canal as it meanders through the Turkey Creek Golf Course and the vacant land immediately west of the golf course and north of SR 193.



Figure 11a. Hemphill Diversion Structure During Irrigation Season

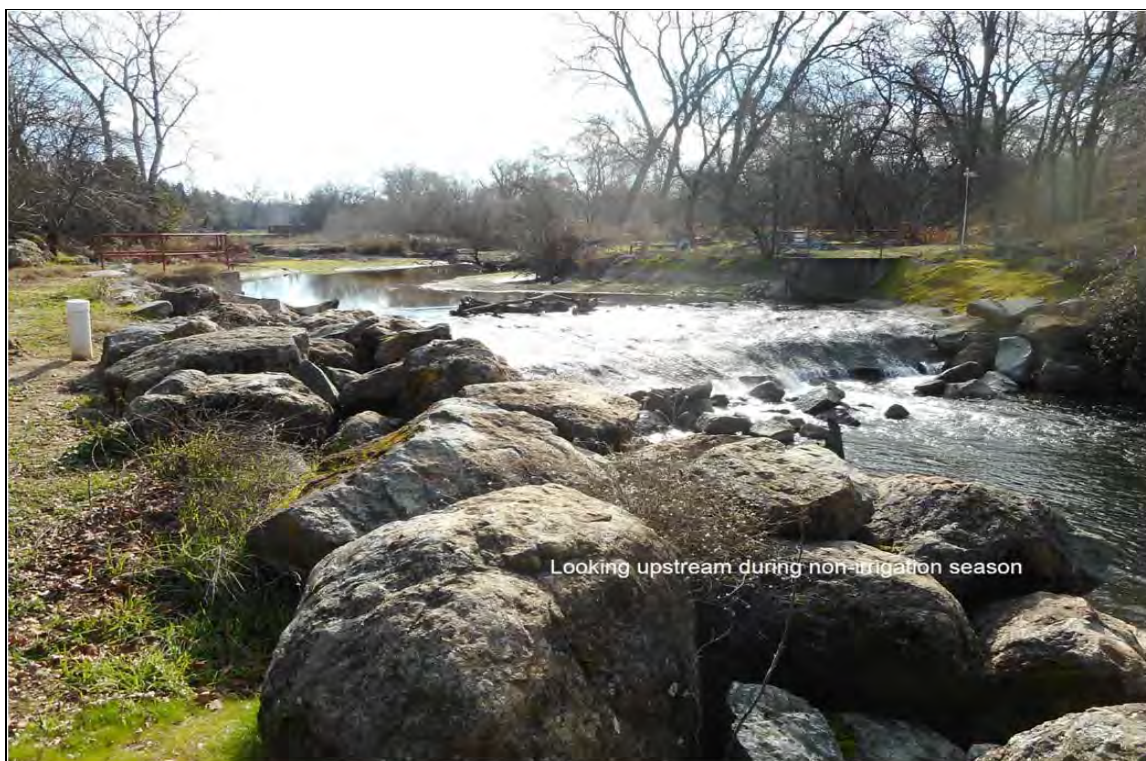


Figure 11b. Hemphill Diversion Structure During Non-Irrigation Season



Figure 11c. Hemphill Diversion Structure Flashboards Not Installed



Figure 11d. Hemphill Diversion Structure View Downstream

4.1.3 Aesthetics (I) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

During construction there will be vehicles and equipment at various sites depending on which of the four alternatives is chosen for construction. However, these will be temporary and will cease once construction is completed. All features constructed as a part of the four Alternatives would be at ground level or underground, with the exception of the potential for the aboveground pipeline crossing of Auburn Ravine in Alternative 3. None of the Alternatives would result in obstruction of scenic views. The Project would not affect the viewshed or scenic vista of the site. Implementation of Alternatives 1, 3 and 4 would return Auburn Ravine to a more natural state in the vicinity of the existing Hemphill Diversion Structure. Therefore, the Proposed Project would have no impact on scenic vistas.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

The Project Alternatives are not located within view of an officially designated scenic highway. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In a non-urbanized area substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

There will be construction activities at various sites during construction, depending on which of the four alternatives is chosen for construction. However, these will be temporary and will cease once construction is completed. All features constructed as a part of the four Alternatives would be at ground level or underground, with the exception the aboveground pipeline crossing of Auburn Ravine if Alternative 3 is chosen. While the Alternative 3 pipeline crossing would present a new manmade structure to the creek, this structure is not inconsistent with the manmade structures currently existing in the Project area. Therefore, none of the Alternatives would result in a substantial degradation of the visual character of the site or impact public views of the site and its surroundings. The Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Would the project 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 type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed Alternatives include the removal of an existing diversion structure and canal inlet structure, depending on the alternative. The Project may include the construction of a fish ladder or infiltration structure or pipeline. All of these are either underground or at the ground surface and do not include any construction or operation attributes that would produce light or glare. No new light or glare sources would be introduced during construction or operation. All normal construction work will be performed

during normal daylight construction hours, thereby eliminating any need for temporary light sources necessary for nighttime work. As such, the Proposed Project would have no impact for the potential to create light or glare that would adversely affect day or nighttime views.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program), which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classifications of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance are based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The DOC manages the California Important Farmland Finder, an interactive website, which can be used to identify the farmland classification of a specific area. This website identifies the lands in the Project vicinity as being Grazing Land and Other Land (DOC 2020a).

As discussed previously, based on the various alternatives, there are essentially three project sites analyzed in this Initial Study. One parcel under Williamson Act Contract is located on Fruitvale Road, adjacent to the pipeline alignment for Alternative 3 (Placer County 2020). No construction areas under any of the Project's Alternatives nor any adjacent lands are subject to a Williamson Act contract (Placer County 2020).

PRC Section 12220(g) defines forest land as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

PRC Section 4526 defines timberland as "land, ... which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."

Portions of the project sites adjacent to the Hemphill Diversion Structure, which is in the City of Lincoln boundaries, are within an area which could be considered to contain a small amount of forest land as this area is predominantly in a natural riparian condition. However, this area is not zoned by the City of Lincoln for forestland protection or timber production.

4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

According to the DOC (2020b), all areas potentially affected by construction of the Proposed Project Alternatives are identified as Grazing Land and Other Land. As such, the Proposed Project would not have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance into non-agricultural use. There would be no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

There is one 30-acre parcel north of Fruitvale Road that is under a Williamson Act contract. This parcel is directly adjacent to the Alternative 3 pipeline alignment. However, the installation of an underground raw water pipeline would neither affect this parcel nor result in a conversion of this parcel into non-agricultural uses. None of the other areas potentially affected by construction of the Proposed Project Alternatives are located in proximity to properties with Williamson Act contracts. (Placer County 2020). The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No land zoned as forest lands exists on or adjacent to areas potentially affected by construction of the Proposed Project Alternatives. The Project would have no impact in this area.

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Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the 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"/>

The only location where forest land may be affected by the Project Alternatives is the area adjacent to Auburn Ravine. However, none of the Alternatives would result in a loss or conversion of this forest land. The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

The only areas that may be considered farmland occur along the Alternate 3 pipeline route. These areas are identified by DOC as Grazing Land. However, the pipeline associated with Alternative 3 would be constructed within the existing roadway ROW and, therefore, would have no effect on the adjacent Grazing land. Therefore, the Proposed Project would have no impact in this area.

4.3 Air Quality

4.3.1 Environmental Setting

The California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (USEPA) focus on the following criteria pollutants to determine air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. In Placer County, the majority of criteria pollutant emissions come from mobile sources.

Toxic Air Contaminants (TACs) are separated into categories of carcinogens and noncarcinogens. Carcinogens, such as diesel particulate matter (diesel PM), are considered dangerous at any level of exposure. Noncarcinogens, however, have a minimum threshold for dangerous exposure. Common sources of TACs include, but are not limited to gas stations, dry cleaners, diesel generators, ships, trains, construction equipment, and motor vehicles.

Topography and Air Quality

The project is located in the western portion of Placer County, which is within the Sacramento Valley Air Basin (SVAB). The SVAB also comprises all of Butte, Colusa, Placer, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties and the eastern portion of Solano County.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that influence the potential for high levels of regional and local air pollutants.

The air basin is relatively flat, bordered by mountains to the east, west, and north and by the San Joaquin Valley to the south. Air flows into the SVAB through the Carquinez Strait, moving across the Sacramento Delta, and bringing with it pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristics of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storm systems. From May to October, the region's intense heat and sunlight lead to high ozone pollutant concentrations. Summer inversions are strong and frequent but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

4.3.2 Air Quality (III) Environmental Checklist and Discussion

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 type="checkbox"/>	<input checked="" type="checkbox"/>

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The PCAPCD is the agency responsible for enforcing many federal and state air quality requirements and for establishing air quality rules and regulations. The PCAPCD attains and maintains air quality conditions in Placer County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. As part of this effort, the PCAPCD has developed input to the SIP, which is required under the federal Clean Air Act for areas that are out of attainment for air quality standards. The SIP includes the PCAPCD's plans and control measures for attaining the ozone national ambient air quality standards.

The SIP plans and control measures are based on information derived from projected growth in Placer County in order to project future emissions and determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Placer County and the incorporated cities in the County. As such, projects that propose development consistent with the

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Hemphill Diversion Structure Project

growth anticipated by the respective general plan of the jurisdiction in which the proposed development is located would be consistent with the SIP. In the event that a project would propose a development that is less dense than that associated with the general plan, the project would likewise be consistent with the SIP. If a project, however, proposes a development that is denser than that assumed in the general plan, the project may be in conflict with the SIP and could therefore result in a significant impact on air quality.

The various Proposed Project Alternatives would not result in uses that would be inconsistent with the land use designations of the City of Lincoln or Placer County. As such, no impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

All of the Proposed Project alternatives will result in the emission of criteria air pollutants during construction. Since an air quality analysis has not yet been completed for the Proposed Project, it is not possible to determine the impact the Project would have on any criteria pollutant. As such, this is considered a potentially significant impact and will be further discussed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. Residential uses occur all along the pipeline route associated with Alternative 3. The nearest sensitive receptor to the Alternatives 1, 2 and 4 sites are residences located approximately 600 to 700 feet from the site.

The Proposed Project will result in the emission of criteria air pollutants during construction. Since an air quality analysis has not yet been completed for the Proposed Project, it is not possible to determine the impact the Project would have on sensitive receptors. As such, this is considered a potentially significant impact and will be further discussed in the EIR.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

The various alternatives of the Proposed Project could result in emissions causing unpleasant odors during construction and operation. As such, this is considered a potentially significant impact and will be further discussed in the EIR.

4.4 Biological Resources

4.4.1 Environmental Setting

The US Fish and Wildlife Service (USFWS), CDFW, and California Native Plant Society document species that may be rare, threatened, or endangered. Federally listed species are fully protected under the mandates of the federal ESA. "Take" of listed species incidental to otherwise lawful activity may be authorized by either the USFWS or the NMFS, depending on the species.

Under the California ESA, the CDFW has the responsibility for maintaining a list of threatened and endangered species. The CDFW also maintains lists of "candidate species" and "species of special concern," which serve as "watch lists." State-listed species are fully protected under the mandates of the California ESA. Take of protected species incidental to otherwise lawful management activities may be authorized under Section 2081 of the California Fish and Game Code.

Under Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (raptors) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

The Native Plant Protection Act (California Fish and Game Code Sections 1900-1913) prohibits the take, possession, or sale within the state of any rare, threatened, or endangered plants as defined by the CDFW. Project impacts on these species would not be considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with the project.

4.4.2 *Biological Resources (IV) Environmental Checklist and Discussion*

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 Wildlife or U.S. Fish and Wildlife Service (USFWS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Project has not yet been evaluated for the potential to affect candidate, sensitive, or special status species. This will occur as a part of the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or USFWS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Project has not yet been evaluated for the potential to affect any riparian habitat or other sensitive natural community. This will occur as a part of the EIR.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Project has not yet been evaluated for the potential to affect wetlands. This will occur as a part of the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Project has not yet been evaluated for the potential to affect native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. This will occur as a part of the EIR.

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

The areas of Alternative 3 that are in Placer County are within the Placer County Tree Ordinance Area 2. Construction of the pipeline for Alternative1 would occur within the existing roadway ROW.

Within the City of Lincoln, City Municipal Code Chapter 18.69 and the Department of Public Works *Design Criteria & Procedures Manual* define the City policy and procedures for the protection of oak trees in the City. The City's policy is to preserve all oak trees possible through its development review process. Oak tree mitigation identification is through the City's design review process.

An evaluation of the potential for the Project to affect trees on the project site has not been completed at this time and will occur as a part of the EIR.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Project is located in the area identified as being within the PCCP. The PCCP is a County-proposed solution to coordinate and streamline the permitting process by allowing local entities to issue state and federal permits. The proposed PCCP is an HCP under the Federal ESA and a NCCP under the California Natural Community Conservation Planning Act. As proposed, the PCCP would include the CARP to issue permits related to the federal Clean Water Act and the California Fish and Game Code. At this time, the PCCP has not been adopted and is currently undergoing environmental review under CEQA and NEPA. The Final PCCP EIR/EIS is currently out for public review until June 22, 2020 (Placer Conservation 2020). While the PCCP has not yet been adopted, there is a potential for it to be adopted prior to approval of the Proposed Project. As such, this impact area will be discussed in the Hemphill Diversion Structure EIR.

4.5 Cultural Resources

The Project is located within territory historically occupied by the Nisenan tribe of California Native Americans, sometimes referred to as the Southern Maidu. The Nisenan occupied the drainages of the Yuba, Bear, and American rivers and the lower drainages of the Feather River, bounded by the west bank of the Sacramento River to the west, the crest of the Sierra Nevada to the east, and a few miles south of the American River to the south. The northern boundary is not well established due to the Nisenan's linguistic similarity with neighboring groups, but extended somewhere between the Feather and Yuba rivers. Nisenan territory extended approximately 110 miles east to west and 100 miles north to south. Based primarily on linguistic variation, the Nisenan were the southern linguistic group of the Maidu tribe, and together with the Maidu and Konkow, form a subgroup of the California Penutian linguistic family. Distinction is made between the Northern Hill, Southern Hill and Valley Nisenan.

4.5.1 Cultural Resources (V) Environmental Checklist and Discussion

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 §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A cultural resources survey has not been completed for areas potentially affected by construction of the Proposed Project Alternatives. As such, there is a potential for the Project to impact historical resources

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within the Project. The extent of this potential impact has not been determined at this time. As such, this will be discussed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A cultural resources survey has not been completed for areas potentially affected by construction of the Proposed Project Alternatives. As such, there is a potential for the Project to impact archaeological resources within the Project. The extent of this potential impact has not been determined at this time. As such, this will be discussed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A cultural resources survey has not been completed for areas potentially affected by construction of the Proposed Project Alternatives. As such, there is a potential for the Project to impact any possible human remains within the Project. The extent of this potential impact has not been determined at this time. As such, this will be discussed in the EIR.

4.6 Energy

4.6.1 Environmental Setting

Introduction

Energy consumption is analyzed in this Initial Study due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal) and emissions of pollutants during construction. The use of energy during operation of the various alternatives would be minimal and only due to periodic maintenance that may be required to maintain infrastructure associated with specific alternatives.

Electricity/Natural Gas Services

Pacific Gas and Electric (PG&E) provides electrical services to the Project area through state-regulated public utility contracts. PG&E's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand.

Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The California Energy Commission (CEC) tracks the amount of electricity and natural gas consumed in California by county. The electricity and natural gas consumption in Placer County from 2014 to 2018 is shown in Table 4.6-1. As indicated, while the use of natural gas has increased since 2014, electricity demand has decreased.

Table 4.6-1. Non-Residential Electricity and Natural Gas Consumption in Placer County 2013-2017		
Year	Non-Residential Electricity Consumption (kilowatt hours)	Non-Residential Natural Gas Consumption (Therms)
2018	1,495,613,543	28,746,568
2017	1,504,775,808	28,769,978
2016	1,536,053,019	26,989,047
2015	1,529,567,565	25,405,577
2014	1,546,175,447	24,737,927

Source: CEC 2020

4.6.2 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The impact analysis focuses on the three sources of energy that are relevant to the Proposed Project: electricity, the equipment fuels necessary for project construction, and the automotive and diesel fuel used during Project operations. The amount of energy necessary to construct and operate the various alternatives for the Project and whether or not it is a wasteful, inefficient, or unnecessary consumption of energy resources has not been determined; as such this area will be further discussed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The City of Lincoln or Placer County do not have a plan for renewable energy or energy efficiency. As discussed under Item a), the amount of energy necessary to construct and operate the Project and whether or not it is a wasteful, inefficient, or unnecessary consumption of energy resources has not been determined. How this will affect a state plan for renewable energy or energy efficiency has also not been determined at this time. For these reasons, this area will be further discussed in the EIR.

4.7 Geology and Soils

4.7.1 Environmental Setting

Geomorphic Setting

All alternatives of the Project are located in the northwestern portion of the Sierra Nevada geomorphic province of California. The Sierra Nevada is a tilted fault block nearly 400 miles long. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope (about 2 degrees) that disappears under sediments of the Great Valley. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, are modified by glacial sculpturing, forming such scenic features as Yosemite Valley. The high crest culminates in Mt. Whitney, with an elevation of 14,495 feet above sea level near the eastern scarp. The metamorphic bedrock contains gold-bearing veins in the northwest-trending Mother Lode. The northern Sierra boundary is marked where bedrock disappears under the Cenozoic volcanic cover of the Cascade Range. (California Geographical Survey [CGS] 2002).

Site Soils

According to the NRCS Web Soil Survey website (NRCS 2020), Alternatives 1 and 2, which are essentially one project site, the only soil identified for this site is Xerofluvents, frequently flooded. This soil has a slight erosion potential and moderate runoff potential (NRCS 2020).

The Alternative 3 pipeline alignment, which includes Pipe Crossings A and B, includes 10 soil units, or types, as shown in Table 4.7-1 below. The majority of soil is Caperton-Andregg coarse sandy loams, making up between 68.5 percent and 77.0 percent of the site. Among many soil related attributes, the Web Soil Survey identifies drainage, flooding, erosion, runoff, and the linear extensibility potential for the Project soils. According to this survey, the Alternative 3 site is predominately underlain by soils that are somewhat excessively drained to well-drained and have a moderate to severe erosion potential. The project site soils have no frost action potential and a low linear extensibility (shrink-swell) (NRCS 2020).

As shown in Table 4.7-1, Alternative 4 includes four soil types: Caperton-Andregg coarse sandy loams, 2 to 15 percent slopes, Pits and dumps, Xerofluvents, frequently flooded, and Xerorthents, placer areas. According to the Web Soil Survey, the Alternative 4 site is predominately underlain by soils that are

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somewhat excessively drained to somewhat poorly drained and have a slight to severe erosion potential. The site soils have no frost action potential and a low to moderate linear extensibility (shrink-swell) (NRCS 2020).

Table 4.7-1. Project Area Soil Characteristics								
Soil	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard ¹	Runoff Potential ²	Linear Extensibility (Rating) ³	Frost Action ⁴	
Alternatives 1 and 2 (Hemphill Diversion Structure area)								
Xerofluvents, frequently flooded	100%	Somewhat excessively drained	Frequent	Slight	B	2.4	None	
Alternative 3 (includes Pipe Crossings A and B)								
	Pipe Crossing							
	A	B						
Andregg coarse sandy loam, 2 to 9 percent slopes	8.7%	8.6%	Well drained	None	Moderate	B	1.5	None
Andregg coarse sandy loam, rocky, 2 to 15 percent slopes	9.0%	8.8%	Well drained	None	Moderate	B	1.5	None
Andregg-Shenandoah complex, 2 to 15 percent slopes	2.2%	2.2%	Well drained	None	Moderate	B	1.5	None
Caperton gravelly coarse sandy loam, 2 to 30 percent slopes	3.8%	3.7%	Somewhat excessively drained	None	Severe	D	1.5	None
Caperton-Andregg coarse sandy loams, 2 to 15 percent slopes	60.5 %	60.0 %	Somewhat excessively drained	None	Severe	D	1.5	None
Rubble land	2.7%	2.7%	Excessively drained	None	Not rated	Not rated	1.5	None
Sierra sandy loam, deep, 9 to 15 percent slopes, LRU 18XI	8.6%	8.5%	Well drained	None	Moderate	C	2.4	None
Xerofluvents, frequently flooded	0.6%	1.6%	Somewhat excessively drained	Frequent	Slight	B	2.4	None
Xerorthents, placer areas	3.9%	3.8%	Well drained	Frequent	Not rated	Not rated	Not rated	None
Alternative 4 (Hemphill Canal area)								
Caperton-Andregg coarse sandy loams, 2 to 15 percent slopes	36.1%	Somewhat excessively drained	Not rated	Severe	D	1.5	None	
Pits and dumps	6.4%	Not rated	Not rated	Not rated	Not rated	Not rated	None	
Xerofluvents, frequently flooded	31.2%	Somewhat poorly drained	Frequent	Slight	B	4.5	None	

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Table 4.7-1. Project Area Soil Characteristics

Soil	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard ¹	Runoff Potential ²	Linear Extensibility (Rating) ³	Frost Action ⁴
Alternatives 1 and 2 (Hemphill Diversion Structure area)							
Xerofluvents, frequently flooded	100%	Somewhat excessively drained	Frequent	Slight	B	2.4	None
Xerorthents, placer areas	26.7%	Well drained	Frequent	Not rated	Not rated	Not rated	None

Source: NRCS 2020

Notes:

1. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.
2. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation. Group A soils have a high infiltration rate (low runoff potential) when thoroughly wet. Group B soils have a moderate infiltration rate when thoroughly wet. Group C soils have a slow infiltration rate when thoroughly wet. Group D soils have a very slow infiltration rate (high runoff potential) when thoroughly wet.
3. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent, moderate if 3 to 6 percent, high if 6 to 9 percent, and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.
4. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Regional Seismicity and Fault Zones

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act, which defined an active fault as one which has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term "sufficiently active" was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term "well-defined," which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2010).

Major faults within the region with the greatest potential to affect the Project's Alternatives sites include the Foothills Fault System, located approximately four to eight miles east of the project site, and the Great Valley Fault System, located approximately 46 miles west of the project site (DOC 2020b). The Foothills Fault System consists of a series of northwest-trending faults. Of this system, the Bear Mountains Fault Zone is considered to be potentially active. The nearest fault is Deadman Fault, approximately four to eight miles east of the Project (DOC 2020b). This fault is a Late Quaternary Age (70,000 to 11,700 years) fault (DOC 2020b).

The Great Valley Fault System consists of 14 recognized fault segments extending from Coalinga in the south to Rumsey Hills in the north. The Dunnigan Hills Fault is located approximately 35 miles west-southwest of the project site and is a Late Quaternary Age fault. The Willows Fault Zone is located approximately 17 miles west southwest of the project site and is a Pre-Quaternary Age (older than 1.6 million years) fault (DOC 2020b).

Paleontological Resources

A paleontological records search was requested from the University of California Museum of Paleontology (UCMP) on June 15, 2020. The search included a review of the institution's paleontology specimen collection records for Placer County, including the Project area and vicinity. In addition, a query of the UCMP catalog records; a review of regional geologic maps from the California Geological Survey (CGS); a review of local soils data; and a review of existing literature on paleontological resources of Placer County by ECORP. The purpose of the assessment was to determine the sensitivity of the Project area, whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project area, and whether or not implementation of the Project could result in significant impacts to paleontological resources. Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

The results of the search of the UCMP indicated that 64 paleontological specimens were recorded from 29 identified localities and 11 unidentified localities in Placer County. Paleontological resources include fossilized remains of birds, mammals, reptiles, and amphibians. No paleontological resources have been previously recorded within or near the Proposed Project area (UCMP 2020).

4.7.2 Geology and Soils (VI) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<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 checked="" type="checkbox"/>	<input 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"/>

- i) None of the Proposed Project Alternatives are located within an Alquist-Priolo Earthquake Zone (CGS 2010, 2015). There would be no impact related to fault rupture.
- ii) According to CGS' Earthquake Shaking Potential for California mapping, the Proposed Project sites are located in an area which is distant from known, active faults and will experience lower levels of ground shaking less frequently. In most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016). The Proposed Project includes the removal of an existing diversion structure and potentially the installation of an underground raw water pipeline. All construction would be required to comply with the NID Improvement Standards, including any required seismic mitigation standards. Because of the required compliance and the distance from active faults, all Alternatives of the Proposed Project would have a less than significant impact related to strong ground shaking.
- iii) Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:
- Loss of bearing strength – soils liquefy and lose the ability to support structures
 - Lateral spreading – soils slide down gentle slopes or toward stream banks
 - Flow failures – soils move down steep slopes with large displacement
 - Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking
 - Flotation – floating of light buried structures to the surface
 - Settlement – settling of ground surface as soils reconsolidate
 - Subsidence – compaction of soil and sediment
- Three factors are required for liquefaction to occur: (1) loose, granular sediment; (2) saturation of the sediment by groundwater; and (3) strong shaking. Because the Proposed Project is located in an area determined to have a low chance of seismic hazard and no habitable structures would be built as a part of the Project, the potential to expose people or structures to substantial adverse effects from liquefaction would be a non-factor. As such, the Project would have no impact in this area.
- iv) All Alternatives identified for the Proposed Project are in areas with relatively flat topography, indicating no potential for landslides. As such, the Proposed Project would have no impact in this area.

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Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As shown in Table 4.7-1, the Project Alternative's soils have a moderate to severe erosion potential. A rating of "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised.

A predominate instigator of erosion on construction sites are storm events and the resulting stormwater runoff. All projects in California over one acre in size, which would include all of the various Alternatives proposed for the Project, require a stormwater pollution prevention plan (SWPPP) in order to comply with the RWQCB's General Construction Storm Water Permit. The SWPPP will identify best management practices (BMPs) to be implemented on the project site to minimize soil erosion. SWPPPs generally include the following BMPs:

- Diversion of offsite runoff away from the construction area;
- Prompt revegetation of proposed landscaped areas;
- Perimeter straw wattles or silt fences and/or temporary basins to trap sediment before it leaves the site;
- Regular sprinkling of exposed soils to control dust during construction during the dry season;
- Specifications for construction waste handling and disposal;
- Erosion control measures maintained throughout the construction period;
- Preparation of stabilized construction entrances to avoid trucks from imprinting debris on public roadways;
- Contained wash out and vehicle maintenance areas;
- Training of subcontractors on general construction area housekeeping;
- Construction scheduling to minimize soil disturbance during the wet weather season; and
- Regular maintenance and storm event monitoring.

The SWPPP is a "live" document and should be kept current by the person responsible for its implementation. Preparation of, and compliance with a required SWPPP would effectively prevent Proposed Project onsite erosion and the loss of topsoil from Project construction activities outside of the active stream channel. Therefore, the potential loss of topsoil due to erosion resulting from Project construction activities is found to be less than significant.

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It is important to note that, while the impact of the Project on the loss of top soil due to erosion as discussed above is less than significant, removal of the diversion structure under Alternatives 2, 3, and 4 could result in the downstream transport of sediment that has accumulated in Auburn Ravine behind the diversion structure. This potential effect of the Project is discussed in Section 4.10 Hydrology and Water Quality of this Initial Study.

This impact is less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As discussed previously, all of the Alternative's project sites have no potential for landslides due to the flat topography in the area.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. One indicator of potential lateral expansion is frost action. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing (NRCS 2020). As indicated in Table 4.7-1, the Web Soil Survey identifies the project site as having soils with no frost action potential. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.¹ No oil, gas, or high-volume water extraction wells are known to be present in the Project area. According to the U.S. Geological Survey (USGS), the project site is not located in an area of land subsidence (USGS 2018). As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils will settle without any additional applied pressure

¹ The processes by which loose sediment is hardened to rock are collectively called lithification.

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when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil resulting in damage to buildings and foundations. Alternative 1 includes the removal of the diversion structure and the construction of an infiltration gallery. Alternative 2 includes construction of a fish ladder while, Alternative 3 includes the removal of the existing Hemphill Diversion Structure and the construction of an underground raw water pipeline. Alternative 4 includes the removal of the diversion structure and the abandonment of the Hemphill Canal. None of these Alternatives would be affected by collapse as no large structures are being built. As such, all of the Alternatives would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Expansive soils can be determined by a soil's linear extensibility. There is a direct relationship between linear extensibility of a soil and the potential for expansive behavior, with expansive soil generally having a high linear extensibility. Thus, granular soils typically have a low potential to be expansive, whereas clay-rich soils can have a low to high potential to be expansive.

According to the NRCS, linear extensibility values for the majority of the Project Alternatives sites are between 1.5 and 2.4 percent. Soils with linear extensibility in that range correlate to soils having a low expansion potential, as noted in Table 4.7-1. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent, moderate if 3 to 6 percent, high if 6 to 9 percent, and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in Table 4.7-1, 100 percent of the Alternatives 1, 2 and 3 site soils have a low shrink-swell potential. As such, the Project would have a less than significant impact in this area. Alternative 4, which includes the Hemphill Canal, has a low to moderate shrink-swell potential. However, this alternative would not include the construction of any structures, but only the removal on the existing Hemphill Diversion Structure and potentially filling in of the Hemphill Canal, bringing it to ground level. No new structures would be constructed as a part of this alternative. As such, Alternative 4 would have a less than significant impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

The Project does not involve the use of septic tanks or a septic system. The Proposed Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A search of the UCMP failed to indicate the presence of paleontological resources in the Project area. Although paleontological resources sites were not identified in the Project area, there is the possibility that unanticipated paleontological resources will be encountered during ground-disturbing Project-related activities. As such, this would be considered a potentially significant impact and shall be discussed further in the EIR.

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps approximately 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂ (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e). Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

4.8.2 Greenhouse Gas Emissions (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts and, as such, is addressed only as a cumulative impact.

The Proposed Project would result in greenhouse gases emission during construction. Since a GHG analysis has not yet been completed for the Proposed Project, it is not possible to determine the impact the Project would have on the environment because of GHG emissions. As such, this is considered a potentially significant impact and will be further discussed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The City of Lincoln does not currently have an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. However, the City is located in the greater Sacramento region and is a member of the Sacramento Area Council of Governments (SACOG). SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy 2016 (MTP/SCS) is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035, and thus establishes an overall GHG target for the region applicable to these subsectors of the transportation sector. SACOG was tasked by CARB to achieve a nine percent per capita reduction compared to 2012 vehicle emissions by 2020, and a 16 percent per capita reduction by 2035, which CARB confirmed the region would achieve by implementing its MTP/SCS (SACOG 2016).

The Proposed Project would most likely not conflict with any adopted plans, policies, or regulations adopted for reducing GHG emissions. However, as identified under Issue a), Project-generated GHG emissions have not yet been determined; therefore, it is not possible to determine if the Project would conflict with California GHG reduction goals. As such, this is considered a potentially significant impact and will be further discussed in the EIR.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, § 25501 as follows:

"Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, § 662601.10, of the CCR as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Under Government Code § 65962.5, both the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC (2020) and SWRCB (2020) lists identified no open cases of hazardous waste violations on, or within 0.5 mile of any of the four Alternatives identified for the Proposed Project.

The USEPA maintains the Enforcement and Compliance History Online (ECHO) program. The ECHO website provides environmental regulatory compliance and enforcement information for approximately 800,000 regulated facilities nationwide. The ECHO website includes environmental permit, inspection, violation, enforcement action, and penalty information about USEPA-regulated facilities. Facilities included on the site are Clean Air Act stationary sources; Clean Water Act facilities with direct discharge permits, under the National Pollutant Discharge Elimination System (NPDES); generators and handlers of hazardous waste, regulated under the Resource Conservation and Recovery Act; and public drinking water systems, regulated under the Safe Drinking Water Act. ECHO also includes information about USEPA cases under other environmental statutes. When available, information is provided on surrounding demographics, and ECHO includes other USEPA environmental data sets to provide additional context for analyses, such as Toxics Release Inventory data. According to the ECHO program, the various Alternative's project sites are not listed as having a hazardous materials violation (USEPA 2020).

4.9.2 Hazards and Hazardous Materials (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

Typical incidents that could result in accidental release of hazardous materials involve leaking storage tanks, spills during transport, inappropriate storage, inappropriate use, and/or natural disasters. If not remediated immediately and completely, these and other types of incidents could cause toxic fumes and contamination of soil, surface water, and groundwater. Depending on the nature and extent of the contamination, groundwater supplies could become unsuitable for use as a domestic water source. Human exposure to contaminated soil or water could have potential health effects depending on a variety of factors, including the nature of the contaminant and the degree of exposure.

Hazardous materials must be stored in designated areas designed to prevent accidental release to the environment. California Building Code requirements prescribe safe accommodations for materials that present a moderate explosion hazard, high fire or physical hazard, or health hazards.

Hazardous materials regulations, which are codified in CCR Titles 8, 22, and 26, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code, were established at the state level to ensure compliance with federal regulations and to reduce the risk to human health and the environment from the routine use of hazardous substances. Protection against accidental spills and releases provided by this legislation includes physical and mechanical controls of fueling operations, including automatic shutoff valves; requirements that fueling operations are contained on impervious surface areas; oil/water separators or physical barriers in catch basins or storm drains; vapor emissions controls; leak detection systems; and regular testing and inspection of fueling stations.

As a result of existing hazardous materials regulations discussed above, the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The Proposed Project's Alternatives would include the potential removal of the existing diversion structure, and either the construction of an infiltration gallery or fish ladder or pipeline. None of this potential construction would include substantial amounts of hazardous material. Any materials would be required to be used, stored, and disposed in accordance with existing regulations and product labeling and would not create a significant hazard to the public or to the environment. Therefore, the Project would have a less than significant impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

As discussed in Issue a), the Project would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or the environment. Potential construction-related hazards could be created during the course of Project construction at the site, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures, including all state and federal controls for heavy equipment operation within a streambed area, that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

All hazardous materials on the site would be handled in accordance with City, County, and State regulations. Because any hazardous materials used for operations would be in small quantities, long-term impacts associated with handling, storing, and disposing of hazardous materials from project operation would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

There are no schools within 0.25 mile of any of the Project Alternatives sites. The Project would have no impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

Under Government Code § 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations within or near any of the Project's Alternatives sites. Therefore, the Proposed Project is not located on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 (DTSC 2020; SWRCB 2020). As a result, this would not create a significant hazard to the public or to the environment and would have no impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The nearest airport to the Project is the Lincoln Regional Airport, located more than four miles northwest of all Project's Alternatives sites. According to the Placer County Airport Land Use Compatibility Plan, the Proposed Project is located outside of all compatibility and influence zones (Placer County 2014). As such, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) 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"/>

Standard evacuation routes have not been designated in Placer County or Lincoln. However, the Placer County Office of Emergency Services, has an online link to an emergency preparedness web page stating that in the event of mandatory evacuation, residents will be advised of safe routes to follow, locations of shelters, and other actions that may need to be taken.

The Proposed Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. All construction activities would not impede the use of surrounding roadways in an emergency evacuation. While Alternatives 1, 2 and 4 would not involve construction on or near a roadway, Alternative 3 would involve the construction of a pipeline in roadway ROW. All construction in a roadway ROW will require an encroachment permit from either Placer County or the City of Lincoln depending on location. This would allow for advanced notice, coordination, and the removal of any impediments on these roadways if an emergency evacuation is required in the area. As such, implementation of the Proposed Project would result in a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project area is in an area designated by California Department of Forestry and Fire Protection (CAL FIRE) as a Moderate Zone. Furthermore, no Very High Fire Hazard Severity zones are located nearby. Finally, the location of the Alternative's project sites makes it readily accessible by emergency personnel and vehicles in the event of a wildland fire. For these reasons, this impact would be less than significant.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

Regional Hydrology

Surface Water

The project is located in the greater Sacramento River hydrologic region. The Sacramento River hydrologic region covers approximately 17.4 million acres (27,200 square miles). The region includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Placer, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties. Small areas of Alpine and Amador counties are also within the region. Geographically, the region extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta (Department of Water Resources [DWR] 2003).

The project is located within boundaries of the American River watershed, which consists of four sub-watersheds: the Yuba, Bear, Upper American, and Lower American rivers. The Proposed Project is within the Bear River sub-watershed (SRWP 2020a).

The Bear River watershed drains approximately 300 square miles. The Bear River originates about 20 miles west of the crest of the Sierra Nevada in northern Placer County within the boundaries of the Tahoe National Forest. The Bear River is fed by the Drum Canal from Spaulding Lake (located on the South Yuba

River). Flowing out of the Drum Afterbay is the Middle Bear, which enters Dutch Flat Reservoir, where the waters of the Boardman Canal enter after running through Alta Powerhouse. The Bear River continues to roughly parallel Interstate 80. Just before the Bear River flows into Rollins Reservoir, it merges with Steephollow Creek, the largest tributary in the upper watershed. The Bear River discharges from Rollins Reservoir and flows southwest into Lake Combie, near the community of Meadow Vista and near an area with heavy development pressure. The Bear River turns west and is fed by Wolf Creek and then enters into Camp Far West Reservoir, the largest water body in the Bear River Watershed. The Bear joins the Feather River south of Yuba City/Marysville. The Bear River contains a large volume of mining sediment stored in its main channel that is subject to continual erosion. The high volume of mining sediment, in combination with restricting levees, has caused the Lower Bear channel to become deeply incised.

In highest rainfall years, winter flows average 3,400 - 5,600 cfs. In normal years, winter flows are 600–800 cfs. In the driest years, flows average only 20–65 cfs in winter months, down to 0 cfs in all other months. Bear River flow patterns are typical of foothill streams with high winter and spring flows and very low summer and fall flows. Bear River flows are regulated almost entirely by several storage reservoirs and numerous diversions (SRWP 2020b).

Groundwater

The Hemphill Diversion Structure site is not located in the defined boundaries of a groundwater basin; rather, the site borders the Sacramento Valley Groundwater Basin and the North American Subbasin, which is directly to the west. The North American Subbasin has a surface area of 351,000 acres (548 square miles). According to the 2003 California Groundwater Bulletin 118 Update, groundwater levels in southwestern Placer County and northern Sacramento County have generally decreased, with many wells experiencing declines at a rate of about 1.5 feet per year for the last 40 years or more. Some of the largest decreases have occurred in the area of the former McClellan Air Force Base. Groundwater levels in Sutter and northern Placer counties generally have remained stable, although some wells in southern Sutter County have experienced declines (DWR 2003). Since this publication, groundwater levels continue to decrease in the valley areas east of Lincoln from spring 2007 to spring 2017 from 10 - 30 feet, depending on location (DWR 2020). However, in the immediate vicinity of the Project, DWR indicates an average increase of 10 feet in ground surface to groundwater surface between 2012 and 2017 (DWR 2020).

The Lincoln Groundwater Management Plan (City of Lincoln 2003) estimates the North American Subbasin total groundwater in storage to be 4.9 million acre-feet (AF). The 2003 Bulletin 118 estimated inflows include natural recharge at 83,800 AF and applied water recharge at 29,800 AF. There was no artificial recharge. Estimated outflows include urban extraction at 109,900 AF and agricultural extraction at 289,100 AF (DWR 2003). The Sustainable Groundwater Management Act (SGMA) directs DWR to identify groundwater basins and sub basins in conditions of critical overdraft. As defined in the SGMA, "A basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts." The North American Groundwater Subbasin is not listed as a critically overdrafted basin (DWR 2018a). DWR is currently working on an update to the Bulletin 118 groundwater report. However, more up-to-date information of the North American Subbasin is not available at this time.

Project Site Hydrology

The Hemphill Diversion Structure is located in the Auburn Ravine watershed. The following description of Auburn Ravine was excerpted from the *Auburn Ravine/Coon Creek Ecosystem Restoration Plan* (Placer County 2002). Auburn Ravine originates on the north side of the City of Auburn. At its confluence with East Side Canal, Auburn Ravine drains approximately 79 square miles (See Figure 3). The elevation of the basin ranges from 1,600 to 30 feet AMSL. The stream flows through the middle of Auburn, where it is channelized, contained in a highly restricted natural channel, or passes through a variety of culverts. The land adjacent to this portion of the watershed is highly urbanized. Immediately west of the City of Auburn, the character of the channel changes, adjacent land uses change, and water from various sources is added to the channel. From the western edge of the City of Auburn to west of Lozanos Road, the channel is high gradient, incised in a narrow canyon, and consists of a number of cascades and pool riffle complexes. The geology is a combination of basalt and granite bedrock. Adjacent land use is generally rural residential with minimal encroachment by development on the channel and floodplain. Just east of Gold Hill Road, the channel gradient decreases to approximately two percent and the channel becomes dominated by pools, runs, and riffles. Channel substrate is dominated by various-sized gravels and coarse sediment. These habitats continue downstream into the City of Lincoln. Within Lincoln city limits, the channel transitions from a pool/riffle channel with high levels of sediment to a sand-bottomed, low-gradient stream. The stream retains this channel type downstream to its confluence with the East Side Canal. In this reach, the channel varies from unconfined with full access to the floodplain to tightly constrained between immediately adjacent levees.

The Auburn Ravine watershed is relatively small and very little of the stream flow is from natural runoff. Water has been imported into Auburn Ravine for over 150 years. Early settlers and miners developed canal systems to bring water into the watershed for a variety of uses. Currently, water is imported into the Auburn Ravine watershed from two primary sources: the Yuba/Bear River watershed and, to a lesser degree, the American River watershed. While winter stream flows are dominated by discharges from wastewater treatment facilities and runoff from rainfall events, summer flows are dominated by irrigation water deliveries to farms, golf courses, and ranches on the valley floor. This is a unique situation for small foothill streams where the normal situation is for stream flows to gradually decline over the spring, summer, and early fall until the first rainstorms occur.

Auburn Ravine has good summer flow conditions in the foothills and downstream to a point well west of Lincoln. Auburn Ravine's winter flow peaks can range from a few hundred cfs to an estimated 100-year flow event exceeding 17,000 cfs.

4.10.2 Hydrology and Water Quality (IX) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In accordance with NPDES regulations, the State of California requires that any construction activity affecting more than one acre obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ.

General Permit applicants are required to submit Permit Registration Documents for the Project to the appropriate regional board, which include a Notice of Intent, risk assessment, site map, signed certification statement, an annual fee, and a SWPPP. The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, and a detailed construction timeline. The SWPPP must also include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges.

Examples of typical construction BMPs included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters. SWPPP BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater. Strict SWPPP compliance, coupled with the use of appropriate BMPs, would reduce potential water quality impacts during construction activities.

SWPPP BMPs generally address construction stormwater impacts but do not address any water quality impacts caused by the removal of a dam such as the Hemphill Diversion Structure. Removal of the structure could result in the downstream transport of sediment that has accumulated in Auburn Ravine behind the diversion structure. As such, further analysis is required. Therefore, the potential for the Proposed Project to result in water quality impacts will be further analyzed in the EIR.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Proposed Project has been initiated to remove/modify the existing Hemphill Diversion Structure to allow for anadromous fish passage. None of the proposed Alternatives would result in the direct decrease of groundwater supplies or recharge. However, Alternative 4, which includes the removal of the diversion structure and the abandonment of the Hemphill Canal would result in the discontinuation of raw water service to a number of properties that currently use the canal for irrigation water. As such, Alternative 4 may result in an indirect impact to groundwater supply as those properties that currently obtain water for the canal will have to find other sources of water. This may include groundwater pumping. Additionally, implementation of Alternative 3 would result in the diversion of creek water at NID's Placer Yard on Gold Hill Road, upstream from the existing Hemphill Diversion Structure. This may also affect the potential for groundwater recharge. Therefore, this area of potential impact will be further analyzed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) result in substantial erosion or siltation on- or off-site;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- i) The Proposed Project would occur in an existing creek and removal of the Hemphill Diversion Structure would potentially result in erosion and siltation impacts. As such, this area of impact will be further analyzed in the EIR.

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- ii) Implementation of the Proposed Project would involve the construction of a fish ladder or infiltration structure or underground pipeline. However, none of these alternatives would increase the amount of surface runoff to the area resulting in on- or offsite flooding. Therefore, the Proposed Project would have a less than significant impact on causing flooding on- or offsite.
- iii) All storm drainage in the area is provided by natural drainage. None of the proposed alternatives would change this drainage. As such, the Proposed Project would have no impact in this area.
- iv) The removal of the diversion structure and construction of a fish ladder or infiltration gallery or installation of a pipeline in existing roadway ROWs would not impede or redirect flood flows. While the fish ladder and infiltration gallery may result in a minor alteration to the existing creek bed, this would not be of such an extent to result the obstruction or redirection of flood flows. The Project would have a less than significant impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project is the construction of a fish ladder or infiltration gallery or installation of a pipeline in existing roadway ROWs. Once completed, the Project would not result in an increase in the risk for the release of pollutants, as none will be involved with these alternatives, in an inundation event. The Project would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project is the construction of a fish ladder or infiltration gallery or installation of a pipeline in existing roadway ROWs or potentially adjacent easement areas. None of these alternatives would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The Project would have no impact in this area.

4.11 Land Use and Planning

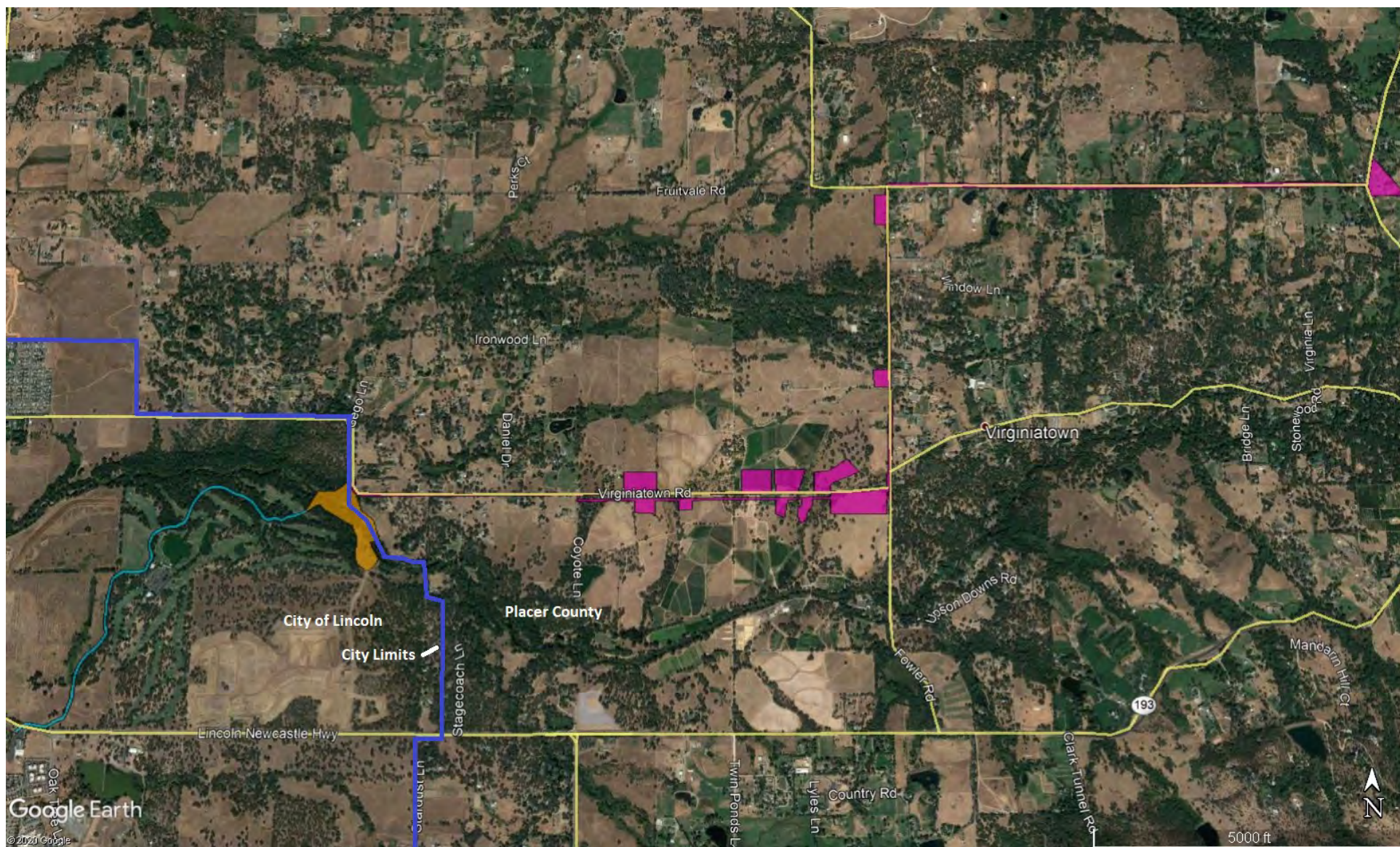
4.11.1 Environmental Setting

The majority of the pipeline path for Alternative 3 is located within Placer County, while the remainder is within the City of Lincoln. Most of Alternatives 1, 2, and 4 are within the City of Lincoln jurisdictional boundaries. However, the middle of Auburn Ravine appears to be the dividing line in this area between the City and County. So those parts of the diversion structure on the northern side of the creek are in the County while the parts in the southern side would be in the City. See Figure 12. *Jurisdictional Boundaries*.

The Project alternatives are located in a developing urban/rural interface area on the eastern edge of the Lincoln city limits. The Turkey Creek Estates subdivision is currently under construction immediately south of the Hemphill Diversion Structure. Adjacent uses include rural residential uses and vacant land to the east and north, the Turkey Creek Golf Course and Turkey Creek Estates to the south and west of the Hemphill Diversion Structure. Rural residential uses, scattered agricultural and grazing land, and vacant land surround the proposed pipeline alignment for Alternative 3. See Figure 4.

Shown in Table 4.11-1 are the General Plan land use designation and zoning districts for the proposed Alternatives.

Table 4.11-1. General Plan Land Use Designation and Zoning District	
General Plan Designation:	<p>City of Lincoln: <i>Village 1 (V-1)</i> (includes portions of Alternative 3 and Alternatives 1, 2 and 4 and as they are within Lincoln city limits)</p> <p>Placer County: <i>Agriculture/Timberland – 10 ac min.</i> (includes portions of Alternative 3 within the Placer County unincorporated area)</p>
Zoning:	<p>City of Lincoln: <i>Village 1 Specific Plan – VPR (Village Park and Recreation), VLDR (Village Low Density Residential)</i> (includes Alternatives 1, 2 and 4 and portions of Alternative 3 as they are within Lincoln city limits)</p> <p>Placer County: <i>Farm-Building site - 10 acre minimum (F-B-X 10 AC. MIN.)</i> (includes portions of Alternative 3 within the Placer County unincorporated area)</p>



4.11.2 Land Use and Planning (X) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

None of the Alternative's project sites are within an established community. Therefore, implementation of the Proposed Project will not divide an established community and would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Auburn Ravine/Coon Creek Ecosystem Restoration Plan addresses the removal of fish barriers within Auburn Ravine. The Proposed Project would include the removal of barriers related to the Hemphill Diversion Structure and is therefore consistent with this Plan. The Proposed Project would not conflict with any other applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

4.12 Mineral Resources

4.12.1 Environmental Setting

The State-mandated Surface Mining and Reclamation Act of 1975 requires the identification and classification of mineral resources in areas within the state subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land as Mineral Resource Zones (MRZ-1 through MRZ-4). The CGS identifies the greater area where the Proposed Project is located as being within the Auburn 15-minute Quadrangle and is classified as MRZ-1, areas where available geologic information indicates there is little likelihood for the presence of mineral resources (CGS 1983).

The City of Lincoln General Plan Background Report (2008a) provides information about the potential mineral resources in the City. According to this information, the General Plan Planning Area is designated as MRZ-4. Areas are designated MRZ-4 when geologic information does not indicate the presence or absence of minerals. Although designated MRZ-4, mineral resources located within the City's Planning Area include clay deposits, granite deposits, and sand and gravel resources. Clay resource extraction operations are located north of Ninth Street, and are transported to the Gladding-McBean plant, where the materials are extracted and stockpiled for use in their clay products (Lincoln 2008a).

The Placer County General Plan does not identify any areas of potential mineral resources.

4.12.2 Mineral Resources (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As discussed above, the City, County or CGS does not identify any mineral resources in the Project vicinity, including on the project site. Therefore, no impacts would occur to mineral resources.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

None of the Alternative's project sites are identified as a mineral resource recovery site in the Lincoln or Placer County general plans. There would be no impact in this area.

4.13 Noise

4.13.1 Environmental Setting

Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels (in $L_{dn}/CNEL$).

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 A-weighted decibels (dBA) per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (USEPA 1971).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the “line of sight” between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers.

Vibration

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual’s sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.13.2 Noise (XII) Environmental Checklist and Discussion

Would the project result in	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

It is difficult to specify noise levels that are generally acceptable to everyone; what is annoying to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general public.

Construction of the various alternatives would result in an increase of noise levels in the Project vicinity. The noise levels generated during construction would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction. As such, without a comprehensive noise analysis, the potential for noise related impacts cannot be determined. Therefore, this area will be discussed in the EIR.

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Would the project result in		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Construction operations have the potential to result in varying degrees of temporary ground vibration and noise levels, depending on the specific construction equipment used and operations involved. As such, without a comprehensive noise analysis, the potential for excessive groundborne vibration or groundborne noise levels cannot be determined. Therefore, this area will be discussed in the EIR.

For a project		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project Area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The nearest airport to the Project is the Lincoln Regional Airport, located more than four miles northwest of the project site. The project site is neither located within an area covered by an airport land use plan nor within two miles of a public or private use airport. Thus, no impact would occur with implementation of the Proposed Project.

4.14 Population and Housing

4.14.1 Environmental Setting

The Alternative 1, 2 and 4 sites are located in the City of Lincoln, whereas Alternative 3 has areas in both Lincoln and Placer County. The California Department of Finance (DOF) provides estimated population and housing unit demographics by year throughout the state. The DOF estimates that the City had a population of 49,317 and the unincorporated County had a population of 115,247 as of January 1, 2020 (DOF 2020). There were 19,275 total housing units in the City and 58,326 in the unincorporated County of January 1, 2020 (DOF 2020).

4.14.2 Population and Housing (XIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

No new roads or extensions of existing roads are proposed. None of the Alternatives being considered include the construction of any new homes. Therefore, direct or indirect increases in population growth would not occur as a result of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

No residences would be removed as a result of any of the Alternatives. The Project would have no impact on existing housing.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

As discussed under Issue b), the Project would not involve the removal or relocation of any housing and would therefore not displace a substantial number of people or necessitate the construction of any replacement housing. The Project would have no impact on existing housing.

4.15 Public Services

4.15.1 Environmental Setting

Public services include fire protection, police protection, parks and recreation, and schools. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time. For example, the Lincoln General Plan Policy PFS-8.11 provides a Police

Department staffing ratio of 1.8 officers per 1,000 population. Further, General Plan Policy OSC-7.1 establishes a parkland-to-population ratio of five acres/1,000 residents or nine acres per 1,000 residents for those projects with development agreements. Finally, Policy PFS-8.4 requires the City to strive to maintain a firefighting capability sufficient to maintain a fire response time of five minutes or less as a general guideline for service provision and locating new fire stations (City of Lincoln 2008b).

Police Services

The Lincoln Police Department (LPD) would provide law enforcement services to the Hemphill Diversion Structure site. LPD personnel are organized into two divisions: Operations and Support. The Operations Division comprises the Patrol, Investigations and Communications. The Support Division comprises the Records Property and Evidence, Citizen Volunteers, and Animal Control. The Chief of Police is responsible for overseeing the entire operation of the LPD, including all units and department functions (LPD 2017). The City's Police Station is located at 770 7th Street, approximately 2.3 miles west of the Hemphill Diversion Structure site.

The Placer County Sheriff's Office (PCSO) provides law enforcement services to those portions of Alternative 3 located within the County. The PCSO provides law enforcement to the unincorporated areas, from the Sacramento County line to the Nevada state line at Lake Tahoe, plus providing contract law enforcement services to the City of Colfax and the Town of Loomis. The Sheriff's Office also provides jail services, coroner's services, court security, and marshal duties to the entire County (PCSO 2020). The nearest Sheriff's Office to the Proposed Project is located at 3140 Horseshoe Bar Road in Loomis, approximately six miles to the south.

Fire Services

The City of Lincoln Fire Department (LFD) provides fire protection and emergency medical services to the Hemphill Diversion Structure site. LFD responds to various emergency and non-emergency incidents including, but not limited to, all types of fire, medical emergencies, public assists, and hazardous situations. The City has three fire stations. The fire station closest to the Hemphill Diversion Structure site is Station #33 located at 17 McBean Park Drive, approximately 1.8 miles west of the site.

Portions of the Alternative 1 project site are located in the jurisdiction of the Placer County Fire Department (PCFD). The PCFD has eight career and five volunteer fire stations providing all risk fire and emergency medical services to a 475-square-mile territory. Through a long-standing Cooperative Fire Protection Agreement with CAL FIRE that was first initiated in 1974, PCFD integrates state and local firefighting resources, both career and volunteer, into an effective combination fire department. The nearest PCFD station to the Alternative 3 project site is located at 1112 Wise Road, approximately three miles to the northwest.

Schools

The Western Placer Unified School District (WPUSD) provides most of the educational services for the City and the area surrounding the Project. The WPUSD has seven elementary schools (grades K-5), two middle schools (grades 6-8), one high school (grades 9-12), and one continuation high school. The WPUSD also

operates the ATLAS Learning Academy, which serves grades K-12 (WPUSD 2018). According to the California Department of Education, (DOE), the City also has three private schools (DOE 2017).

Parks

The City of Lincoln has 18 parks, ranging in size from 0.7 to 42 acres. The City will have approximately 178.3 acres of parkland with completion of the 15-acre Robert Jimenez Park, which is currently under construction. Based on the DOF 2018 estimated City population of 48,591, upon completion of the Robert Jimenez Park, the City's parkland-to-population ratio will be 3.67 acres of parks/1,000 population².

Placer County owns and manages 21 active park properties, 15 passive parks/ open space areas, seven beaches, and 44 miles of off-street trails. The County's standard level of service is five acres of active park per 1,000 people and five acres of open space/passive park (Placer County 2019).

4.15.2 Public Services (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Fire Protection

All of the Alternatives are located approximately two to three miles from the nearest fire station. The Proposed Project would not result in an increase in population and thereby not require additional fire facilities to serve this population. The Proposed Project would not require any additional LFD or PCFD

² 178.3 acres of parks/(48,591/1,000) population = 3.67 acres of parks/1,000 population.

facilities, equipment, and/or staff and is not anticipated to create an additional burden on existing fire facilities. Therefore, the Project would have a less than significant impact in this area.

Police Services

The Proposed Project would not result in a significant increase in demand for police protection resulting in new or expanded police facilities. Police facilities and the need for expanded facilities are based on the staffing levels these facilities must accommodate. Police staffing levels are generally based on the population/police officer ratio, and an increase in population is usually the result of an increase in housing or employment. None of the proposed alternatives would result in an increase in population to the area. As such, the Project would not result in the need for an increase in police protection or police facilities. Therefore, the Proposed Project would have a less than significant impact in this area.

Schools

The Proposed Project is removal of an existing diversions structure and potentially the construction of an infiltration gallery, a fish ladder or a pipeline. Because the Proposed Project would not increase the population or result in substantial employment gains, an increase of student population in the WPUSD would not occur; nor would additional educational facilities be required. Therefore, the Proposed Project would have no impact in this area.

Parks

As stated previously, the need for additional parkland is primarily based on an increase in population to an area. Given that the none of the proposed alternatives would result in an increase in the City's or County's population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not require the construction or expansion of park and recreational facilities and would not result in an increase in demand for parks and recreation facilities in the surrounding area. There would be no impact to parks from construction of the Proposed Project.

Other Public Facilities

The Proposed Project does not result in an increase in housing or population in the City or County resulting in an increased use of other public facilities. Therefore, the Project would have no impacts on other public facilities.

4.16 Recreation

4.16.1 Environmental Setting

The City of Lincoln has 18 parks and the County owns and manages 21 active park properties, 15 passive parks/open space areas, seven beaches, and 44 miles of off-street trails.

4.16.2 Recreation (XV) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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"/>

The need for additional parkland is primarily based on an increase in population to an area. Given that the Proposed Project would not increase the City's or County's population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not increase the use of park and recreational facilities resulting in substantial physical deterioration of the facility. There would be no impact to recreational facilities from construction of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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"/>

No recreational facilities are proposed as a part of the Project. The Proposed Project would have a no impact in this area.

4.17 Transportation/Traffic

4.17.1 Environmental Setting

Existing Street and Highway System

The Project is located in a rural, although developing urbanized area. Access to the Hemphill Diversion Structure site is provided by the Lincoln Newcastle Highway and Virginiatown Road. The Alternative 3 project site includes Virginiatown, Fowler and Fruitvale roads.

Alternative Transportation Modes

Bicycle Facilities. The City of Lincoln identifies Lincoln Newcastle Highway as having Class II bike lanes to the City boundary (Lincoln n.d.). According to the Placer County Regional Bikeway Plan (2018), the Lincoln Newcastle Highway within the County is identified for future bike lanes.

Public Transit. Public transportation bus service is provided in Placer County through Placer County Transit (PCT). However, no bus routes or stops are available within the Project area. The nearest bus route is the

Lincoln Circular located in the City of Lincoln with a stop at East Avenue and McBean Park Drive, approximately 1.75 miles from the Hemphill Diversion Structure site.

4.17.2 Transportation/Traffic (XVII.) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Because the Proposed Project would not directly or indirectly introduce a new population in the region, the total number of vehicle trips generated by the Project is not expected to change from existing conditions. Project construction will, however, result in temporary increases in local traffic due to the transport of construction personnel, equipment and material to the project site.

Construction is considered to have only short-term effects on traffic and circulation conditions within the area proposed for construction. There are no planned road closures as a result of Project construction and traffic control would be provided, as necessary. As such the Proposed Project's impact on the local circulation system would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a vehicle miles traveled (VMT) methodology instead of the now superseded (as of January 1, 2019) level of service (LOS) methodology. Pertinent to the Proposed Project are those criteria identified in Section 15064.3(b)(1) Land Use Projects. According to this section:

"Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high- quality transit corridor³ should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area

³ "High-quality transit corridor" means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an "existing stop along a high-quality transit corridor" may include a planned and funded stop that is included in an adopted regional transportation improvement program.

compared to existing conditions should be presumed to have a less than significant transportation impact."

However, Section 15064.3(b)(3) allows an agency to determine a project's transportation impact on a qualitative basis if a VMT methodology is unavailable, as is the case with the Proposed Project.

Section 15064.3(b)(3) is as follows:

"Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate."

The Proposed Project would result in a short-term increase in the amount of traffic on the local roadways during construction. Following completion of the Project there would be no increase in traffic beyond current conditions. The Proposed Project would not increase the capacity of any of the affected roadways in the area and, as such, would not lead to a measurable and substantial increase in VMT. Therefore, the Proposed Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric 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"/>

No modifications to roadway features are proposed as part of the Project. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No new developments or modifications to roadway features are proposed as part of the Project. Therefore, the Project would not result in any adverse impact on emergency access. As such, the Project would have no impact regarding emergency access.

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

The Project area is located within what is historically documented as the Nisenan tribal territory.

4.18.2 Tribal Cultural Resources (XVII) Environmental Checklist and Discussion

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 tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A cultural resources survey, including tribal consultation, has not been completed for the Project. As such, there is a potential for the Project to impact tribal cultural resources on the on the site. The extent of this potential impact has not been determined at this time. As such, this will be discussed in the EIR.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

Other than NID raw water facilities, there are no other utilities or service systems located at the Hemphill Diversion Structure site.

Water Service

The Hemphill Diversion Structure is used during the irrigation season to facilitate the flow of water from the Auburn Ravine to the Hemphill Canal. The Hemphill Canal provides irrigation water for multiple parcels including, but not limited to, Turkey Creek Golf Course, Lincoln Hills Golf Course, Lincoln Crossing Community Association, and Lincoln Land Holdings as shown in Figure10. Auburn Ravine is part of the Bear River raw water system (NID 2016).

According to the NID Agricultural Water Management Plan (2016), NID serves nearly 6,000 agricultural customers with an average total reported irrigated acreage of 25,860 acres. Most agricultural water customers purchase water seasonally, from mid-April through mid-October, and the water is mainly used for irrigated pasture, vineyards, orchards, and family gardens.

Wastewater and Storm Drainage

Wastewater facilities are not provided on the Hemphill Diversion Structure site nor within the Alternative 3 project area. There are no formal storm drainage facilities in the Project area. Any existing storm drainage in the area is provided through natural drainages, including Auburn Ravine.

Solid Waste

Within the Lincoln city boundaries, the Lincoln Department of Public Services manages solid waste and green waste collection and disposal. The Western Placer Waste Management Authority (WPWMA) is the area's regional waste management agency. The WPWMA was established in 1978 through a joint exercise of powers agreement between Placer County and the cities of Lincoln, Rocklin and Roseville to own, operate and maintain a sanitary landfill and all related improvements (WPWMA 2020). The WPWMA's facilities consist of the Western Regional Sanitary Landfill and a Materials Recovery Facility which includes composting, household hazardous waste, and recycling and buyback facilities.

As shown in Table 4.19-1, the majority solid waste from the City and unincorporated County is disposed of at the Western Regional Landfill. According to the figures published by the California Department of Resources Recycling and Recovery (CalRecycle, 2020a), in 2018, the Western Regional Landfill received approximately 90.2 percent of Lincoln's and 98.0 percent of the unincorporated County's solid waste. As of June 2005, the Western Regional Landfill had a remaining capacity of 29 million cubic yards and a cease operation date of January 1, 2058 (CalRecycle 2020b).

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Table 4.19-1. Solid Waste Disposal Facilities Used by the City of Lincoln and Placer County - 2018					
Destination Facility	Solid Waste Disposal – 2018 (tons/year)		Landfill Information		
	City of Lincoln	Unincorporated Placer County	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Azusa Land Reclamation Co. Landfill	3	-	51,512,201	9/30/12	1/1/2045
Foothill Sanitary Landfill	1	7	125,000,000	6/10/2010	12/31/2082
Forward Landfill, Inc.	21	21	22,100,000	12/31/2012	1/1/2020
Kettleman Hills		8	15,600,000	2/25/2020	NA
L and D Landfill	162	358	4,100,000	5/31/2005	1/1/2023
North County Landfill & Recycling	2	1	35,400,000	12/31/2009	12/31/2048
Potrero Hills Landfill	38	67	13,872,000	1/1/2006	2/14/2048
Recology Hay Road	²	39	30,433,000	7/28/2010	1/1/2077
Recology Ostrom Road LF Inc.	3,291	34	39,223,000	6/1/2007	12/31/2066
Sacramento County Landfill (Kiefer)	283	1,087	112,900,000	9/12/2005	1/1/2064
Vasco Road Sanitary Landfill	7	1	7,379,000	10/31/2016	12/31/2023
Western Regional Landfill	35,237	80,187	29,093,819	6/30/2005	1/1/2058
Yolo County Central Landfill	11	20	n/a	n/a	1/1/2081
Yearly Total	39,057	81,831			
Average per Resident (lbs/day)	4.5	5.0			
Average per Employee (lbs/day)	24.9	14.2			

Source: CalRecycle 2020a, 2020b, and 2020c

4.19.2 Utilities and Service Systems (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Water

Alternatives 1 and 32 involve the construction of an infiltration gallery and the construction of a fish ladder and would not require new water infrastructure or treatment facilities. These alternatives would have no impact in this area.

Alternative 3 would require the installation of a new pipeline to provide water to the Hemphill Canal. No additional water treatment or infrastructure or the expansion of such facilities are required for the installation of the pipeline. The environmental effects of this pipeline and removal of the Hemphill Diversion Structure are discussed in this Initial Study under each impact area. Alternative 3 would have a less than significant impact in this area.

Alternative 4, the removal of the Hemphill Diversion Structure and abandonment of the Hemphill Canal, would result in the discontinuation of raw water service to those parcels currently served by the Hemphill Canal. Discontinuation of services would require those parcels currently served by the Hemphill Canal to obtain other sources of raw water. While discontinuation of service would not have a direct impact to water facilities, it may result in an indirect impact as new infrastructure may be required to serve these parcels. As such, Alternative 4 would have a potentially significant impact on water facilities and will be further analyzed in the EIR.

Wastewater

The Proposed Project includes four different alternatives designed to allow for anadromous fish passage beyond the Hemphill Diversion Structure. None of these alternatives would require wastewater service or facilities or impact any existing facilities in the area. The Proposed Project would have no impact to existing wastewater infrastructure or treatment facilities.

Storm Drainage

None of the four Alternatives would require storm drainage facilities. No new facilities would be required to serve the Project and the Project would have no impact in this area.

Electric Power

Alternative 1, the Riverbank Infiltration Gallery Alternative, would require the extension of electrical power to the project site. PG&E provides electrical services to the Project area through state-regulated public utility contracts. PG&E's ability to provide its services concurrently for each project is evaluated during the development review process. Existing electrical power poles are located on Virginiatown Road, approximately 300 feet from the Hemphill Diversion Structure site. New power poles and electrical lines will be required to be extended to the infiltration gallery. However, no new PG&E electric facilities, with the exception of possibly two new electrical poles, will be required to provide electricity to the project. Therefore, the project would have a less than significant impact in this area.

Natural Gas

None of the four Alternatives would require natural gas facilities. As such, the project would have no impact to natural gas facilities.

Telecommunications

None of the four alternatives would require telecommunication facilities. No new telecommunication facilities would be required to serve the project and the project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discontinuation of service as identified under Alternative 4 and discussed in Item a) above will require an analysis of the available water supply to serve those parcels that would no longer be served by the Hemphill Canal. As such, Alternative 4 would have a potentially significant impact on water supply and will be further analyzed in the EIR.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Refer to Item a) above

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project's alternatives would include the potential removal of the existing diversion structure, and either the construction of an infiltration gallery or fish ladder or pipeline. None of these alternatives would result in a substantial amount of solid waste and all solid waste generation would end upon completion of construction. As such, the Proposed Project would not substantially increase solid waste in the area and existing landfills have sufficient capacity to accommodate the relatively minor amounts of waste that would be generated by the Proposed Project. This is a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local statutes and management and reduction regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project is required to comply with all state and federal statutes regarding construction solid waste. This impact is considered less than significant.

4.20 Wildfire

4.20.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (i.e., winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The project site is not in an area designated by CAL FIRE (2007) as a Fire Hazard Severity Zone. Furthermore, no Very High Fire Hazard Severity Zones are located nearby. Finally, the location of the project site makes it readily accessible by emergency personnel and vehicles in the event of a wildland fire.

4.20.2 Wildfire (XX) Environmental Checklist and Discussion

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

None of the Alternative's project sites are in an area designated by CAL FIRE (2007) as a Fire Hazard Severity Zone and no Very High Fire Hazard Severity Zones are located nearby. The Proposed Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No construction activities would impede the use of surrounding roadways in an emergency evacuation. The Project would have no impact in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

None of the Alternative's project sites are in an area designated by CAL FIRE as a Fire Hazard Severity Zone and no Very High Fire Hazard Severity Zones are located nearby. No inhabitable structures would be built or occupied as a part of the Project and the Project would have no impact in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

None of the Alternative's project sites are in an area designated by CAL FIRE as a Fire Hazard Severity Zone. Furthermore, no Very High Fire Hazard Severity Zones are located nearby. No new fuel breaks, emergency water sources would be required for development of the Project. While new power lines would be required for Alternative 3, these lines would not exacerbate fire risk in the area. The Project would have no impact in this area.

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If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

Potentially Significant Impact Less than Significant with Mitigation Incorporated Less than Significant Impact No Impact

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

☐ ☐ ☐ ☒

None of the Alternative's project sites are in an area designated by CAL FIRE as a Fire Hazard Severity Zone and no Very High Fire Hazard Severity Zones are located nearby. The Project would have no impact in this area.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XIX) Environmental Checklist and Discussion

Does the Project:

Potentially Significant Impact Less than Significant with Mitigation Incorporated Less than Significant Impact No Impact

- a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

☒ ☐ ☐ ☐

As discussed in Sections 4.4 Biological Resources and 4.5 Cultural Resources, the Proposed Project may have potential impacts to these resources. These areas will be discussed in the EIR.

Does the Project:

Potentially Significant Impact Less than Significant with Mitigation Incorporated Less than Significant Impact No Impact

- b) 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)?

☒ ☐ ☐ ☐

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Implementation of the Proposed Project, in conjunction with other approved or pending projects in the region, may have the potential to result in cumulatively considerable impacts to the physical environment. Cumulative impacts will be discussed in the EIR.

Does the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Direct and indirect impacts to human beings may occur as a result of implementation of the Proposed Project. As such, these will be discussed in the EIR.

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