

Auburn Ravine Gaging Station Fish Passage Improvement Project

Initial Study / Mitigated Negative Declaration

Nevada Irrigation District

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Submitted By

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1. INTRODUCTION

The Nevada Irrigation District (NID) is proposing an environmental enhancement project to improve fish passage at the Gaging Station in Auburn Ravine within the Lincoln Crossing Nature Preserve in Lincoln. This Initial Study was prepared to consider the potential for the project to result in significant impacts pursuant to the California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, Section 21000, et seq.). NID is the CEQA lead agency for the project and this document has been prepared based on the requirements of the state CEQA Guidelines (14 California Administrative Code, Section 14000 et seq.). Based on the results of this Initial Study, NID has determined that the project could have a significant effect on the environment, but mitigation has been identified that would reduce impacts to less than significant. See CEQA Determination in Section 3.

MITIGATED NEGATIVE DECLARATION INFORMATION SHEET

PROJECT TITLE: Auburn Ravine NID Gaging Station Fish Passage Project

LEAD AGENCY: Nevada Irrigation District
1036 W. Main Street
Grass Valley, CA 95945

CONTACT PERSON: John Kirk, P.E., Maintenance Manager
(530) 273 - 6185 ext 281
kirk@nidwater.com

PROJECT LOCATION: Approximately 1,000 feet downstream of the State Route 65 bridge crossing in the City of Lincoln, CA

APPLICANT: Nevada Irrigation District
1036 W. Main Street
Grass Valley, CA 95945

GENERAL PLAN: Open Space, 100 year Flood Zone

ZONING: Open Spaces

EXISTING LAND USE: Land uses in the vicinity of the project are residential subdivisions to the north and south. The project is located within the city of Lincoln open space parkway/Nature Preserve to the east and west, including the Auburn Ravine off-leash dog park.

PROJECT PURPOSE and OBJECTIVES

The purpose of this environmental enhancement project is to improve fish passage at the Gaging Station in Auburn Ravine within the Lincoln Crossroads Nature Preserve. This project will provide both upstream passage for adult anadromous and resident fishes to access spawning habitat located above NID's existing Gaging Station and downstream passage for migrating juvenile fishes while maintaining the ability to accurately measure stream flows occurring during the typical irrigation season (April 15 – October 15). The project purpose is intended to be accomplished by installing a "nature-like fishway" consisting of a series of constructed rock chutes and armored step pools (also referred to as a chute-and-pool design) in a way that mimics the morphology of a natural channel. The constructed chutes and pools span the channel downstream of the existing Gaging Station and are designed to dissipate stream power over the drop from the facility's existing concrete flume to the streambed below, while allowing the Gaging Station to continue accurate measurement of streamflow. The roughened and armored channel is designed to eliminate future erosion and

channel incision using stabilizing elements such as concrete-capped sheetpiles placed within a matrix of large rock, with smaller material mixed in throughout to control porosity, reduce sub-surface flows and allow for fish passage under a variety of flow conditions (including low flows).

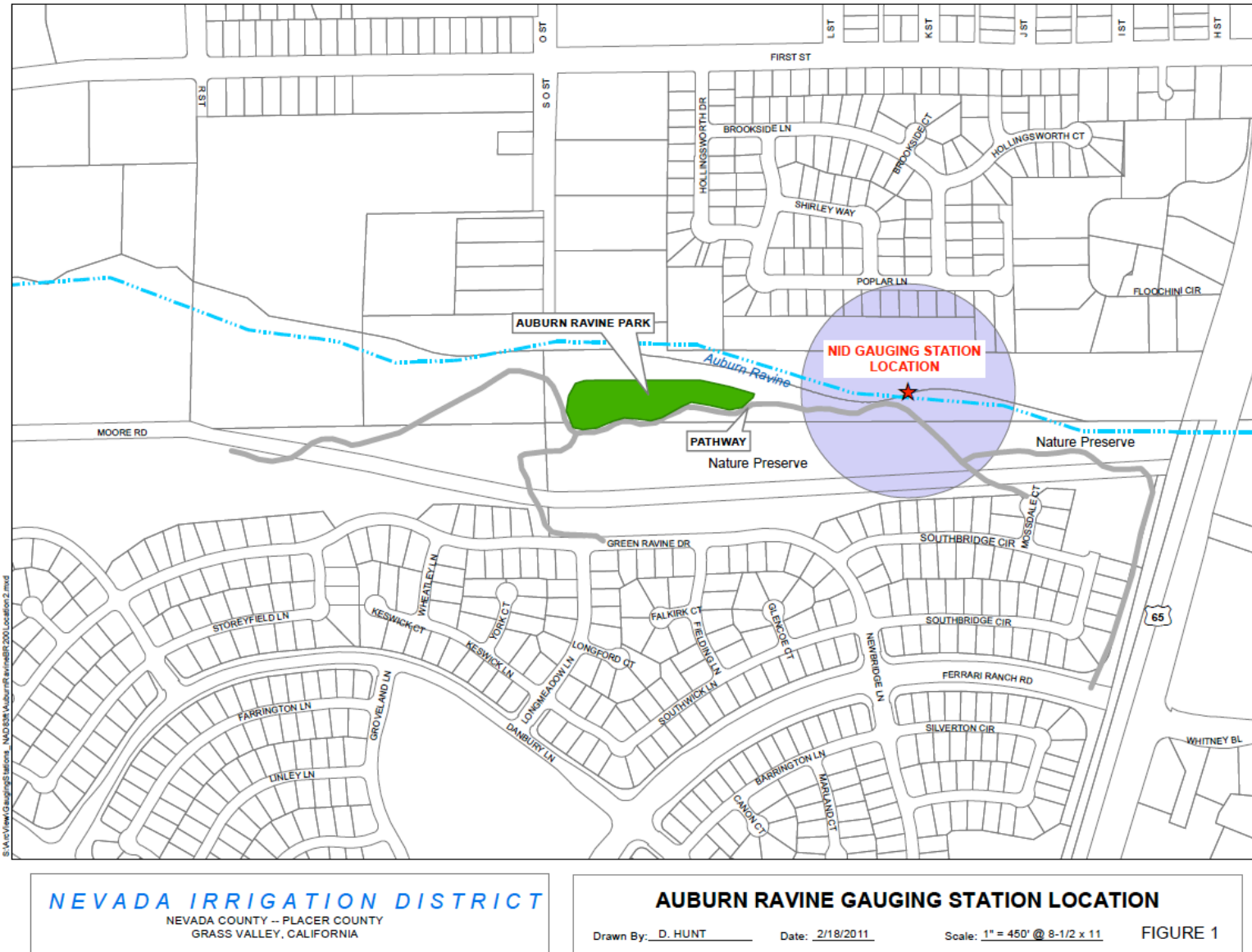
PROJECT BACKGROUND

The NID Gaging Station is located approximately 1,000 feet downstream of the State Route 65 bridge crossing in the city of Lincoln, CA (Figure 1). The Gaging Station was installed in 1981 in order to manage downstream water transfers with South Sutter Water District and provide accurate flow measurements for the City of Lincoln's wastewater dilution requirements. In order to create a reliable and accurate gage record during a wide range of flow conditions the stream banks were reinforced with concrete walls. The concrete walls were installed on both sides of the creek in conjunction with the installation of a Parshall Flume or weir (basically an impermeable wall and apron structure that creates a perfectly rectangular cross section where flow can be easily and accurately measured). The concrete walls constrict the channel and create a pool behind (i.e., upstream of) the flume. Since the installation of the structure in 1981 the channel bed downstream of the Gaging Station has incised approximately six feet. During high flows the water drops over the weir and cuts into the streambed below. Overtime, water flowing through the constricted channel and over the weir has resulted in enough incision into the streambed below (approximately six feet) that the steep drop in elevation has created a barrier to fish passage.

Auburn Ravine has the potential for significant anadromous fish resources especially fall-run and late fall-run Chinook salmon and steelhead trout (Jones and Stokes 2004). Gravel-bedded stream reaches suitable for spawning of salmonids (fishes of the family Salmonidae which including salmon, trout, whitefish, and char) exists upstream from the City of Lincoln. Surveys of potential salmonid spawning habitats conducted in 2004 within streams in western Placer County found that Auburn Ravine contained more potential spawning habitat than all other surveyed stream reaches combined (Jones and Stokes 2004). Steelhead trout and Chinook salmon are known to still occur in Auburn Ravine (along with the resident, non-anadromous form of steelhead simply referred to as rainbow trout).

Historically low summer flows would dramatically limited the amount of habitat available for summer rearing of steelhead/rainbow trout in Auburn Ravine. However, the increased flows and cool water temperatures associated with flow augmentation due to irrigation demand has dramatically increased the quantity and quality of summer rearing and foraging habitat for salmonids. Fish sampling by California Department of Fish and Game (CDFG) in 2004 and 2005 found various size classes of steelhead/rainbow trout at all sites sampled between State Route 65 in Lincoln and Pacific Gas and Electric Company's (PG&E) Wise Power House located approximately one mile west of Auburn 12 miles upstream. Population densities of various size classes of steelhead/rainbow trout were reported to be relatively high within sampled reaches upstream of State Route 65, with relative steelhead/rainbow trout abundance ranging from 337 to 7,985 individuals per river mile. Other native fish species sampled upstream of State Route 65 included Sacramento pikeminnow, Sacramento sucker, lamprey, and speckled dace.

Figure 1 -- Location Map, NID Gauging Station



The fish passage project was initiated by Placer County in conjunction with the Placer County Flood Control Agency. CalFed awarded the project partners a \$304,000 grant to fund two fish passage projects on Auburn Ravine—the Gaging Station and the Hemphill Dam fish passage improvement project. Due to funding limitations, the only project proceeding at this time is the fish passage improvement at the Gaging Station.

A project advisory group composed of multiple stakeholders, including staff from Placer County, the City of Lincoln and the CDFG met with technical consultants for input and comments on the conceptual alternatives. Winzler and Kelly (project design engineers), Michael Love and Associates (fish passage engineers) and McBain and Trush (riparian vegetation and fisheries consultants) were retained by Placer County to design fish passage improvements for salmonids at the NID Gaging Station and Hemphill Dam sites. A fish passage alternatives study was developed for both proposed sites (Fish Passage Alternatives Developed for Auburn Ravine’s NID Gaging Station and Hemphill Dam Site, March 2009). The technical memorandum (Fish Passage Alternatives Developed for Auburn Ravine’s NID Gaging Station and Hemphill Dam Site, March 2009) was used to guide the design of the fish passage improvements at the Gaging Station that is subject to this Initial study.

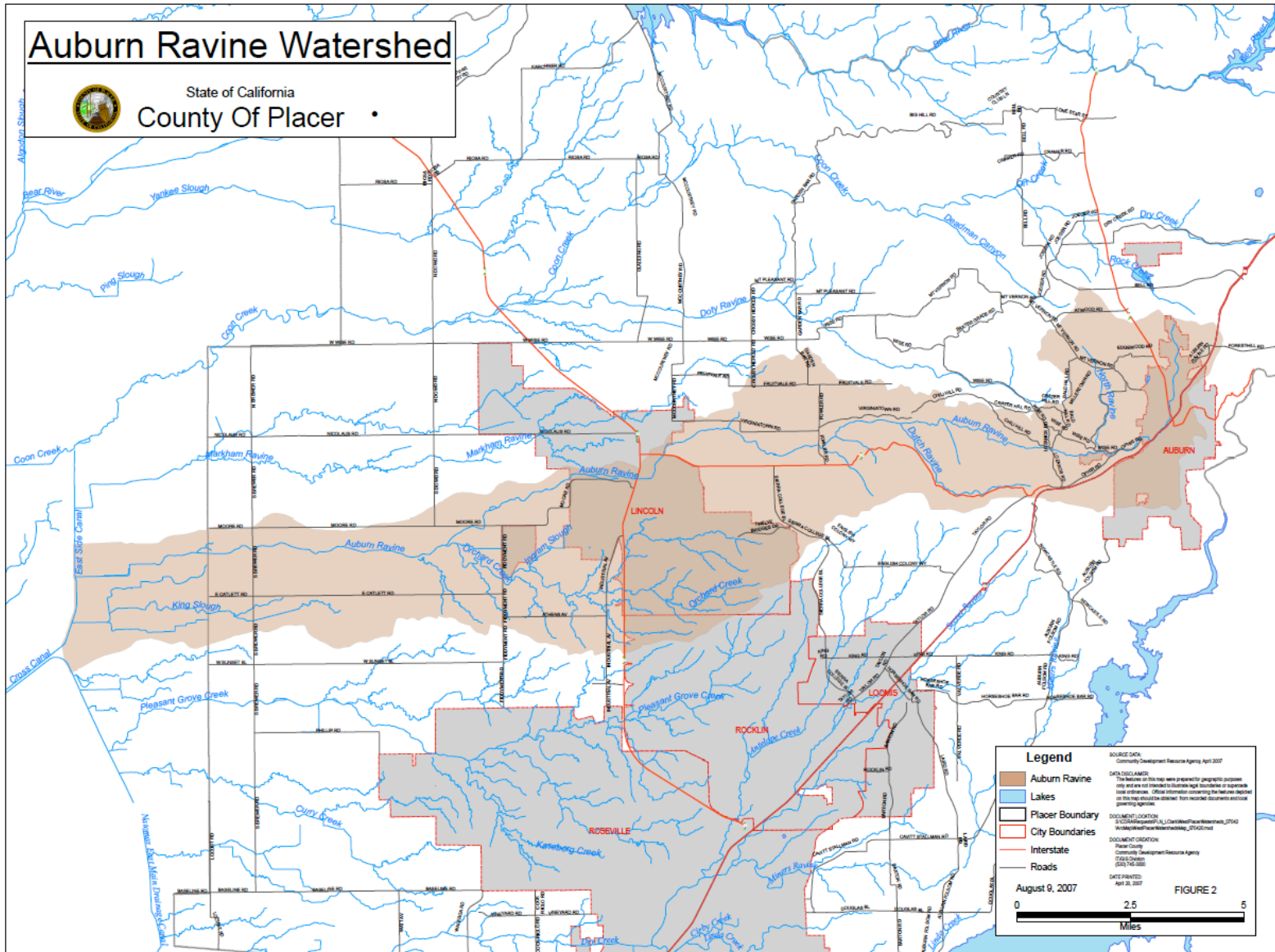
The alternative of removing the Gaging Station from the channel altogether was considered, but was not pursued as an option for several reasons. The risk of head-cutting and severe upstream channel incision that would likely result from removal of the structure would require considerable stream rehabilitation efforts (e.g., bank reinforcements, design, engineering, maintenance, etc.). The project team considered the costs of such efforts (including water quality permitting costs, CEQA, etc.) to be prohibitive; furthermore, such costs were not fundable under the existing grant agreements. Additionally, the multiple and somewhat complicated interests in maintaining the functionality of the existing gaging facility continue to persist. Based on long-standing agreements, NID may declare annual surplus water available to South Sutter Water District and Auburn Ravine is the only stream system that can carry irrigation waters to South Sutter Water District. NID’s “declared” annual surplus water is used to supplement South Sutter irrigation flows to farmers in the Sacramento valley. In addition, the Gaging Station is also used to accurately measure dilution factors for the Lincoln Regional Waste Water treatment plant. Auburn Ravine is also used to carry water for Placer County Water Agency (PCWA). These water delivery constraints and legal agreements meant that any change to the functionality of the structure would likely delay the project as ample time would be needed to negotiate with multiple parties and was ultimately declared outside the scope and feasibility of this project.

STUDY AREA - ENVIRONMENTAL SETTING

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 East Side Canal. The East Side Canal flows into the Cross Canal. The Cross Canal 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 feet to 30 feet above mean sea level (See Figure 2, Auburn Ravine Watershed Map).

In its headwaters, Auburn Ravine is characterized by a high gradient, incised channel with steep-sided banks. Large boulders and cobbles dominate the substrate. The channel includes scour pools, waterfalls, and high-velocity chutes. Riparian vegetation is abundant. In its middle reaches downstream to the City of Lincoln, the stream’s gradient decreases substantially, and the substrate is characterized by sand, gravel and cobbles. Pools and riffles are common, and trees and shrubs dominate the riparian zone. The channel contains large woody debris and bank erosion increases in the downstream reaches relative to the upper reach.

Figure 2 -- Auburn Ravine Watershed Map



Within the city limits of Lincoln, Auburn Ravine has a very low gradient and sandy substrate. Riparian vegetation is characterized by a relatively open tree canopy with an understory dominated by blackberries and shrubs. Site elevations range from approximately 145 to 150 feet above mean sea level.

Downstream from Lincoln, rice farms and livestock ranches border the stream. In some places, the stream is contained within levees and riparian vegetation may be absent. Stream channel substrate is mostly clay and fine sediments, with occasional pieces of large woody debris. Grazing and channel maintenance activities restrict the development of riparian vegetation. The lower 2.5 miles of Auburn Ravine was rerouted and leveed to flow into the East Side Canal.

Auburn Ravine's physical habitat can be summarized into two major segments. Beginning about Joiner Parkway Bridge in Lincoln, the stream begins to increase in gradient and the channel becomes a traditional pool and riffle stream. The channel contains fair quantities of sediment and sediment transport and sediment inputs to the channel are limiting hatching and emergence success and overall aquatic habitat quality. Upstream of about Goldhill Road, the amount of sediment in the channel decreases and the overall quality of habitat increases. Downstream of Joiner Parkway, the channel is nearly all sand bottomed with little productivity or habitat complexity. The general quality of riparian vegetation diminishes downstream from the City of Lincoln and by the time you reach the Placer/Sutter county line, the contribution and effectiveness of the riparian community to contribute to the quality of aquatic habitats is generally lacking. This downstream area should be considered a migration corridor for anadromous fish and not suitable spawning or rearing areas.

The Auburn Ravine watershed has a Mediterranean climate with a low-elevation rain-dominated hydrology. Over 85 percent of precipitation occurs between November and April. Based on observations and historical stream flow records from other similar streams within the region, flows in Auburn Ravine respond relatively rapidly to rainfall events, with the hydrograph both rising and falling abruptly. Flow augmentation has dramatically changed the flow characteristics of Auburn Ravine during the typically dry season. The irrigation season generally begins on April 15th, and ends by October 15th of each year. NID measures flow during the irrigation season at the Gaging Station. Mean monthly flows for the 1974 to 2007 irrigation seasons range from 116 cubic feet per second (cfs) in July to 37 cfs in September.

EXISTING CONDITIONS

The Gaging Station is owned and maintained by NID to monitor flow in Auburn Ravine during the irrigation season (April 15 through October 15). The flume structure is made up of concrete that spans the channel and forms a flat streambed with vertical sides up each bank. At the downstream end of the flume is a curb, approximately 0.8 feet tall, which spans the outlet of the flume. This curb provides adequate depth for fish to swim across the concrete section at all flows. The flume and curb section is 25 feet wide, with flaring sidewalls and aprons at the inlet and outlet. The entire length of the flume, measured from the ends of the aprons, is 28.5 feet.

Since its construction in 1981, the channel bed downstream of the flume has incised approximately six feet. To protect the structure from erosion and undermining, large rock has been placed immediately downstream of the flume. This forms an over-steepened riprap ramp that produces shallow depths during lower flows and turbulent conditions with high velocities at higher flows. As a result, upstream fish passage is partially blocked for adult anadromous salmonids and may be completely blocked for juvenile salmonids and adult resident trout.

A stilling well is located adjacent to the concrete structure and is used to measure the flow within Auburn Ravine at the site.

There are three general biological communities in the vicinity of the Gaging Station. Helix Environmental Planning conducted terrestrial habitat mapping in January 2011. The basic habitat/vegetation types include the following along with their basic characteristics (Figure 3).

**Table 1.1
Habitat Type**

Biohabitat Type	Cover Type	Acreage
Riparian	Woodland Valley oak Northern California black walnut	0.41 acres
Perennial Stream	Stream (narrow riparian strip along the banks) Arroyo willow red willow narrow-leaved willow Godding's black willow white alder Fremont cottonwood	0.34 acres
Disturbed	Disturbed grassland (along southern boundary, including the concrete path)	0.12 acres

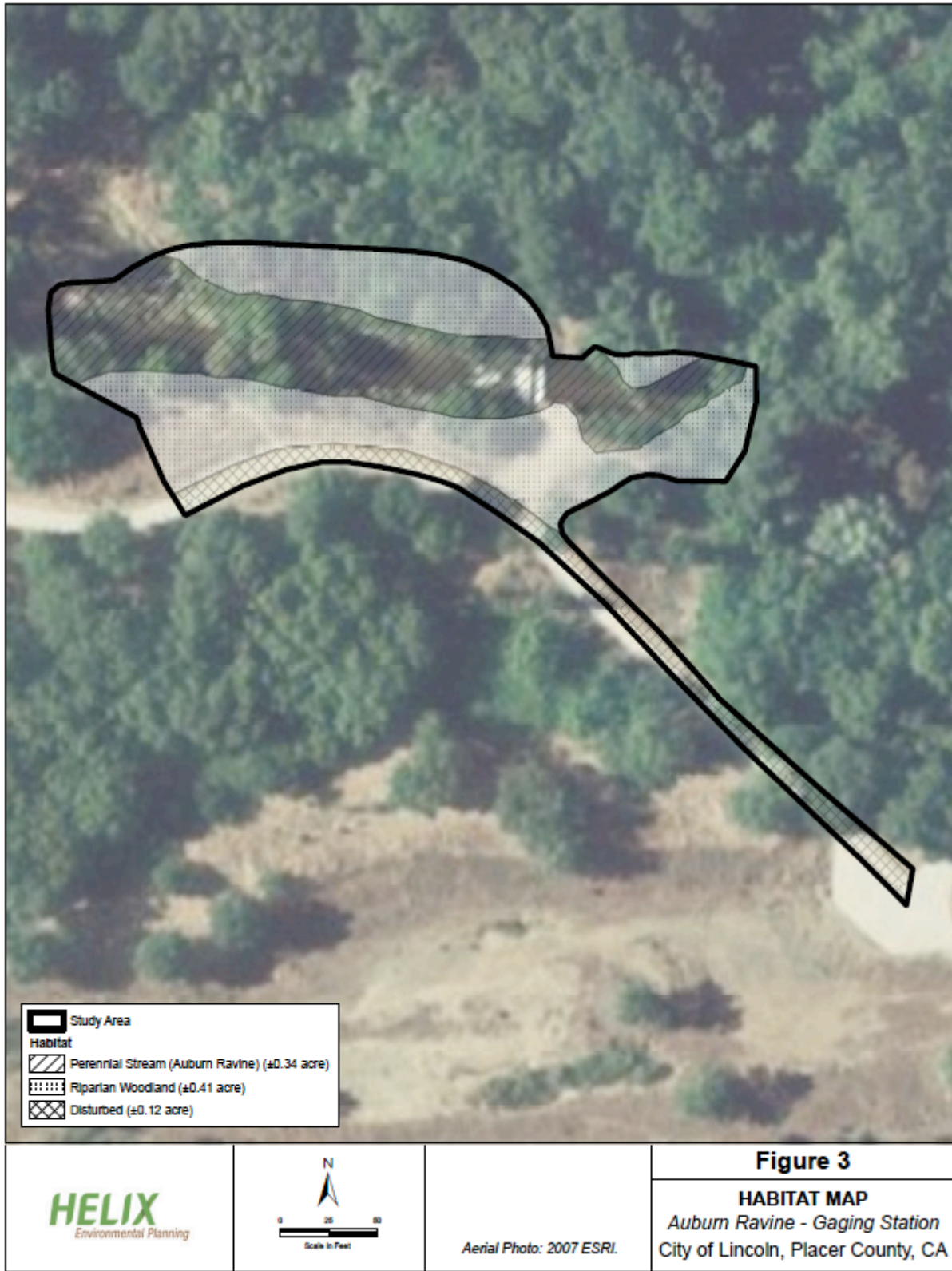
McBain and Trush conducted aquatic habitat mapping at the Gaging Station on December 1, 2008. Salmonid habitat was mapped to quantify habitat for several life stages (fry and juvenile rearing, spawning) of salmonids species of interests (fall Chinook and steelhead). The reach of the stream characterized at the Gaging Station included approximately 684 feet of upstream and 894 feet of downstream. Habitat was mapped for two successive early life stages for Chinook and steelhead, fry and juveniles.

The upstream habitat was primarily one continuous 1,114 ft long pool, terminating at the upstream end into a low-gradient riffle. Salmonid microhabitat was relatively sparse in this pool section of the channel, due to slow channel velocities, sandy substrates, and lack of channel and hydraulic complexity. Bank cover was available along a portion of this reach, providing some rearing habitat for juvenile Chinook and steelhead along the channel margins. Nearly the entire length of the long pool upstream of the dam was lined with thick Himalayan blackberry on steep 2:1 sloped banks on both left and right banks of the channel.

The habitat below the Gage Station was more complex and abundant. Below the gage, the channel meanders and has more abundant medium and large wood pieces comprising several large logjams, undercut banks, medium gradient riffles with exposed gravel and cobble. The vegetative cover is considered excellent along the stream banks.

Surrounding land uses are largely characterized as an open space, stream zone within an established nature preserve. The City of Lincoln owns the nature preserve. The Lincoln Crossing Nature Preserve was offered for dedication to the City by the developer of the Lincoln Crossing Village project. The Lincoln Crossing planned community, located on the south side of Auburn Ravine was approved for about 2,900 units on approximately 1,000 acres in 2003. The nature preserve is established to protect oak trees, jurisdictional wetlands and wildlife migration/habitat. The nature preserve includes wildlife/biological habitat mitigation areas for the plan area as well as flood control, passive and active recreation and

Figure 3 – Habitat Map



pedestrian travel. A 12-foot concrete multi-use trail bicycle path traverses the lineal parkway. The 10-acre Auburn Ravine Park is also located downstream and west of the Gaging Station. A single-family residential subdivision and light industrial area is located to the north.

2. PROJECT DESCRIPTION

The Project description and engineered plans were prepared in response to the March 2009, Fish Passage Alternatives technical memorandum prepared by Winzler & Kelly of Eureka, CA and Michal Love & Associates of Arcata, CA. See CD for detailed engineered plans for Auburn Ravine Gaging Station Fish Passage Improvement Project. The project includes the following features:

Existing Structure: No changes to the existing concrete structure are expected except for minor modifications to the existing concrete curb on the downstream end of the gaging station. The curb will be modified to include a two-foot notch to provide a stream path transition from the concrete apron to better facilitate juvenile fish passage. The stilling well station may require a flow recalibration following installation of the fish passage improvement.

Proposed Fish Passage Improvements: The fish passage improvements include a new roughened channel with rock chutes and pools at an average slope of 4 percent. The constructed chute-and-pool feature will occupy approximately 6,392 square feet within the stream channel covering an area of 34 feet by 188 feet. The maximum area of disturbance to accomplish the project is approximately 0.9 acres. The upstream end of the roughened channel will begin at the downstream edge of the Gaging Station flume. The current approximate six-foot drop from the flume apron will be spread over the approximate 188-foot length of the fish passage improvements. Flow will exit the flume into the upstream transition pool. The pool is designed to dissipate energy and provide resting habitat for fish before they swim through the flume. Flow will then travel over a series of chutes and pools, with varying lengths, until the downstream transition pool, which connects to the existing channel. Each chute will have a slope of eight percent and each pool will have a flat ten-foot horizontal length immediately following the upstream grade control structure. At the end of the 10-foot horizontal section, the channel has an adverse slope of varying degrees. The elevation difference between each pool's upstream and downstream grade control structures will be zero. Engineered streambed material (ESM) will be installed between the grade control structures. ESM is a rock gradation designed to remain in place up to the 100-year storm flow. All construction within the existing stream zone will occur after the stream is dewatered and temporarily re-routed via the 36-inch diameter water diversion pipe during low flow season (September through October 2011). (See Figure 4, Plan View.)

The following items describe specific features of the new chute-pool channel system:

Sheetpiles: Steel sheetpiles will provide a stable and consistent cross section below the flume. The sheetpiles interlock with on another to form a stable barrier to prevent subterranean water flow to undermine the engineered streambed. Large boulders will line the sheetpile on both the upstream and downstream sides. There will be two grade control techniques using sheetpiles: sheetpiles with a concrete cap and sheetpiles with no concrete cap. The sheetpiles with a concrete cap will be located at the end of each chute. The top of the cap will be sloped at eight percent, which matches the chute slope just upstream of the pool. Immediately downstream of the cap will be large boulders that are designed to remain in place and protect the downstream pool from scour. The sheetpiles with no concrete cap will be located at the end of each pool and will be placed to define and maintain the tailout of each pool. The tops of these sheetpiles are to be installed at 12 inches below the finished grade of the stream channel.

Figure 4 -- Auburn Ravine Site Plan



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

AUBURN RAVINE GAUGING STATION SITE PLAN
 Drawn By: D. HUNT Date: 2/22/2011 Scale: 1" = 100' @ 8-1/2 x 11 **FIGURE 4**

Sheetpiles will be driven into the ground to a depth of between 16 and 21 feet and will span the entire width of the channel. This configuration will armor the newly constructed bed as well as reduce the amount of sub-surface flow (i.e., promote surface flow) in order to allow better fish passage under lower flow conditions (the addition of smaller material to the matrix of larger placed rocks in the roughened channel will help control porosity and further reduce sub-surface flows). To help decrease corrosion of the sheetpiles, they will be designed with an additional cross-section corrosion allowance and will have epoxy applied along the top four feet. The application of the epoxy may occur prior to or after the sheetpiles have been driven into the ground. If the epoxy is applied prior to installing the sheetpiles, then extra care will be required to limit the removal of the epoxy by scraping against the gravel during installation.

Bank Stability and Revegetation Plan: Clearing will occur on both sides of the improved stream channel. Trees and shrubs will be removed minimally and within limits of disturbance only as indicated on plans. All oak trees great than 6-feet in diameter will be protected. Along the newly constructed banks (2H:IV) above the bankfull elevation (the 1.5-year frequency flood level), will be a single layer of rock. The rocks will have diameters ranging from four to five feet. These rocks will be back-filled with soil and rock and the slope will be re-vegetated. The boulders are designed to remain in place and protect the bank. The vegetation will provide roughness to decrease the flow velocity and to provide habitat. A detailed re-vegetation and erosion control plan is included within the project drawings (See sheet C-7 of NID Gaging Station Fish Passage Improvement Project plans).

Bypass Structure and Dewatering: In order to dewater the stream channel during construction, a bypass structure will be installed that will divert all streamflow around the construction area (approximately 300 ft of channel). It is anticipated that water will be diverted via gravity using a minimum 36-inch diameter pipe. The bypass pipe will be installed in a temporary trench along the left (south) bank, just north of the concrete path. The trench will be back-filled once the pipe is installed so that the pipe will remain buried for the duration of construction. The bypass intake will consist of a temporary cofferdam that will be installed across the upstream face of the flume and will divert all streamflow into the bypass pipe. The downstream end of the bypass structure will be located below the construction area such that the pipe outfall does not contribute to any scour or erosion in the existing channel or on the stream banks. The bypass structure will not be screened on either the upstream or downstream end so that no entrainment of fish can occur. The entire bypass structure will be removed once construction is finished and the trench will be back-filled and stabilized in accordance with the erosion control and re-vegetation plan.

Construction Staging Areas: Construction access is planned to be from Mossdale Court through the Lincoln Crossing Village subdivision south of the project. The existing concrete path will provide immediate access to the site.

All construction activities will be based on the south side of the stream channel. All construction equipment, materials, fuels and other items will be stored within the designated construction staging areas that provide the necessary petroleum containment required by Placer County Department of Environmental Health. All employee vehicle parking will occur within the construction staging area or along the access path within an easement held by NID. Material deliveries will access the concrete pathway from Mossdale Court. All materials will be dropped off within the staging area and will leave the pathway open for public use after the delivery. All reasonable efforts to protect the pathway from damage will be utilized. Any damage resulting from construction activities to individual sections of the path will be repaired following the completion of the project in an equal to or better condition to what it was prior to construction. Access will be regulated through an encroachment permit issued by the City of Lincoln.

Equipment and days and hours of operation: Likely construction equipment will include excavators, vibrating head sheet pile driver, cranes, backhoes, dump trucks, cement trucks, pickups, delivery trucks and similar related equipment. All construction equipment will be equipped with the latest sound-deadening mufflers and meet air quality requirements of the Placer County Air Quality Management District.

Work will begin no earlier than 7:00 a.m. and end at 7:00 p.m., or at dark, Mondays through Saturdays with no work on Sundays or federal holidays. Should weather prevent construction activities, the NID General Manager may authorize work on Sundays. If the contractor needs to work on the weekend, the adjoining landowners will be notified 48 hours in advance.

Construction schedule: Site preparation construction activities including clearing and grubbing, installation of the bypass pipe and establishment of the staging area would commence in September 2011. Actual dewatering including the installation of the cofferdam would start on or around September 15, 2011, and be completed within 45 days, weather permitting. The bypass is designed to meet the District's remaining, summer, irrigation, delivery requirements. Restoration of flow within the stream channel would follow construction, subject to satisfaction of the Stream Alteration Agreement with the California Department of Fish and Game. Site stabilization and bank stabilization/revegetation would follow and be complete no later than October 31, 2011. The in-stream construction schedule is necessitated by the District's irrigation delivery requirements. Construction earlier in the year would impact those irrigation deliveries and possibly impact the City of Lincoln's wastewater dilution requirements, which may be easier to meet during the proposed construction window.

OTHER RELATED PROJECTS

For purposes of this Initial Study/Mitigated Negative Declaration, the Gaging Station fish passage improvement project is a standalone project on Auburn Ravine. As noted above, there is also a second fish passage project, which is in the design stage, at the Hemphill Diversion Dam site located approximately 3.0 miles east at the northwest corner of the Turkey Creek Golf Club (1.5 miles upstream of State Route 193). It will be subject to a separate Initial Study. There are no other known fish passage obstructions west (downstream) of the Gaging Station site along Auburn Ravine.

PROJECT BENEFITS

The above described construction activities and the resulting channel improvements will greatly improve the conditions for fish passage at the Gaging Station without disturbing the long-term use of the gaging facility. Providing fish passage at the Gaging Station will allow access to quality spawning and rearing habitats upstream in Auburn Ravine that have become inaccessible to anadromous and resident fishes including Chinook salmon, steelhead/rainbow trout and other native fishes. Additionally, the project will greatly improve channel stability in the vicinity of the Gaging Station thereby reducing the potential for erosion and finer sediment inputs in downstream reaches of Auburn Ravine.

PUBLIC INVOLVEMENT

NID hosted two public workshops/sessions soliciting comments from the public regarding the Proposed Project. An informational meeting was held with the Lincoln Open Space Committee on February 9, 2011, and a community meeting was conducted on February 15, 2011. This latter meeting was open to the public. The public review period for the Initial Study/Mitigated Negative Declaration was from March 1, 2011 through March 31, 2011.

ENTITLEMENTS AND REQUIRED APPROVALS

Table 1 lists the required entitlements, permits, and approvals required for the project, as well as the responsible agency. The analysis in Section 4 relies on a number of reference documents that are included at the end of this Initial Study.

**Table 1-2
Required Approvals/Permits for Project**

Entitlements	Responsible Agency
Encroachment Permit	City of Lincoln
Stream Alteration Permit	California Department of Fish and Game
CWA 404 Permit	U.S. Army Corps of Engineers
CWA 401 Certification	California Regional Water Quality Control Board
Hazardous materials business plan	Placer County Environmental Health Department

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

CEQA DETERMINATION:

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

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

Signature _____ Date _____

Printed Name John Kirk, P.E., Maintenance Manager For: Nevada Irrigation District

This mitigated negative declaration reflects the independent judgment of NID, as the lead agency.

Written comments shall be submitted no later than 45 days from the posting date. The NID Board of Directors determination on this Mitigated Negative Declaration is final.

Submit written comments to:

John Kirk, P.E.
Maintenance Manager
Nevada Irrigation District
1036 W. Main Street
Grass Valley, CA 95945-5424

Or by e-mail to: kirk@nidwater.com

4. INITIAL STUDY CHECKLIST

I. Aesthetics

Would the project:

Environmental Issue	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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The south side of project site is located within the City of Lincoln's Lincoln Crossings Nature Preserve and Auburn Ravine Park. The primary site feature is a riparian stream zone that is also used for passive recreation. With the exception of a twelve (12) foot concrete multi-use trail, it is largely in a riparian setting within Auburn Ravine. The north side of Auburn Ravine is not included within the nature preserve, but it is within the land zoned as open space and is subject to City oak tree management requirements.

Regulatory Setting

The nature preserve area provides wetland preservation, oak tree preservation, enhanced natural drainage features for flood control and wildlife migration corridors. As such, the nature preserve contributes significantly to the aesthetics of the area. Relative to aesthetics, the City of Lincoln has standards for protecting oak trees. The nature preserve is maintained and managed to a natural state and therefore is part of the community image. The following applicable regulatory standards apply from the Lincoln Crossing Development Plan:

Section 3.0, Design Guidelines, Subsection 3.1, Landscape Design, subsection D, Oak Trees

- All native oak trees that are approved for removal and are greater than six (6) inches in diameter at 54 inches above greater shall be replaced with specimen trees having a total combined diameter equal to the diameter of the removed tree(s).

- Native oak trees greater than six (6) inches at 54 inches above grade that are not approved for removal but are critically damaged during construction also shall be replaced. Replacement shall be by specimen trees having a total combined diameter equal to the diameter of the removed tree(s). If the project site is not capable of supporting all the required replacement trees, a damage fee shall be paid to the City that is equivalent to the retail cost of the number of trees that cannot be accommodated plus the cost of maintaining those trees for five (5) years.

Section 2. Management and Maintenance Activities, Subsection 2.3.2.D, Pre-/Post-Review of Construction/Maintenance

- Except those activities previously approved by the U.S. Army Corps of Engineers (USACE), the Nature Preserve Manager should review all approved construction and on-going maintenance within the Nature Preserve Areas prior to implementation. The Nature Preserve Manager shall conduct a pre-construction review for any maintenance activity that requires use of heavy equipment to determine if any remediation is required.

General Plan ***Policy LU-12.4 Creek Natural Edges***

Where feasible, the City should preserve the existing natural edges along the city's creek system and wetland areas and restore impacted creeks by planting natural vegetation.

Impact Analysis

I. a. *Have a substantial adverse effect on a scenic vista?*

The Lincoln Crossings Nature Preserve weaves through the Lincoln Crossings Development Plan area and constitutes an integral component in the design of Lincoln Crossing. The nature preserve constitutes a scenic vista for users of the open space area on both sides of Auburn Ravine.

The Gaging Station, while manmade, is largely unobtrusive to users of the park and does not detract from the lineal, open space, park and nature preserve. The north side of Auburn Ravine is not included within the Lincoln Crossing Nature Preserve. Due to riparian vegetation and grade, the existing Gaging Station is not directly visible from the 12' multi-use trail. It is highly visible, however, from both sides of the Auburn Ravine bank.

The fish passage feature will become a new chute-pool channel within the banks of the ravine below the existing concrete chute. There will be six new combination pools and chutes to facilitate fish passage. The new-engineered channel will be approximately 187 feet long and be constructed to have a four percent gradient. In order to accommodate the new fish passage channel, the stream bank sides will be re-graded as needed to a maximum slope of 2 horizontal to 1 vertical (2:1) throughout. Clearing and grubbing within the stream bank will occur on both sides of the project area ranging in width between five (5) and fifteen (15) feet on both sides in the vicinity of the new pools and chutes. This stream bank clearing will involve removal of existing vegetation of the channel approximately 180 feet in length downstream of the concrete flume. The vegetation type within the project area on the north side is largely characterized with riparian vegetation that primarily includes California walnut, white alder, and willows. The land on the south side of the gage station includes willows and non-native grass.

The re-engineered stream bank will be stabilized with large boulders and re-planted with a variety of riparian vegetation including, arroyo willow, Gooddings' willow, sand bar willow. For added diversity within the stream bank (riparian zone), the Biological Resources section includes recommendations to include alders and cottonwoods. In

addition, wildflowers are recommended for the seed mix fore-vegetation of the terraced area above the stream bank.

The terrace on the north side of the streambed will only be disturbed should the contractor require access. Generally, work within the stream channel will not require equipment to impact the terrace on the north side. The terrace area on the south side will be used for all construction-staging activities during the 30- to 45-day construction period. As such, the ground and considerable vegetation will be disturbed.

The upper terrace area on both sides of the stream bank will be re-vegetated with native, grassland mixture, as needed. There are no oak trees identified within the terraced area on the south side of the Gaging Station project area. All oaks in the vicinity will be protected and are outside of the immediate construction and staging areas. It is not anticipated that any construction related activity or new landscaping will occur in proximity to the existing oak trees. All oak trees will be protected in accordance with Section 3.0, Design Guidelines, Subsection 3.1, Landscape Design, subsection D, Oak Trees of the City of Lincoln's, Lincoln Crossing Development Plan.

The construction related impacts will be short in duration. The visual affects of the fish passage channel and pools will add to the aesthetics of the Gaging Station as the severe drop off caused by years of rapid flows and velocities will be eliminated and replaced with a series of gentle pools. All disturbed areas on both sides of the project area will be stabilized and re-vegetated using native plant (See Sheet C-7, Erosion Control & Re-Vegetation Plan, Engineered Plans for the Auburn Ravine Fish Passage Improvement Project).

Upon completion of the fish passage a gentle channel with a series of pools will replace the higher velocity channel that continues to incise the stream bank and bed. The site will be re-vegetated to restore and soften the appearance of the engineered channel.

Impact Conclusion: The fish passage improvement features will not result in significant impacts to the Lincoln Crossing Nature Preserve scenic vista.

- I. b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

The site is not proximate to a state scenic highway.

Impact Conclusion: No impact.

- I. c. *Substantially degrade the existing visual character or quality of the site and its surroundings?*

See analysis under item I.a, above. As noted in the project description, heavy equipment will be needed to provide materials to the project site. Access to the construction staging area is proposed to utilize the path from Mossdale Court. In addition, the City of Lincoln is concerned with potential damage to the 12-foot wide bicycle/pedestrian path that traverses the project area within Auburn Ravine.

Mitigation Measure

MM I-c1: Any damage to any section of the concrete path attributed to project construction activities shall be repaired to an equal or better condition.

Timing: Completion of project
Responsibility: NID's Contractor
Reporting/verification: City of Lincoln prior to on-site construction

Impact Conclusion: With the inclusion of MM I-c1, the visual impact impacts will be reduced to less than significant.

I.d. **Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?**

The project will not introduce any new light sources.

Impact Conclusion: No impact

Impact Conclusion: With the inclusion of MM I-c1, the fish passage project will not result in a significant long-term, aesthetic impact.

II. Agricultural Resources and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by California Air Resources Board.

Would the project:

Environmental Issue	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"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forestland (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"/>
d) Result in the loss of forestland or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?

Environmental Setting

The project area is in a riparian stream zone with man-made features.

Regulatory Setting

The State Farmland Mapping and Monitoring Program (FMMP) maintains *Important Farmland in California, 2004*, maps and data used for analyzing impacts to California’s agricultural resources. Agricultural land is rated according to soil quality and irrigation status with the best quality land identified as Prime Farmland. The program also identifies land that qualifies as Farmland of State Importance, Unique Farmland, and Farmland of Local Importance. The maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance.

The California Forest Practice Act was enacted in 1973 to ensure that logging is done in a manner that will preserve and protect our fish, wildlife, forests and streams. The Act and Rules are codified in the Public Resources Code.

Impact Analysis

- II.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?*

The project site is not located in an area designated as Prime, Unique, or Farmland of Statewide Importance. The project site is located within residential “Estate” land use designated parcels. Therefore, there would be no conversion of designated Prime, Unique, or Farmland of Statewide importance to non-agricultural use.

Impact Conclusion: No Impact

- II.b. *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

The proposed project would not conflict with existing agricultural zoning or conflict with a Williamson Act contract. There would be no impact from the proposed project.

Impact Conclusion: No Impact

- II.c. *Conflict with existing zoning for, or cause rezoning of, forestland (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))?*

The project site does not include forestlands or lands zoned Timberland Production.

Impact Conclusion: No Impact

- II.d. *Result in the loss of forestland or conversion of forestland to non-forest use?*

The project site is located within a Nature preserve and is zoned open space. There are no timber resources on site.

Impact Conclusion: No Impact

- II. e. *Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, or non-agricultural use or conversion of forestland to non-forest use?*

The current conditions that enable South Sutter Water District to receive irrigation water from NID along the canal route would remain unchanged with the implementation of the project.

Impact Conclusion: No Impact.

Impact Conclusion: There would be no changes expected from the fish passage improvement project that would result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use. Therefore, there would be no impacts from development of the project and mitigation measures are not required.

III. Air Quality

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

A region's air quality is influenced by the region's climate, topography, and pollutant sources. The characteristics of the region encompassing the Project are such that the area can, at times, have the potential for high concentrations of regional and localized air pollutants. The primary source of the Environmental Setting section is taken from the Village 7 Specific Plan Environmental Impact Report.

Climate and Topography

The Project is located in western Placer County. This portion of Placer County is part of the larger Sacramento Valley Air Basin (SVAB). The climate of the SVAB is Mediterranean in character, with mild, rainy winter weather from November through March and warm to hot, dry weather from May through September. The physiographic features giving shape to the SVAB are the Coast Range to the west, the Sierra Nevada to the east, and the Trinity Range to the north. These ranges channel winds through the Sacramento Valley, but also inhibit dispersion of pollutant emissions because the ranges can block pollutants from exiting the valley. The predominant annual and summer wind pattern is the full sea breeze from the south-southwest, commonly referred to as the "Delta breeze." These cool winds originate from the Pacific Ocean and flow through a sea-level gap in the Coast Range called the Carquinez Straits. In the winter season (December through February), northerly winds predominate. In the winter months, the SVAB experiences a high percentage of calm atmospheric conditions. These calm conditions result in the stagnation of Sacramento Valley air, especially during late fall and early spring. These calm conditions act to restrict dispersion of pollutants released near ground level. Without air movement, air pollutants can collect and concentrate in a single area, increasing health hazards. Air pollution problems in the SVAB are further exacerbated by the fact that pollution can migrate from the San Francisco Bay area to the foothills of the Sierra Nevada by means of the Carquinez Straits.

Criteria Air Pollutants

Criteria air pollutants are a group of pollutants for which federal or state regulatory agencies have adopted ambient air quality standards. Criteria air pollutants are: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead. Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between oxides of nitrogen (NO_x) and reactive organic gases (ROG). A brief description of the criteria air pollutants is provided below. Table 4.4-1 lists the health effects associated with these pollutants.

Ozone, commonly referred to as smog, is greatest on warm, windless, sunny days. The type of ozone referred to in this section is called tropospheric ozone (called "bad ozone" by scientists), since it lies very close to the earth's surface (in the troposphere). Ozone is not emitted directly into the air, but formed through a complex series of chemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x). These reactions occur over time in the presence of sunlight. Ground level ozone formation can occur in a matter of hours under ideal conditions. The time required for ozone formation allows the reacting compounds to spread over a large area, producing a regional pollution concern. Once formed, ozone can remain in the atmosphere for one or two days. Ozone is removed from the atmosphere through rainout, washout, and chemical reaction with plants. The principal sources of the ozone precursors (ROG and NO_x) are the combustion of fuels and the evaporation of solvents, paints, and fuels. Motor vehicles produce over 70 percent of the NO_x in the region.

Carbon Monoxide is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas

with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. Through control measures adopted by state, local, and federal agencies, all areas of the SVAB have attained the state and federal CO standards. However, the potential still exists for incidents of highly localized concentrations of CO to occur.

Coarse Particulate Matter (PM₁₀) and Fine Particulate Matter (PM_{2.5}) consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of suspended particulate matter, like pollen and windblown dust, occur naturally. However, in populated areas, most fine suspended particulate matter is caused by road dust, diesel soot, combustion, abrasion of tires and brakes, and construction activities. Fine particles can remain suspended in the air and travel long distances.

The health effects of particulate matter (PM) depend on the nature of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances absorbed onto fine particulates or with fine dust particles of silica or asbestos. Generally, health effects associated with PM may result from both short-term and long-term exposure to elevated levels. These effects may include increased mortality, reduced lung function, aggravation of asthma and bronchitis symptoms, and respiratory disease.

Nitrogen Dioxide (NO₂) is generated by the burning of fuel and can produce lung damage in exposed individuals. NO₂ can also react in the atmosphere to form acid rain. NO₂ is one component of NO_x, which is an ozone precursor. NO₂ increases respiratory disease and irritation and may reduce resistance to certain infections.

Sulfur Dioxide (SO₂) can be produced by coal or oil burning power plants or industries, refineries, and diesel engines. SO₂ can increase lung disease and breathing problems in asthmatics, and can react in the atmosphere to form acid rain. SO₂ can irritate the lungs, damage vegetation and materials, and reduce visibility.

Lead concentrations in the air are generated by industrial processes, primarily metals processing. The highest air concentrations of lead are usually found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Lead can cause blood effects such as anemia and the inhibition of enzymes involved in blood synthesis. Lead may also affect the central nervous and reproductive systems. Ambient lead levels have dropped dramatically as the percentage of motor vehicles using unleaded gasoline continues to increase. In the past, motor vehicles were the major contributor of lead emissions to the air. As a result of EPA's regulatory efforts to reduce lead in gasoline, air emissions of lead from the transportation sector, and particularly the automotive sector, have greatly declined over the past two decades. .

Regional Air Quality

Criteria air pollutants are classified in each air basin, county, or in some cases, within a specific urbanized area. The classification is determined by comparing actual monitoring data with state and federal standards. If a pollutant concentration is lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

Placer County is currently designated as a non-attainment area for state and federal ozone standards and state particulate matter (PM10) standards. For all other air pollutants for which a standard has been adopted, Placer County is either in attainment or unclassified. In relation to the federal ozone standard, Placer County is located within an area designated by the U.S. Environmental Protection Agency (EPA) as the Sacramento Federal Ozone Nonattainment Area. This area includes all of Sacramento and Yolo counties, and portions of El Dorado, Solano, Placer, and Sutter counties. For Placer County, the Nonattainment Area extends from the Sacramento/Placer County line east to the summit of the Sierra Nevada.

In 2004, the Sacramento region was classified as a “serious” ozone nonattainment area with an attainment deadline of June 15, 2013. However, since the Sacramento region needs to rely on the longer term emission reduction strategies from state and federal mobile source control programs, the 2013 attainment date cannot be met. Consequently, on February 14, 2008, CARB, on behalf of the air districts in the Sacramento region, submitted a letter to EPA requesting a voluntary reclassification (bump-up) of the Sacramento Federal Nonattainment Area from a “serious” to a “severe” 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019. The five districts in the nonattainment area – Sacramento Metropolitan Air Quality Management District (SMAQMD), the Yolo-Solano Air Quality Management District (YSAQMD), the Placer County Air Pollution Control District (PCAPCD), the El Dorado County Air Quality Management District (EDCAQMD), and the Feather River Air Quality Management District (FRAQMD) – prepared a draft “Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan” in September 2008. The plan includes the information and analyses to fulfill the federal Clean Air Act requirements for demonstrating reasonable further progress and attainment of the 1997 8-hour ozone NAAQS for the Sacramento region. In addition, this plan establishes an updated emissions inventory, provides photochemical modeling results, proposes the implementation of reasonably available control measures, and sets new motor vehicle emission budgets for transportation conformity purposes.¹

Existing Local Air Quality

CARB collects ambient air quality data through a network of air monitoring stations throughout the state. These data are summarized annually and are published in CARB’s California Air Quality Data Summaries. The monitoring stations that are closest to the City of Lincoln are located in Rocklin and Roseville. Table III-1 identifies the national and state ambient air quality standards for air pollutants.

According to the most recent emissions inventory data for Placer County, mobile sources are the largest contributors of both ROG and NOx.² In the Sacramento Valley Air Basin, emissions of NOx decreased from 1990 to 2005 and are projected to continue decreasing from 2005 to 2020. More stringent mobile source emission standards and cleaner burning fuels have largely contributed to the decline in NOx emissions. ROG emissions have been decreasing for the last 30 years due to more stringent motor vehicle standards and new rules for control of ROG from various industrial coating and solvent operations.³

¹ Sacramento Regional 8-Hour Ozone and Reasonable Further Progress Plan, draft, September 2008,

² CARB, <www.arb.ca.gov/app/emsmv/emssumcat_query>.

³ California Air Resources Board, ARB Almanac 2008, p. 4-58.

**Table III-1
Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone	1-hour 8-hour	0.075 ppm	0.09 ppm 0.07 ppm
Carbon Monoxide	1-hour 8-hour	35.0 ppm 9.0 ppm	20.0 ppm 9.0 ppm
PM ₁₀	24-hour annual	150 ug/m ₃ 50 ug/m ₃	50 ug/m ₃ 20 ug/m ₃
PM _{2.5}	24-hour Annual	35 ug/m ₃ 15 ug/m ₃	12 ug/m ₃
Notes: ppm = parts per million ug/m ₃ = micrograms per cubic meter Source: California Air Resources Board, Ambient Air Quality Standards, 2009. www.arb.ca.gov/aqd/aqfaq/stdtable.html			

Regulatory Setting

Federal Regulations

The federal Clean Air Act (CAA) governs air quality in the United States. The U. S. Environmental Protection Agency (USEPA) administers the CAA. The USEPA has established ambient air quality standards (AAQS) for common pollutants. The ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the USEPA regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.

As required by the federal Clean Air Act, standards have been established for the following criteria pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), sulfur oxides, and lead.

The USEPA classified western Placer County, as a non-attainment area for the eight-hour federal ozone standard. For all other federal criteria pollutants, Placer County is designated as attainment or unclassified.

State Regulations

The California Clean Air Act (CCAA) governs air quality in California. The CCAA is administered by CARB at the state level and by air quality management districts at the regional and local levels. Pursuant to the CCAA, the State of California has also established ambient air quality standards. California standards are generally considered more stringent than the corresponding federal standards, and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. CARB classifies Placer County, including the project area, as a non-attainment area for state ozone, as well as non-attainment for PM₁₀. For all other state criteria pollutants, Placer County is designated as attainment or unclassified.

Local Standards

The PCAPCD’s responsibilities include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA. The

PCAPCD is a special district created by state law to enforce federal, state and local air pollution regulations. The PCAPCD recommends the thresholds shown in Table III-2 to determine whether or not a project would result in a significant impact on air quality.

**Table III-2
PCACPD Recommended Thresholds for Potential Air Pollutants**

Pollutant	Emissions Threshold (pounds per day)
ROG	82
NO _x	82
CO	550
PM ₁₀	82
Source: Placer County Air Pollution Control District, 2004.	

Impact Analysis

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

The Proposed Project would result in short-term, temporary air pollutant emissions of particulate matter, carbon monoxide, reactive organic compounds (ROG), and nitrogen oxides (NO_x) during construction as a result of ground disturbance activities and the operation of construction vehicles and equipment. These impacts would be minimal and limited due to the short-term construction period. Ground disturbance activities will primarily occur within the streambed where soil/ground moisture content will be high. As a result, fugitive dust (PM₁₀) emissions will be minimal. The moisture content of the soil along the terraced bank is also expected to have greater moisture content. These short-term construction emissions are, therefore, not anticipated to affect applicable air quality standards. Although this impact is considered less than significant, Mitigation Measure III-a1 is included to ensure that potential air quality construction emissions are minimized.

Mitigation Measure

MM III-a1. To reduce construction-generated emissions and potential fugitive dust pollutants, the contractor shall demonstrate compliance with all applicable California Air Resources Board construction standards. The construction emissions/dust control plan shall be presented to the Placer County Air Pollution Control District for review and approval prior to groundbreaking activities.

<i>Timing:</i>	<i>Prior to on-site construction and on-going</i>
<i>Responsibility:</i>	<i>NID</i>
<i>Reporting/verification:</i>	<i>PCAPCD</i>

Impact Conclusion: No significant impact with mitigation.

III. b. *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Placer County is in non-attainment status for both federal and state ozone standards and for the state PM₁₀ standard. Construction activities would result in short-term increases in emissions from the use of heavy equipment that generates dust and exhaust. Project construction may create short-term increases in fugitive dust and both ROG and NO_x emissions from vehicle and equipment operation. Because construction is expected to

be short term, emissions are not anticipated to result in a violation or substantial adverse contribution to air quality standard attainment status. To the extent that the construction project will have impacts MM III-a1 above will mitigate such short-term impacts.

Upon completion of construction, the fish passage project would not generate pollutant emissions as no equipment would be used during operation. Vehicular traffic is generally the primary source of long-term project emissions. The increased number of vehicle trips would generate a minimal amount of air pollutants. This minor increase in additional vehicle trips is not expected to exceed State or federal air quality standards.

Impact Conclusion: Less than significant impact

- III. c. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?*

Refer to response a) and b) above. While the project would generate short-term air quality impacts as a result of construction activities, it would not result in long-term or cumulatively considerable increases in air quality pollutant emissions for which Placer County is currently in non-attainment (ozone and PM₁₀). The project would not result in increased traffic or a long-term increase in air pollutant emissions. The proposed project would not significantly increase vehicular trips or otherwise result in significant increases in pollutant emissions. The air pollutant emissions increase associated with construction activities is less than significant and would result in less than significant contributions to cumulative pollutant increases in the region.

Impact Conclusion: Less than significant impact

- III. d. *Would the project expose sensitive receptors to substantial pollutant concentrations?*

“Sensitive receptors” to air quality issues are considered residences, schools, parks, hospitals, or other land uses where children or the elderly congregate, or where outdoor activity is the primary land use. Approximately 10 residences fronting Southbridge Circle and Mossdale Court are located on the bluff overlooking the Nature Preserve along the southern project boundary. These homes are approximately 450-feet away from the project site. Similarly, there are a number of homes located approximately 270 to the north fronting the south side of Popular Lane. These areas have the potential to be exposed to limited pollutant concentrations during construction. The proposed project could result in temporary emissions of particulate matter, carbon monoxide, ROG, and NO_x during construction as a result of ground disturbance activities and the operation of construction vehicles and equipment.

The fish passage project is a maintenance project that once constructed, would not generate pollutant emissions and no machinery would be used during operation. Trips to the proposed project site would most likely originate primarily in Lincoln, especially in the residential communities surrounding the project site. Overall impacts to residences during construction would be less than significant due to the limited nature of the project and short-term construction period.

Impact Conclusion: Less than significant impact

III. e. **Would the project create objectionable odors affecting a substantial number of people?**

Operation of construction equipment has the potential to cause objectionable odors from exhaust, which may affect people in the immediate vicinity. Use of this equipment would be minimal, and any odors would be temporary and intermittent in nature. The project is intended to be constructed in the fall when ambient temperatures are lower, mixing of air is greater and inversion layers tend to be less common. In addition, residences potentially impacted are at least 270 feet away from project construction activities.

As an environmental enhancement, stream maintenance project there will be no on-going potential for generation of objectionable odors. This impact is considered less than significant.

Impact Conclusion: Less than significant impact

Impact Conclusion: After the implementation of MM III-1, above, impacts to air resources would be considered less than significant with mitigation.

IV. Biological Resources

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Auburn Ravine is a tributary to the Sacramento River. The watershed drains the lower foothills of the Sierra and its headwaters are located near the City of Auburn at an elevation of approximately 1,600 feet. (Figure 2) Auburn Ravine emerges from the Sierra foothills as it flows through the Town of Lincoln. Downstream of Lincoln the channel becomes highly altered as it flows through a channelized section within agricultural lands dominated by rice fields. Auburn Ravine supports runs of Chinook salmon and steelhead trout.

Three general biological communities were observed within the study area. They include Riparian Woodland, Annual Grassland and Open Water. The vegetation and variations within these biological communities are described below and shown in Figure 4. Appendix A lists the plant species that are known to occur in the Gaging Station study area region. Appendix B lists the wildlife and fish species that are known to occur in the Gaging Station study area region.

Riparian Woodland

The area around the Gaging Station site consists primarily of riparian woodland that shows evidence of previous disturbance. Valley oak (*Quercus lobata*) and northern California black walnut (*Juglans hindsii*) are the primary over-story trees in the woodland. Both species grow in riparian and upland floodplains. Arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), narrow-leaved willow (*Salix exigua*), Goodding's black willow (*Salix gooddingii*), white alder (*Alnus rhombifolia*), and Fremont cottonwood (*Populus fremontii*) form a narrow riparian strip along the banks of Auburn Ravine.

California grape (*Vitis californica*) is a vine growing among the trees and shrubs. In moist, open locations several wetland species are common, including various rushes (*Juncus* spp.). Creeping wildrye (*Elymus triticoides*) forms dense stands at several locations along the bank. California rose (*Rosa californica*), mugwort (*Artemisia douglasiana*), and the non-native Himalayan blackberry (*Rubus armeniacus*) are common understory species.

The northern California black walnut is considered a special-status species on the California Native Plant Society (CNPS) List 1B. However, this native species was commonly used as rootstock for the cultivated English or Persian walnut. As a result, it is now widespread throughout Northern California, particularly in riparian areas. The CNPS status is given to the few areas where the trees were known to be native before Caucasians came to the region. The trees along Auburn Ravine are almost certainly introduced by dispersal from orchards and other areas.

Annual Grassland

There is also a narrow band of grassland adjacent to the paved path along the southern boundary of the study area. Although a few species growing in this area are native, most are not. Common species include wild oats (*Avena* sp.), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian thistle (*Carduus pycnocephalus*), and hop clover (*Trifolium dubium*).

Open Water

The majority of the stream in Auburn Ravine is open water and not covered by a tree canopy. Nevertheless, several wetland and freshwater marsh species grow in patches along the margins of the stream, sometimes forming dense vegetation.

REGULATORY SETTING

Federal Regulations

Federal Regulation of Waters of the United States

The U.S. Army Corps of Engineers (USACOE) and the Environmental Protection Agency (USEPA) regulate the discharge of dredged or fill material into Waters of the United States, including wetlands, under Section 404 of the Clean Water Act (CWA). Projects that would result in the placement of dredged or fill material into Waters of the U.S. require a Section 404 permit from the USACOE. Some classes of fill activities may be authorized under general permits if specific conditions are met; others will require individual permits.

Section 401 of the CWA requires the issuance of a water quality certification or waiver thereof for all Section 404 nationwide or individual permits issued by the Corps. The USEPA has deferred water quality certification authority to the Regional Water Quality Control Board (RWQCB). The federal government also supports a policy of minimizing “the destruction, loss, or degradation of wetlands.” Executive Order 11990 (May 24, 1977) requires that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

Federal Endangered Species Act

Sections 9 and 4(d) of the Endangered Species Act of 1973 (ESA) prohibit the “take⁴” of any fish or wildlife species listed as endangered or threatened, including the destruction of habitat that could hinder species recovery. Section 9 also prohibits the removal, possession, damage, or destruction of any endangered plant from federal land as well as acts to remove, cut, dig up, damage, or destroy an endangered plant species in non-federal areas in knowing violation of any state law or in the course of criminal trespass.

Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act states that without a permit issued by the U.S. Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird.

⁴ Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.

State Regulations

State Regulation of Waters

The CDFG regulates activities that would interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream. Section 1602 of the California Fish and Game Code (CFG) requires notification of the CDFG for lake or stream alteration activities. If, after notification is complete, the CDFG determines that the activity may substantially adversely affect an existing fish and wildlife resource, the CDFG has authority to issue a streambed alteration agreement under Section 1603 of the CFG.

California Endangered Species Act

California implemented its own Endangered Species Act (CESA) in 1984. The CESA prohibits the take of state-listed endangered and threatened species; however, habitat destruction is not included in the state's definition of take. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. CDFG administers the CESA and authorizes take through Section 2081 agreements (except for designated "fully protected species").

California also designates Species of Special Concern, which are those species experiencing serious population declines or range retractions that, if continued, could qualify them for State threatened or endangered status. Although this is an administrative designation that carries no formal legal status, the intent of the designation is to focus attention on the conservation risk, to stimulate research on poorly known species, and to achieve conservation and recovery of these species before they meet CESA criteria for listing as threatened or endangered. As such, Species of Special Concern are considered during the environmental review process as described in Section 15380 of the CEQA Guidelines.

Regarding listed rare and endangered plant species, CESA defers to the California Native Plant Protection Act (NPPA) of 1977, which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants, which are not regulated under the NPPA. In this case, plants listed as rare or endangered under the NPPA are not protected under CESA but can be protected under CEQA. In addition, plants that are not state-listed but meet the state standards for listing are also protected under CEQA (Guidelines, Section 15380).

California Fish and Game Code Bird Protections

Section 3503 of the CFG prohibits destruction of the nests or eggs of most native resident and migratory bird species. Section 3503.5 of the CFG specifically prohibits the taking of raptors or destruction of their nests or eggs.

Regional Conservation Plans

Environmental review and permitting on a project-by-project basis is being increasingly accomplished using Natural Community Conservation Plans (NCCPs) and Habitat Conservation Plans (HCPs). These programs are essentially streamlined listed species take permitting processes, but they effectively allow for a landscape-scale, ecosystem-based approach to conservation planning on a regional scale. The Natural Communities Conservation Planning process is authorized and codified in Section 2800 of the California Fish and Game Code. The goal of Natural Communities Conservation Planning is to conserve healthy functioning ecosystems and the species that are supported by them.

Habitat Conservation Plans are required under the Federal Endangered Species Act as part of the Section 10(a) Incidental Take Permit provision. The HCP standards are to fully mitigate for impacts and must not jeopardize the continued existence of listed species. Placer County is developing a joint HCP/NCCP covering the western portion of Placer County.

Impact Discussion

- IV-a. *Will the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Game or U.S. Fish & Wildlife Service?*

The analysis is divided into two primary categories: 1) aquatic and semi-aquatic species and 2) terrestrial species.

Aquatic and Semi-Aquatic Species

Special-status aquatic and semi-aquatic species that may potentially occur in the Project area include: Central Valley fall/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*), Central Valley steelhead (*Oncorhynchus mykiss irideus*), Pacific lamprey (*Entosphenus tridentatus*), river lamprey (*Lampetra ayresii*), northwestern pond turtle (*Actinemys marmorata marmorata*), and California red-legged frog (*Rana aurora draytonii*). The species listed above include aquatic species that may potentially occur in the Project area that are currently listed on federal or state watch lists for special animals, species of concern, and/or threatened or endangered species under the state or federal Endangered Species Act (ESA). This list of species was refined from the pool of potentially relevant species included on the California Department of Fish and Game (CDFG) Special Animals List (CDFG 2009) which identifies those taxa of the greatest conservation need in California, as well as the species lists generated from USFWS and California Natural Diversity Database (CNDDDB) queries performed specifically for the Lincoln, CA USGS quadrangle encompassing the Project area. Potential impacts to these special-status aquatic species from Project activities are discussed below along with recommended mitigation measures where appropriate.

Central Valley fall/late fall-run Chinook salmon

Species Status

The Central Valley fall/late fall-run Evolutionary Significant Unit (ESU) of Chinook salmon (*Oncorhynchus tshawytscha*) is classified as a Species of Concern under the federal Endangered Species Act (ESA). This species is also designated as a Species of Concern by the National Marine Fisheries Service (NOAA Fisheries), as Sensitive by the USDA Forest Service (USFS), and as Vulnerable by the American Fisheries Society (AFS). The late fall-run is designated as a California Species of Special Concern (SSC) by CDFG.

Summary of Natural History/Biology

Chinook salmon are anadromous salmonids that employ a variety of life history strategies to take advantage of the diversity of river systems and regional conditions to which they are adapted. Central Valley fall/late fall-run Chinook salmon typically spend three to four years in the ocean before returning to streams tributary to the Sacramento

and San Joaquin rivers to spawn. Adult spawners typically migrate upstream into their natal streams beginning with the lower water temperatures and increased streamflow associated with fall and winter rains. The peak spawning period for fall-run Chinook salmon is approximately late October/November (Moyle 2002). Like all salmonids, Chinook salmon require cool, clean, well-oxygenated water for rearing and survival, as well as clean gravel substrates for successful spawning and egg incubation. After emerging from the gravel, juvenile Chinook salmon have two primary emigration strategies; some individuals emigrate within a few days of emergence, while most are believed to rear in their natal streams through the spring, then emigrate in May or June when the water temperatures begin to become stressfully warm. Others may rear for a full year before emigrating. Additional life history information for this species can be found in Moyle (2002).

Relevance of Species to Project

Fall/late fall-run Chinook salmon are known to occur in Auburn Ravine and have been observed trying to ascend the Gaging Station flume in years past (unpublished data). Bailey (2003), in his summary of data from multiple sources (including unpublished CDFG data), noted that native and hatchery-origin fall-run Chinook were present in Coon Creek, Auburn Ravine, and Dry Creek watersheds in Placer County. Electrofishing surveys conducted by CDFG in April 2005 confirmed the presence of juvenile Chinook salmon in Auburn Ravine (CDFG 2008). Although there are not enough quantitative data to estimate population sizes, historical and anecdotal evidence (including that summarized by Bailey [2003]) suggests that a continued run of fall/late fall-run Chinook still persists in Auburn Ravine.

Central Valley fall/late fall-run Chinook salmon likely use the Project area primarily as a migration corridor. Adult Chinook salmon (spawners) attempt to ascend the Gaging Station flume to access spawning habitats upstream in Auburn Ravine, and any juvenile Chinook salmon successfully spawned upstream would migrate downstream through the Project area toward the ocean after emerging from the gravel. Therefore, the primary adverse effect of Project activities on Chinook salmon will be dewatering of the streambed during construction. While it is unlikely that many Chinook salmon will be present in the work area during the time when the channel is dewatered (i.e., juveniles will likely have out-migrated already and adult spawners will likely not have arrived yet), no fish will be able to survive in the dewatered portion of the channel during construction; therefore all fish will need to be relocated. Additionally, it is assumed that the bypass pipe will be impassable to all fish moving upstream (fish will be able to pass through the bypass in the downstream direction, however). Other potential impacts to Chinook salmon may include potential water-quality issues associated with sedimentation or hazardous material spills during construction. Implementation of Mitigation Measures (MM IV-a1 through IV-a3) discussed below would reduce such impacts to a less than significant level. It should be noted, however, that the overall impacts of the Project on Chinook salmon are expected to be decidedly positive, with the outcome being improved fish passage and, therefore, unimpeded access to additional spawning and rearing habitats upstream of the Project area in Auburn Ravine.

Central Valley Steelhead

Species Status

The Central Valley Distinct Population Segment (DPS) of steelhead (*Oncorhynchus*

mykiss irideus) is listed as Threatened under the federal ESA. This species is also designated as Threatened by the AFS. Coon Creek and one of its tributaries (Doty Creek) just to the north of the Project area, as well as Dry Creek and two of its tributaries (Secret Ravine and Miners Ravine) just to the south of the Project area, are listed as critical habitat for Central Valley steelhead (NOAA 2005); no critical habitat for this species is listed in Auburn Ravine.

Summary of Natural History/Biology

Steelhead are anadromous salmonids that employ a variety of life history strategies that take advantage of the diversity of river systems and regional conditions to which they are adapted (the non-anadromous forms are resident rainbow trout). Adult Central Valley steelhead migrate upstream from the ocean between October and May with peak spawning from January through March. Like other salmonids, steelhead require cool, clean, well oxygenated water for rearing and survival, as well as clean gravel substrates for successful spawning and egg incubation. In California, most juvenile steelhead remain in their natal streams for two years before emigrating to the ocean during the late spring or early summer (although strategies from one to four years of freshwater residence are known from California). Juvenile migration to the ocean generally occurs from November through May. Because steelhead juveniles remain in freshwater for several years, summer temperatures are often limiting (e.g., steelhead are excluded from streams where summer water temperatures exceed 23-27°C for extended periods of time). However, it is assumed that the inter-basin transfer of water into Auburn Ravine for the conveyance of irrigation delivery greatly enhances steelhead-rearing conditions due to the influx of relatively large volumes of cool water during the otherwise driest and warmest months of the year. Additional life history information for steelhead can be found in Moyle (2002).

Relevance of Species to Project

Central Valley steelhead are known to occur in Auburn Ravine and have been observed ascending the Gaging Station flume in years past. Bailey (2003) summarized sampling events in 1959, 1971, 1979, and 1984 that indicated the presence of steelhead in Auburn Ravine. Fish population surveys conducted by CDFG in 2004 and 2005 found steelhead to be the most abundant fish species on average during both the winter and spring sampling efforts in Auburn Ravine (CDFG 2008); enough steelhead data were collected to estimate an average of 2,163 juvenile steelhead present per river mile between the McBean Park and Wise Road sampling locations (just upstream of the Project area).

Central Valley steelhead likely inhabit the immediate Project area, as well as uses it as a migration corridor (i.e., adult spawners and juvenile out-migrants). Therefore, the primary adverse effect of Project activities on steelhead will be dewatering of the streambed during construction. No fish will be able to survive in the dewatered portion of the channel during construction, thus all fish will need to be relocated. Additionally, it is assumed that the bypass pipe will be impassable to all fish moving upstream (fish will be able to pass through the bypass in the downstream direction, however). Other potential impacts to steelhead may include potential water-quality issues associated with sedimentation or hazardous material spills during construction. Implementation of Mitigation Measures (MM IV-a1 through IV-a3) discussed below would reduce such impacts to a less than significant level. It should be noted, however, that the overall impacts of the Project on steelhead are expected to be decidedly positive, with the outcome being improved fish passage and, therefore, unimpeded access to additional

spawning and rearing habitats upstream of the Project area in Auburn Ravine.

Pacific Lamprey

Species Status

Pacific lamprey (*Entosphenus tridentatus*) is listed on the CDFG Class 3 watch list for Species of Special Concern and is designated as Vulnerable by the AFS.

Summary of Natural History/Biology

Pacific lamprey is a parasitic, anadromous lamprey native to the northern Pacific Ocean. It is the largest and most common lamprey in California, found in the Sacramento and San Joaquin river drainages up to the major dams and historically migrated in to the upper reaches of the major tributaries in the Central Valley (Moyle 2002). Unfortunately, Pacific lamprey is poorly studied in California. Pacific lampreys may have multiple life histories, similar to salmon and steelhead, especially in the larger rivers (e.g., some rivers may have both resident and anadromous sub-populations). Adult Pacific lampreys migrate from the ocean to their natal streams to spawn in the fall and winter. Adult Pacific lampreys are believed to spawn primarily between March and June, although some populations may spawn earlier, in January and February (Moyle 2002). Larval lampreys, or ammocoetes, emerge from the gravel and are carried downstream where they seek out calm backwater and side-water habitats with soft mud and silt substrates where they burrow tail-first into the substrates and feed by filtering items from the water column. Pacific lampreys remain as ammocoetes for five to seven years, before beginning their migration to the ocean where they typically remain for one to two years before returning to their natal streams to spawn. Additional life history information for Pacific lamprey can be found in Moyle (2002).

Relevance of Species to Project

Pacific lamprey is known to occur within the lower Sacramento River and its tributaries, including Auburn Ravine, therefore this species is expected to occur in the vicinity of the Project area. The Gaging Station is known to limit the migration of salmon and steelhead, and may also limit the migration of Pacific lamprey, although the flume structure is likely to be less of a barrier to lamprey, which can cling to rocks with their mouthparts (via suction) and effectively climb steep barriers. The soft-bottomed portions of backwater and side-water habitats above and below the Project area structure may provide adequate habitat for lamprey ammocoetes. The identification of lamprey ammocoetes (the most common life stage captured in the field) can be difficult, especially with live individuals. While most lampreys present in Auburn Ravine are assumed to be Pacific lamprey, river lamprey may also be present.

The primary effect of Project activities on Pacific lamprey will be dewatering of the streambed during construction. No fish will be able to survive in the dewatered portion of the channel during construction, thus all fish will need to be relocated. Additionally, it is assumed that the bypass pipe will be impassable to all fish moving upstream, even lamprey. Other potential impacts to Pacific lamprey may include potential water-quality issues associated with sedimentation or hazardous material spills during construction. Implementation of Mitigation Measures (MM IV-a1 through IV-a3) discussed below would reduce such impacts to a less than significant level. It should be noted, however, that the overall impacts of the Project on Pacific lamprey are expected to be decidedly positive, with the outcome being improved fish passage and, therefore, unimpeded access to additional spawning and rearing habitats upstream of the Project area in Auburn

Ravine.

River Lamprey

Species Status

River lamprey (*Lampetra ayresii*) is listed as California Species of Special Concern (SSC) by CDFG and is designated as Vulnerable by the AFS.

Summary of Natural History/Biology

River lamprey is a parasitic, anadromous lamprey native to the northern Pacific Ocean. In the Central Valley, river lamprey is found in the lower reaches of the Sacramento and San Joaquin rivers and their tributaries (Moyle 2002). Unfortunately, river lamprey is poorly studied in California. Like Pacific lamprey, river lamprey may have multiple life histories, similar to salmon and steelhead, especially in the larger rivers (e.g., some rivers may have both resident and anadromous sub-populations). Adult river lampreys migrate from the ocean to their natal streams to spawn riffle areas during winter. Spawning is believed to occur between February and May (Moyle 2002). Ammocoetes emerge from the gravel and are carried downstream where they seek out calm backwater and side-water habitats with soft mud and silt substrates, where they burrow tail-first into the substrates and feed by filtering items from the water column. River lampreys remain as ammocoetes for three to five years before beginning their migration to the ocean where they typically remain for less than one year before returning to their natal streams to spawn. Additional life history information for river lamprey can be found in Moyle (2002).

Relevance of Species to Project

River lamprey is known to occur within the lower Sacramento River and its tributaries, and may occur in Auburn Ravine. Therefore, this species may occur in the vicinity of the Project area. The Gaging Station is known to limit the migration of salmon and steelhead, and may also limit the migration of river lamprey, although the flume structure is likely to be less of a barrier to lamprey, which can cling to rocks with their mouthparts (via suction) and effectively climb steep barriers. The soft-bottomed portions of backwater and side-water habitats above and below the Project area may provide adequate habitat for lamprey ammocoetes. The identification of lamprey ammocoetes (the most common life stage captured in the field) can be difficult, especially with live individuals. While most lampreys present in Auburn Ravine are assumed to be Pacific lamprey, river lamprey may also be present.

The primary adverse effect of Project activities on river lamprey will be dewatering of the streambed during construction. No fish will be able to survive in the dewatered portion of the channel during construction, thus all fish will need to be relocated. Additionally, it is assumed that the bypass pipe will be impassable to all fish, even river lamprey. Other potential impacts to river lamprey may include potential water-quality issues associated sedimentation or hazardous material spills during construction. Implementation of Mitigation Measures (MM IV-a1 through IV-a3) discussed below would reduce such impacts to a less than significant level. It should be noted, however, that the overall impacts of the Project on river lamprey are expected to be decidedly positive, with the outcome being improved fish passage and, therefore, unimpeded access to additional spawning and rearing habitats upstream of the Project area in Auburn Ravine.

Northwestern Pond Turtle (NWPT)

Species Status

NWPT (*Actinemys marmorata marmorata*) is listed as California Species of Special Concern (SSC) by CDFG and is classified as Sensitive by the USFS and Vulnerable by the World Conservation Union (IUCN).

Summary of Natural History/Biology

NWPT can inhabit a variety of aquatic habitats including rivers, streams, lakes, ponds, wetlands, reservoirs, brackish estuarine waters, canals, etc. (Holland 1994; Jennings and Hayes 1994; Germano and Bury 2001), which they use primarily for foraging, thermoregulation and avoidance of predators. NWPT requires emergent basking sites for thermoregulation such as rocks, logs, or emergent vegetation and has been observed to avoid areas of open water lacking them (Holland 1994).

Relevance of Species to Project

Although NWPT is assumed to occur in Auburn Ravine, the Project area generally lacks the habitats and emergent basking sites preferred by NWPT (however, this species may occur more readily in pools upstream and downstream of the Gaging Station). The Project area also lacks the preferred upland habitats for NWPT nesting (low-angle unshaded sandy/silty slopes) and overwintering (burrows in duff-laden soil with leaf litter); although NWPT is also known to overwinter in aquatic habitats as well, seeking refugia among rocks, logs, mud, submerged vegetation and undercut banks. However, NWPT typically overwinter from November to March (Project construction should be completed prior to this period). Direct effects of Project activities on NWPT may include dewatering of the streambed during construction, disturbance of bottom substrates where NWPT may be present, or injury or mortality from trampling by workers or equipment (e.g., during turtle movements to and from wintering, breeding, and summering habitats). Implementation of Mitigation Measures (MM IV-a1 through IV-a3) discussed below would reduce such impacts to a less than significant level.

California Red-legged Frog (CRLF)

Species Status

CRLF (*Rana aurora draytonii*) is listed as Threatened under the federal ESA and designated as a California Species of Special Concern (SSC) by CDFG. CRLF is also classified as Vulnerable by the ICUN.

Summary of Natural History/Biology

CRLF occurs primarily in perennial or ephemeral ponds, pools, and streams where water remains long enough for breeding and development of young (Jennings and Hayes 1994). Specific breeding sites include ponds, marshes, sag ponds, deep pools and backwaters within streams and creeks, dune ponds, lagoons and estuaries. Preferred habitats contain dense emergent or shoreline riparian vegetation closely associated with deep (>0.7 m), still, or slow-moving water. The types of riparian vegetation most suitable structurally for CRLF include willows (*Salix* sp.), cattails (*Typha* sp.) and bulrushes (*Scirpus* sp.). While frogs can successfully breed in streams and riparian systems, high winter and spring flows and cold temperatures in streams typically make these environments risky for egg and tadpole stages.

Another key habitat indicator for CRLF is the absence or near-absence of introduced

predators such as bullfrogs and predatory fish, particularly centrarchids (i.e., basses and sunfishes), which may feed on the larvae at higher levels than naturally co-evolved predatory species (Hayes and Jennings 1988). Emergent vegetation, undercut banks and semi-submerged root balls afford shelter from such predators (USFWS 1997). CRLF lay their eggs from late November to late April, attaching them to emergent vegetation. Larvae remain in these aquatic habitats until metamorphosis. Eggs hatch in six to 14 days and larvae undergo metamorphosis three to seven months after hatching (Storer 1925). Increased siltation during the breeding season can cause asphyxiation of eggs and small larvae.

There is much variation in how frogs use particular habitats, and in many cases frogs may complete their entire life cycle in a certain area without using other nearby habitat components (i.e., a pond is suitable for each life stage and use of upland habitat or a riparian corridor is not necessary). However, CRLF may disperse upstream, downstream, or upslope of their breeding habitat to forage and seek sheltering habitat. They can be encountered living within streams at distances around three kilometers from the breeding site and have been found up to 30 meters from water for over two months in adjacent dense riparian vegetation (Rathbun et al. 1993). They take shelter in small mammal burrows and other refugia (e.g., moist leaf litter; boulders or rocks; downed trees or logs; industrial debris; watering troughs, abandoned sheds and incised stream channels) (Jennings and Hayes 1994). During wet periods, CRLF can move long distances between aquatic habitats, traversing upland habitats or ephemeral drainages up to a 1.6 km from the nearest known frog populations. Seeps and springs in open grasslands can function as foraging habitat or refugia for wandering frogs (USFWS 1997).

Relevance of Species to Project

CRLF may possibly occur in the Project area, but the presence of this species is unlikely. The probability of CRLF occurring in the Project area is considered low for several reasons. Although Auburn Ravine is within the historical range of this species, inter-basin transfers of irrigation water have created a more consistent riverine, flowing-water environment year-round in the Project area, with higher flows and fewer habitat characteristics that are suitable for CRLF breeding (i.e., a lack of still, or slow moving waters with emergent vegetation suitable for egg mass deposition and tadpole survival). The relatively flashy hydrologic nature of the of Auburn Ravine in general coupled with artificially augmented flows during the historically dry period (i.e., irrigation season) creates scouring conditions that likely preclude any CRLF breeding in Auburn Ravine. Although it is possible that CRLF could migrate through the area or use the stream temporarily, it remains highly unlikely that CRLF would be present in the Project area.

In the unlikely event that CRLF were present in the Project area, direct impacts from Project activities could include injury or mortality to CRLF individuals from being crushed by equipment and/or worker foot traffic. Work activities, including noise and vibration, may harass CRLF by causing them to move, increasing potential for predation and desiccation. Implementation of Mitigation Measures (MM IV-a1 through IV-a3) discussed below would reduce such impacts to a less than significant level.

Overall Impact Discussion

Relevance of the Instream Construction Schedule to Aquatic and Semi-Aquatic Species

Irrigation season typically ends around October 15. Typically, instream work is not permitted by the CDFG before July 1 and shall be completed by October 15, unless otherwise approved. The instream construction activities will be subject to the CDFG Stream Alteration Agreement in order to accommodate a potentially later-than-normal completion date for Project construction.

Since NID has a carryover of water supplies from the 2009/2010 season and precipitation levels for the 2010/2011 season appear to be equal to or greater than normal, it is projected that surplus waters will be made available to South Sutter Water District for the 2011 irrigation season. Based on the 2011 projected deliveries, it would appear that dewatering of the stream channel could begin as early September 15, 2011. NID's irrigation flow delivery schedule will likely preclude the start of in-stream construction activities until after this date when the majority of irrigation deliveries have been made.

If there are no delays associated with construction or weather, the instream construction activities should largely be completed by October 31, 2011. Water deliveries start tapering off in mid September and are expected to be approximately 37 cfs once deliveries to South Sutter Water District are finished. There are however, irrigation flows from NID and PG&E that will still need to be delivered until October 15, 2011. Nonetheless, the bypass pipe should be able to accommodate those flows without overwhelming the temporary diversion. .

The following Mitigation Measures are incorporated into the Project to reduce or eliminate the potential to adversely affect special-status (aquatic) species and other sensitive biological resources:

MM IV-a1 (Pre-construction Assessment and Delineating and Avoiding Sensitive Areas during Construction)

The boundaries of the Project area and equipment access routes should be minimized and clearly demarcated (construction access, staging, storage, and parking areas shall be located along the access road entering from Mossdale Court.). Sensitive natural communities (i.e., waters, riparian zones, oak woodlands, etc.) within and adjacent to construction areas shall be conspicuously marked in the field (including suitable buffer zones) by a qualified biologist in order to minimize impacts on these communities. Work activities shall be prohibited within the marked areas.

<i>Timing:</i>	<i>Prior to beginning on-site disturbance and construction</i>
<i>Responsibility:</i>	<i>NID's qualified biologist</i>
<i>Reporting/verification:</i>	<i>NID's biologist to report to NID and CDFG as part of the approved Stream Alteration Agreement</i>

MM IV-a2 (Aquatic Species Removal/Relocation during Critical Construction Periods)

An aquatic species protection plan will be prepared to determine how fish and other aquatic species will be protected during the course of Project construction. This plan will

include procedures to rescue aquatic species stranded during the dewatering process. A qualified biologist shall be present to inspect the construction/installation of the cofferdam and bypass pipe features prior to dewatering. In particular, a qualified biologist (or crew thereof) shall be on-site immediately prior to and during the dewatering process to conduct any necessary aquatic species rescue activities in the immediate work area. Relocation of any fish, frogs, turtles, etc. present in the bypassed portion of the channel will be necessary to help avoid and/or minimize potential injury or mortality during the construction period. If a special-status aquatic species is in harm's way, this species should either be allowed to move from harm's way on its own, or should be removed by a qualified biologist according to the aquatic species protection plan (see **MM IV-d1** below). The qualified biologist(s) will relocate any such individuals to a safe and biologically appropriate location that is outside of the Project work area. Individuals must be handled with extreme care (e.g., fish should be kept in water to the maximum extent possible) during relocation activities. A similar procedure should be followed for all other critical construction periods, including re-watering of the channel and removal of the cofferdam and bypass pipe.

<i>Timing:</i>	<i>During construction/installation of the cofferdam and bypass pipe features before dewatering occurs, plus re-watering of the channel and removal of the cofferdam and bypass pipe following instream construction.</i>
<i>Responsibility:</i>	<i>NID's qualified biologist</i>
<i>Reporting/verification:</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>

MM IV-a3 (Worker Education and Monitoring during the General Construction Period)

A worker education program shall be developed and presented by the qualified biologist to all construction personnel before they start work on the Project. The program shall summarize relevant laws and regulations that protect sensitive biological resources, discuss sensitive habitats and special-status species known to occur (or with the potential to occur) in the work zone or adjacent area (particularly those species described above), explain the role and authority of the biological monitors and review applicable avoidance and minimization measures to protect sensitive species and habitats. The contractor shall be advised that anytime a special-status species is encountered during construction, work shall be stopped immediately at that location and shall not resume until the situation is resolved in accordance with the aquatic species protection plan (see **MM IV-a2** above and **MM IV-d1** below) or any other relevant permit requirements for the Project.

<i>Timing:</i>	<i>Prior to on-site construction</i>
<i>Responsibility:</i>	<i>NID's qualified biologist</i>
<i>Reporting/verification:</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>

Impact Conclusion: The impacts to aquatic and semi aquatic species will be reduced to less than significant with the inclusion of MM IV-a1 through a3.

Terrestrial Species

A Biological Resources Assessment for Auburn Ravine Gaging Station was prepared by

Helix Environmental Planning Helix Environmental Planning, Auburn CA in January 2011 (See Appendix C). Eighteen special-status species were evaluated for their potential to occur within the Auburn Ravine Gaging Station study area. Four of the species listed in Appendix B (Appendix D of the Biological Resources Assessment) that are associated with vernal pools were eliminated from further consideration due to the absence of suitable habitat (Conservancy fairy shrimp, vernal pool tadpole shrimp, vernal pool fairy shrimp, and western spadefoot). In addition, California tiger salamander was also determined to have no potential for occurring on site due to the absence of suitable breeding habitat and the considerable distance from other known populations. The giant garter snake and California red-legged frog (discussed above) were determined to have minimal or no potential for occurring on site due to the study area occurring outside of their known ranges and based on the absence of recorded occurrences in the project region.

Suitable habitat for valley elderberry longhorn beetle, in the form of elderberry shrubs, was not detected on site during the field surveys and therefore the species is not expected to occur.

A variety of special-status birds were eliminated from further consideration due to the study area occurring outside of their known range or due to the absence of suitable habitat and included California black rail, yellow warbler, and grasshopper sparrow. Due to the lack of, or limited potential for, occurrence of the above-mentioned species within the study area, no further mitigation is determined to be necessary.

The following is a summary of special status plant and wildlife species that may occur in the project area:

Special-Status Plants

Nine special-status plant species were evaluated for their potential to occur within the study area and are identified in Appendix C. Of the nine species evaluated, potential habitat for only two of the species was determined to occur on site. Following the literature review and field surveys, it was determined that Brandagee's clarkia and big-scale balsam-root are not likely to occur on site due to the lack of direct observations during field surveys and/or due to rarity of the species within the region. Both species would have been evident at the time of the July survey and neither was observed. No further surveys are needed and no mitigation is required.

Special Status Wildlife

The following three species may occur in the project area: Swainson's hawk, tricolored blackbird and purple martin. The relevance of these species to the project follows.

Swainson's hawk

Based on the close proximity to other documented nesting sites (NDDB 2011), taller trees of the study area may provide some limited suitable nesting habitat for Swainson's hawk. Therefore, any removal of identified trees or construction within the area could result in disturbance of the nesting life stage of Swainson's hawk, depending on timing of proposed construction activities. Breeding occurs from late March to late August, with peak activity in late May through July. Incubation is about 25 to 28 days. Migrating individuals typically move south through California in September and October and move back to their summer range in March through May. Site disturbance and construction will

not occur until early September and end in late October. While the site is not ideal habitat for Swainson's hawk, the construction activity will avoid the sensitive time frames for this species. However, should Swainson's hawk be identified in the disturbance area, the following mitigation measures are required.

Tricolored blackbird

A very limited amount of potential nesting habitat for tricolored blackbird occurs in association with small patches of cattails and blackberry thickets along Auburn Ravine. Depending on the timing of construction, site disturbance could result in disturbance of breeding and nesting activity of this species. Disturbance of active nests can be avoided during construction through appropriate measures. To the extent feasible ground disturbance and removal of vegetation should be avoided within the study area during the typical breeding and nesting period for this species (approximately April through July). The construction period of September through mid October is expected to preclude any impacts to breeding and nesting of the Tricolored blackbird, however should Tricolored blackbirds be identified in the disturbance area, the following mitigation measures are required.

Purple martin

Suitable nesting habitat for purple martin occurs in woodland portions of the study area. To avoid disturbance of purple martin nesting, a pre-construction survey should be conducted prior to initiation of ground disturbance within any area containing suitable nesting habitat, if construction occurs during the typical breeding/nesting season (approximately April through August). If active nests are found, disturbance of the nest and surrounding area should be avoided until after the young have fledged. If avoidance is not feasible, CDFG should be contacted to determine appropriate mitigation responsibilities. The construction period of September through mid October is expected to preclude any impacts to breeding and nesting of the Purple martin, however should Purple martin be identified in the disturbance area, the following mitigation measures are required.

Mitigation Measures

MM IV-a4. (Raptor pre-construction surveys)

To avoid take of active Swainson's hawk nests, or nests of any raptor, should construction start before September 1, pre-construction surveys should be conducted by a qualified biologist no more than 30 days prior to initiation of proposed development activities. Survey results should then be submitted to the CDFG. If active nests are found on or immediately adjacent to the site, consultation should be initiated with CDFG to determine appropriate avoidance measures. Protective measures would likely include establishing buffer zones around active nests and avoiding all construction activities within the buffer zones until after the young have fledged.

<i>Timing:</i>	<i>30 days prior to on-site development activities</i>
<i>Responsibility:</i>	<i>NID's qualified biologist</i>
<i>Reporting/verification:</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>

MM IV-a5 (Tricolored blackbird pre-construction survey)

To the extent feasible, avoid ground disturbance and removal of vegetation within the study area during the typical breeding and nesting period for this species (approximately

April through July). If construction activities cannot be avoided during the typical breeding season, retain a qualified biologist to conduct a pre-construction survey (approximately one (1) week prior to construction) to determine presence/absence of nesting colonies of the species. If no nesting activities are detected within proposed work areas, construction activities may proceed. If active nests are found, construction should be avoided until after the young have fledged from the nest and achieved independence, or upon approval from CDFG.

Timing: Seven days prior to on-site development activities
Responsibility: NID's qualified biologist
Reporting/verification: NID's biologist to report to CDFG as part of their Stream Alteration Agreement

MM IV-a6 (Purple martin pre-construction survey)

To avoid disturbance of purple martin nesting, a pre-construction survey should be conducted prior to initiation of ground disturbance within any area containing suitable nesting habitat, if construction occurs during the typical breeding/nesting season (approximately April through August). If active nests are found, disturbance of the nest and surrounding area should be avoided until after the young have fledged. If avoidance is not feasible, CDFG should be contacted to determine appropriate mitigation responsibilities.

Timing: Prior to conducting on-site development activities
Responsibility: NID's qualified biologist
Reporting/verification: NID's biologist to report to CDFG as part of their Stream Alteration Agreement

Impact Conclusion: The impacts to terrestrial species will be reduced to less than significant with the inclusion of MM IV-a4 through a6.

IV.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 Game or U.S. Fish and Wildlife Service?

The majority of the stream in Auburn Ravine is open water and not covered by a tree canopy. Nevertheless, several wetland and freshwater marsh species grow in patches along the margins of the stream, sometimes forming dense vegetation. Auburn Ravine supports a riparian corridor of variable width, depending on adjacent land use and width of the floodplain. In the study area, the channel has been altered and most of it armored. The slopes are steep sided and support a variable riparian plant community composed of native and non-native species. Auburn Ravine represents 0.34-acre of the study area.

Impacts to the bed, bank, or channel of streams or ponds would require a Streambed Alteration Agreement with the California Department of Fish and Game (CDFG). Impacts to the riparian habitat may require a Streambed Alteration Agreement with the CDFG. Impacts may be self-mitigating because the goal is to enhance stream habitat. However, CDFG may require replanting of lost riparian trees as a condition of the 1602 agreement. A detailed erosion control and re-vegetation plan to restore the pre-project riparian conditions is included as part of the project description (see sheet C-7 of the Fish

Passage Improvement Project, Auburn Ravine Gaging Station). There are a variety of other trees in the riparian zone that may need to be replanted along with the rest of the vegetation. The City of Lincoln regulates oak removal. See item IV-e below.

The proposed re-vegetation plan does not currently include shade trees as part of the riparian restoration plan. Introducing cottonwoods and alders would increase the diversity of the restored riparian zone and add shade to the stream.

MM IV-a.7 (Increase diversity of restored riparian zone)

The re-vegetation plan shall include alders and cottonwoods as a means of increasing diversity and shade within the riparian zone.

<i>Timing:</i>	<i>Include in final construction plans</i>
<i>Responsibility:</i>	<i>NID's engineering design consultant</i>
<i>Reporting/verification:</i>	<i>NID</i>

Impact Conclusion: The impacts to riparian habitat will be reduced to less than significant with MM IV. A7 and the requirement to obtain a Clean Water 404 certification from the US Army Corps of Engineers (see Item IV.c, below) and a Stream Alteration Agreement from CDFG.

IV.c *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Auburn Ravine flows east to west through the study area and is one of the major streams in western Placer County. It was likely a seasonal stream in historical times but now is perennial and carries high flows during the dry season, as it is a major conveyance system for the Nevada Irrigation District.

Auburn Ravine is classified as a “waters of the United States.” Activities that affect Auburn Ravine would require a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act. The project would also need to obtain a water quality certification from the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the federal Clean Water Act. The Corps and the RWQCB may add conditions to the permits that would stipulate the appropriate mitigation. Because this project is designed to enhance fish passage in Auburn Ravine, impacts to the stream may be self-mitigating.

There are no wetlands in the immediate project vicinity and no wetlands would be directly impacted. (See Appendix D, Wetland Delineation for Auburn Ravine Gaging Station, Helix Environmental Planning, January, 2011)

Impact Conclusion: The impacts to federally protected wetlands will be less than significant.

IV.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?*

Although a primary objective of the Project is to improve fish passage at the Gaging Station over the long term, Project operations and infrastructure may temporarily block the movement of migratory fish and possibly other aquatic organisms during the short term (i.e., during the instream construction period). The construction period has been carefully considered with respect to migratory fish and surplus water deliveries. The construction period from September to mid October was selected to avoid the critical migratory period for Fall and Late-Fall run Chinook from October 15th-November 15th, while also designing the bypass to accommodate surplus water deliveries typically made during the construction period.

Once construction is completed, all Project-introduced material (pipes, gravel, cofferdams, construction debris, etc.) shall be removed, leaving the area as it was before construction. Excess materials shall be disposed of at an approved disposal site. Project-affected areas must be stabilized prior to the rainy season and/or prior to re-establishing flow in the channel. All improved areas (in-channel features, stream banks, upper terraces, etc.) shall be re-contoured in accordance with the engineered plans; all temporarily disturbed natural areas (outside designed Project improvements) shall be re-vegetated and returned to their pre-Project conditions. In accordance with the fish passage improvement plans and requirements from regulatory agencies.

Streamflow will be impounded by a temporary cofferdam that will be installed across the upstream face of the Gaging Station flume, which will divert all water through a minimum 36-inch diameter bypass pipe laid along the south bank. The Project's bypass structure will be gravity fed such that no pumps will be required to facilitate flow through the pipe, and no pumps will be used to otherwise dewater the Project area. All aspects of the bypass structure (i.e., coffer dams, diversion pipes, supports, etc.) must be appropriately sized to accommodate potentially varying streamflows without exceeding their limits and thus the overall capacity of the bypass structure to divert the necessary stream discharge. The downstream end of the bypass pipe must be situated in a manner such that outfall from the pipe does not contribute to erosion in the channel or on the stream banks. The bypass structure shall remain in place and functional throughout the construction period. Normal flows shall be restored to the channel as soon as possible after completion of construction.

This bypass will dewater approximately 300 feet of channel for construction and return streamflow to the natural channel below the construction area. It is assumed that this bypass structure will be impassable to all fish (in the upstream direction). The pipe will not be screened on either the upstream or downstream end so that no entrainment of fish can occur (thus it is possible that downstream passage may still be possible, but upstream passage will be precluded by the combination of velocity, depth, and a lack of structure or roughness elements to provide resting areas within the pipe; in addition, fish may not be able to enter the pipe from the downstream end). The entire bypass structure will remain in place for the duration of instream construction and will be removed once the newly constructed channel is ready to be re-watered.

As a result, fish passage through the Project area will effectively be blocked during the instream construction period. Assuming low-flow conditions prevail throughout this period, the impact of Project activities (in terms of blocking migratory fish) would be minimal considering that the existing unimproved Gaging Station flume is impassable under lower flow conditions. However, if changes in flow conditions or the timing of construction activities significantly conflict with the timing of spawning migration

activities (in terms of the numbers of spawning fish that may become blocked and/or the duration that they remain blocked) measures may need to be taken to minimize this temporary impact (e.g., Mitigation Measure IV-a2 ***Aquatic Species Removal/Relocation during Critical Construction Periods***) fish such as Central Valley Chinook salmon and steelhead, Pacific lamprey, and river lamprey attempting to reach spawning habitats upstream in Auburn Ravine may need to be transported around the construction area. It is anticipated that instream Project construction can be completed within 45 days (weather permitting), so that fish migration will be blocked by Project activities for a minimum amount of time. To a certain extent, migrating fish such as salmon, steelhead, and lamprey spawners are accustomed to holding below passage barriers until conditions (e.g., flows) change such that the barrier can be ascended or circumnavigated. Thus, although a primary objective of the Project is improving long-term fish passage at the Gaging Station, the implementation of Mitigation Measures MM IV-d1 through IV-d4 may be required to reduce short-term impacts to migratory fish to a less than significant level.

Mitigation Measures

The following mitigation measures should be incorporated into the Project to reduce or eliminate the potential to interfere with the movement of native resident or migratory fish species:

MM IV-d1 (Fish Rescue Plan during Construction Bypass Period)

An aquatic species protection plan developed in conjunction with CDFG's stream alteration agreement shall be prepared to determine how fish and other aquatic species shall be protected during the course of Project construction. This plan will include procedures to rescue aquatic species stranded by dewatering (see ***MM IV-a2*** above), and will also establish procedures for relocating adult spawners (Chinook salmon, steelhead, lamprey, or other fish) that may arrive at the downstream end of the bypass prior to the completion of Project construction and subsequent re-watering of the newly constructed channel (i.e., during the period when upstream migratory access is temporarily blocked). The aquatic species protection plan shall outline the procedures for capturing and transporting fish past the bypass structure and relocating them to the natural wetted channel upstream of the Project area. Considerations will include techniques for capturing, handling and transporting fish, the timing of such rescue efforts, as well as the requirements for staffing such efforts with the appropriate number of qualified biologists and equipment. The worker education program (described in ***MM IV-a3*** above) should alert construction workers to signs of spawners congregating at the downstream end of the bypass, and a monitor should conduct weekly site visits to track potential spawning activity in the vicinity of the Project area.

Timing:

On-going

Responsibility:

NID's qualified biologist

Reporting/verification:

NID's biologist to report to CDFG as part of their Stream Alteration Agreement

MM IV-d2 (Emergency Removal of bypass facilities)

An emergency bypass pipe removal plan must be established in order to accommodate unexpected, excessive flows in Auburn Ravine. The emergency plan shall include provisions to allow natural flows to be re-established within the stream channel in the event that early storms or other surges in water flow are predicted. The plan shall address

all stabilization measures to secure improvements installed to date; minimize downstream erosion, stream bed incising, flooding, etc. Said plan shall be able to be executed within 24 hours.

Timing: As part of final construction plans and on-going
Responsibility: NID
Reporting/verification: NID's biologist to report to CDFG as part of their Stream Alteration Agreement

Impact Conclusion: The impacts to aquatic and semi-aquatic species will be reduced to less than significant with the inclusion of MM IV-d1 through d2.

IV.e Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Lincoln Crossings General Development Plan requires that developers comply with the City of Lincoln's Oak Tree Ordinance. It also establishes similar standards from mitigation measures in the Lincoln Crossing EIR. The oak tree protection standards are included in Section 3.1 D of the Lincoln Crossing General Development Plan. In summary, this plan strongly encourages protection native oaks trees that are removed and are greater than six (6) inches in diameter at 54 inches above grade. Any such tree that is to be removed or otherwise impacted shall be replaced by a specimen tree that has a total combined diameter equal to the diameter of the removed tree. No oak trees have been observed in the designated area of disturbance; however, should oak trees be identified in the disturbance area, the following mitigation measures are required. Although the project disturbance area does not encompass any oak trees 6 inches in diameter or greater and does not propose the removal of any oak trees 6 inches in diameter or greater, the implementation of Mitigation Measures MM IV-e1 through IV-e3 may be required to reduce impacts to oak trees to a less than significant level should there be protected oaks overlooked in the pre-project studies.

MM IV-e1 (Oak tree preservation)

Prior to grading within and adjacent to construction areas, fencing shall be installed one (1) foot outside the dripline of all oak woodlands and individual oak trees (larger than six inches in diameter measured 54 inches above grade) shall be conspicuously marked in the field by a qualified biologist or arborist.

Timing: Prior to beginning on-site disturbance and construction
Responsibility: NID's qualified biologist
Reporting/verification: NID's biologist to report to NID and City of Lincoln

MM IV-e2 (Impacted oak trees)

Any individual oak tree (larger than six inches in diameter measured 54 inches above grade) that must be removed or is critically damaged must be replaced by specimen trees having a combined diameter equal to the diameter of the removed tree(s).

Timing: Each tree to be removed shall be marked prior to construction
Responsibility: NID's qualified biologist
Reporting/verification: NID to report to the City of Lincoln

MM IV-e3 (Oak tree protection)

Trees to be retained must be protected by maintaining at least 1 ½ foot distance from the dripline for all grading and other soil compaction activities. No fuel, oil, concrete mix or other deleterious mixture shall be allowed to flow across or within the dripline on an existing oak tree.

<i>Timing:</i>	<i>Protection standards shall be included in the final construction specifications</i>
<i>Responsibility:</i>	<i>NID's contractor</i>
<i>Reporting/verification:</i>	<i>NID to report to the City of Lincoln</i>

Impact Conclusion: The impacts to oak trees will be reduced to less than significant with the inclusion of MM IV-e1 through e3.

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

Placer County is in the process of developing a joint Habitat Conservation Plan (HCP) under the Federal Endangered Species Act and Natural Community Conservation Plan (NCCP) under the California Natural Community Conservation Planning Act. The joint HCP/NCCP for the western portion of the county that includes the Project area, is referred to as the Placer County Conservation Plan (PCCP). Although the PCCP is not yet adopted, an administrative draft is available (PCCP 2005). The PCCP is a proactive, regional planning tool designed to avoid potential conflicts between the County's growing human population and unique ecological assets which will define necessary management actions for aquatic and wetland conservation as well as best management practices to be implemented within these areas. 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.

PCCP documents include detailed Species Accounts for various special-status aquatic species that occur in Placer County (and may occur in the Project area) including steelhead, Chinook, CRLF and NWPT. These Species Accounts include information on each species' status, taxonomy, distribution, population status and trends, natural history, and population threats, as well as provide context for a regional conservation strategy for each species and a model for each species' distribution in the County. Species Accounts also provide envirograms for each species, which are tools to help depict and organize the most important ecological factors that affecting each species.

PCCP is anticipated to be a valuable tool for regional planning in Placer County, including the Project area. No conflicts with any provisions of the forthcoming PCCP are anticipated for this Project, and no mitigation is necessary.

Impact Conclusion: This project will not impact an adopted habitat conservation plan.

Impact Conclusion: With the inclusion of Mitigation Measures MM IV-a1 through a3 and MM IV-d1 through d3, and MM IV-e1 through e3 the impacts to biological resources will be less than significant.

V. Cultural Resources

Would the project:

Environmental Issue –	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The project area is located along the eastern flank of the northern Sacramento Valley, within lands that receive winter storm runoff from a significant watershed. In view of the substantial surface water sources throughout this area, including the American River located approximately nine miles east of the project, prehistoric use and occupation was generally intensive, but the population was not randomly distributed. Clearly, the most intensively occupied land areas were at elevated locations along the river systems and along the Valley/Foothill interface located east of Lincoln and the present project area.

Impact Discussion

- V. a. *Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?*

Based on the Archaeological Inventory Survey for the Auburn Ravine Gauging Station Project (Jensen, December 10, 2010) (Appendix E) and the 1989 Lincoln Crossing Specific Plan cultural resources study, no known historic resources are located within the Proposed Project area.

Impact Conclusion: Since there are no known historical resources, therefore the impact is less than significant.

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

Based on the Archaeological Inventory Survey for the Auburn Ravine Gauging Station Project (Jensen, December 10, 2010) and the 1989 Lincoln Crossing Specific Plan cultural resources study, no known prehistoric resources are located within the Proposed Project area.

The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. Due to the proximity to Auburn Ravine there is the possibility that important unidentified cultural materials could be encountered on or below the surface

during the course of construction activities. This possibility is particularly relevant considering the constraints generally to archaeological field survey and particularly where extensive past disturbance has occurred, as in the present case.

In conjunction with the records search for the present project, the Native American Heritage Commission (NAHC) was contacted by Genesis Society regarding Sacred Land Listings. The NAHC indicated that there are no Sacred Land listings for the project area or adjacent lands. The contact list from the Native American Heritage Commission included in the Archaeological Inventory Survey (See Appendix D) included five individuals and groups, all of whom were contacted and requested to supply any information they might have concerning prehistoric sites or traditional use areas within the project area.

Two responses were received from these contacted groups. In a letter dated May 21, 2010, April Moore indicated that the Auburn Ravine area is highly sensitive for prehistoric cultural materials, and any ground disturbing project activities should involve a local Maidu monitor. In a letter dated June 10, 2010, Greg Baker of the United Auburn Indian Community of the Auburn Rancheria indicated that the tribe would like to receive a copy of the archaeological inventory report, and further requested to have tribal consultants involved in project fieldwork. As no sites were identified within the project area, no additional consultation was conducted.

Despite the potential to find archaeological resources, the following mitigation measures are considered appropriate and would reduce this potentially significant impact to less than significant.

Mitigation Measures

MM V-b1. Consultation in the event of inadvertent discovery of cultural material: In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately. In the event that unanticipated cultural or paleontological resources (including structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains) are encountered during construction, all earthmoving activity shall cease until NID retains the services of a qualified archaeologist. The archaeologist or paleontologist shall examine the findings, assess their significance, and offer recommendations for procedures deemed appropriate to either further investigate or mitigate adverse impacts to those cultural or paleontological archaeological resources that have been encountered (e.g., excavate the significant resource). In the event that pre-historic archaeological resources are discovered during ground-disturbing activities, the United Auburn Indian Community shall be contacted immediately. If the find is determined to be legally significant by the project archaeologist, or culturally important to the Tribal community, project representatives shall meet with the archaeologist and the Tribe to determine the appropriate course of action.

<i>Timing:</i>	<i>Immediately</i>
<i>Responsibility:</i>	<i>NID</i>
<i>Reporting/verification:</i>	<i>NID's archaeologist and tribe to determine the appropriate course of action</i>

Impact Conclusion. With the inclusion of MM V-b1, the inadvertent discovery of cultural material will be less than significant.

V. c. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

No known paleontological resources are located within the Proposed Project area. Although there is always the potential to disturb unknown cultural resources during construction activities, implementation of Mitigation Measure V-b1 would reduce this potentially significant impact to less than significant. The site also does not contain any other unique geologic features.

Impact Conclusion. The potential impact to paleontological resources or unique geological features are less than significant with the inclusion of MM V-b1.

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

It is not anticipated that any human remains would be encountered during construction; however, the Proposed Project would be subject to the provisions of the California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.94 et seq., regarding the discovery and disturbance of human remains should any human remains be discovered during project construction. While the possibility is very low that human remains will be encountered, the following mitigation measure is included:

Mitigation Measures

MM V-d1. Consultation in the event of inadvertent discovery of human remains:

In the event that human remains are inadvertently encountered during any ground-disturbing activity or at any time subsequently, State law shall be followed, which includes but is not limited to immediately contacting the Placer County Coroner's office upon any discovery of human remains. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person it believes to be the most likely descendant. The most likely descendant shall work with NID to develop a program for re-internment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been completed.

<i>Timing:</i>	<i>Immediately</i>
<i>Responsibility:</i>	<i>NID</i>
<i>Reporting/verification:</i>	<i>NID's archaeologist and tribe to determine the appropriate course of action</i>

Impact Conclusion. With the inclusion of MM V-d1, the potential impact to finding human remains will be less than significant.

Impact conclusions: With the inclusion of MM V-b1 and V-d1, the impacts to cultural resources are less than significant.

VI. Geology and Soils

Would the project:

Environmental Issue –	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:				
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 type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Regional Geology

The geology map for the region (California Department of Conservation 1987) shows Turlock Lake formation present in north of Pleasant Grove Creek and Riverbank Formation present south of Pleasant Grove Creek. Basin deposits comprising of poorly sorted stream and basin deposits from clay to boulder size is present in the northeastern portion of the Study Area. Both formations including basin deposits do

not include ultramafic rocks that create soils known to support special-status plant species. No significant rock outcrops exist on the site.

Seismicity

Seismicity is defined as the geographic and historical distribution of earthquake activity. Seismic activity may result in geologic and seismic hazards including seismically induced fault displacement and rupture, ground shaking, liquefaction, lateral spreading, landslides and avalanches, and structural hazards. Based on historical seismic activity and fault and seismic hazards mapping, Placer County is classified as a low severity earthquake zone.

Fault Systems

Earthquake activity is intrinsically related to the distribution of fault systems (i.e., faults or fault zones) in a particular area. Numerous faults have been identified within 60 miles of the Sacramento area. No known active faults are located within Placer County; however, the Loomis Basin Draft Environmental Impact Report identified three inactive faults in the immediate vicinity of the Lincoln area. These include the Volcano Hill fault, an unnamed fault alignment, which extends east-west between Folsom Lake and the City of Rocklin, and the Linda Creek Fault.

Soils

Three soil units are mapped in the Study Area (USDA, NRCS 1980):

- 174 - Ramona sandy loam, 0 to 2 percent slopes
- 193 - Xerofluvents, occasionally flooded
- 194 - Xerofluvents, frequently flooded

Ramona sandy loam, 0 to 2 percent slopes

A small portion of the southern Project Area is within this soil unit. This mapped soil unit consists of fine loamy, mixed Typic Haploxeralfs formed in alluvium from predominately granitic sources. They are undulating, very deep, well drained soils on low terraces. Permeability is moderately slow.

Xerofluvents, occasionally flooded

This soil unit is located within the area south of Auburn Ravine. This soils unit consists of small areas of moderately well drained loamy alluvium adjacent to stream channels. Natural vegetation is annual grasses, forbs, and valley oak.

Xerofluvents, frequently flooded

The majority of the Project Area to the north of Auburn Ravine is within this soil unit. The soils in this unit consist of narrow stringers of somewhat poorly drained recent alluvium adjacent to stream cannels. These are variable colored, stratified gravelly sandy loams, and gravelly clay loams that generally grade to sand and gravel with increasing depth. Drainage and permeability vary, but wetlands can form in these soils where permeability is low.

Impact Analysis

- VI. a. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:*
- 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?*

The Proposed Project area does not contain any earthquake faults as identified on the most recent Alquist-Priolo Earthquake Fault Zoning Map(s), and there are no known active faults within south Placer County; therefore, there would be no potential impact of the project to expose people and/or structures to fault rupture hazards.

ii) *Strong seismic ground shaking?*

Due to the presence of active and potentially active faults, all areas within California are exposed to some degree of seismic ground shaking and associated seismic hazards, such as liquefaction. Although the Central Valley is generally considered less seismically active than other areas of California, the project area is nevertheless susceptible to seismic ground shaking due to earthquakes on faults associated with the Foothills/Bear Mountains System, Coast Range-Sierran block boundary, San Andreas, and others.

The potential for a seismic event at the project site is low. Because the project area does not include any structures or dwellings that would be a high risk of collapse during a seismic event, the risk of adverse effects from ground shaking are considered to be less than significant.

iii) *Seismic-related ground failure, including liquefaction?*

Liquefaction is most likely to occur in deposits of water-saturated alluvium or similar deposits of artificial fill. Older alluvial deposits, such as the Riverbank Formation, that underlie the project area generally have low liquefaction potential because of their level of consolidation. This impact is considered less than significant.

iv) *Landslides?*

The project would not alter slopes or other areas where landslides are likely to occur; therefore, the likelihood of landslides is minimal and no impacts are anticipated.

Impact Conclusion: The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death

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

The proposed project involves the construction of a fish passage feature to overcome the barrier that was created by the Gaging Station. There is a potential for grading and construction activities that would increase erosion within the streambed and adjoining banks. The project involves grading within and along the streambed on both sides and on the adjacent south bank to accommodate the staging area. The maximum project disturbance area is approximately .9 acres. Native soils will be segregated and stockpiled on site for re-use after rough grading is completed. Erosion and sediment control will be performed during construction in accordance with the latest edition of Appendix Chapter 33 of the California Building Code, Section 20 of the standard specifications and applicable City of Lincoln regulations. The contractor will be required to employ the following standard Best Management Practices (BMPs) as described in the current Caltrans storm water quality handbook.

The applicable measure include the following:

- SS-2, Preservation of existing vegetation,
- SS-10, Outlet protection/velocity dissipation devices, SC-1, Silt Fence

Because the maximum disturbance area is less than one acre, the project applicant would not be required to apply for and comply with the General Construction Activity Stormwater Permit. Due to the sensitive nature of the project setting, the following mitigation measure is included:

MM VI-b1 (Bank Protection/Erosion BMPs and Stormwater Pollution Prevention)

All Best Management Practices (BMPs) for erosion control and bank protection shall be implemented during Project construction including the use of silt fences, settling basins, runoff diversions, sediment filter socks, and covering of soil stockpiles. A Stormwater Pollution Prevention Plan (SWPPP) shall be developed for Project construction activities occurring in or adjacent to waterways or wetlands; all BMPs shall be implemented to minimize erosion and sedimentation. BMPs should include the following features:

- Control sheet flow and runoff from all disturbed areas using ditches, berms, weed-free wattles and straw bales, and silt fencing.
- Cover or stabilize loose soil and exposed slopes prior to the onset of rainy season and any time that rain is forecast within 24 hours.
- Use geotextile fabric or protective mats where feasible to minimize ground damage where vehicle travel through wetlands or other saturated soil areas cannot be avoided in temporary work areas.
- Ensure proper design of restraint and shoring systems in order to prevent unstable excavations.
- Apply gravel to a depth of three inches to access roads used during the rainy season.
- Hydroseed disturbed areas before the rainy season with a mixture of native and non-invasive plants that provide protection from erosion. The seed mixtures will be developed for each site based on local conditions.
- Stabilize stream banks before the rainy season with riprap, native plantings, willow wattles or other biotechnical slope stabilization techniques.

Timing: Included in construction specifications and SWPP secured prior to start of construction

Responsibility: NID

Reporting/verification: NID construction inspector

Impact Conclusion: With the inclusion of MM VI-b1, soil erosion impacts would be less-than-significant.

VI. c. *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Soils in the project area include Xerofluvents, Occasional Flooding and Xerofluvents, frequently flooded. The Xerofluent soil type has a low shrink-swell potential. Due to the consolidation of the soils within the project area, it is unlikely that the soils are susceptible to land sliding, lateral spreading, subsidence, liquefaction, or collapse.

Impact Conclusion: This impact is considered less than significant, as the project will not result in permanent structures and it is not 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.

- VI. d. *Would the project 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?*

Expansive soils are soils that increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise during each wet season and fall during each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows, which may result in structural hazards. As discussed above, Xerofluent Ramona sandy loam soils have a low shrink-swell potential.

Impact Conclusion: The project site does not contain expansive soil, which would create substantial risks to life or property, and does not include construction of new habitable structures. Therefore, no impact associated with expansive soils is anticipated.

- VI. 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?*

Neither septic tanks nor alternative wastewater disposal systems are part of the Proposed Project.

Impact Conclusion: Septic systems are not proposed, therefore, there is no impact associated with the Proposed Project.

Impact Conclusion: The impacts to geology and soils are considered less than significant with the inclusion of MM VI-b1.

VII. Greenhouse Gas Emissions

Would the project:

Environmental Issue	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

On September 27, 2006, the State of California adopted Assembly Bill 32 (California Global Warming Solutions Act of 2006). The bill requires the California Air Resources Board (CARB) to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. Greenhouse gases include: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The State of California Air Resources Board approved 427 million metric tons of carbon dioxide equivalents (MMTCO_{2e}) as the statewide greenhouse gas emission limit, which is equivalent to the 1990 emissions level. Carbon dioxide equivalent means the amount of carbon dioxide by weight that would produce the same climate change impact as a given weight of another greenhouse gas. Placer County exceeds the Federal 8-hour ozone standard but this is due to transport of ozone precursors from the central valley.

Greenhouse gases, including carbon dioxide, methane, and nitrous oxide, serve to regulate the earth's surface temperature, keeping the earth's average temperature close to 60 degrees Fahrenheit. Greenhouse gases occur both naturally and as a result of manmade activities (anthropogenic sources).

Climate change refers to any significant change in measures of climate (such as temperature, precipitation or wind) lasting for an extended period (decades or longer). Over the past 200 years, anthropogenic sources, including the burning of fossil fuels (such as coal and oil) and deforestation have caused the concentrations of heat-trapping "greenhouse gases" to increase significantly in our atmosphere (U.S. EPA 2007a).

In the U.S., our energy-related activities account for three-quarters of our human-generated greenhouse gas emissions, mostly in the form of carbon dioxide emissions from burning fossil fuels. More than half the energy-related emissions come from large stationary sources such as power plants, while about a third comes from transportation. Industrial processes (such as the production of cement, steel, and aluminum), agriculture, forestry, other land use and waste management are also important sources of greenhouse gas emissions in the United States (U.S. EPA 2007b).

If greenhouse gases continue to increase, climate models predict that the average temperature at the Earth's surface could increase from 2.5 to 10.4°F above 1990 levels by the end of this century. Scientists are certain that human activities are changing the composition of the atmosphere and that increasing the concentration of greenhouse gases will change the planet's climate (U.S. EPA 2007b).

Rising average temperatures are already affecting the environment. In California during the last fifty years winter and spring temperatures have been warmer, spring snow levels in lower and mid-elevation mountains have dropped, and snowpack has been melting one to four weeks earlier. Climate change projections through 2100 indicate an increase in the number of severe heat days, an increase in poor air quality days and a declining Sierra snowpack. Such changes could adversely affect health, water supplies, hydropower, agriculture and recreation in California (California Climate Change Center 2006).

Regulatory Setting

The State of California has enacted legislative measures to implement policies and regulatory actions to quantify and reduce GHGs. The most prominent of these is AB 32, Nunez (2006) - The California Global Warming Solutions Act of 2006. AB32 declares that global warming is a serious threat to the public health, economic wellbeing, natural resources, and environment of California. AB 32 makes CARB responsible for monitoring and reducing GHG emissions, and requires CARB to:

1. Establish (by January 1, 2008) a statewide GHG emissions cap for 2020, based on 1990 emissions.

2. Adopt a plan by January 1, 2009 showing how emissions reductions will be achieved from significant GHG sources via regulations, market mechanisms, and other actions.
3. Adopt a list of discrete early action measures by July 1, 2007 that can be implemented before January 1, 2010 and beyond. The Early Action List required by the California Global Warming Solutions Act of 2006 contains nine discrete early action items. These actions are primarily transportation related, with commercial actions included as well. They are intended to target the most significant sources of GHGs.

On April 13, 2009, the Governor's Office of Planning and Research submitted to the Secretary for Natural Resources its proposed greenhouse gas emission amendments to the State CEQA Guidelines, as required by SB 97 (Chapter 185, 2007). Those amendments were adopted on December 30, 2009. The amendments set target greenhouse gas emission reductions for all metropolitan planning organizations (MPO). Each MPO must design a Sustainable Communities Strategy or alternative strategy as part of its regional transportation plan to achieve 2020 and 2035 greenhouse gas emission targets set by the Air Resources Board for each region. Local agencies not included within an MPO are exempt from the greenhouse gas emission targets, but they must address the CEQA Guidelines requirement contained in the Initial Study checklist for projects that they are considering.

SB 375 Has Three Major Components:

1. Using the regional transportation planning process to achieve reductions in greenhouse gas emissions consistent with AB 32's goals;
2. Offering California Environmental Quality Act incentives to encourage projects that are consistent with a regional plan that achieves greenhouse gas emission reductions; and
3. Coordinating the regional housing needs allocation process with the regional transportation process while maintaining local authority over land use.

SB 375 requires each MPO to include a "Sustainable Communities Strategy" (SCS) in the regional transportation plan that demonstrates how the region will meet the greenhouse gas emission targets. The states four largest four MPO's (includes (SACOG) are required to develop per capita emission reductions standards between 5 percent and 10 percent of 2005 levels by 2020. CARB must adopt the Targets by September 30, 2010, and the MPOs will begin to incorporate the SCS into Regional Transportation Plans in 2011. If the SCS falls short of meeting the targets, the region must prepare an "alternative planning strategy" that, if implemented, would meet the targets. If any of the 18 MPOs cannot achieve the Targets via an SCS, it may develop an Alternative Planning Strategy.

Impact Analysis

- VII. a *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment*

The Project is the installation of an engineered stream fish passage feature that includes a series of chutes and pools. There are no mechanical devices requiring the use of non-renewable energy resources. The passive design of the system assures neither energy consumption nor gas emissions are required to beneficially operate the fish bypass features. Natural hydrologic forces will ensure that no greenhouse gases are emitted. Upon completion, the Project will create a zero-carbon footprint.

Impact Conclusion: There will be no direct or indirect generation of greenhouse gas emissions following completion of construction, but there will be a less than significant impact during construction activities.

VII. b *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses*

The City of Lincoln has not adopted its own greenhouse emission reduction plan. It is however a part of the Sacramento Area Council of Governments (SACOG). AB 375 requires that each Metropolitan Planning Organization prepare a green house gases emissions reduction program in the form of an SCS. Since Placer County and El Dorado County have their own Regional Transportation Agency, that agency is required to include the SCS in its update as part of the Regional Transportation Plan.

As note under VII. A, the project will not generate any long term emissions such that a zero carbon foot print will be achieved.

Impact Conclusion: The passive design of the system assures neither energy consumption nor gas emissions are required to beneficially operate the fish bypass features. There will be no direct or indirect generation of greenhouse gas emissions following completion of construction, but there will be a less than significant impact during construction activities.

Impact Conclusion The Project will not have the potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses.

VIII. Hazards and Hazardous Materials

Would the project:

Environmental Issue	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issue	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"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The project area is in a riparian stream zone with man-made features. There are no known hazardous materials or sites within the project area.

Overview

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 in Title 22 of the California Code of Regulations (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. (California Code of Regulations, Title 22, Section 66261.10)

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosivity, and reactivity. CCR, Title 22, Sections 66261.20-66261.24 define the aforementioned properties. The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Under Government Code Section 65962.5, the California Department of Toxic Substances Control (DTSC) maintains a list of hazardous substance sites. This list, referred to as the "Cortese List", includes CALSITE hazardous material sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination.

Regulatory Setting

Federal Regulations

Federal agencies that regulate hazardous materials include:

- Environmental Protection Agency (USEPA) – USEPA administers the Resource Conservation and Recovery Act (RCRA), which regulates the generation, transportation, treatment, storage and disposal of hazardous waste.
- Occupational Safety and Health Administration (OSHA) – OSHA is responsible for ensuring worker safety, including operations that may use, handle or dispose of hazardous materials.

State Regulations

State agencies with responsibility to regulate hazardous materials include:

- California Environmental Protection Agency (Cal-EPA) – Cal-EPA and the Office of Emergency Services (OES) establish regulations governing the use of hazardous materials. Within Cal-EPA, the Department of Toxic Substances Control (DTSC) has primary regulatory responsibility. Enforcement of regulations has been delegated to local jurisdictions, which enter into agreements with DTSC.
- California State Water Resources Control Board and Regional Water Quality Control Board (RWQCB) – These agencies regulate surface water and groundwater quality according to the Porter-Cologne Water Quality Act, the Toxic Pits Cleanup Act, the Underground Tank Law and Clean Water Act.

In January 1996, Cal-EPA adopted regulations implementing a “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program). The six program elements of the Unified Program are: (1) hazardous waste generators and hazardous waste onsite treatment; (2) underground storage tanks; (3) above-ground storage tanks; (4) hazardous material release response plans and inventories; (5) risk management and prevention program; and (6) Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency – a Certified Unified Program Agency (CUPA), which is responsible for consolidating the administration of the six program elements within its jurisdiction.

Local Implementation of Regulations

The Placer County Department of Environmental Health is the designated CUPA for Placer County.

Impact Analysis

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

Small amounts of hazardous materials would be used during construction activities (i.e., equipment maintenance, fuel, and solvents). Hazardous materials would primarily be used during construction of the project, and any hazardous material uses would be required to comply with all applicable local, state and federal standards associated with the handling and storage of hazardous materials. In light of the sensitive nature of the site, the following mitigation measure is included:

Mitigation Measure

MM VIII-a1 (Hazardous Material Controls and Spill Prevention during Construction)

The following minimum controls for pollution prevention during servicing and fueling of construction vehicles will be used:

- Fueling and servicing shall be performed only in designated areas located as far as practicable from stream zones and wetland areas.
- When fueling, tanks shall not be “topped off.”
- Spill containment kits shall be carried in all construction vehicles.
- Secondary containment devices such as a drain pan or drain cloth shall be used when fueling in order to catch spills.
- All project construction personnel and subcontractors shall be trained in proper fueling, servicing, and clean-up procedures.
- All fluid spills or leaks shall be reported immediately.
- Hazardous materials shall be stored as far as practical from the stream channel.
- All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 50 feet from the stream.
- A contingency plan for possible leaks and spills of hazardous materials shall be developed and implemented for the Project.

Timing: *Fueling specifications shall be included in the construction plans and be followed throughout the construction period*

Responsibility: *NID’s contractor*

Reporting/verification: *NID’s construction inspector*

Impact Conclusion: With the incorporation of the above mitigation measure and state law requirements, this impact will be less than significant.

VIII. b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Potential hazardous substances used in the construction operation may include petroleum hydrocarbons, asphalt, paint, stains, pesticides and herbicides. The cleaning and storage of potentially hazardous materials such as paints and chemicals will be controlled through the Hazardous Waste Business Plan issued by the Placer County Environmental Health Division. The Proposed Project would result in a less than significant impact associated with the use and potential accidental release of hazardous materials during construction and operation (see discussion at item “a”, above).

Impact Conclusion: Since state and local law control the use and handling of construction-related hazardous substances, this impact is considered less than significant.

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

The North Lincoln Crossing Elementary School is located approximately 0.18 miles south of the project site. The school is separated from the project site in Auburn Ravine by residences. Children will not be in contact with hazardous materials at the construction site. As noted above, the project would involve the handling of hazardous materials; however, handling and storage of hazardous materials would comply with all applicable local, state, and federal standards.

Impact Conclusion: Since state and local law control the use and handling of construction-related hazardous substances, this impact is considered less than significant.

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

The project area does not include any sites that were included on a list of hazardous materials sites as maintained by the DTSC.

Impact Conclusion: Since there are no known hazardous wastes on site, there will be no impact.

- VIII. e. *For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?*

The project is located approximately 2 ¼ miles southeast of the Lincoln Municipal Airport. The Proposed Project does not include lighting features nor does the Proposed Project include erection of structures that have the potential to enter the airspace of aircraft utilizing the Airport. According to the 2000 Placer County Airport Land Use Compatibility Plan, the Proposed Project is outside of the Airport Influence Area.

Impact Conclusion: The project will not result in any impacts on a public airport.

- VIII. f. *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

The project is not located within the vicinity of a private airstrip.

Impact Conclusion: The project will not result in any impacts on a private airport.

- VIII. g. *Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?*

The installation of the fish passage features at the existing gaging station will not interfere with any known emergency response plan.

Impact Conclusion: This impact is considered less than significant.

- VIII. h. *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

According to the California Fire Alliance's Fire Planning and Mapping Tools database, the project is in an area dominated by fuels classified as "moderate" and "high" in terms of wildland fire risk (<http://wildfire.cr.usgs.gov/fireplanning>), accessed January 11, 2007). The project entails the installation of the fish passage features at the existing gaging station within Auburn

Ravine. The project will not change the current use of the land/water and as a result will not result in increased risk of fire hazard. Project construction and operation is not anticipated to result in a new or increased exposure of people or structures to a significant risk of loss, injury or death involving wildland fires.

Impact Conclusion: Due to the short-term nature of the construction phase, this impact is considered less than significant.

Impact Conclusion: With the inclusion of MM VIII-a1, the project will not result in significant impacts for hazards or hazardous materials.

IX. Hydrology and Water Quality

Would the project:

Environmental Issue	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The 0.9-acre project area is located within the Auburn Ravine drainage area. Auburn Ravine has a low-elevation, rain-dominated hydrology. Over 85 percent of precipitation occurs between November and April. Based on observations and historical stream flow records from other similar streams within the region, flows in Auburn Ravine respond rapidly to rainfall events, with the hydrograph both rising and falling abruptly. Historically, flows within Auburn Ravine would have been extremely low to nonexistent during the dry season (May through October). Flow augmentation has dramatically changed the flow characteristics of Auburn Ravine during the dry season.

Auburn Ravine currently serves as a conveyance channel for irrigation water obtained from an inter-basin transfer. Auburn Ravine is a perennial stream originating just west of the city of Auburn. From Auburn, the stream flows southwest through Lincoln and along the northern boundary of the Proposed Project area.

Regulatory Setting

Federal and State Regulation

The Federal Emergency Management Agency oversees the delineation of flood zones and provides disaster assistance. The agency manages the National Flood Insurance Program, which enables property owners in designated flood zones to purchase flood insurance. Flood zones are mapped on Flood Insurance Rate Maps that show the expected frequency and severity of flooding by area.

Federal Clean Water Act Section 402

The 1972 amendments to the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the Clean Water Act (CWA) created a new section of the CWA devoted to stormwater permitting (Section 402[p]). On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish storm water permit application requirements. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five (5) or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999, were expanded to address storm water discharges from construction sites that disturb land areas equal to or greater than one (1) acre and less than five (5) acres (small construction activity).

The State of California Regional State Water Resources Control Board administers and enforces the provisions of the NPDES program. NPDES is the primary federal program that regulates point source and non point-source discharges to waters of the United States. The SWRCB issues both general and

individual permits. Construction activities are regulated under the NPDES General Permit for Construction Activities provided the total amount of ground disturbance during construction exceeds one acre. The appropriate RWQCB enforces the general permit. Coverage under a general permit requires the preparation of a stormwater pollution prevention plan (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, a detailed construction timeline, and a best management practice (BMP) monitoring and maintenance schedule. Construction activities that are subject to this General Permit include clearing, grading, disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre of total land area.

Effective July 1, 2010 all dischargers are required to obtain coverage under the new Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. Construction activity subject to this permit includes clearing, grading and disturbances to the ground. Pursuant to the Permit, a discharger shall prepare a monitoring program prior to the start of construction and immediately implement the program at the start of construction.

Impact Discussion

IX-a. *Would the project violate any water quality standards or waste discharge requirements?*

Water quality may be impacted during construction activities due to surface runoff into Auburn Ravine. The project includes a variety of water quality construction protection measures to minimize impacts to Auburn Ravine. Following construction, there will be no on-going water quality impacts. Monitoring of the erosion protection and stabilization measures to reclaim the disturbed areas along both sides of Auburn Ravine within the project boundaries will occur. Following completion of the project, there will be no long-term activity that would affect stream flow or otherwise contribute to water quality degradation.

Due to the less than one-acre size, the project is not required to obtain an NPDES permit. Throughout the construction phase of the project, the contractor will be required, to the degree possible, to incorporate best management practices to ensure that sediments and other discharges to the ravine are prevented. Construction within the streambed in October presents concerns regarding storms that could generate erosion and sediment discharge into Auburn Ravine. As noted under Geology and Soils, the project incorporates measures to minimize potential impacts to water quality. These measures include erosion prevention and sediment control in accordance with the latest edition of Appendix Chapter 33 of the Uniform Building Code, compliance with the *Storm Water Management Program for the City of Lincoln*, and Section 20 of the Caltrans standard specifications. The project includes requirements for the installation of sediment control devices such as fiber rolls and silt fences along contours. Silt fences shall be installed approximately two (2) to five (5) feet above the toe of disturbed slopes.

To ensure that waste discharge requirements are met, NID shall develop and implement a Stormwater Pollution Prevention Plan and related erosion control best management practices as called for in its construction plans. In addition, a 401 Clean Water Act (CWA) Water Quality Certification will be obtained from the RWQCB.

Impact Conclusion: Due to the implementation of construction related BMPs and the 401 CWA certification, the project would result in less than significant impacts to water quality.

- IX. b. *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

The Project would not deplete groundwater supplies or interfere substantially with groundwater recharge, because the construction project will not draw from groundwater supplies or affect areas that contribute substantially to groundwater recharge. Stream flows will be maintained during construction through a bypass pipe. Pre-project groundwater recharge will remain substantially unchanged following completion of the project.

Impact Conclusion: This impact is considered less than significant.

- IX. c. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?*

The Project would not substantially alter the existing drainage pattern of Auburn Ravine. The physical and hydrological characteristics of Auburn Ravine would temporarily be altered by the project through a the installation of a minimum 36" bypass pipe that will divert water around the construction site through a temporary coffer dam immediately upstream of the existing concrete flume. Upon completion of construction the bypass pipe will be removed and flows will be resumed within the stream channel.

Soil erosion impacts are addressed under Geology and Soils item VIII. a. and Mitigation Measure MM VIII-a1 along with standard construction practices included on Sheet G-2, General Notes for the Auburn Ravine Gaging Station Fish Passage Improvement Project.

Impact Conclusion: The project would result in temporary, less than significant impacts associated with alteration of the stream.

- IX. d. *Would the project create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

The Proposed Project would not result in an increase of impervious surface.

Impact Conclusion: The project would have a less than significant contribution to the amount and quality of stormwater flows in the area.

- IX. e. *Would the project otherwise substantially degrade water quality?*

While construction will occur within the streambed of Auburn Ravine, the project incorporates a number of BMPs such that under normal conditions, the project will not otherwise degrade water quality. The largest are of concern would be heavy storms that could prevent and/or delay construction after site disturbance has occurred. Should a heavy storm or storms occur, significant impacts to water quality could result. Steps shall be taken to ensure that the site is secured in the event of large storms. This impact is

potentially significant and the following mitigation measure is included.

MM IX-e1: An emergency, storm water, management plan shall be prepared that can be fully implemented within 24 hours to stabilize all disturbed areas in anticipation of a significant storm event. Said plan shall be included in the final construction plans (see also MM IV-d3).

<i>Timing:</i>	<i>Prior to the start of on-site construction and on-going</i>
<i>Responsibility:</i>	<i>NID and Contractor</i>
<i>Reporting/verification:</i>	<i>The special storm water management program specifications shall be verified by NID and included in the contract management specifications</i>

Impact Conclusion: With the inclusion of MM IX-e1 and IV-d3, the project would have a less than significant impact.

- IX. f. *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

The Proposed Project is a park development project and no housing development is associated with the project.

Impact Conclusion: No impact.

- IX. g. *Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?*

The project area is located within the Detailed Study Zone “A” 100-year Floodplain as identified in the 2006 City of Lincoln General Plan EIR and is located within the Auburn Ravine 100-year floodplain and floodway.

In 2002 and 2003, Civil Engineering Solutions, Inc. provided hydraulic support analysis of Auburn Ravine for the Lincoln Crossing project. The Lincoln Crossing project proposed floodplain fringe encroachments for development, and the mapping for the project-identified park and trail improvements within the Auburn Ravine floodplain and floodway. Civil Engineering Solutions, Inc. analyzed the potential impacts of these improvements and determined that improvements at the park site and the development of Lincoln Crossing would have the potential to increase flood elevations within Auburn Ravine without mitigation. Civil Engineering Solutions, Inc. worked with the Lincoln Crossing project engineer to develop a mitigation plan across the Auburn Ravine overbank frontage of the project. The Lincoln Crossing Specific Plan mitigated the impact of the proposed improvements and additionally lowered flood plain elevations by 0.95 to 2.05 feet at locations where the City was concerned that Auburn Ravine had the potential to flood parking areas and structures north of the Ravine (Civil Engineering Solutions, 2007c).

In 2007, as part of the Auburn Ravine Park project (dog park), Civil Engineering Solutions, Inc. addressed potential flooding impacts associated with the new dog park (See Appendix B of the Final Mitigated Negative Declaration for the Auburn Ravine Park Project, April 2008). In their letters dated March 28, 2007, and May 30, 2007, Civic

Engineering Solutions, Inc., indicated that the dog park project will cause a minor increase of 0.08 feet in the 100-year flood plain level in the vicinity of the dog park. This minor increase is due to the installation of a fence around the dog park. The memorandum states that this minor increase in flood plain level would not exceed the previously lowered flood plain elevations of 0.95 to 2.05 feet associated with the Lincoln Crossings project.

The fish passage project will not contribute to changes in flood plain levels as there are no new permanent above-ground obstructions, changes in floodway contours and increases in water surface elevations that would increase flooding potential within the Auburn ravine floodplain or change flooding on adjoining lands.

Impact Conclusion: There will be no impact to flooding associated with the construction of the fish passage project.

- IX. h. *Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?*

The project area is located within the Detailed Study Zone “A” 100-year Floodplain as identified in the 2006 City of Lincoln General Plan EIR; however, the Proposed Project would not expose people to or introduce structures that would have the potential to result in significant risk of loss, injury or death.

Impact Conclusion: The fish passage project is an in-stream improvement that will not expose people or structures to a significant risk of loss.

- IX. i. *Would the project be subject to inundation by seiche, tsunami or mudflow?*

The Proposed Project would not create an additional risk from seiche or tsunami in the project area and the relatively flat topography eliminates the potential for mudslides to inundate the project site.

Impact Conclusion: The fish passage project is an in-stream improvement that will not be subject to inundation by seiche, tsunami or mudflow.

Impact Conclusion: With the inclusion of MM IX-e1 and MM VIII-a1, the project will have a less than significant impact on hydrology and water quality.

X. Land Use and Planning

Would the project:

Environmental Issue	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"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program,	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The project is located within the Lincoln Crossings Nature Preserve. The preserve is a natural feature that separates the Lincoln Crossings Village neighborhood from the Joiner Parkway neighborhood on either side of Auburn Ravine. The primary applicable land use plan within the project area is the City of Lincoln General Plan. The project area is designated “Open Space” on the Lincoln General Plan. The project area is located in the northern portion of the Lincoln Crossing Specific Plan area. The Specific Plan sets this area aside as a nature preserve.

Impact Discussion

- X. a. *Would the project physically divide an established community?*
 The project site is designated open space in the City General Plan and is part of the Lincoln Crossings Nature Preserve. The fish passage project is an environmental enhancement within Auburn Ravine, which is currently a natural feature dividing two separate residential villages.

Impact Conclusion: The fish passage project would not divide an existing community.

- X. b. *Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

The project does not conflict with any 2006 General Plan goals or policies to mitigate potential environmental effects. As an environmental enhancement project it furthers the goals of the General Plan and of the Lincoln Crossings Nature Preserve Area Operations and Maintenance Plan. Section 2.2.1.C of this plan requires vegetation removal to be conducted by hand removal only. The current project description does not describe how vegetation would be removed. This impact is potentially significant and mitigation will be required to bring the project into conformity with the Lincoln Crossings Nature Preserve Area Operations and Maintenance Plan.

MM X-b1 Vegetation removal within the disturbance zone shall occur using hand equipment, unless alternate means are approved by the City of Lincoln.

<i>Timing:</i>	<i>Included in bid package and implemented during vegetation removal</i>
<i>Responsibility:</i>	<i>NID and Contractor</i>
<i>Reporting/verification:</i>	<i>NID to report to City of Lincoln</i>

Impact Conclusion: With the inclusion of MM X-b1, the project will not be in conflict with adopted policies and regulations of the City of Lincoln.

X. c. *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*

There are no adopted Habitat Conservation Plans (HCP), Natural Community Conservation Plans (NCCP) or other habitat conservation plans that are applicable to the project area. There is however an adopted Nature Preserve within Auburn Ravine. Also see discussion above in Section IV.f.

Placer County is in the process of developing a joint Habitat Conservation Plan (HCP) under the Federal Endangered Species Act and Natural Community Conservation Plan (NCCP) under the California Natural Community Conservation Planning Act. The joint HCP/NCCP for the western portion of the county includes the Project area. See a more detailed discussion under Item IV-f of the Biological Resources Section.

The project would not affect implementation of the United States Fish and Wildlife Service’s (USFWS) adopted recovery plans for California Red-legged Frog, which applies to the western portion of Placer County. Though the proposed project is located within the Sierra Nevada Foothills and Central Valley Recovery Unit identified in the USFWS Recovery Plan for the California Red-legged Frog, the project area lacks water features that could potentially provide suitable habitat. Although, Auburn Ravine is located adjacent to the project area, no construction activities would occur in the ravine, and as discussed above, the City would maintain a buffer between the upland areas of the project site and the riparian zone to ensure no impacts to the riparian corridor. Therefore, the Proposed Project would not conflict with the provisions of the California Red-legged Frog Recovery Plan.

Impact Conclusion: The fish passage project is an environmental enhancement project and would not impact an adopted habitat management plan.

Impact Conclusion: With the inclusion of MM X-b1, the project will not be in conflict with adopted land use policies and programs of the City of Lincoln.

XI. Mineral Resources

Would the project:

Environmental Issue	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"/>
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"/>

Environmental Setting

The project site is not located within a Mineral Resource Zone, as defined by the California Mines and

Geology Board. According to the Placer County General Plan Update Draft EIR, the only mineral resource sites in the vicinity of the project site include a clay plant in the City of Lincoln and a sand and gravel operation southeast of the City. No mineral extraction activities occur within or in the vicinity of the project site.

Impact Analysis

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

The project is not within or adjacent to any important mineral resource areas as identified by the State of California

Impact Conclusion: The Proposed Project would not impact the availability of mineral resources that would be of value to the state.

- XI. b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

The Placer County General Plan Update Draft EIR identifies the only mineral resource sites in the vicinity of the project site as a clay plant in the City of Lincoln and a sand and gravel operation southeast of the City.

Impact Conclusion: the Proposed Project would not impact the availability of mineral resources that would be of value to the region.

Impact Conclusion: There will be no impact to mineral resources associated with the construction of the fish passage project and mitigation measures are not required.

XII. Noise

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
would the project expose people residing or working in the project area to excessive noise levels?				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The immediate project setting is characterized as residential neighborhoods. There are several types of outside, existing, noise sources that contribute to the ambient noise levels at the Proposed Project site, including vehicular traffic, train, industrial, and residential noise sources.

The most predominant noise sources contributing to the existing noise environment is motor vehicle traffic and railroad noise. State Route 65 is located approximately 0.2 miles east of the project area and Ferrari Ranch Road, a collector street, is also approximately .2 miles to the south of the project area. The Union Pacific Railroad generates railroad noise in the vicinity of the project area.

Noise Background

People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Although elevated noise levels can result in physiological damage and hearing loss, excessive noise in the environment more commonly impairs general human well being by contributing to psychological stress and irritation. Such health effects can result when noise interferes with everyday human activities such as sleep, talking, recreation, relaxation, and tasks requiring concentration. When noise is either disturbing or annoying, whether by its pitch or loudness, it may be considered objectionable.

The overall noise level associated with a given noise environment is called the “ambient” noise level. Ambient noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, trains, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Other contributing noise sources, often referred to as “background” sources, can include the sound of birds, people talking, occasional vehicles passing by, or televisions and radios. Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). Environmental sound levels are usually measured in A-weighted decibels, or dBA, which is a method of taking into account the sensitivity of the human ear to various frequencies in the sound spectrum. In general, a difference of three decibels is barely perceptible to the human ear, while a difference of 10 decibels is perceived as a doubling of loudness.

Factors that affect the transmission of noise between the noise source and the receptor include:

- Line of sight: Barriers, such as topography, sound walls and other structures, between a noise source and recipient can provide varying degrees of noise attenuation, particularly when placed near the noise source.
- Distance: A reduction in noise level of roughly 6 dBA occurs with each doubling of distance from a noise source, depending on the hardness of intervening surfaces.

Regulatory Setting

Federal Regulations

The federal Occupational Safety and Health Administration (OSHA) defines potentially harmful noise exposure (the level at which hearing loss may occur from long-term exposure) as exposure to greater than 90 dBA averaged over eight hours. For noise greater than 90 dBA, the allowable exposure time is correspondingly shorter.

State Regulations

The State of California sets interior residential standards for multifamily dwellings at 45 dBA Ldn. This interior residential standard is meant primarily for sleep and speech protection.

Local Regulations

The City of Lincoln addresses noise in the General Plan Health and Safety Element. This element recognizes that different types of land uses have different sensitivities toward their noise environment with residential areas generally considered to be the most sensitive type of land use to noise and industrial/commercial areas considered to be the least sensitive. Local noise elements and/or ordinances typically set forth standards related to land use compatibility and noise analyses required for development activities. Specific emphasis is given to noise sensitive land uses, typically defined as residential land uses, schools, health care facilities, libraries, and churches.

The City of Lincoln General Plan Noise Section ((Section 8 of the Health and Safety Element) has established maximum permissible noise levels impacting residential land uses from transportation and non-transportation sources. The normally acceptable exterior noise limits for residential land uses is 60 dBA CNEL. However, these standards do not apply to construction activities related to a project. Based on Polices HS-8.8 and 8.15, the city provides guidelines to developers and can set days and hours of operation for construction projects. **Mitigation Measure 7** of the Lincoln Crossings Specific Plan EIR limits construction from 7 AM to 5 PM, on Monday through Friday and prohibits construction on Saturday or Sunday, unless the City grants a special permit, in order to minimize disruption to residences adjacent and near the project.

Impact Analysis

- XII. a. *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?*

The fish passage project will not impact existing background noise levels and therefore would not generate noise in excess of standards established in the general plan.

Noise from project activities will be short-termed and limited to construction. The proposed construction schedule is for work to begin at 7 AM and finish at 7 PM, Monday through Saturday with no work on Sundays. Construction activities could temporarily increase noise levels in the vicinity of the project. Actual noise levels would depend on the type of construction equipment involved, distance to the source of the noise, time of day, and similar factors. However, these increases would be temporary. The Proposed Project area is located within the northern portion of the Lincoln Crossing Specific Plan. Mitigation Measures 4.9-1 and 4.9-2 of the Lincoln Crossing Specific Plan EIR are applicable to construction activities. The strict application of these two measures would have a potential negative effect on the ability to complete the project before potential early storms and the October 15 date when CDFG would preclude instream operations.

Although construction-related noise would be temporary and is considered less than significant, implementation of the following Mitigation Measures (modified from the Lincoln Crossing Specific Plan EIR) would ensure construction-related noise impacts would be less than significant.

Mitigation Measures

MM XII-a1. Construction activities shall be limited from 7 AM to 7 PM, Monday through Saturday and shall be prohibited on Sunday. Construction activities between the hours of 5 PM and 7PM, Monday through Friday and from 7 AM through 7 PM on Saturdays shall not exceed the 60 dBA CNEL standard of the City of Lincoln General Plan Noise Section ((Section 8 of the Health and Safety Element).

MM XII-a2. The contractor shall use mufflers, enclosure panels, or other noise suppression attachments on all equipment, as appropriate, and turn off equipment when not in use.

<i>Timing:</i>	<i>On-going through end of on-site construction</i>
<i>Responsibility:</i>	<i>NID</i>
<i>Reporting/verification:</i>	<i>The construction contract management specifications shall include these construction hours and limitations</i>

Impact Conclusion: With the inclusion of the above Mitigation Measures, the project will have a less than significant effect.

XII. b. *Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Project construction includes activities, such as operation of large pieces of equipment (e.g., excavators, sheet pile driver, crane, backhoes, dump trucks, cement trucks, pickups, delivery trucks, and similar related equipment), which may result in the periodic, temporary generation of groundborne vibration. The closest residences to the pile driving activities on the north side of Auburn Ravine are approximately 225 feet away and the on the south side are approximately 450 feet away. Pile drivers would be used on a limited basis over a period of approximately 16 days during construction for driving the eight (8) sheet piles to a maximum depth of 16 feet. Any potential groundborne vibration impacts would be short term and periodic. The underlying geology consisting of alluvial deposits with combinations of clay, silt, sand and gravel suggests that ground borne vibration will be substantially absorbed and would likely be imperceptible to the nearest residences. While groundborne vibrations will be short term, the following operating measures are included as part of the project specifications:

- a. Use driving method that will not cause damage to nearby structures.
- b. Notify adjacent and affected landowners and building occupants a minimum of three (3) days before proceeding with the work.
- c. Drive sheet piling only in presence of project engineer
- d. Use driving method not capable of causing damage to nearby structures.

Impact Conclusion: Ground borne vibrations will be short term, periodic and

absorbed by underlying geologic features before sensations are felt by adjoining residences. To the extent that there would be impacts, MM XII-a1 would ensure potential impacts are less than significant.

- XII. c. *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Following construction activities, operation of the fish passage features is not anticipated to increase the ambient noise levels above current levels.

Impact Conclusion: Operation of the fish passage features is based on natural hydrologic processes, therefore impacts are considered less than significant.

- XII. d. *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

See response to items XII. a and c., above. Construction activities would increase noise levels temporarily in the vicinity of the project. Actual noise levels would depend on the type of construction equipment involved, distance to the source of the noise, weather, time of day and other factors. However, these increases would be temporary.

Impact Conclusion: Because the project would be required to comply with Mitigation Measures XII-a1 and XII-a2, this impact is considered less than significant.

- XII. e. *For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The project is located approximately 2 ¼ miles southeast of the Lincoln Municipal Airport. According to the 2000 Placer County Airport Land Use Compatibility Plan, the Proposed Project is outside of the Airport Influence Area.

Impact Conclusion: No significant impact.

- XII. f. *For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

The project is not located within the vicinity of a private airstrip.

Impact Conclusion: No significant impact

Impact Conclusion: With the inclusion of Mitigation Measures Mitigation Measures XII-a1 and XII-a2, project construction noise impacts will be less than significant

XIII. Population and Housing

Would the project:

Environmental Issue	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"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Project area is located in the northern portion of the Lincoln Crossing Specific Plan area. There are well-established residential neighborhoods located to the north and south of the project area.

Impact Analysis

- XIII. a. *Would the project induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?*

The project does not propose construction or replacement of new homes or businesses, would not affect the current distribution of homes and businesses, and does not propose extension of infrastructure that could support substantial population growth.

Impact Conclusion: The project will not induce new population growth, therefore there are no impacts

- XIII. b. *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

Impact Conclusion: The project will not displace any housing, therefore there are no impacts.

- XIII. c. *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

Impact Conclusion: The project does not involve the displacement of people, therefore there are no impacts.

Impact Conclusion: The project is a temporary short-term construction project that will not generate the need for new housing or otherwise displace existing homes or residents.

XIV. Public Services

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Environmental Setting

General public safety and law enforcement services for the project area are provided by the Lincoln Police Department. The Lincoln Fire Department provides fire protection services and emergency services to the project area. There are two fire station is proximity to the project site, both. Fire station #33 is located on East Joiner Parkway and station #34 is located at First Street and Joiner Parkway; this latter station is within approximately ½ mile of the site.

Impact Discussion

XIV.a *Fire protection?*

The fish passage improvement project would not include elements that would increase human presence in the area; therefore, there would be no need for additional facilities to provide fire protection.

XIV.b *Police protection?*

The fish passage improvement project would not include elements that would increase human presence in the area; therefore, there would be no need for additional facilities to provide police protection.

XIV.c *Schools?*

The fish passage improvement project would not include elements that would increase human presence in the area; therefore, the project would not result in an increased demand for schools.

XIV.d *Parks?*

The fish passage improvement project would not include elements that would increase human presence in the area; therefore, the project would not result in an increased demand for parks or facilities to maintain parks.

XIV.e Other public facilities?

The Proposed Project does not include residential or commercial components that would result in increased human presence in the area; therefore, the project would have no impact on other public facilities.

Impact Conclusion: The fish passage improvement project will not impact public services as it will not generate increased human activity, therefore mitigation measures are not required.

XV. Recreation

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might, have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The Project area is located in the northern portion of the Lincoln Crossing Specific Plan area, is adjacent to existing residential uses and is within the Auburn Ravine Nature Preserve area. The preserve area is a recreational feature that includes a bicycle/pedestrian path that provides access to the Auburn Ravine Park to the west. There are residential parcels located to the north and south of the project area.

Impact Discussion

XV.a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The proposed project may slightly increase recreational use of the nature preserve, as the fish passage improvement project will fish migration in the fall. The fish passage improvement will be an added attraction for users of the Auburn Ravine Nature Preserve. While the project site is used for passive recreation, it could attract an unknown number of new visitors to observe fish migration at a site that was previously a barrier.

Impact Conclusion: This impact is considered less than significant.

- XV.b. *Does the project include recreational facilities, or require the construction or expansion of existing facilities, which might have an adverse physical effect on the environment?*

The project involves the development of a fish passage improvement feature that will enable anadromous fish to migrate upstream in the fall. The existing recreational features associated with the Auburn Ravine Nature Preserve and passive park are adequate to accommodate any increase in park users.

Impact Conclusion: This impact is considered less than significant.

Impact Conclusion: The fish passage improvement project will not create significant impacts on recreation facilities; therefore mitigation measures are not required.

XVI. Transportation/Traffic

Would the project:

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

Environmental Issue

Potential Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Environmental Setting

Construction access to the project site is via Mossdale Court from Southbridge Circle, from Green Ravine Drive from Ferrari Ranch Road to Highway 65. Traffic on Mossdale Court, Southbridge Circle and Green Ravine Drive are primarily limited to residential traffic. Ferrari Ranch Road is a small arterial road that carries both residential and commercial oriented traffic. A 12 foot concrete pedestrian and bicycle path meanders throughout the project site within Auburn Ravine.

Impact Discussion

- XVI. a. *Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

During the construction phase, construction vehicles and equipment would temporarily result in an increased number of vehicle trips on residential roads within Lincoln Crossing; however, such increases in traffic would only be temporary and no long-term traffic impacts would occur. Lincoln roads frequently carry construction related traffic; therefore, the presence of such traffic is not uncommon. Any increase in the number of vehicle trips to visit the fish passage project would not result in noticeable changes in traffic in or near the project area. As a construction only project, the fish passage improvements would not interfere or otherwise impact alternative transportation programs sponsored by the City of Lincoln.

Impact Conclusion: This impact is considered less than significant.

- XVI. b. *Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

As discussed above in response XVI. a. the increased number of vehicle trips would not result in noticeable changes in traffic in or near the project area. As such, there would be no conflict with an adopted congestion management plan.

Impact Conclusion: As a construction only project, the fish passage improvements will not generate any direct or cumulative impacts on levels of service on area roads.

- XVI. c. *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

The fish passage improvement project would not result in a change in air traffic patterns or increase traffic levels that would result in a substantial safety risk. The project does not propose construction of any structures that would impede the height limitation of the Lincoln Municipal Airport. Therefore, no impacts on air traffic patterns would occur as a result of this project.

Impact Conclusion: The fish improvement project will not have any impacts on the Lincoln Municipal Airport.

- XVI. d. *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
The project does not include any design features of the surrounding roadways nor would it introduce new traffic to the area.

Impact Conclusion: As a construction only project, the fish passage improvement project will not generate any new traffic hazards.

- XVI. e. *Would the project result in inadequate emergency access?*
As a construction only project, the fish passage improvement project would not obstruct emergency access within the adjacent residential community.

Impact Conclusion: As a construction only project, the fish passage improvement project will not create conditions that would lead to inadequate emergency access.

- XVI. f. *Would the project Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*
As a construction only project, the fish passage improvement project would not conflict with alternative transportation systems within the area.

Impact Conclusion: The project will not impact alternative transportation systems.

Impact Conclusion: As a construction only project, the fish passage improvement project will not create impacts to traffic and transportation in the area, therefore mitigation measures are not required.

XVII. Utilities and Service Systems

Would the project:

Environmental Issue	Less Than Significant			
	Potentially Significant Impact	With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
project from existing entitlements and resources, or are new or expanded entitlements needed?				
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Utilities located within and adjacent to the project area include water and sewer services provided by the City of Lincoln Public Works, natural gas and electricity provided by Pacific Gas and Electric (PG&E), telecommunication services provided by Surewest, cable is provided by Starstream Cable Company, and telephone services provided by AT&T. Solid waste services in the project area are provided by the City of Lincoln. Storm drainage facilities are maintained by the City of Lincoln.

Impact Discussion

XVII. a. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

As a construction only project, the fish passage project would not produce additional wastewater; and would, therefore, not result in impacts to wastewater treatment facilities.

XVII. b. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The project would have no impact on water or wastewater treatment facilities.

XVII. c. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The project does not require the construction of a new storm water drainage facility or expansion of existing facilities.

XVII. d. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

As a construction only project, the fish passage project does not require the development or expansion of water supplies.

XVII. e. *Result in a determination by the wastewater treatment provider that 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?*

As a construction only project, the fish passage project would not produce wastewater.

XVII. f. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Solid waste generated by the project construction would be minimal and would be limited to construction debris. The solid wastes generated by the proposed project would have a negligible effect on local landfills. Solid waste disposal would occur in accordance with federal, state and local regulations. Disposal would occur at permitted landfills.

XVII. g *Comply with federal, state and local statutes and regulations related to solid waste?*

The project would conform to all applicable state and federal solid waste regulations; therefore, the impact would be considered less than significant.

Impact Conclusion: As a construction only project, the fish passage improvement project will not create impacts on utilities and service systems, therefore mitigation measures are not required.

XVIII. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less Than Significant With Mitigation Measures. With the incorporation of mitigation measure in Sections I, Aesthetics, II, Air Quality, IV, Biological Resources, V, Cultural Resources VI, Geology and Soils, VIII, Hazards and Hazardous Materials, IX, Hydrology and Water Quality and X, Land Use and Planning, the project is not expected to degrade the quality of the environment. Specifically, the project is not expected to substantially reduce the habitat or affect populations of any fish or wildlife species. The project is an environmental enhancement project within the Auburn Ravine Nature Preserve. It will offer positive benefits for fish through the elimination of a long time fish barrier preventing migration to spawning habitat upstream at the Gaging Station. The cultural resources report did not identify any important examples of the major period of California history or prehistory. All vegetation removed to facilitate construction of the fish passage improvements will be replaced with similar riparian vegetation.

XVIII.b ***Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?***

Less than Significant. All impacts described in the Initial Study Checklist are considered less than significant or would be mitigated to a less-than-significant level.

The impact to biological resources is not cumulatively considerable because implementation of Mitigation Measure 3 would ensure no cumulative loss in potential Swainson's hawk foraging habitat. As noted above and in Section IV, the fish passage improvements are an environmental enhancement that will remove a migratory barrier and therefore improve access to upstream spawning habitat.

The unlikely discovery of cultural resources would not result in a cumulatively considerable impact. Should such unknown resources be discovered, standard project procedures in place would ensure that any resources discovered are treated in a manner to ensure proper handling and preservation.

Construction-related noise impacts are considered less-than-significant as they would be temporary and short term in nature. All reasonable efforts to reduce noise exposure to surrounding residents have been incorporated as mitigation measure in Checklist Item XII. The short-term nature of the construction related noise will not create long-term cumulative impacts.

All other less than significant impacts are not considered "cumulatively considerable" in a regional sense. Therefore, this impact is considered less than significant.

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

Less than Significant. As discussed throughout this document, the Proposed Project is an environmental enhancement project that will improve fish passage while providing spawning habitat upstream of the project area. As a construction only project, the impacts will be short term and temporary. Therefore, the project would have a less than significant impact on human beings.

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Appendix F

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

Introduction

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Auburn Ravine Gaging Station Fish Passage Improvement Project. This MMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to “adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” A MMRP is required for the proposed project because the Mitigated Negative Declaration (MND) has identified significant adverse impacts, and measures have been identified to mitigate those impacts.

The numbering of the individual mitigation measures follows the numbering sequence as found in the MND.

Mitigation Monitoring and Reporting Program

The MMRP, as outlined in the following table, describes mitigation timing, monitoring responsibilities, and compliance verification responsibility for all mitigation measures identified in this MND.

The MMRP is presented in tabular form on the following pages. The components of the MMRP are described briefly below:

Summary Mitigation Measures: The mitigation measures are taken from the MND, in the same order that they appear in the MND. The actual language is contained in the MND.

Monitoring Responsibility: Identifies the party responsible for mitigation monitoring.

Mitigation Timing: Identifies at which stage of the project mitigation must be completed.

Reporting/Verification: Identifies who is responsible for filing the report and the agency responsible for verifying that the Mitigation Measure has been implemented.

Compliance Verification Responsibility: Identifies the agency responsible for verifying compliance with the mitigation. In some cases, verification will include contact with responsible state and federal agencies.

Mitigation Measure	Summary of Measure	Monitoring Responsibility	Timing	Reporting/ verification	Verification (Date and Initials)
AESTHETICS					
MM I-c1	Any construction related damage to any section of the concrete path shall be repaired	<i>NID</i>	<i>Completion of project</i>	<i>City of Lincoln prior to on-site construction</i>	
AIR QUALITY					
MM III-a1	The construction emissions/dust control plan shall be presented to the Placer County Air Pollution Control District.	<i>NID</i>	<i>Prior to on-site construction and on-going</i>	<i>The construction management specifications shall be submitted to PCAPCD for approval</i>	
BIOLOGICAL RESOURCES					
Aquatic and semi-aquatic species					
MM IV-a1	Sensitive natural communities within and adjacent to construction areas shall be conspicuously marked in the field, and work activities shall be prohibited within the marked areas..	<i>Qualified biologist</i>	<i>Prior to on-site construction activities</i>	<i>NID's biologist to report to NID and CDFG as part of the approved Stream Alteration Agreement</i>	
MM IV-a2	An aquatic species protection plan shall be prepared to determine how fish and other aquatic species will be protected during the course of Project construction.	<i>Qualified biologist</i>	<i>Prior to on-site construction activities</i>	<i>Plan shall accompany Stream Alteration</i>	

Mitigation Measure	Summary of Measure	Monitoring Responsibility	Timing	Reporting/ verification	Verification (Date and Initials)
			construction.	<i>Agreement application</i>	
MM IV-a3	A program shall be presented to all construction staff. Anytime a special-status species is encountered during construction, work shall be stopped immediately at that location and shall not resume until the situation is resolved in accordance with the aquatic species protection plan (see MM IV-a2 above and MM IV-d1 below) or any other relevant permit requirements for the Project.	<i>NID's qualified biologist</i>	<i>Prior to start of construction and throughout construction phase</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>	
MM IV-a4	Raptor pre-construction surveys shall be conducted no more than 30 days in advance should construction start before September 1.	<i>NID's qualified biologist</i>	<i>Prior to start of construction</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>	
MM IV-a5	Tricolored blackbird pre-construction survey shall be conducted no more than 30 days in advance should construction start before August 1.	<i>NID's qualified biologist</i>	<i>Prior to start of construction</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>	
MM IV-a6	Purple martin pre-construction survey shall be conducted no more than 30 days in advance should construction start before September 1.	<i>NID's qualified biologist</i>	<i>Prior to start of construction</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>	
MM IV-a7	The re-vegetation plan shall include alders and cottonwoods as a means of increasing	<i>NID</i>	<i>As part of final construction</i>	<i>NID</i>	

Mitigation Measure	Summary of Measure	Monitoring Responsibility	Timing	Reporting/ verification	Verification (Date and Initials)
	diversity.		<i>plans and bid specifications</i>		
MM IV-d1	An aquatic species protection plan shall be prepared as part of the CDFG Stream Alteration. This plan will include procedures to rescue aquatic species should they be stranded by dewatering.	<i>NID's qualified biologist</i>	<i>On-going</i>	<i>NID's biologist to report to CDFG as part of the stream alteration agreement</i>	
MM IV-d2	An emergency bypass pipe removal plan must be established in order to accommodate unexpected, excessive flows in Auburn Ravine.	<i>NID</i>	<i>As part of final construction plans and on-going</i>	<i>NID's biologist to report to CDFG as part of their Stream Alteration Agreement</i>	
MM IV-e1	Install fencing 1 (one) foot around the dripline of any oak tree larger than six (6) inches.	<i>NID's qualified biologist</i>	<i>Prior to start of construction</i>	<i>NID's biologist to report to NID and City of Lincoln</i>	
MM IV-e2	Any individual oak tree (larger than six inches in diameter) that must be removed or is critically damaged must be replaced by specimen trees equal to the diameter of the removed tree(s).	<i>NID's qualified biologist</i>	<i>Prior to start of construction</i>	<i>NID's biologist to report to NID and City of Lincoln</i>	
MM IV-e3	Trees to be retained must be protected by maintaining at least 1 ½ foot distance from the dripline for all grading and other soil compaction activities. No fuel, oil, concrete mix or other deleterious mixture shall be allowed to flow across or within the dripline of an existing oak tree.	<i>NID's qualified biologist</i>	<i>Prior to start of construction</i>	<i>NID's biologist to report to NID and City of Lincoln</i>	


Mitigation Measure	Summary of Measure	Monitoring Responsibility	Timing	Reporting/ verification	Verification (Date and Initials)
CULTURAL RESOURCES					
MM V-b1	In the event of an inadvertent discovery of previously unidentified cultural materials, archaeological consultation shall be sought immediately.	<i>NID's contractor</i>	<i>Immediately</i>	<i>NID's archaeologist and tribe to determine the appropriate course of action</i>	
MM V-d1	In the event that human remains are inadvertently encountered during any ground-disturbing activity or at any time subsequently, immediately contact the Placer County Coroner's office and tribal representatives.	<i>NID's contractor</i>	<i>Immediately</i>	<i>Placer County Sheriff coroner and tribal representative along with NID's archaeologist to determine the appropriate course of action</i>	
Geology and Soils					
MM VI-b1	All Best Management Practices (BMPs) for erosion control and bank protection shall be implemented during Project construction	<i>NID</i>	<i>Included in construction specifications and SWPP secured prior to start of construction</i>	<i>NID construction inspector</i>	
Hazards and Hazardous Waste					
MM VIII-a1	Include appropriate minimum controls for pollution prevention during servicing and fueling of construction vehicles.	<i>NID's contractor</i>	<i>Included in final construction plans and</i>	<i>NID's construction inspector</i>	

Mitigation Measure	Summary of Measure	Monitoring Responsibility	Timing	Reporting/ verification	Verification (Date and Initials)
			<i>followed throughout construction</i>		
Hydrology and Water Quality					
MM IX-e1	An emergency, storm water, management plan shall be prepared that can be fully implemented within 24 hours to stabilize all disturbed areas in anticipation of a significant storm event. Said plan shall be included in the final construction plans.	<i>NID and contractor</i>	<i>Prior to start of site disturbance and on-going</i>	<i>NID and included in the contract management specifications</i>	
Land Use					
X-B1	Vegetation removal within the disturbance zone shall occur using hand equipment, unless alternate means are approved by the City of Lincoln.	<i>NID</i>	<i>Included in bid package and during vegetation removal</i>	<i>NID to report to City of Lincoln</i>	
Noise					
MM XII-a1	Construction activities shall be limited from 7 AM to 7 PM, Monday through Saturday and shall be prohibited on Sunday. Construction activities between the hours of 5 PM and 7PM, Monday through Friday and from 7 AM through 7 PM on Saturdays shall meet the 60 dBA CNEL standard of the City of Lincoln General Plan Noise Section	<i>NID</i>	<i>On-going through end of on-site construction</i>	<i>The construction contract management specifications shall include these construction hours and limitations</i>	
MM XII-a2	The contractor shall use mufflers, enclosure panels, or other noise suppression attachments on all equipment as appropriate	<i>NID</i>	<i>On-going through end of on-site</i>	<i>The construction contract</i>	

Mitigation Measure	Summary of Measure	Monitoring Responsibility	Timing	Reporting/ verification	Verification (Date and Initials)
	and equipment shall be turned off when not in use.		<i>construction</i>	<i>management specifications shall include these construction hours and limitations</i>	

Staff Report

for the Regular Meeting of the Board of Directors, April 27, 2011

TO: Board of Directors
FROM: John Kirk, P.E., Maintenance Manager 
DATE: April 18, 2011
SUBJECT: Auburn Ravine NID Gaging Station
Fish Passage Improvement Project

MAINTENANCE

RECOMMENDATION ACTION: Adopt Resolution 2011-09: Nevada Irrigation District Adopting the Mitigated Negative Declaration; Approving the Mitigation Monitoring and Reporting Program; Approving the Auburn Ravine NID Gaging Station Fish Passage Improvement Project and Authorizing filing the Notice of Determination with Placer County.

BACKGROUND: Currently, the District operates and maintains the Highway 65 gaging station in Auburn Ravine to accurately measure and record water deliveries to South Sutter Water District and irrigation deliveries by Placer County Water Agency.

The gaging station was originally constructed in 1981 as a result of a contractual agreement with South Sutter Water District. Since then, erosion has occurred downstream of the gaging station, creating a challenge for fish passage at the site. The project is the construction of transitional pools to enhance the ability of fish to move throughout this segment of Auburn Ravine.

BUDGETARY IMPACT: The estimated project cost is \$800,000, with the District's participation currently estimated at \$250,000. The remaining \$550,000 would be funded by Placer County through various grants that Placer County received this past year.

[JK]

Attachments (3):

- Initial Study and Mitigated Negative Declaration
- Mitigation Monitoring and Reporting Program
- Resolution 2011-09

**(ADOPTING A MITIGATED NEGATIVE DECLARATION, AND APPROVING THE
AUBURN RAVINE NID FISH PASSAGE IMPROVEMENT PROJECT)**

WHEREAS, Nevada Irrigation District ("District") has undertaken the review of a project to modify an existing in-stream gaging station to aid in fish passage, (the "Project"); and

WHEREAS, the California Environmental Quality Act of 1970 ("CEQA") requires state, local, and other agencies to evaluate or reduce, when feasible, the significant environmental impacts of their respective projects; and

WHEREAS, the District has retained Thomas A. Parilo & Associates to prepare a Preliminary Review and Initial Study ("Initial Study") for the proposed Project, in accordance with the requirements of CEQA; and

WHEREAS, on March 3, 2011, a Notice of Intent to Adopt a Mitigated Negative Declaration for the Project was published in The Lincoln Messenger newspaper, advising of the time and place of a public hearing on the Project; and

WHEREAS, on April 27, 2011, following a public hearing on the Negative Declaration for the Project, the Board of Directors of the Nevada Irrigation District approved the adoption of the proposed Mitigated Negative Declaration for the Project as presented; and

WHEREAS, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the project, in accordance with the requirements of CEQA.

NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the Nevada Irrigation District that it does find as follows:

1. The above recitals are true and correct.
2. Based on its review of the whole record before it, including the Initial Study, the MMRP, presentations of Staff and consultants, and the public comments, both written and oral, received in response to its Notice of Intent, the Board finds that there is no substantial evidence of record that the Project will not have a significant effect on the environment and that the Mitigated Negative Declaration represents the independent judgment and analysis of the District.

3. Mitigation measures are made a condition for approval of the Project and the Board hereby adopts the MMRP for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental impacts.
4. The documents which constitute the record of proceedings upon which the decision of the Board is based are located at the offices of Nevada Irrigation District, 1036 West Main Street, Grass Valley, California, and the Secretary to the Board is the custodian thereof.
5. The Board of Directors hereby approves the Project.
6. The Board Secretary is hereby authorized to file a Notice of Determination, a copy of which is attached as Exhibit 'A', with the Office of the County Clerk, Placer County and State Clearinghouse.

ADOPTED by the Board of Directors of the Nevada Irrigation District at a regular meeting of said Board, held on the 27th day of April 2011, by the following vote of said Board

AYES: Directors:

NOES: Directors:

ABSENT: Directors:

ABSTAINING: Directors:

President

Board Secretary

NOTICE OF DETERMINATION

To: State Clearinghouse
P. O. Box 3044
Sacramento, CA 95812-3044

From: Nevada Irrigation District
1036 West Main Street
Grass Valley, CA 95945-5424

- SUBJECT:** Filing of Notice of Determination in Compliance with Section 21108 or 21152 of the Public Resources Code.

Auburn Ravine Gaging Station Fish Passage Improvement Project
Project Title

2011032003
State Clearinghouse Number

John R. Kirk, P.E., Maintenance Manager (530) 273-6185 Ext. 201
Contact Person Telephone Number

- PROJECT LOCATION:**

The project site is Nevada Irrigation District's (NID) gaging station and is located within the Lincoln Preserve Nature Preserve, approximately 1,000-feet downstream of the State Route 65 bridge crossing in the City of Lincoln, California.

- PROJECT DESCRIPTION:**

The fish passage improvements include the construction of a new roughened channel with rock chutes and pools. The constructed chute-and-pool feature will occupy approximately 6,392-square feet within the stream channel covering an area of 34-feet by 188-feet. The upstream end of the roughened channel will begin at the downstream edge of the gaging station flume. The current approximate 6-foot drop from the flume apron will be spread over the approximate 188-foot length of the fish passage improvements. Flow will exit the flume into the upstream transition pool. The pool is designed to dissipate energy and provide resting habitat for fish before they swim through the flume. Flow will then travel over a series of chutes and pools, with varying lengths, until the downstream transition pool, which connects to the existing channel. All construction within the existing stream zone will occur after the stream is dewatered and temporarily re-routed via the 36-inch diameter water diversion pipe during low flow season (September 2011 through October 2011).

- DETERMINATIONS:**

This is to advise that NEVADA IRRIGATION DISTRICT approved the above-described project on April 27, 2011, after complying with CEQA, and has made the following determinations regarding the project:

- The project will will not have a significant effect on the environment.
- An Environmental Impact Report was was not prepared for this project, pursuant to the provisions of CEQA.

- c. A Negative Declaration was was not prepared for this project, pursuant to the provisions of CEQA.

The Negative Declaration and record of project approval may be examined at the District's main office located at 1036 West Main Street in Grass Valley, California.

- d. Mitigation measures were were not made a condition of the approval of this project.
- e. A Statement of Overriding Considerations was was not adopted for this project.
- f. Findings were were not made, pursuant to the provisions of CEQA.
- g. A mitigation reporting or monitoring plan was was not adopted for this project.

NEVADA IRRIGATION DISTRICT

By: _____
Ron S. Nelson
General Manager

Date: _____

NEVADA IRRIGATION DISTRICT

BOARD OF DIRECTORS

MINUTES

April 27, 2011

The Board of Directors of the Nevada Irrigation District convened in regular session at the District's main office located at 1036 W. Main Street, Grass Valley, on the 27th day of April, 2011 at 9:00 a.m.

Present were Nancy Weber, President; Nick Wilcox, Vice-President; John H. Drew, W. Scott Miller and Jim Bachman, Directors.

Staff members present included Ron Nelson, General Manager; Tim Crough, Assistant General Manager; Marie G. Owens, Finance Manager/Treasurer; Gary King, Chief Engineer; John Kirk, Maintenance Manager; Yvonne DuBose, Human Resources Manager; Peggy Davidson, Recreation Manager; Anthony Soares, District Counsel; and Lisa Francis Tassone, Board Secretary.

EMPLOYEE RELATIONS – New Employee Introduction, Gravatt

Bob MacDonald, Assistant Maintenance Superintendent, introduced Kenath Gravatt, Utility Worker I. Mr. Gravatt is a native of Auburn, CA and currently a resident of Colfax. He was previously employed with Placer County Water Agency. He also has experience with underground work, electrical conduit, plumbing, etc. He is married and has a son. Mr. Gravatt is excited to learn new skills and is happy to be with the District.

The Board and staff welcomed Mr. Gravatt to the District.

MINUTES – April 13, 2011 Meeting

Approved the Minutes of the Board of Directors' meeting of April 13, 2011, as submitted. M/S/C Miller/Drew

TREASURER'S QUARTERLY REPORT OF INVESTMENTS

Accepted the Treasurer's Quarterly Report of Investments for filing as of December 31, 2010. M/S/C Miller/Drew

FEDERAL EMERGENCY MANAGEMENT AGENCY – Rejection of Claim

President Weber stated that the District submitted a claim to the Federal Emergency Management Agency (FEMA). The claim was paid, but FEMA discovered that projects were not completed, and is requesting the money be paid back. She is hoping that this is not a pattern the District will be repeating.

WARRANTS

Approved the following warrants: Yuba-Bear Revolving Fund Nos. 23598 through 23630, inclusive; General Fund Revolving Account Nos. 53964 through 54099, inclusive; Recreation Fund Nos. 2763 through 2786, inclusive; and Payroll Direct Deposit and Warrant Nos. 58526 through 58699, inclusive. M/S/C Miller/Drew

EMPLOYEE RELATIONS – Howe, Retirement Presentation (Res. 2011-07)

John Kirk, Maintenance Manager, recognized Craig J. Howe on his retirement after 19 years of service with the District. Mr. Howe started his employment with the District in 1992 in the Vegetation Control section. He worked his way up to the position of Senior Vegetation Control Specialist. Mr. Howe obtained his Pest Control Advisor's License, and he also holds an Arborist License. Mr. Kirk has always appreciated and respected Mr. Howe being forthright. He never wavered from his analysis of a field condition. Mr. Howe plans on traveling during retirement. He is an avid scuba diver and a 'cactiphile.' He currently has over 1,000 varieties of cacti. Mr. Kirk thanked Mr. Howe for his leadership, knowledge and diligence, and wished Mr. Howe the best of luck in his retirement.

The Board applauded Mr. Howe for his 19 years of service and congratulated him on his retirement.

AUBURN RAVINE HIGHWAY 65 FISH PASSAGE IMPROVEMENT PROJECT – Preliminary Review & Initial Study (Res. No. 2011-09)

John Kirk, Maintenance Manager, presented the Preliminary Review and Initial Study for the Auburn Ravine Highway 65 Fish Passage Improvement Project. The Project is being proposed as an enhancement to the District's existing gaging station in the Auburn Ravine. He introduced the Project team: Tom Parilo, Parilo and Associates, who assisted with the environmental process, and Dr. Carrie Monohan, who addressed any biological issues and provided technical assistance for this environmentally sensitive area and topic.

Dr. Monohan provided the Board with some background. The location of this Project is the District's gage below Highway 65 on the Auburn Ravine in the City of Lincoln. The gage was installed in 1981 by South Sutter Water District and the District as a critical component to downstream water deliveries to the City of Lincoln, Pacific Gas & Electric Company (PG&E), South Sutter Water District, and Placer County Water Agency.

April 27, 2011

She stated that the Auburn Ravine is a part of the Western Placer Streams which provides habitat for anadromous salmon, specifically fall and late fall run Chinook. Surveys done in 2004 found that there was suitable spawning habitat upstream of the City of Lincoln, but the fish could not make it upstream without this Project. In 2005, Placer County organized a project advisory group around the need for fish passage in Auburn Ravine, which included a number of stakeholders, the City of Lincoln, the District and the California Department of Fish and Game. The project advisory group convened a design team to evaluate project alternatives which included the removal of the structure. This was not recommended because of the potential for head cutting and upstream incision, and the fact that the District needed to maintain the ability to accurately measure discharge at this location. The preferred alternative is being presented at this time – a channel spanning regrade using sheet piles to create a series of shoots and pools that mimic the morphology and natural conditions. The Project is truly an environmental enhancement to the Auburn Ravine and this fishery, and would not be possible without the District's partners and funders: CALFED, Placer County, Dry Creek Conservancy and Bella Vista Foundation.

The Auburn Ravine is a calibrated stream channel with a record dating back over 20 years that is used to calculate and measure the size and timing of downstream water deliveries. The stage discharge relationship is a technical component to numerous existing water contracts and the facility operates smoothly for its intended purpose. It is interesting to note that historic (or natural) summer flows would have been much lower than they are today and would have likely limited the amount of habitat available for summer rearing of steelhead/rainbow trout.

The goal of this Project is to improve the District's facility by providing fish passage while continuing to meet water delivery needs of downstream users

Director Miller asked if there has been a fish count.

Dr. Monohan stated that there have been some surveys done above the Project site to determine the benefit of the Project.

Director Miller asked if the counts will continue.

Dr. Monohan stated that continuous monitoring is an excellent idea, but is not part of the current Project description.

Mr. Kirk explained that the Project is in the City of Lincoln and is in a nature preserve west of Highway 65 and east of the Auburn Ravine Park. The Project would modify the stream channel. There is a streambed alteration area, and bank stabilization areas. The bike path/walkway is part of the Lincoln preserve. The Project will require a temporary coffer dam with a bypass pipe.

Mr. Kirk explained several drawings for the Project. He noted that no oak trees are scheduled to be removed.

Mr. Parilo provided a summary of the environmental process for the Project:

Preliminary Studies:

- Summary of 2004 and 2005 Fish Community Surveys in Auburn Ravine and Coon Creek (Placer County)
- Riparian Vegetation and Fish Habitat Evaluation
- Auburn Ravine Fish Passage Alternatives developed for Auburn Ravine's NID Gaging Station

Completed California Environmental Quality Act (CEQA) Studies:

- Biological Assessment for the Auburn Ravine Gaging Station Study Area
- Wetland Delineation
- Archaeological Inventory Survey
- These studies supported the findings of "no significant impact"

Mr. Parilo explained that pre-CEQA outreach included a site visit with the Department of Fish and Game in December 2010. The City of Lincoln had a number of concerns including the impact to the pathway. They also stressed the importance of the Project having no impacts to the oak trees. The team also met with the Lincoln Open Space Committee. Their concern was that the District maintains the nature preserve near the Project site. On February 15, 2011, a meeting was held to introduce the Project to the public. Input was received from neighboring residents and other groups (i.e. Save Auburn Ravine Salmon and Steelhead, and a member from a Native American Tribe).

CEQA Process:

- Finalize Project Description and Initial Study
- Circulate Mitigated Negative Declaration for 30-day public review – February 28, 2011
 - Cultural Resources Study sent to local Native American Tribes
- Public Review ended April 8, 2011
- No agency or public comments were received
- Today's Public Hearing

Environmental Permits Applied for:

- Clean Water Act Section 401 Water Quality Certification
- Clean Water Act Section 404 administered by Army Corps of Engineers
- Lake and Stream Alteration Permit Fish and Game 1600

Summary of Mitigation Measures:

- Aesthetics
 - Repair damage to the concrete path attributed to Project construction
- Air Quality
 - Implement emissions/dust control plan
- Biological Resources
 - Aquatic species protection plan – plan to include fish rescue methods

April 27, 2011

- A worker education program for identifying sensitive biological resources
- Raptor and special bird pre-construction surveys if construction starts before September 1
- Include alders and cottonwoods in re-vegetation plan
- Prepare Oak Tree Protection Plan
 - Fencing around dripline
 - No deleterious mixture (oil, fuel) allowed to flow across dripline
 - Replace critically damaged trees
- Cultural Resources
 - Archaeological consultation shall be required for inadvertent discovery of previously unidentified cultural material, and/or human remains
- Geology and Soils
 - All Best Management Practices (BMPs) for erosion control and bank protection
- Hazards and Hazardous Waste
 - Include appropriate minimum controls for pollution prevention during servicing and fueling of construction vehicles
- Hydrology and Water Quality
 - An emergency, storm water, management plan shall be fully implemented within 24 hours in anticipation of a significant storm event
- Noise
 - Construction activities between the hours of 5:00 p.m. and 7:00 p.m. Monday through Friday and from 7:00 a.m. through 7:00 p.m. on Saturdays shall not exceed the 60 decibal Community Noise Equivalent Level (dBA CNEL) standard of the City of Lincoln General Plan
 - Use appropriate noise suppression features on all equipment

Mr. Kirk explained that the Project should be completed within a 45-day period due to irrigation demands and deliveries. Construction would begin by September 15 and be completed by October 30, 2011. Vegetation removal could begin as early as August 2011.

Director Drew asked if the sheet piles are driven or excavated and then placed.

Mr. Kirk stated that the sheet piles will be driven.

Mr. Kirk stated that he does not yet have the finalized design or bid documents available from Placer County's design consultant. If these documents are not ready, or if the permits are not received, the Project may be delayed one year.

Ron Nelson, General Manager, stated that the Project is located adjacent to a large number of residents and proposes an opportunity to allow residents to observe what will be occurring. He asked if there is any way to invite the public to the area to witness the Project while at the same time providing for their safety.

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Mr. Kirk stated that access can be allowed on a limited basis. Additionally, a video documentary will be made.

Mr. Nelson asked if anadromous fish will be present during construction, and if there are opportunities to deal with this issue.

Mr. Kirk explained that a fish recovery plan is mandatory as part of the permitting process. Typically, at this time of year, anadromous fish are not present. If they were to somehow appear, the recovery plan would be implemented.

Dr. Monohan added that fish tend to avoid noise such as would occur during construction.

Director Drew referenced Item 2 on page 1 of Resolution No. 2011-09, and pointed out that the word 'not' be removed.

Staff concurred and will provide the correct Resolution, upon approval by the Board of Directors.

Director Drew expressed concern that all of the efforts and expenses associated with preparing an environmental document are greater than the benefit, as far as he is concerned. At times, the environmental requirements are counterproductive.

Director Drew asked if there will be any protection from professional poachers at the Project site.

Mr. Kirk responded affirmatively.

Director Drew stated that the area above the gaging station and past the Hemphill Canal is ideal spawning habitat for steelhead and other anadromous fish. Above the spawning area, there is a huge barrier, and no anadromous fish will go over the barrier, and they never have. He asked how the difference between steelhead and Rainbow trout is determined in the analysis that has been done.

Dr. Monohan stated that there is morphological difference.

Director Drew stated that he would be interested in any studies that have been done above the barrier at Hemphill. It is his feeling that the fish do not make it over the barrier.

Director Wilcox stated that after reviewing the environmental document, he found the document to be well done. He commended the team for doing an excellent job.

Director Drew noticed that there was attention paid to two species of eels. He asked if they are species of special concern.

April 27, 2011

Edmond Sullivan, Senior Planner with Placer County, stated there is a potential for listing the Pacific Lamprey eel.

Director Bachman stated that he thought fish monitoring was part of the Project.

Mr. Kirk explained that the Water Distribution Operators in the District's Operations Department will document any fish sightings as the Operators take their measurements. Any monitoring beyond this has not been included in the Project.

President Weber asked if the Project will be constructed by the District's Maintenance Department.

Mr. Kirk stated that the Project is currently scheduled to be done under contract.

President Weber noted the budget impact of \$250,000, and asked if this amount has been included in this year's budget.

Mr. Nelson explained that a budget amendment will be necessary in the amount of \$250,000 if the Project is to be completed this year. Mr. Nelson stated that he is proposing to take the funds from the District's Watershed Improvement Reserve.

Mr. Kirk pointed out that if the Project is not completed this fall, the grant from Placer County will expire, and that the District would have to pay for the entire Project if the District constructs the Project in the future.

President Weber stated that she was pleased to see the thorough environmental work that has been done for this Project. It is simpler to complete a thorough document early on, rather than do the work piecemeal.

President Weber opened the public hearing.

Jeanette Clark, resident in the Cement Hill area, stated that as an educator, she sees a wonderful opportunity for the District to involve the public and provide this information as education for children.

Hearing no further testimony, President Weber closed the public hearing.

**Adopted Resolution No. 2011-09 (Adopting a Mitigated Negative Declaration, and Approving the Project and Mitigation Monitoring and Reporting Program for the Auburn Ravine Highway 65 Fish Passage Improvement Project), as amended.
M/S/C Wilcox/Miller**

Director Miller stated that the Project is "wonderful." In the analysis of the success of the Project, fish, by his understanding, instinctively return to their birth place. He asked if the District should consider planting fish in case the fish do not return to this area. He is concerned because the District is going to be asked by the Federal Energy

April 27, 2011

Regulatory Commission (FERC) to enhance fish return District-wide. He suggested placing this matter on the Maintenance and Resource Management Committee agenda.

Director Drew stated that during the early life stages of the salmonids, there is a window of imprinting where they will adapt to a new environment.

Director Wilcox stated that his impression is that this section of Auburn Ravine has historically been used by salmonids and therefore the idea of planting would be inappropriate. It would be better to preserve genetic integrity of streams. If planting were to take place, it would have to be done under the direction of the Department of Fish and Game. The District has, by virtue of the existing gaging facility, over time, created a blockage, and the District is now taking responsibility for the blockage and mitigating for the blockage. In time, the fish will return to this area.

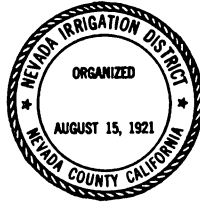
Mr. Kirk stated that last fall, approximately six Chinook salmon appeared at the gaging station. It is his understanding that the Department of Fish and Game used to plant excess Chinook salmon in this stretch of the stream.

Dr. Monohan stated that the intent of this discussion is “fantastic” but there are ways to improve reproductive success of strains that already inhabit this area that should be explored prior to looking into planting strains from other areas.

Mr. Nelson stated that there are a number of ways to measure success in this Project. There are other factors beyond the District’s control that have an influence on the number of fish that return or if fish return. There are conditions downstream that can become an impediment under certain conditions. What the District knows is that this facility is a barrier to anadromous fish, and by taking proactive steps to remove the barrier, the District is helping restore the populations. There are resident fish that need to move up and down to access their own spawning grounds. The District is demonstrating leadership by taking proactive steps to deal with this issue.

President Weber stated that she would like the District to explore funding from one of the sport fishing groups. There are a couple of groups that are actively involved in the Western Placer Streams area. She would like this to be explored from the view point that the benefits from this Project be tied to other projects. The District needs to prove whether or not the fish passage projects are effective and make the necessary modifications.

President Weber directed Staff to present information to the Maintenance and Resource Management Committee in one year regarding potential funding opportunities, direction for monitoring and a report on the success of the Auburn Ravine Gaging Station Fish Passage Improvement Project.



RESOLUTION No. 2011-09

OF THE BOARD OF DIRECTORS OF THE NEVADA IRRIGATION DISTRICT (ADOPTING A MITIGATED NEGATIVE DECLARATION, AND APPROVING THE PROJECT AND MITIGATION MONITORING AND REPORTING PROGRAM - AUBURN RAVINE FISH PASSAGE IMPROVEMENT PROJECT)

WHEREAS, Nevada Irrigation District ("District") has undertaken the review of a project to modify an existing in-stream gaging station to aid in fish passage, (the "Project"); and

WHEREAS, the California Environmental Quality Act of 1970 ("CEQA") requires state, local, and other agencies to evaluate or reduce, when feasible, the significant environmental impacts of their respective projects; and

WHEREAS, the District has retained Thomas A. Parilo & Associates to prepare a Preliminary Review and Initial Study ("Initial Study") for the proposed Project, in accordance with the requirements of CEQA; and

WHEREAS, on March 3, 2011, a Notice of Intent to Adopt a Mitigated Negative Declaration for the Project was published in The Lincoln Messenger newspaper, advising of the time and place of a public hearing on the Project; and

WHEREAS, on April 27, 2011, following a public hearing on the Negative Declaration for the Project, the Board of Directors of the Nevada Irrigation District approved the adoption of the proposed Mitigated Negative Declaration for the Project as presented; and

WHEREAS, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the Project, in accordance with the requirements of CEQA.

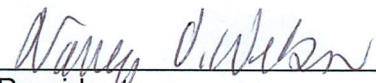
NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the Nevada Irrigation District that it does find as follows:

1. The above recitals are true and correct.
2. Based on its review of the whole record before it, including the Initial Study, the MMRP, presentations of Staff and consultants, and the public comments, both written and oral, received in response to its Notice of Intent, the Board finds that there is no substantial evidence of record that the Project will have a significant effect on the environment and that the Mitigated Negative Declaration represents the independent judgment and analysis of the District.


3. Mitigation measures are made a condition for approval of the Project and the Board hereby adopts the MMRP for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental impacts.
4. The documents which constitute the record of proceedings upon which the decision of the Board is based are located at the offices of Nevada Irrigation District, 1036 West Main Street, Grass Valley, California, and the Secretary to the Board is the custodian thereof.
5. The Board of Directors hereby approves the Project.
6. The Board Secretary is hereby authorized to file a Notice of Determination, a copy of which is attached as Exhibit 'A', with the Office of the County Clerk, Placer County and State Clearinghouse.

ADOPTED by the Board of Directors of the Nevada Irrigation District at a regular meeting of said Board, held on the 27th day of April 2011, by the following vote of said Board

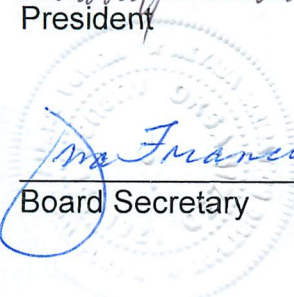
AYES:	Directors: Drew, Miller, Bachman, Wilcox, Weber
NOES:	Directors: None
ABSENT:	Directors: None
ABSTAINING:	Directors: None



President



Board Secretary



The first part of the document is a letter from the Secretary of the State of New York to the Governor, dated January 1, 1912. The letter is addressed to the Governor and is signed by the Secretary.

The second part of the document is a letter from the Governor to the Secretary, dated January 1, 1912. The letter is addressed to the Secretary and is signed by the Governor.

The third part of the document is a letter from the Secretary to the Governor, dated January 1, 1912. The letter is addressed to the Governor and is signed by the Secretary.

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The fifth part of the document is a letter from the Secretary to the Governor, dated January 1, 1912. The letter is addressed to the Governor and is signed by the Secretary.



NOTICE OF DETERMINATION

To: State Clearinghouse
P. O. Box 3044
Sacramento, CA 95812-3044

From: Nevada Irrigation District
1036 West Main Street
Grass Valley, CA 95945-5424

1. **SUBJECT:** Filing of Notice of Determination in Compliance with Section 21108 or 21152 of the Public Resources Code.

Auburn Ravine Gaging Station Fish Passage Improvement Project
Project Title

2011032003

State Clearinghouse Number

John R. Kirk, P.E., Maintenance Manager

Contact Person

(530) 273-6185 Ext. 201

Telephone Number

2. **PROJECT LOCATION:**

The project site is Nevada Irrigation District's (NID) gaging station and is located within the Lincoln Preserve Nature Preserve, approximately 1,000-feet downstream of the State Route 65 bridge crossing in the City of Lincoln, California.

3. **PROJECT DESCRIPTION:**

The fish passage improvements include the construction of a new roughened channel with rock chutes and pools. The constructed chute-and-pool feature will occupy approximately 6,392-square feet within the stream channel covering an area of 34-feet by 188-feet. The upstream end of the roughened channel will begin at the downstream edge of the gaging station flume. The current approximate 6-foot drop from the flume apron will be spread over the approximate 188-foot length of the fish passage improvements. Flow will exit the flume into the upstream transition pool. The pool is designed to dissipate energy and provide resting habitat for fish before they swim through the flume. Flow will then travel over a series of chutes and pools, with varying lengths, until the downstream transition pool, which connects to the existing channel. All construction within the existing stream zone will occur after the stream is dewatered and temporarily re-routed via the 36-inch diameter water diversion pipe during low flow season (September 2011 through October 2011).

4. **DETERMINATIONS:**

This is to advise that NEVADA IRRIGATION DISTRICT approved the above-described project on April 27, 2011, after complying with CEQA, and has made the following determinations regarding the project:

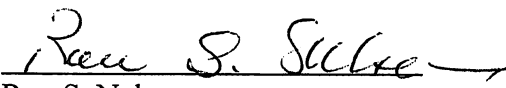
- a. The project will will not have a significant effect on the environment.
- b. An Environmental Impact Report was was not prepared for this project, pursuant to the provisions of CEQA.

- c. A Negative Declaration was was not prepared for this project, pursuant to the provisions of CEQA.

The Negative Declaration and record of project approval may be examined at the District's main office located at 1036 West Main Street in Grass Valley, California.

- d. Mitigation measures were were not made a condition of the approval of this project.
- e. A Statement of Overriding Considerations was was not adopted for this project.
- f. Findings were were not made, pursuant to the provisions of CEQA.
- g. A mitigation reporting or monitoring plan was was not adopted for this project.

NEVADA IRRIGATION DISTRICT

By: 
Ron S. Nelson
General Manager

Date: APRIL 27, 2011

NOTICE OF DETERMINATION

To: State Clearinghouse
P. O. Box 3044
Sacramento, CA 95812-3044

From: Nevada Irrigation District
1036 West Main Street
Grass Valley, CA 95945-5424

- 1. SUBJECT: Filing of Notice of Determination in Compliance with Section 21108 or 21152 of the Public Resources Code.

Auburn Ravine Gaging Station Fish Passage Improvement Project

Project Title

2011032003

State Clearinghouse Number

John R. Kirk, P.E., Maintenance Manager

Contact Person

(530) 273-6185 Ext. 201

Telephone Number

FILED

APR 29 2011

Jim McCauley
COUNTY CLERK OF PLACER COUNTY
BY Tracy Callan
DEPUTY

- 2. PROJECT LOCATION:

The project site is Nevada Irrigation District's (NID) gaging station and is located within the Lincoln Preserve Nature Preserve, approximately 1,000-feet downstream of the State Route 65 bridge crossing in the City of Lincoln, California.

- 3. PROJECT DESCRIPTION:

The fish passage improvements include the construction of a new roughened channel with rock chutes and pools. The constructed chute-and-pool feature will occupy approximately 6,392-square feet within the stream channel covering an area of 34-feet by 188-feet. The upstream end of the roughened channel will begin at the downstream edge of the gaging station flume. The current approximate 6-foot drop from the flume apron will be spread over the approximate 188-foot length of the fish passage improvements. Flow will exit the flume into the upstream transition pool. The pool is designed to dissipate energy and provide resting habitat for fish before they swim through the flume. Flow will then travel over a series of chutes and pools, with varying lengths, until the downstream transition pool, which connects to the existing channel. All construction within the existing stream zone will occur after the stream is dewatered and temporarily re-routed via the 36-inch diameter water diversion pipe during low flow season (September 2011 through October 2011).

- 4. DETERMINATIONS:

This is to advise that NEVADA IRRIGATION DISTRICT approved the above-described project on April 27, 2011, after complying with CEQA, and has made the following determinations regarding the project:

- a. The project will will not have a significant effect on the environment.
- b. An Environmental Impact Report was was not prepared for this project, pursuant to the provisions of CEQA.

Callan
Apr 14 11:41
JOHN K

0:\JOHN\PROJECTS\AUBURN RAVINE GAGING STATION\NOD.DOCX

POSTED 04/29/2011
Through _____
JIM McCAULEY, COUNTY CLERK
By Tracy Callan

#-11-0059

- c. A Negative Declaration was was not prepared for this project, pursuant to the provisions of CEQA.

The Negative Declaration and record of project approval may be examined at the District's main office located at 1036 West Main Street in Grass Valley, California.

- d. Mitigation measures were were not made a condition of the approval of this project.
- e. A Statement of Overriding Considerations was was not adopted for this project.
- f. Findings were were not made, pursuant to the provisions of CEQA.
- g. A mitigation reporting or monitoring plan was was not adopted for this project.

NEVADA IRRIGATION DISTRICT

By: *Ron S. Nelson*
Ron S. Nelson
General Manager

Date: April 27, 2011



State of California -- The Resources Agency
DEPARTMENT OF FISH AND GAME
2010 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT# 110059
STATE CLEARING HOUSE# (if applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY NEVADA IRRIGATION DISTRICT	DATE 04/29/2011
--	---------------------------

COUNTY/STATE AGENCY OF FILING PLACER COUNTY CLERK AUBURN
--

PROJECT TITLE AUBURN RAVINE GAGING STATION FISH IMPROVEMENT PROJECT

PROJECT APPLICANT NAME NEVADA IRRIGATION DISTRICT	PHONE NUMBER
---	--------------

PROJECT APPLICANT ADDRESS 1036 W MAIN STREET	CITY GRASS VALLEY	STATE CA	ZIPCODE 95945
--	-----------------------------	--------------------	-------------------------

PROJECT APPLICANT (Check appropriate box):

- Local Public Agency School District Other Special District State Agency Private Entity

CHECK APPLICABLE FEES:

- | | | |
|---|------------|--------------------|
| <input type="checkbox"/> Environmental Impact Report (EIR) | \$2,839.25 | \$ _____ |
| <input type="checkbox"/> Mitigated/Negative Declaration (ND)(MND) | \$2,044.00 | \$ <u>2,044.00</u> |
| <input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board Only) | \$850.00 | \$ _____ |
| <input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP) | \$965.50 | \$ _____ |
| <input type="checkbox"/> County Administrative Fee | \$50.00 | \$ <u>50.00</u> |
| <input type="checkbox"/> Project that is exempt from fees | | |
| <input type="checkbox"/> Notice of Exemption | | |
| <input type="checkbox"/> DFG No Effect Determination (Form Attached) | | |
| <input type="checkbox"/> Other _____ | | \$ _____ |

PAYMENT METHOD:

- Cash Credit Check Other

TOTAL RECEIVED **\$2,094.00**

SIGNATURE

X *King Callen*

TITLE

DEPUTY

PROJECT APPLICANT COPY

DFG/ASB COPY

LEAD AGENCY COPY

COUNTY CLERK COPY

FG 753.5a (Rev. 11/09)