

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS
P.O. BOX 2000
SACRAMENTO, CA 95812-2000

INITIAL STUDY

I. BACKGROUND

PROJECT TITLE: Petition for Change and Time Extension for Water Right Permit
20428 of Kreuse Creek Premier Vineyard

APPLICATION: Permit 20428/Application 29351

APPLICANT: Kreuse Creek Premier Vineyard
P.O. Box 3989
Napa, CA 94558

APPLICANT'S CONTACT PERSON: Andrew Hitchings
Somach, Simmons & Dunn
813 6th Street, 3rd Floor
Sacramento, CA 95814-2403

General Plan Designation: Open Space

Zoning: Agricultural Watershed

Introduction

This Initial Study and Mitigated Negative Declaration has been prepared to comply with the requirements of the California Environmental Quality Act (CEQA) in support of Kreuse Creek Premier Vineyard's ("Petitioner") Petition for Change and Petition for Extension of Time (Permit 20428/Application 29351 – Napa County).

The Petitioner is requesting the following changes to Permit 20428: (1) a reduction in the Permitted quantity diverted from 70 acre-feet per annum (afa) to 35 afa; (2) a limitation of purpose of use to irrigation only; (3) change the point of onstream storage to a Point of Diversion (POD) to off-stream storage; and, (4) change the location of the point of off-stream storage. No change to either the size or location of the Permitted place of use is proposed. The POD(s) are both located in the Tulucay Creek Watershed and the Milliken-Sarco-Tulucay Groundwater Basin; and are approximately 2 miles east of the City of Napa. Overdraft of the Milliken-Sarco-Tulucay Groundwater Basin has resulted in pressure to reduce use of groundwater, and prompted the decision by the Petitioner to switch from groundwater to the use of its existing surface water right under Permit 20428. Figure 1 shows the location and vicinity of the proposed project.

This Initial Study includes a project description, project background, environmental setting description, a section on responsible trustees and agencies and an expanded section on environmental impacts. This document describes how most impacts are avoided and for potential impacts it identifies mitigation measures that would be implemented to reduce all potential project impacts to a less than significant level.

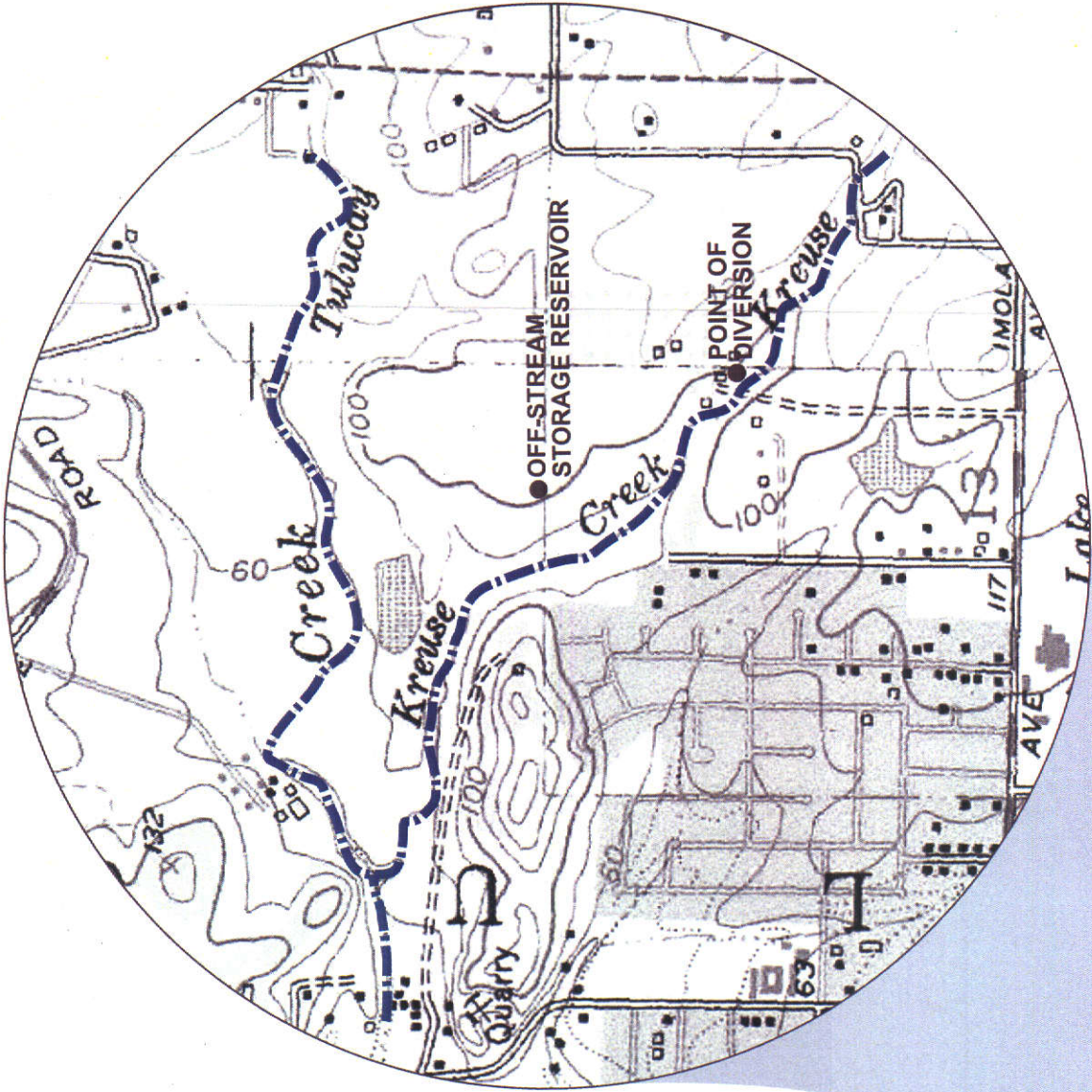
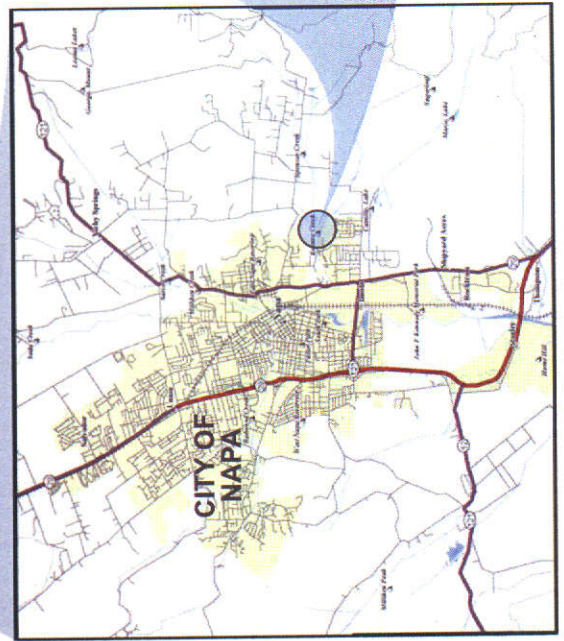
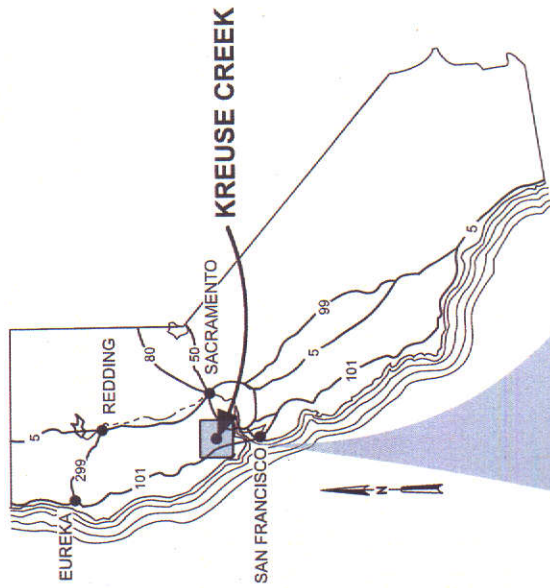


FIGURE 1
KREUSE CREEK LOCATION
AND PROJECT VICINITY MAP
 INITIAL STUDY FOR THE CHANGE IN POINT
 OF DIVERSION FOR KREUSE CREEK
CH2MHILL

Project Description

Petitioner currently holds water right Permit 20428 to divert a total of 70 afa to storage from Kreuse Creek tributary to Tulucay Creek, thence Napa River, for the purposes of frost protection and irrigation on approximately 75 acres of vineyard. The Permit authorizes construction of two 35 acre-foot reservoirs, one onstream Kreuse Creek (Original POD #1), and one off-stream (Original Point of Rediversion #4 [POR #4]). It also authorizes an additional POD, known as POD #3. Neither of the PODs or the POR in the existing Permit have been constructed to date and no surface water is currently diverted for use on the site. The current water supply on site is solely groundwater. Under the project as Permitted, but not constructed, water is to be diverted to off-stream storage at Original POD #4 by pumping both from the onstream reservoir on Kreuse Creek (Original POD #1) as well as from a Point of Diversion on an unnamed stream tributary (swale) to Tulucay Creek (Original POD #3). The total amount appropriated under the existing Permit may not exceed 70 afa during a Permitted diversion season of October 15 to April 30. The locations for POD #1, POD #3 and POD #4 under the existing Permit are shown on Figure 2.

In order to minimize potential impacts to fisheries, the Permittee is petitioning the State Water Board to replace the on-stream reservoir at POD #1 with an infiltration gallery to divert water to off-stream storage at POR #4, which would be relocated within Petitioner's lands approximately 1,000 feet to the west of its current permitted location. No change is proposed to the location of POD #3, which would be used to supplement POD #1 by diverting water to off stream storage at POR #4. Petitioner also seeks an extension of time under the Permit to complete construction and beneficial use in accordance with this requested change. Petitioner currently relies upon its groundwater supplies for irrigation purposes. POD #1 on Kreuse Creek, POD #3 (same as the original PODs #1 and #3), and the proposed relocation of POR #4 (off-stream storage reservoir) and conveyance pipeline are shown on Figure 3.

The Petition proposes that the maximum storage be reduced from 70 afa to 35 afa per water year. The original Permit allows a season of diversion of October 15 to April 30. In response to agency concerns, the Petitioner proposes that the season of diversion be limited to December 15 through March 31. The Petition further requests limiting use to irrigation purposes only. In response to additional agency concerns, the proposed project includes further limitations to minimize impacts on fish, including a maximum rate of direct diversion of 0.8 cfs and a minimum bypass flow of 1 cfs. Table 1 summarizes the terms of the original Permit and the terms proposed in the Petition for Change.

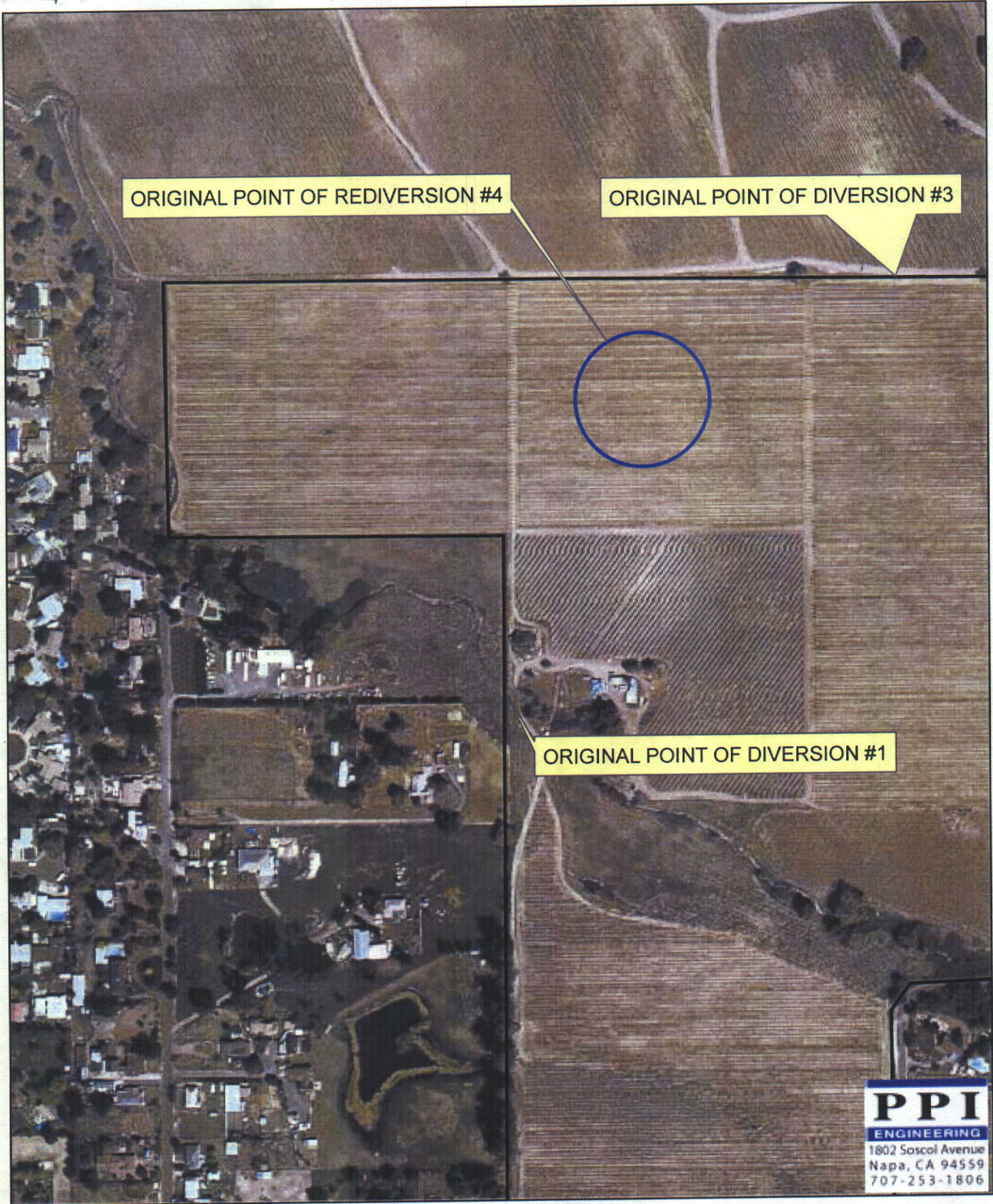
TABLE 1
Summary of Proposed Permit Modifications

Parameter	Original Permit	Petition for Change
Annual diversion to storage	70 afa	35 afa
Diversion season	October 15 to April 30	December 15 to March 31
Maximum instantaneous diversion	None specified	0.8 cfs
Bypass flow	None specified	1.0 cfs
Diversion type	Onstream reservoir	Infiltration gallery with flow meter, automated float switch, and automated data logger

TABLE 1
Summary of Proposed Permit Modifications

Parameter	Original Permit	Petition for Change
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The purpose of use is for storage of irrigation water for use during the irrigation season. Limited groundwater is available as a supplemental source.

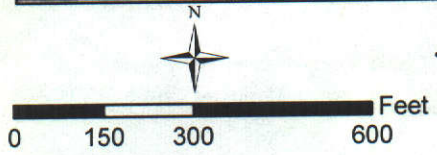


ORIGINAL POINT OF REDIVERSION #4

ORIGINAL POINT OF DIVERSION #3

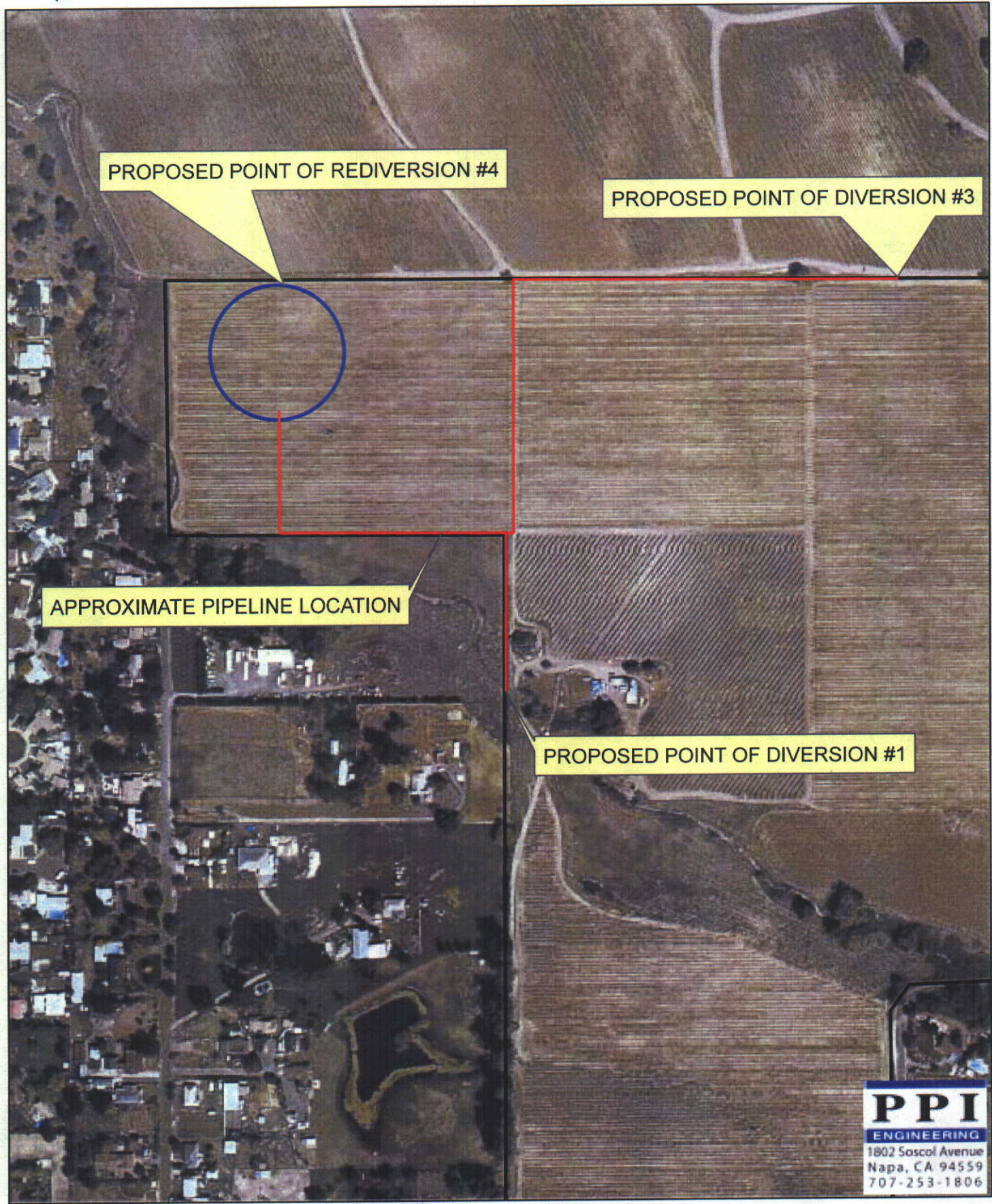
ORIGINAL POINT OF DIVERSION #1

— APPROXIMATE PROPERTY LINE



PPI
 ENGINEERING
 1802 Soscol Avenue
 Napa, CA 94559
 707-253-1806

FIGURE 2
 LOCATION OF PERMITTED
 POD'S AND POR



PROPOSED POINT OF REDIVERSION #4

PROPOSED POINT OF DIVERSION #3

APPROXIMATE PIPELINE LOCATION

PROPOSED POINT OF DIVERSION #1

PPI
 ENGINEERING
 1802 Soscol Avenue
 Napa, CA 94559
 707-253-1806



— APPROXIMATE PROPERTY LINE
 — APPROXIMATE PIPE LOCATION

FIGURE 3
 LOCATION OF POD'S AND
 POR UNDER PETITION
 FOR CHANGE

The proposed project encompasses a number of facilities, which would be operated by Petitioner. The project includes the four primary components described in detail as follows:

- **POD #1 Infiltration gallery:** The diversion at POD #1 would consist of a 30-foot long infiltration gallery that would be installed into the channel bed of Kreuse Creek. The gallery would lie 12 inches below the streambed in a horizontal position and consist of a perforated pipe with capped ends. The structure would be located within a bed of varying layers of crushed rock. The top layer of the diversion would be even to the existing channel bed of Kreuse Creek. A 15-inch mainline connects the infiltration gallery to the pump.^a The construction of the diversion would temporarily alter the bed of Kreuse Creek.
- **POD #1 Sump and Pump:** The sump will consist of a 6-foot diameter corrugated steel pipe installed vertically next to the creek. The sump receives water through a 15-inch diameter pipe from the infiltration gallery. The pumping unit would consist of a single pump with electronic motor and variable frequency drive or a series of smaller staged pumps and motors. The top of the sump consists of a locked, childproof steel cover. A 12-inch outlet pipe would run from the pump to the proposed reservoir.^a Discharge from the pump would be regulated by float switches and stilling wells or other electronic controls. Final design of the control system will be completed once details of Permit mitigations are known.
- **POD #3 Diversion:** The diversion at POD #3 will divert water by directing flow into a 36-inch diameter galvanized, corrugated steel pipe sump set vertically in the ground about 6 feet deep. A concrete bottom will support a submersible trash pump with float switch controls. When the reservoir is full, or outside the season of diversion, the pump can be switched off allowing water to flow past the sump in the natural flow path of the swale.
- **Conveyance pipeline:** The conveyance pipeline would deliver water from the pump to the proposed off-stream storage reservoir. It would consist of a 12-inch pipe, approximately 1,600 linear feet in length from the pump to the off-stream reservoir site.^a The pipe would have a flow meter with the totalizer mounted adjacent to the pump.
- **POR #4 Rediversion (Off-stream reservoir):** The proposed off-stream reservoir would be located on the slope of a hill. The hillside would be excavated so that the reservoir would partially reside in the upslope section of the hill, with the down slope section of the reservoir supported by an artificial embankment created from structural fill. The structure would incorporate an outlet pipeline to Kreuse Creek, an overflow pipe, and connections to the irrigation system and drainage structures. The top layer of the embankment would consist of agricultural fill.^b A safety fence would be built around the reservoir perimeter.^c

Project Background

On June 24, 2004, Kreuse Creek Premier Vineyard filed a petition with the State Water Board to change the Point of Diversion and seek an extension of time to complete construction and beneficial use under Permit 20428. The change petition proposes modification of Permit 20428 so as to minimize potential impacts to fish in Kreuse Creek. The change petition seeks the replacement of the onstream storage allowed under the Permit, with off-stream storage. Further, although the existing Permit allows for diversion and storage of up to 70 afa per year, the Petitioner has voluntarily reduced this amount to 35

afa per year. Similarly, the existing Permit allows for diversion between October 15 and April 30; however, in response to agency concerns, the Petitioner has limited the diversion period to December 15 through March 31.

On March 25, 2005, the State Water Board published a notice of the Petition. Protests were received from the Department of Fish and Game (DFG), National Marine Fisheries Service (NMFS), and Earth Defense for the Environment Now (EDEN). On January 15, 2004, Petitioner and CH2M HILL met with DFG to describe the project and gain an understanding of agency concerns. On September 8, 2005, an additional meeting was held with all protestants including DFG, NMFS, and EDEN to go over proposed protest dismissal terms.

As a product of these meetings, the resource agencies (DFG and NMFS) and the Petitioner reached agreement by letter, dated September 30 2005, on specific mitigating Permit terms that address the concerns and recommendations of the agencies. The agency recommendations and the Petitioner actions are described below.

Petitioner also prepared a Water Availability Analysis/ Cumulative Flow Impairment Index WAA/CFII report for the proposal which was accepted by the State Water Board on June 28, 2006 and is incorporated herein by reference.

Resource Agency Comments on Petition

In response to initial discussions with DFG to avoid construction of an onstream reservoir and potential impacts to fish, the Petitioner proposes construction of an infiltration gallery located in Kreuse Creek, pump, conveyance pipeline and an off-stream reservoir for water storage. The POD #1 remains in the same location as POD #1 in the original Permit.

Season of Diversion

The existing Permit allows diversion of water from Kreuse Creek from October 15 through April 15. Both NMFS and DFG recommend changing the season of diversion to the period of December 15 to March 31, to reduce potential adverse impacts on anadromous salmonids. Accordingly, the Petitioner has proposed to limit the diversion season under the Permit to December 15 through March 31.

Bypass Flow

Petitioner has prepared a WAA/CFII report for Kreuse Creek flows, which includes an analysis of bypass flow. Both NMFS and DFG suggested that the starting point for determining the minimum bypass flow during the season of diversion be the estimated unimpaired long-term February median flow at POD#1. There is a limited period of record available from the existing USGS gage located on Tulucay Creek. Data is available for the period 1971 through 1983 and then is unavailable until 2002 when there is less than one year of available data. Based on the period of record 1971 through 1983 and including 2002, the February median flow at POD #1 is estimated to be 0.8 cfs. Based on the period of record 1971-1983 and excluding 2002, the February median flow at POD #1 is estimated to be 0.9 cfs.¹

The Petitioner proposes a 1.0 cfs minimum bypass flow. When the flow at POD #1 is less than or equal to 1.0 cfs, the Petitioner will not divert water. This limitation addresses the comments submitted by protestants NMFS and DFG. This bypass rate amounts to 212 afa

¹ Based on the proration of the flow data recorded at the Tulucay Creek gage (USGS Gage Number 11458350; Tulucay, CA; Napa, CA; water years 1971 through 1983 and 2002).

for the December 15 to March 31 season of diversion.² Therefore, after the bypass flow has been met, it is estimated that, on average, approximately 610 afa is potentially available for diversion at POD #1.³ Allowing a minimum bypass flow of 1 cfs or 212 afa will not affect Petitioner's ability to divert and store 35 afa during the diversion period.

Maximum Instantaneous Rate of Diversion

DFG has recommended that the maximum instantaneous rate of diversion should be limited to 15 percent of the 20 percent winter exceedance flow. The "20 percent winter exceedance flow" is the flow that would be expected to be exceeded 20 percent of the time. In order to determine this value, the prorated daily flow for Kreuse Creek at the Point of Diversion was evaluated for the season December 15 through March 31. A histogram data analysis was performed, and the 80th percentile value (80 percent of the flows are lower than this value) was identified as 5 cfs. The 80th percentile is equivalent to the 20 percent exceedance (20 percent of the flow are higher than this value). Fifteen percent of this is 0.8 cfs; therefore the maximum instantaneous rate of diversion is calculated to be 0.8 cfs. Petitioner has agreed to limit the maximum instantaneous rate of diversion to 0.8 cfs, in accordance with DFG's recommendation. The full analysis of maximum instantaneous rate of diversion is included in the Water Availability Analysis.

Cumulative Impacts of Diversion

NMFS requested that an analysis be conducted to address potential cumulative impacts of water diversions within the watershed, in accordance with the Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams, dated June 17, 2002 (Guidelines). This analysis, which takes into account the proposed diversion, as well as all other Permitted senior and junior water rights within the Tulucay Creek watershed, is developed in detail in the WAA/CFII report and summarized here. The cumulative impacts to the natural hydrology were evaluated at six Points of Interest (POIs) within the watershed. The POIs were provided by DFG and are listed below in Table 2.

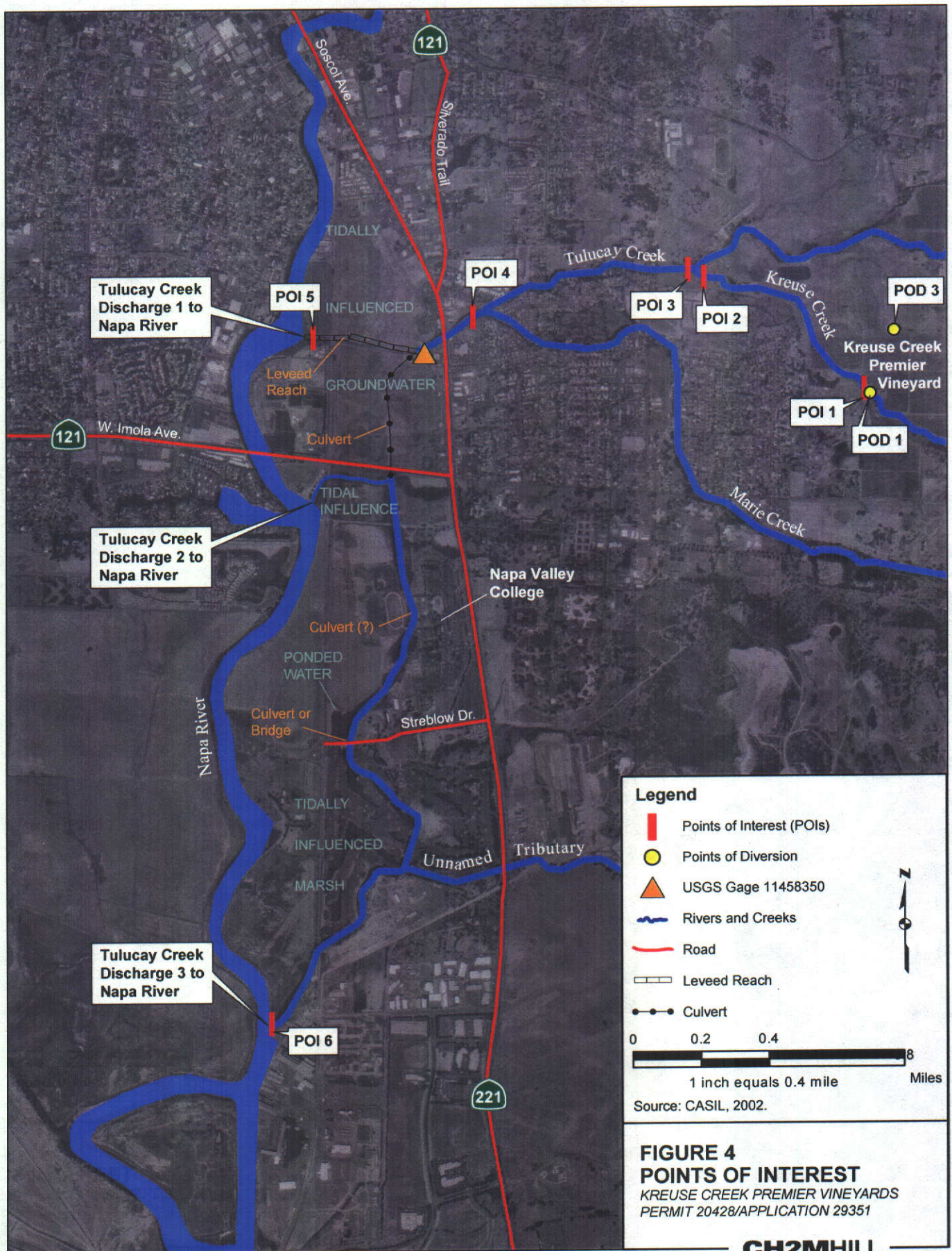
² 1.0 cfs x 1.983 AF/cfs/day x 107 days = 212 AF

³ 803 AF minus 212 AF = 591 AF

TABLE 2
Points of Interest

POI	Description
1	The point on Kreuse Creek immediately below POD 1
2	The point on Kreuse Creek immediately above its confluence with Tulucay Creek
3	The point on Tulucay Creek immediately below its confluence with Kreuse Creek
4	The point on Tulucay Creek immediately below its confluence with Marie Creek
5	The point on Tulucay Creek immediately above its northern confluence with the Napa River as indicated on Figure 4
6	The point on Tulucay Creek immediately above its southern confluence with the Napa River as indicated on Figure 4

POIs 1 through 4 are in the Upper Tulucay Creek Watershed, and POIs 5 and 6 are in the Lower Tulucay Creek Watershed.



The CFII is an index used as a screening tool to evaluate the cumulative flow impairment demand of all existing and pending projects in a watershed of interest. The CFII is a percentage obtained by dividing the demand (in units of AF) by the supply (in units of AF) at a specified POI and for a specified time period, where:

- Demand is the "face" value of entitlements of all existing and pending water rights, under all bases of right, from October 1 through March 31, above the POI. Information about existing and pending water rights is obtained through use of the WRIMS database and water right files. Demand includes existing and pending water rights applications for "Post-1914" appropriators, Statements of Water Diversion and Use for "Riparian" and "Pre-1914" appropriators, small domestic use registrations, stockpond registrations, and any other known authorized diversions.⁴
- Supply is the seasonal average unimpaired flow above a POI. For coastal watersheds, including those in Napa County, the season of December 15 through March 31 is used to compute supply. This period is also the Petitioner's proposed diversion/storage season.

The State Water Board requires two sets of CFII calculations for analysis. The first set, Case A, takes into account the demand of the pending application and all known senior diverters. The second set, Case B takes into account all foreseeable water rights, i.e., the demand of the pending application, all senior diverters, and all junior diverters.

At the project's Point of Diversion, under both Case A and Case B, October 1 and March 31 diversions total 55 AF. The estimated unimpaired flow (supply) of the entire watershed during the diversion season of December 15 through March 31 is 822 AF.

Within the entire Tulucay Creek watershed, the Case A October 1 and March 31 diversions total 365 AF, while Case B October 1 and March 31 diversions total 580 AF. The estimated unimpaired flow (supply) of the entire watershed during the diversion season of December 15 through March 31 is 7,401.2 AF.

A proposed diversion could be considered to have adverse impacts to the environment if it resulted in habitat modifications that adversely affected any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the DFG or U.S. Fish and Wildlife Service (USFWS); if it had an adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the DFG or USFWS; or if it would 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.

The CFII results for Case A and Case B are shown in Tables 3 and 4 respectively. The cumulative impairment resulting from other Permitted diversions and the proposed diversion.

⁴ Determined from WRIMs database search performed on May 25, 2005.

TABLE 3
Case A CFII Results (Demand of all pending water right applications and known senior water rights).

POI	Oct 1–Sep 30 Demand (AF)	Dec 15–Mar 31 Supply (AF)	CFII
1	55	822.36	7%
2	55	881.10	6%
3	281.5	4,464.22	6%
4	365	7,107.51	5%
5	365	7,401.21	5%
6	365	7,401.21	5%

TABLE 4
Case B CFII Results (All foreseeable future water rights: pending applications, senior and junior water rights)

POI	Oct 1–Sep 30 Demand (AF)	Dec 15–Mar 31 Supply (AF)	CFII
1	55	822.36	7%
2	55	881.10	6%
3	496.5	4,464.22	11%
4	580	7,107.51	8%
5	580	7,401.21	8%
6	580	7,401.21	8%

NMFS and the DFG have published Guidelines for Maintaining Instream Flows to Protect Resources Downstream of Water Diversions in Mid-California Coastal Streams (NMFS/DFG, 2002). These guidelines include recommendations limiting maximum rate of instantaneous diversion, protecting channel-forming flow, limiting the diversion season, providing minimum bypass flows, and gaging of project diversions and bypass flows. The proposed project incorporates all of these measures as either mitigation or limitations on the diversion.

The NMFS/DFG guidelines further state that spawning habitat for anadromous fish can be adversely affected if more than 10 percent of the winter flows are diverted. If the CFII is greater than 10 percent, then there is a reasonable likelihood of significant cumulative impacts. When a CFII is between 5 percent and 10 percent, the additional hydrologic analysis is required. This analysis, which addresses channel forming flows, maximum instantaneous rate of withdrawal, and bypass flows is presented in the WAA/CFII report. For Case A, which includes all senior water rights holders and the proposed diversion, the CFII ranges from 5 percent to 7 percent for all POIs. For Case B, which takes into account the demand of the pending application, all senior diverters, and all junior diverters (projects that are not yet Permitted), the CFII at POI #3 is 11 percent, while the CFII at all other POIs ranges from 6 percent to 8 percent. Through implementation of the mitigation measures described above, impacts are reduced to less than significant. Specific Permit terms

implementing these and other measures to be included in any order amending Permit 20428 are detailed in Section II.

Effect on Channel Forming Flows

The stream-flow that is responsible for transporting the majority of the sediment and is responsible for creating or maintaining the characteristic size and shape of a channel is known as the channel forming flow or the dominant discharge. A typical methodology for determination of the channel forming flow is use of the 2-year recurrence flow and application of statistical methods for determination of flood frequencies.^d The channel forming flow analysis is presented in detail in the Water Availability Analysis and the results are summarized here. The results of the analysis indicated that the 2-year recurrence flow for Kreuse Creek at POI #1 (immediately downstream of #1) is 28.4 cfs.

In order to assess the influence of the project diversion on the frequency at which channel forming flows occur, the following analysis was performed:

- The pre-project average daily flow at POD #1 was determined using the pro-ratio method. The number of days during the diversion season and throughout the year that the average daily flow exceeded 28.4 cfs was calculated.
- It was assumed that a diversion of 0.8 cfs would occur, during the season of diversion, if the creek flow at the POD #1 exceeded 1.8 cfs. This assumption maximizes the potential impact of the proposed project to channel-forming flows.
- The post-project flow was calculated as the pre-project flow minus 0.8 cfs. The number of days during the diversion season and throughout the year that the average daily flow would exceed 28.4 cfs, post-project, was calculated.
- The pre-project frequency and the post-project frequency were compared.

The results of this analysis for the season of diversion both pre and post project are shown in Table 5. As shown, the proposed project will have no effect on the frequency of channel forming flows.

Monitoring Compliance

Both DFG and NMFS requested access to the site and a monitoring compliance program. A monitoring compliance program would be established to assure that the bypass flows would be maintained and rates of diversion would not be exceeded by the project. The program would include the following provisions:

- The project would provide DFG personnel access to all points of diversion and rediversion, and places of use for the purpose of conducting routine and or random monitoring and compliance inspections.
- The project would incorporate equipment such as a float switch within Kreuse Creek above the Point of Diversion. The float switch would be set in a pipe that measures height of the stream. Water elevations over a certain point would trigger the pump, which diverts water to the reservoir. In a sandy environment, such as that found in the channel bed of Kreuse Creek, the elevation setting for the float switch would need to be re-calibrated on a regular basis.
- The project would record information to an automated data logger. Collected information on flows and rates of diversions would be submitted to the Division of Water Rights for compliance monitoring upon request.

TABLE 5
Frequency of Channel Forming Flows

Water Year	Number of Days of Channel Forming Flow During the Season of Diversion	
	Pre-Project	Post-Project
1972	0	0
1973	4	4
1974	0	0
1975	1	1
1976	0	0
1977	0	0
1978	3	3
1979	2	2
1980	10	10
1981	0	0
1982	8	8
1983	9	9
Total Number of Days	37	37
Frequency of Occurrence	35%	35%

Environmental Setting

CH2M HILL conducted a reconnaissance-level biological survey of the project area on March 24, 2004. A copy of the report is on file with the State Water Board. The survey included species observation, vegetative habitat identification and a general survey of the existing environment. In addition to the field survey, a special-status species list was generated using the California Natural Diversity Database (CNDDDB) on March 20, 2006, for the "Napa" U.S. Geological Survey 7.5-minute quadrangle (quad), which includes the project site (Appendix B).^e A special-status species list for the "Napa" quad was also obtained through the USFWS on March 20, 2006 (Appendix C).^f Listed species with potential for occurrence on or near the project site include the federally threatened steelhead (*Onchyrhynchus mykiss irideus*) (Central California Coast Ecologically Significant Unit [ESU]) and the northwestern pond turtle (*Clemmys marmorata marmorata*), a federal species of concern.

The area proposed for the infiltration gallery currently consists of annual grassland and does

not support shrubs or riparian vegetation. Information provided by the project proponent is that the surface of the creek bed is dry at this location for most of the spring and summer. At the time of the March 2004 survey, the creek was flowing subsurface at the proposed intake location; however, surface flows were observed both upstream and downstream of the proposed intake site.

Responsible and Trustee Agencies

The State Water Board is the lead agency under CEQA with the primary authority for project approval. In addition, the following responsible and trustee agencies may have jurisdiction over some or all of the proposed project:

- California Department of Fish and Game (DFG)—Streambed Alteration Agreement, California Endangered Species Act (CESA) Compliance
- California Regional Water Quality Control Board—Clean Water Act Section 401 Water Quality Certification
- County of Napa—Grading Permit
- U.S. Fish and Wildlife Service (USFWS)—ESA Compliance
- National Marine Fisheries Service (NMFS)—ESA Compliance
- U.S. Army Corps of Engineers (USACE)—Clean Water Act Section 404 Compliance

II. ENVIRONMENTAL IMPACTS

The environmental factors checked below could be potentially affected by this project. See the checklist on the following pages for more details.

- | | | |
|---|--|--|
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Transportation/Circulation | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Population and Housing | <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Geological Problems /Soils | <input type="checkbox"/> Energy and Mineral Resources | <input checked="" type="checkbox"/> Aesthetics |
| <input checked="" type="checkbox"/> Hydrology/Water Quality | <input checked="" type="checkbox"/> Hazards | <input checked="" type="checkbox"/> Cultural Resources |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

1. GEOLOGY AND SOILS. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
i) Rupture of a known earthquake fault, as delineated in 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 & Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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"/>	X
d) Be located on expansive soils, 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"/>	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

The Napa Valley lies within the California coastal margin, a geologic region created from old sea floor, molten materials, and diverse types of rock. Over millions of years the region was uplifted from the ocean floor due to the collision of several plates of the earth's crust. The compressed land folded over time to create the current mountain ranges and valleys present today in the Napa Valley region. The Napa Valley is considered a drop and spread valley, where the land between the mountains widened and lowered, creating a valley that is lower in elevation relative to the higher valleys typical of the coastal range. Over time the Napa Valley was shaped by different events, such as open volcanic vents releasing molten rock, various stages of sedimentation from rising sea levels submerging the land and a variety of vegetation. (Napa Valley Wines, no date)

There are many distinct soil types within the region that vary greatly depending on location and geology of eroding mountain range materials as well as particle size and weight. Some regions display layered soil types that vary between red volcanic soil, sandy grey soil, and sedimentary soil containing sand and shells. At least 10 major alluvial fans exist within the valley, each containing distinct soil characteristics.⁹

a) and c) Earthquake Potential and/or Unstable Geologic Unit or Soil: The proposed

project site is not located on a known seismic fault according to the Alquist-Priolo fault-rupture hazard zone.^h No impacts due to seismic ground shaking, liquefaction or landslides is anticipated as a result of implementing the proposed project. In addition, the proposed project is not located on unstable, expansive soil or soil incapable of supporting the proposed structures.

b) Soil Erosion/Loss of Topsoil: To comply with Napa County requirements for a grading Permit an erosion control plan has been prepared which includes detailed erosion and sediment control measures such as the use of cover crops, silt fences and straw bale waterbars.ⁱ The erosion control plan has been incorporated into the project. Implementation of these measures is intended to avoid or minimize erosion, turbidity or sedimentation. Additionally, as part of the project, an eroded portion of the Kreuse Creek streambed would be repaired, improving conditions for riparian habitat and associated fish and wildlife resources. Refer to Section 3.8 for further information on erosion and sediment control.

d) and e) Expansive Soils or Soils Incapable of Adequately Supporting Septic or Alternate Wastewater Disposal: Soils underlying the proposed project area include Haire Loam and Sobrante Loam. Hare Loam has a slight erosion potential, slow to medium runoff and 2 to 9 percent slopes. Sobrante Loam has an erosion hazard of slight to moderate with medium runoff and 5 to 30 percent slopes.ⁱ

Permit Terms Required

To prevent any threat of impacts to geology and soils, any order issued by the State Water Board amending Permit 20428 should include the following mitigating Permit terms, substantially as written:

- *Construction of the offstream reservoir shall not begin until the Napa County Engineer, the United States Natural Resource Conservation Service, or a civil engineer registered by the State of California has approved the plans and specifications for the reservoir. Construction of the reservoir shall be under the direction of said approving party.*

The following mitigation terms, substantially as written, are added in accordance with the protest dismissal agreement between Petitioner, NMFS, DFG and EDEN dated September 30, 2005:

- *An erosion control/revegetation plan and implementation schedule, prepared by a licensed civil engineer, shall be submitted to and approved by the Chief, Division of Water Rights, prior to starting construction. The erosion control plan shall be incorporated into the terms and conditions of any lake or streambed alteration agreement between Permittee and the department of Fish and Game for the diversion works identified in this Permit. Before storing water in the reservoir, Permittee shall furnish evidence, which substantiates that the erosion control/revegetation plan has been implemented. Evidence includes photographs showing the project area vegetation and slopes.*
- *Before starting construction and installation of any of the improvements related to the diversion, redirection or storage of water under this Permit, Permittee shall submit plans and specifications to the Chief of the Division of Water Rights for approval prior to the diversion of water.*

2. AIR QUALITY. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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 type="checkbox"/>	X
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

Napa County lies within the San Francisco Bay Area Air Basin (Basin). The Basin extends from Napa County in the north to Santa Clara County in the South.^k The Basin encompasses 5,340 square miles and 19 percent of California's population. The Basin is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) pursuant to a mandate from the California Air Resources Board (CARB).

a), c), d), and e) Conflict With Air Quality Plan, Expose Sensitive Receptors, Net Increase of Criteria Pollutants, Objectionable Odors: Because of the limited duration of construction of the project and its rural location, the proposed project would not obstruct implementation of the applicable air quality plan, result in considerable increase of pollutants, expose sensitive receptors to substantial pollutant concentrations or create objectionable odors to a substantial number of people. No air quality impacts would occur as a result of operation of the proposed project.

b) Violate Air Quality Standards: The proposed project would cause temporary, short-term adverse impacts to air quality as a result of construction emissions, particularly dust emissions from construction equipment. Construction-related impacts are expected to be local (i.e., confined to the construction site area) and limited to the duration of the construction activities. Although temporary, short-term air quality impacts could be generated by the proposed project. The impact of construction emissions could be significant, therefore, mitigation is required.

To mitigate for short-term air quality impacts associated with the proposed project from dust generated during periods of construction activities, a dust control program would be implemented with the following components:

- Equipment and manual watering would be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

- The contractor or builder would designate a person to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. This person would respond to citizen complaints.

Implementing the dust control program would reduce this impact to a less than significant level.

Permit Terms Required

To prevent any threat of impacts to air quality, during construction of the project, Permittee shall implement Construction Best Management Practices (BMPs) in accordance with the Bay Area Air Quality Management District (BAAQMD) Guidelines for Construction Activities. Any order issued by the State Water Board amending Permit 20428 should include the following mitigating terms, substantially as written:

- *Other Agency Permits term, See Hydrology and Water Quality section, below.*

3. HYDROLOGY AND WATER QUALITY. Would the project:

Issues (and Supporting Information Sources)	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 type="checkbox"/>	X
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 type="checkbox"/>	X
c) Substantially alter the existing drainage pattern of the site, including through alteration of the course of a stream or river, or substantially increase the rate or volume of surface runoff in a manner that would:				
i) result in flooding on- or off-site	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
ii) create or contribute runoff water that would exceed the capacity of existing or planned stormwater discharge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iii) provide substantial additional sources of polluted runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iv) result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
d) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Place housing or other structures which would impede or re-direct flood flows within a 100-yr. 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"/>	X

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Expose people or structures to a significant risk of loss, injury, or death involving flooding:				
i) as a result of the failure of a dam or levee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
ii) from inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
g) Would the change in the water volume and/or the pattern of seasonal flows in the affected watercourse result in:				
i) a significant cumulative reduction in the water supply downstream of the diversion?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
ii) a significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
iii) a significant reduction in the available aquatic habitat or riparian habitat for native species of plants and animals?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
iv) a significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
v) a substantial increase or threat from invasive, non-native plants and wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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"/>	X
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

The project would not increase the rate or amount of surface runoff, nor would it result in flooding on or off-site, create a source of polluted runoff or substantially degrade water quality in the vicinity of the project area.

a) and d) Violate Water Quality Standards, Degrade Water Quality: The project area is located within the San Francisco Bay Region of the Water Quality Control Board, and lies within the San Pablo Basin within the Region. The Basin Plan does not list specific beneficial uses for Tulucay or Kreuse creeks; however, it is typical to apply the beneficial uses of receiving waters to upstream creeks. The designated beneficial uses of the Napa River include agricultural supply, municipal supply, navigation, water contact recreation, non-contact water recreation, wildlife habitat, cold freshwater habitat, warm freshwater habitat, fish migration, and fish spawning.¹ (Note: Tulucay Creek is incorrectly listed as tributary to the Petaluma River in the Regional Board's Basin Plan.)

Water quality objectives of the Basin Plan include numerical objectives established to limit adverse effects of pollutants and narrative objectives which are those that present general descriptions of water quality that need to be attained through pollution control measures and water management. These objectives are based on biological, chemical and physical

information, literature research and monitoring programs.¹

This project includes the temporary alteration of Kreuse Creek for the construction of an infiltration gallery and the flow gage to be installed on the Creek and the construction of a 12-inch-diameter pipeline and off-stream reservoir on vineyard land. Prior to authorized construction of the project, Petitioner must obtain a Streambed Alteration Permit from DFG and 401 Certification from the Regional Water Quality Control Board and appropriate county Permits. It is assumed that the terms of these Permits will require the development and submittal of Water Pollution Prevention and Response Plan (also referred to as a Stormwater Pollution Prevention Plan) to these agencies for their review. The Plan is required to describe project-specific measures that will be implemented to avoid the purposeful or accidental release of pollutants into surface water or groundwater. The construction activities that require water quality pollution control include:

- Channel excavation
- Temporary, on-site storage of excavated sediments
- Use of construction equipment near water
- Stream corridor re-planting
- Excavation for construction of the off-stream reservoir
- Excavation for construction of the pipeline

In order to avoid the accidental discharge of pollutants to surface water or groundwater, the Water Pollution Prevention and Response Plan will include the measures included in Table 6.

Construction activities would occur during summer months in which the stream would be dry or without measurable surface flow in the project area, therefore, increases in turbidity would be unlikely.

To avoid or minimize potential impacts related to increased turbidity, the Petitioner would ensure that turbidity increases would not cause nuisance or adversely affect beneficial uses. The Basin Plan specifies that increases to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU. The Petitioner is required to consult with the State Water Board regarding a Section 401 water quality certification and either file an application for a waste discharge Permit and comply with the monitoring and reporting requirements for project construction or acquire a waiver. Additionally, it is anticipated that the Streambed Alteration Agreement for the project would require that construction occur during the dry season when there is no measurable flow in the streambed, minimizing or avoiding the potential for water quality impacts.

Erosion and sediment loss could occur on the down slope of the embankment, spillway and outlet discharge associated with the off-stream reservoir. This erosion could constitute a significant impact to hydrology and water quality.

TABLE 6
Water Quality Pollution Prevention Measures

Measure	Description
Water Quality Monitor	A water quality monitor will ensure that the Petitioner is in compliance with the measures specified in the Water Pollution Prevention and Response Plan.

TABLE 6
Water Quality Pollution Prevention Measures

Measure	Description
Scheduling	Construction activities would occur during summer months in which the stream would be dry or without measurable runoff or surface flow in the project area.
Sediment control measures	<p>The construction contractor would, as necessary, use sediment control measures such as fiber rolls, sand bags (clean fill or in-situ fill), straw mats, or other appropriate equipment to prevent the discharge of sediment to Kreuse Creek.</p> <p>Interception ditches may be used, as appropriate, to direct water away from the tops of cut-and-fill slopes.</p> <p>Small sediment catchment basins or traps may be used, as appropriate to prevent sediment from being transported away from the construction sites. Types of sediment traps to be considered include filter berms, straw-bale barriers, filter inlets, vegetative filter strips, and culvert risers.</p>
Vehicle and Equipment Cleaning, Fueling, and Maintenance	Cleaning, fueling and maintenance of equipment will occur at a designated location (either on the Petitioner's property within its operations yard) or off-site. The construction contract would, as necessary, use containment materials such as sand bags, fiber rolls, hay bales, or other appropriate equipment to prevent the discharge of hazardous materials to surface or groundwater. Materials such as drip pans or absorbent pads will be stockpiled for use in case of spill.
Spill Prevention and Control	Vehicle and equipment will be visually inspected for leaks. Leaking equipment will not be Permitted to operate in or near the Creek. Materials will be stored at least 50 feet away from the creek channel, or at a location to be specified in the Water Quality Pollution Prevention Plan. Measures related to vehicles and equipment will also be implemented.
Stockpile Management	The construction contractor would, as necessary, use sediment control measures such as fiber rolls, sand bags (clean fill or in-situ fill), straw mats, or other appropriate equipment to prevent the discharge of sediment to Kreuse Creek. Stockpiling adjacent to the creek during excavation and infiltration gallery installation will be very short term.
Site Restoration	<p>Disturbed areas will be rehabilitated to a uniformly high standard within the project area.</p> <p>The creek channel will be in-filled with the native soils, which will be temporarily excavated for installation of the infiltration gallery. The creek channel will be restored to at least its pre-project condition.</p> <p>Complete revegetation and stabilization of disturbed soils will be implemented. Reseeding and mulching work would be completed by October 1 of the year following completion of the project. If erosion control practices are not installed by October 1 of the year following completion, exposed soils could require additional treatment following seasonal rains and subsequent erosion.</p> <p>Additional measures specified in the Streambed Alteration Permit Agreement will be implemented. Any plantings would be from seed material or starts and would include native plant species and be approved by a revegetation specialist or erosion control specialist. Special emphasis would be given to native plant assemblages that were characteristic of the site prior to construction.</p>

Site-specific, detailed features of the erosion and sediment control plan would be incorporated into the construction contract and specified on the civil design sheets, and could include the following:

- Construct the project and rehabilitate disturbed areas to a uniformly high standard within the project area.
- Restore original contours unless otherwise directed by a geotechnical engineer.
- Salvage, protect, and use the highest quality soil for revegetation.
- Provide erosion and sediment control as required.
- Discourage non-noxious weed competition and control noxious weeds.

As part of the 401 Certification process, the Petitioner would develop the plan for review by the San Francisco Bay Regional Water Quality Control Board. Mitigation measures for bank restoration and revegetation would be included as conditions of the Streambed Alteration Agreement pursuant to Sections 1600-1606 et seq. of the Fish and Game Code.

A structural erosion control plan was developed in coordination with the Napa County Grading Permit, DFG 1603 Streambed Alteration Agreement and State Water Board Water Right Permit in April of 2002.¹ The site-specific measures included in that plan will be incorporated into the Water Quality Pollution Prevention and Response Plan.

Implementation of an erosion control plan would reduce impacts to a less than significant level.

b) Deplete Groundwater Supplies: The Petitioner currently uses groundwater as the primary source of irrigation for the vineyards. Issues of concern raised by Napa County regarding overdraft of groundwater from the Milliken-Sarco-Tulucay Groundwater Basin has influenced the Petitioner's decision to decrease the use of groundwater resources in favor of surface water for the purpose of irrigation. A decrease in the use of groundwater would be beneficial to the Basin by minimizing the dependency on groundwater resources, thereby decreasing potential for groundwater overdraft in the vicinity of the proposed project.

The proposed project would not deplete groundwater resources because increased use of surface water in lieu of groundwater is proposed. Surface water would be diverted and stored and primarily relied upon during the irrigation season in years when surface water supplies are available (i.e., non-critically dry years). Due to the proximity and depth of existing wells it is reasonably speculated that existing pumping of groundwater wells does affect stream flow in Kreuse Creek. With implementation of the project, stored water will be utilized allowing a significant reduction in overall pumping thereby relieving the existing effects on riparian resources due to groundwater pumping. Further, to minimize dry season impacts to Kreuse Creek via groundwater pumping, the Petitioner has agreed that if pumping is required to supplement surface water (if, for instance, 35 AF were not available for diversion from Kreuse Creek during a particular year), then groundwater would be pumped during the wetter time of the year, and available stored reservoir water would be utilized during the drier part of the year. This would serve to reduce groundwater pumping during the dry season, a measure protective of the fishery.

c) Alter Existing Drainage Pattern: The location of the proposed reservoir could potentially alter the existing drainage of the project location due to the potential for overflow or spill from the reservoir onto the surrounding land causing erosion or siltation on- or off-site. The proposed reservoir is designed with an inlet pipeline from the infiltration gallery located

at POD #1 on Kreuse Creek, an overflow pipe and connections to the irrigation system and drainage structures to prevent erosion due to overflow of the reservoir. Erosion or siltation due to the location of the proposed reservoir would be less than significant due to the design features of the reservoir in addition to the location of the proposed reservoir within the existing vineyard.

e), f), h), and i) Houses or Structures in Flood Zones, Expose Sensitive Receptors in Flood Zones, Impede Flood Flows, Dam/ Levee Failure: The proposed project does not involve the placement of housing within a 100 year flood hazard area, nor would it expose people or structures to significant risk as the result of the failure of a levee or dam.

In lieu of the originally designed onstream reservoir capable of storing 70 AF, project components include water to be directly diverted from Kreuse Creek through use of an infiltration gallery. Water would be pumped from the infiltration gallery to an off-stream reservoir which would have a maximum storage limit of 35 AF per water year.

g) Significant Change in Water Volume or Seasonal Flows:

Hydrology: A WAA/CFII report for the Kreuse Creek area was prepared in accordance with the Draft Guidelines to provide information required under the California Water Code Section 1275(a) to demonstrate whether water is available for appropriation; and to determine the impact of the application/project on stream flow in order to evaluate the impacts to fishery resources as required by the California Environmental Quality Act (CEQA), the California Endangered Species Act (CESA), and the federal Endangered Species Act (ESA). The analysis addresses the hydrologic features, water availability, annual unimpaired flow, unimpaired flow during the projects diversion season, bypass flow and maximum instantaneous rate of diversion, channel forming flow, and cumulative flow impairment index within the project area.

The study concluded that the recommended minimum bypass flow is 0.83 cfs. However, the Petitioner has agreed to a bypass flow of approximately 1 cfs during the season of diversion, an amount that totals 49 acre-feet per month. The historic hydrologic data suggest that maintaining this bypass flow during the proposed limited season of diversion of December 15 to March 31 would not inhibit the Petitioner's ability to divert up to 35 acre-feet for storage, except in critically dry years⁵.

The WAA/CFII shows that the 20 percent winter exceedance flow at POD #1 is 5 cfs. A suggested protest dismissal term would impose a maximum instantaneous rate of diversion of 15 percent of 5 cfs, or approximately 0.8 cfs. This historic hydrologic data suggests that limiting withdrawals to this maximum diversion rate during the season of diversion would not inhibit the Petitioner's ability to divert up to 35 acre-feet for storage, except in critically dry years.

j) Inundation by Seiche, Tsunami, or Mudflow: No waterfronts are present within the proposed project area that would create risk of inundation by a seiche, tsunami, or mudflow.

Permit Terms Required

To prevent any threat of impacts to hydrology and water quality, any order issued by the State Water Board amending Permit 20428 should include the following mitigating terms, substantially as written:

- *Stream or Lake Alteration Agreement term (see Biological Resources section).*

⁵ In the 13 years of record evaluated, there were two years that are historically classified as critically dry based on DWR water year classifications, including 1976 and 1977. These two years are two of the driest years on record in California hydrologic history.

- *Other Agency Permits. The Permittee shall obtain all necessary federal (including U.S. Army Corps of Engineers Section 404), state and local agency Permits required by other agencies prior to construction and diversion of water. Copies of such Permits and approvals shall be forwarded to the Chief, Division of Water Rights.*
- *Report of Waste Discharge. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction, Permittee shall file a report pursuant to Water Code Section 13260 and shall comply with all waste discharge requirements imposed by the California Regional Water Quality Control Board, San Francisco Bay Region, or by the State Water Board.*
- *No debris, soil, silt, cement that has not set, oil, or other such foreign substance will be allowed to enter into or be placed where it may be washed by rainfall runoff into the waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area.*
- *Erosion Control Term (see Geology and Soils section).*

Petitioner will obtain a CWA Section 402 NPDES General Permit For Stormwater Discharges Associated With Construction Activities. A Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to construction, and a Notice of Intent (NOI) will be submitted to the State Water Board prior to construction. Petitioner will comply with the structural erosion control plan dated developed in coordination with the Napa County Grading Permit. The site-specific measures included in that plan will be incorporated into the SWPPP.

References:

- WAA/CFII Report dated June 2006.
- Consultation with DFG, NMFS, USFWS, County, Regional Board.
- Erosion Control Plans
- County Grading Permit
- Flood Hazard Map – <http://www.esri.com/hazards/makemap.html>

4. BIOLOGICAL RESOURCES. Would the project:

Issues (and Supporting Information Sources)	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 DFG or USFWS?	<input type="checkbox"/>	X	<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 DFG or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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"/>	X

Discussion

The biological environment within the project study area includes plant and wildlife species, plant communities and special-status species. The Environmental Settings section below briefly describes special status species and surveys relevant to this Initial Study. These are explained in further detail in the following text.

CH2M HILL conducted a reconnaissance-level biological survey of the project area on March 24, 2004 (Refer to Appendix D). The survey included species observation, vegetative habitat identification and a general survey of the existing environment. The area proposed for the infiltration gallery currently consists of annual grassland and does not support shrubs or riparian vegetation (Refer to photos in Appendix E). Information provided by the Petitioner is that the surface of the creek bed is dry at this location for most of the spring and summer. At the time of the March 2004 survey, the creek was flowing subsurface at the proposed intake location, however, surface flows were observed both upstream and downstream of the proposed intake site.

Vegetation

General plant communities identified within the project area during the reconnaissance-level biological survey were valley foothill riparian, annual grassland, riverine, orchard-vineyard and urban. These vegetative communities are described as follows:

- **Valley foothill riparian** communities are generally found in valleys and are bordered by sloping alluvial fans, lower foothills and coastal plains. Communities are generally associated with low velocity flows, flood plains and gentle topography. Typical vegetation found in valley foothill riparian communities include cottonwood, sycamore and valley oak. This habitat is usually associated with riverine, grassland, oak woodland and agricultural communities.^m
- **Annual grassland** communities consist of open grassland primarily dominated by annual species. Growth of species is dependent on weather conditions and livestock grazing. In years of abundant rainfall, large amounts of standing dead plant material

may be present during the summer months. Species within this habitat type include common and introduced grasses and forbs.^m

- **Riverine** habitat is characterized as continually or intermittently running water as found in rivers and streams. Streams originate at higher altitudes, at which point they have greater velocities, then slow in velocity at lower elevations and become sluggish and muddy with water temperature and turbidity tending to increase. Vegetation within riverine habitat may consist of moss, algae and duckweed.^m
- **Orchard-vineyard** classification is characterized as orchards typically with a single dominant tree. Trees are usually low growing and bushy with an open understory to facilitate harvesting.^m Within the project area vineyards are the dominant crop.
- **Urban** vegetation classification varies to contains up to five types of vegetative structures; tree grove, street strip, shade tree/lawn, lawn and shrub cover.^m

Wildlife

Rivers and streams serve as linear extensions of natural habitat, providing important movement pathways for aquatic and terrestrial wildlife species. Kreuse Creek could serve as a corridor for local movement during the breeding season as well as during migration and dispersal.

Table 7 lists wildlife observed during the reconnaissance-level biological survey on March 24, 2004.

TABLE 7
Wildlife Observed at Kreuse Creek Vineyard March 24, 2004

Common Name	Scientific Name
Red-tailed hawk	<i>Buteo jamaicensis</i>
Turkey vulture	<i>Cathartes aura</i>
Anna's hummingbird	<i>Calypte anna</i>
Northern flicker	<i>Colaptes auratus</i>
Black phoebe	<i>Sayornis nigricans</i>
Common raven	<i>Corvus corax</i>
Western scrub-jay	<i>Aphelocoma californica</i>
Western bluebird	<i>Sialia mexicana</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
House finch	<i>Carpodacus mexicanus</i>
Botta's pocket gopher	<i>Thomomys botta</i>
California ground squirrel	<i>Spermophilus beecheyi</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>

TABLE 7

Wildlife Observed at Kreuse Creek Vineyard March 24, 2004

Common Name	Scientific Name
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a) Candidate, Sensitive or Special-status Species: In addition to the field survey, a special-status species list was generated using the California Natural Diversity Database (CNDDDB) on March 20, 2006, for the "Napa" U.S. Geological Survey 7.5-minute quadrangle (quad), which includes the project site (Appendix B).^e A special-status species list for the "Napa" quad was also obtained through the U.S. Fish and Wildlife Service on March 20, 2006 (Appendix C).^f Listed species with potential for occurrence on or near the project site include the federally threatened steelhead (*Onchrhynchus mykiss irideus*) (Central California Coast Ecologically Significant Unit [ESU]) and the northwestern pond turtle (*Clemmys marmorata marmorata*), a federal species of concern. The potential for occurrence for CNDDDB-listed species in the project area is provided in Table 8.

TABLE 8

CNDDDB Search of the Napa Quad Conducted on March 20, 2006

Mitigated Negative Declaration for the Change in Point of Diversion for Kreuse Creek

Species Name	Species Scientific Name	Status*	Suitable Habitat for the Species	Potential for Occurrence**
Tricolored blackbird	<i>Agelaius tricolor</i>	SSC	Nest in marshes with dense stands of tules, bulrush, and cattails, or blackberry thickets, and spiny grain crops; forage in grasslands and pastures.	Moderate
Pallid bat	<i>Anrotaous pallidus</i>	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Moderate
Suisun Marsh aster	<i>Aster lentus</i>	1B	Marshes and swamps (brackish and freshwater).	Low
Alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	1B	Alkali playa, valley and foothill grasslands and vernal pools.	Low
San Joaquin saltbush	<i>Atriplex joaquiniana</i>	1B	Chenopod scrub, alkali meadow, valley and foothill grassland.	Low
Dwarf dowingia	<i>Dowlingia pusilla</i>	2	Valley and foothill grassland (mesic sites), vernal pools.	Low
Northwestern pond turtle	<i>Clemmys marmorata</i> <i>marmorata</i>	SSC	Found in marshes, ponds, streams and ditches that support emergent vegetation. Requires basking sites. Nests may be found up to 0.5 km from water.	Moderate to high
Narrow-leaved daisy	<i>Erigeron angustatus</i>	1B	Chaparral. Serpentine and volcanic substrates, generally	Low

TABLE 8

CNDDDB Search of the Napa Quad Conducted on March 20, 2006
 Mitigated Negative Declaration for the Change in Point of Diversion for Kreuse Creek

Species Name	Species Scientific Name	Status*	Suitable Habitat for the Species	Potential for Occurrence**
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	SSC	in shrubby vegetation Fresh and saltwater marshes	Low
Northern California black walnut	<i>Juglans hindsii</i>	1B	Riparian forest and woodland. Deep alluvial soil associated with a creek or stream.	Moderate
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE, 1B	Valley and foothill grassland, vernal pools, cismontane woodland. Extirpated from most of its range.	Low
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	1B	Freshwater and brackish marshes	Low
Mason's lillaeopsis	<i>Lilaeopsis masonii</i>	Rare, 1B	Freshwater and brackish marshes, riparian scrub.	Low
Steelhead-central California coast ESU	<i>Onchrhynchus mykiss irideus</i>	FT	San Francisco and San Pablo Bay Basins	High
California freshwater shrimp	<i>Syncaris pacifica</i>	FE, SE	Low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow.	Low
American badger	<i>Taxidea taxus</i>	SSC	Drier open stages of most shrub. Forest and herbaceous habitats, with friable soil. Need sufficient food and open, uncultivated ground. Prey on burrowing rodents.	Moderate
Showy Indian clover	<i>Trifolium amoinum</i>	FE, 1B	Valley and foothill grassland, coastal bluff scrub.	Low
Saline clover	<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	1B	Marshes and swamps, valley and foothill grassland and vernal pools.	Low

Notes:

See Appendix B for complete CNDDDB report

* FE = Federal Endangered

FT = Federal Threatened

SE = State Endangered

ST = State Threatened

Rare = State Rare Species

SSC = California Department of Fish and Game (DFG) Species of Special Concern

1B = California Native Plant Society (CNPS), List 1B species are rare, threatened or endangered in California throughout their range.

2 = California Native Plant Society (CNPS), List 2 species are rare, threatened or endangered in California but more common elsewhere

** High potential for occurrence = the species has been observed at the project site, or is known to occur in the vicinity of the project and suitable habitat for the species is present on the project site

Moderate potential for occurrence = the species has not been observed on or near the project site, but the site provides one or more habitat elements potentially used by the species

TABLE 8

CNDDDB Search of the Napa Quad Conducted on March 20, 2006
 Mitigated Negative Declaration for the Change in Point of Diversion for Kreuse Creek

Species Name	Species Scientific Name	Status*	Suitable Habitat for the Species	Potential for Occurrence**
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Low potential for occurrence = the species has not been observed on or near the project site, and the site does not provide any of the habitat elements necessary to support the species

Steelhead: Information provided by Friends of the Napa River documents the occurrence of juvenile steelhead (*Oncorhynchus mykiss irideus*) in Kreuse Creek. Data on steelhead use of the Napa River watershed is being collected as part of a multi-year study led by Dr. Charley Dewberry and coordinated through Friends of the Napa River. Studies indicate that if the opportunity was present and sufficient water was available there would be the potential for rainbow trout and steelhead to migrate up and spawn in Kreuse Creek.

Anecdotal information provided by the Petitioner indicates that the surface of the creek bed is dry at this location for most of the spring and summer. This would be consistent with other similar creeks in the region. At the time of the March 2004 survey, there was no surface flow at the proposed intake location; however, surface flows were observed both upstream and downstream of the proposed intake site. The lack of flowing water at the intake location precludes the use of the area for juvenile steelhead rearing in spring and summer. Construction of the project would occur during the spring or summer months when there is no surface water at the intake location, therefore, impacts to steelhead and rainbow trout due to construction of the proposed project would be less than significant.

Since construction will take place in the dry, impacts to steelhead and rainbow trout during construction would be less than significant; therefore, no mitigation is required.

California red-legged frog and Foothill yellow-legged frog: Although these species are not listed on the special-status species list generated by the CNDDDB, these species have been known to occur in habitat similar to that, which is found in the vicinity of the project site. The California red-legged frog (*Rana aurora draytonii*) is a USFWS federally threatened species, and the foothill yellow-legged frog (*Rana boylei*) is listed by DFG as a state species of concern. According to the CNDDDB, no observations of California red-legged frog or foothill yellow-legged frog have been recorded within the project vicinity. No amphibians were observed during the field survey; however, the site visit occurred before the breeding season for many amphibians. The stream corridor at the water intake location is not optimal habitat for either species due to its lack of vegetative cover and seasonal absence of spring and summer water. The pool has some potential for California red-legged frog use based on its depth, although there is very little vegetative cover present. The area of the water intake has some potential for foothill yellow-legged frog use upstream based on its gradient (0 to 4 percent), low water velocity, and limited riparian and overhanging canopy cover. However, the temperature in the stream was approximately 60° Fahrenheit, which is the upper temperature limit for foothill yellow-legged frogs. If the creek is used by frogs, it would likely be upstream in more shaded portions of the creek.

There are no listed observations of the California red-legged frog or foothill yellow-legged frog recorded within the project vicinity, though Kreuse Creek may serve as potential habitat in more shaded portions of the Creek, likely upstream of the project area. The CNDDDB search did not list either species as occurring within the project area, in addition, no amphibians were observed within the project area during the field survey. Because of the lack of habitat within the project area, the lack of observations in the vicinity of Kreuse Creek, and the lack of

flowing water during construction, the potential for disturbance to the California red-legged frog and foothill yellow-legged frogs is considered less than significant. Disturbance of California red-legged frog and foothill yellow-legged frog is considered less than significant therefore no mitigation is required.

Northwestern pond turtle: The northwestern pond turtle (*Clemmys marmorata marmorata*) is the only abundant turtle native to California. The northwestern pond turtle is highly aquatic and is typically associated with such habitats as streams, rivers, sloughs, ponds and artificial water bodies. This species is known to travel long distances upland for nesting and overwintering. The nearest recorded sighting of a northwestern pond turtle near the project area was on September 24, 2003 on Tulucay Creek at the Soscol Avenue Bridge Overcrossing in Napa, California (Observed by Michael Galloway of Caltrans as reported in the CNDDDB).

Although there are no CNDDDB records within the project area, the Kreuse Creek provides likely habitat for northwestern pond turtles. The proposed project could impact the northwestern pond turtle through direct mortality during operation of heavy equipment.

The potential disturbance to northwestern pond turtle could be significant and, therefore, mitigation is required.

If present within the project area, the proposed project may impact the northwestern pond turtle. However, by limiting the size of the project footprint and staging areas, potential impacts would be kept to a minimum and, therefore would be considered less than significant. Implementation of this measure would reduce impacts to less than significant.

b) Riparian Vegetation: No riparian vegetation is present at the location of the infiltration gallery. The proposed reservoir would be sited within the existing vineyard area, and project water would be used to support the existing vineyard. In addition, according to the CNDDDB Survey no special-status plants are located within the proposed project site. No trees would be affected by the construction of the required project facilities. For these reasons, impacts to riparian vegetation are considered less than significant as a result of the proposed project. Impact to riparian vegetation is less than significant; therefore, no mitigation is required.

c) Federally Protected Wetlands: Section 404 of the Clean Water Act requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the discharge of dredged or fill material into all waters of the United States, including wetlands, both adjacent and isolated. Wetlands are defined as areas that "are inundated by surface or groundwater with a frequency sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE, 1987).

The proposed project would not have an adverse effect on federally protected wetlands because no federally protected wetlands are located in the vicinity of the proposed project. No riparian or wetland vegetation is present at the location of the proposed water intake, conveyance pipeline, or storage reservoir. The proposed project sites will be located on existing vineyard and annual grassland vegetation. The proposed reservoir would be situated completely within the existing vineyard area, and project water used to support existing vineyard. The proposed project would not result in any changes in land use or result in adverse impacts to natural habitats, including wetlands.

The proposed project would not conflict with local, state or regional policies or provisions of habitat conservation plans, tree preservation policies or biological resource policies or

ordinances.

d) Movement of Species: The operation of the proposed infiltration gallery and off-stream storage reservoir are not anticipated to adversely affect steelhead and resident rainbow trout that may be using the stream corridor upstream and downstream of the project area, nor adversely affect fish passage through the project area. The infiltration gallery would be located along a cut bank adjacent to an existing road on the creek bed margins. The area proposed for the infiltration gallery currently consists of annual grassland and does not support shrubs or riparian vegetation. The project proponent proposes to divert water from the creek only during winter flows, and the water velocity at the infiltration gallery would be within DFG and NMFS standards and guidelines to prevent fish entrainment. Because the diversion site lacks spring and summer aquatic habitat and riparian vegetation, and because the project would incorporate measures protective of aquatic resources to avoid entrainment and provide adequate bypass flows for adult and juvenile fish during winter months as documented in the Water Availability Analysis, the operation of the proposed project is not expected to result in adverse effects to steelhead and rainbow trout.

Due to operational design of the project in accordance with DFG and NMFS standards, impacts to steelhead during operation would be less than significant; therefore, no mitigation is required.

e) and f) Local Policies and Ordinances, Conservation Plans: The proposed project would not conflict with local, state or regional policies or provisions of habitat conservation plans, tree preservation policies or biological resource policies or ordinances.

Permit Terms Required

To prevent any threat of impacts to fisheries, wildlife, and plant species, any order issued by the State Water Board amending Permit 20428 should include the following mitigating terms, substantially as written:

- *The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 35 acre-feet per annum to be collected from **December 15** of each year to **March 31** of the succeeding year.*
- *This Permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose.*
- *Permittee shall not use more water under the basis of riparian right on the place of use authorized by this permit than permittee would have used absent the appropriation authorized by this permit. Based on the information in the Division's files, riparian water has not been used on the place of use. Therefore, consistent with this term, permittee may not divert any additional riparian water for use on the place of use authorized by this permit under basis of riparian right. With the Chief of the Division's approval, this information may be updated, and permittee may use water under basis of riparian on the authorized place of use, provided that permittee submits reliable evidence to the Chief of the Division quantifying the amount of water that permittee likely would have used under the basis of riparian right absent the appropriation authorized by this permit. The Chief of the Division is hereby authorized to approve or reject any proposal by permittee to use water under the basis of riparian right on the place of use authorized by this permit.*

- *Permittee shall install and maintain devices satisfactory to the State Water Board to measure the rate and quantity of water diverted into the reservoir from Kreuse Creek (POD#1) and the Unnamed Stream (# 3).*
- *Prior to and during construction of the dam and reservoir and initial filling of the reservoir, Permittee shall take the following actions to ensure that construction of the dam and reservoir and initial filling of the reservoir shall not harm sensitive species that may be present at or near the reservoir site:*
 - a) *Following consultation with DFG and the U. S. Fish and Wildlife Service (USFWS), hire a qualified biologist acceptable to the Chief of the Division of Water Rights to:*
 - i) *Conduct a pre-construction biological survey of the construction site and surrounding environs to determine if sensitive species, including Northwestern Pond Turtle and California Red-Legged Frog, and/or their habitats may be present;*
 - ii) *Conduct a training session for construction field crews to inform them of the possible presence of sensitive species, their appearance and explain actions to be taken if they are encountered during construction of the reservoir;*
 - iii) *Monitor dam and reservoir construction and initial reservoir filling activities to ensure that harm to sensitive species encountered is avoided, and if it is determined that specific individual species encountered must be physically captured and relocated, ensure that such capture and relocation activities are performed only by a qualified collection biologist duly certified by the DFG and the USFWS; and*
 - b) *Stop all dam and reservoir construction activities if sensitive species are encountered and refrain from resuming construction activities until the biologist hired under part a) above declares that individual species encountered have either safely left the work area or have been safely removed and relocated by a qualified collection biologist duly certified by the DFG and the USFWS.*
- *No water shall be diverted under this Permit until Permittee has installed a device, satisfactory to the State Water Board, which is capable of measuring the bypass flow required by the conditions of this Permit. Said measuring device shall be properly maintained. In order to ensure full compliance with this requirement, Permittee shall implement all provisions of the Permit 20428 (Application 29351) flow bypass compliance plan dated July 19, 2006 on file with the State Water Board.*
- *This Permit does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the Permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this Permit.*

To further protect biological resources, the following mitigation terms, substantially as written, are added in accordance with the protest dismissal agreement between Petitioner, NMFS, DFG and EDEN dated September 30, 2005:

- *The maximum rate of diversion to offstream storage from either # 1 or POD #3 shall not exceed 0.8 cubic feet per second.*

- Permittee shall not divert water at # 1 unless there is at least a minimum bypass flow of 1.0 cubic foot per second at said Point of Diversion.
- Permittee shall install an infiltration gallery for the diversion of water from # 1. The infiltration gallery shall meet United States Fish and Wildlife Service recommendations to avoid impacts on fish passage, and shall include an automated float switch within Kreuse Creek above POD #1, for turning the pumps off and on.
- Permittee shall install flow meters at POD #1 and POD #3 (one at each location), and these flow meters shall record flow data and diversion information to an automated data logger. This flow and diversion data shall be maintained for the life of the project and submitted to the Division of Water Rights and DFG within 30 days upon request.
- Permittee shall develop a water management plan that will set priorities for the use of water from the offstream storage reservoir during the irrigation season, and will include a plan for avoiding the use of Permittee's groundwater supplies during the period of July 1 through September 30. A copy of the plan shall be submitted to the Chief, Division of Water Rights. Notwithstanding this condition, it is acknowledged that Permittee reserves any and all of its claims to groundwater rights, and this condition shall not be construed as establishing any jurisdiction over Permittee's water supplies that are legally classified as percolating groundwater.
- Permittee shall allow representatives of the State Water Resources Control Board and the Department of Fish and Game reasonable access to the project works to determine compliance with the terms of this Permit.
- Stream or Lake Alteration term (see Hydrology and Water Quality section).
- Erosion Control Plan term (see Geology and Soils section).

5. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental impacts, 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. Would the project:

Issues (and Supporting Information Sources)	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 & Monitoring Program of the California Resources Agency, to non-agricultural uses?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

The proposed project is located in an agricultural area. The project area, a vineyard, is bounded by additional vineyards on three sides, to the north, south and east, and is bounded by Kreuse Creek on the west. The proposed project supports continued agricultural practices in the region, by assuring a continued water supply and does not conflict with existing land use practices currently established by Napa County.

a) and b) Convert Farmlands Per FMMP, Conflict with Agricultural Zoning: The proposed project would not involve other changes to the existing environment that could result in conversion of Farmland to non-agricultural use, because the proposed project would be implemented in support of agricultural practices.

The existing surrounding agricultural land uses would not be affected during the construction period. The construction process would be phased to avoid interruption to agricultural uses.

c) Convert Other Farmlands: Approximately 4.5 acres of vineyard would be removed for the construction of the proposed reservoir. Though a small amount of land would be converted from existing crops to a permanent reservoir it would constitute a less than significant impact because the reservoir would be used to support agricultural practices.

Permit Terms Required

None.

6. NOISE. Would the project result in:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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, would the project expose people residing in or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing in or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Exposure of Persons to Noise Levels: Noise levels in the project vicinity are primarily

from agricultural sources including wineries, wind machines, tractors and water pumps. The General Plan describes most agricultural noises as intermittent seasonal noises that cannot be expressed in day-night average levels (Ldn) terms. Although there are no wineries within the immediate vicinity of the project site, existing noise from general agricultural uses could affect the noise environment of the project area.ⁿ

The project area is located on private land with no public access, though residences adjacent to the vineyard and within sight of the project area could potentially be impacted during construction of the proposed project. Ambient noise levels would be expected to increase during project construction. Noise emissions from construction equipment at a distance of 50 feet from the noise source would range from between 75 to 80 decibels (dBA). Table 9 lists the estimated noise emissions of the construction equipment that are typically used for project construction.

TABLE 9
Typical Noise Levels of Construction Equipment

Equipment	Sound Level (dBA) at 50 feet
Earthmoving	
Front loader	75
Backhoe	75
Dozer	75
Tractor	75
Scraper	80
Grader	75
Truck	75
Paver	80
Impact	
Jack hammer	75
Rock drill	80
Pneumatic drill	80
Materials handling	
Concrete mixer	75
Concrete pump	75
Crane	75
Derrick	75
Stationary	
Pump	75
Generator	75
Compressor	75
Other	

TABLE 9
Typical Noise Levels of Construction Equipment

Equipment	Sound Level (dBA) at 50 feet
Saw	75
Vibrator	75

Source: Sincero and Sincero, 1996.^o

Noise impacts during project construction may be significant; therefore, mitigation is necessary.

The Napa County General Planⁿ outlines mitigation measures for industrial activities as follows:

- Erect walls, berms, etc. where practical and effective on a case-by-case basis.
- Restrict time of day and days of week for operations.
- Encourage control of noise within site by means such as quiet machinery, buildings around noisy operations and performance of noisy operations indoors.

If specific noise complaints are received during construction, one or more of the following noise mitigation measures would be implemented:

- Restrict construction within 1,000 feet of residences to daytime hours. No construction would be performed within 1,000 feet of an occupied dwelling unit on Sundays, legal holidays, or between the hours of 7:00 p.m. and 7:00 a.m. on other days. The County must approve any variance from this condition.
- All equipment would have sound-control devices no less effective than those provided on the original equipment. No equipment would have any unmuffled exhaust.
- No pile-driving or blasting operations would be performed within 3,000 feet of an occupied dwelling unit on Sundays, legal holidays, or between the hours of 8:00 p.m. and 8:00 a.m. on other days. The County must approve any variance from this condition.

As directed by the County, the contractor would implement appropriate noise mitigation measures, including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around stationary construction noise sources.

b), c), and d) Groundborne Vibrations, Permanent Increase in Ambient Noise Levels, Periodic Increase in Ambient Noise Levels: As a result of the proposed project no significant vibration or ground borne noise is anticipated. No permanent, temporary or periodic increases in noise levels would result because the permanent facilities proposed in this project would not generate substantial noise.

e) and f) Airport Interference: There are no airports within 2 miles of the proposed project area.

Implementation of mitigation measures would reduce noise impacts to less than significant.

Permit Terms Required

To prevent any threat of impacts by noise levels on sensitive receptors, Petitioner will comply with Napa County General Planⁿ noise mitigation measures (listed above in this section). Any order issued by the State Water Board amending Permit 20428 should include the following mitigating terms, substantially as written:

- Other Agency Permits term (see Hydrology and Water Quality section).

7. LAND USE AND PLANNING. Would the project:

Issues (and Supporting Information Sources)	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"/>	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

a), b), and c) Divide an Established Community, Conflict With Existing Land Use Plans, Conflict With Conservation Plans: The proposed project is located in the southeast portion of Napa County. The project area is bounded by vineyards on three sides, to the north, south and east, and is bounded by Kreuse Creek on the west.

According to the Napa County Land Use Plan 1998-2000, the project area exists within the agriculture, watershed and open space resource areas. Land use within the project area is defined as agricultural watershed. The primary crop is vineyards.^p

No impacts to land uses are anticipated as a result of the proposed project. The project is located on private agricultural land and would not divide an established community, conflict with applicable land use plans, policies or zoning ordinances and would not conflict with any applicable habitat conservation plan or natural community conservation plan. Erosion control is discussed above in Section 3, Hydrology and Water Quality.

Permit Terms Required

To prevent any threat of impacts to land use designations, any order issued by the State Water Board amending Permit 20428 should include the following mitigating term, substantially as written:

- Other Agency term (see Hydrology and Water Quality section).

8. MINERAL RESOURCES. Would the project:

Issues (and Supporting Information Sources)	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 future value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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"/>	X

Discussion

a) and b) Impacts on Existing Mineral Resources: The project is located on private land within a rural agricultural area with no known mineral resources available; therefore, no impacts are anticipated to existing mineral resources.

Permit Terms Required

None.

9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Be located on a site which 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 to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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 a 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"/>	X
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"/>	X

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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 type="checkbox"/>	X

Discussion

Napa County addresses issues relating to Hazards and Hazardous materials in the Safety Element of the General Plan. The safety element focuses primarily on issues such as fires in wildland areas adjacent to urban developments and on geologic hazards.

a) Transportation Routes: Due to the rural location and private ownership of the land, the proposed project would not create a significant hazard to the public through transportation or emissions of hazardous materials during construction of the project.

b) Public or Environmental Hazards: This project includes the temporary alteration of Kreuse Creek for the construction of an infiltration gallery and the flow gage to be installed on the Creek. Typical construction methods will require equipment and techniques that use hazardous materials such as diesel fuel, oil, cleaning solvents and other industrial chemicals.

Project construction could result in an inadvertent spill of hazardous materials used for standard construction practices. Construction would require transport and use of potentially hazardous materials such as gasoline, diesel, industrial chemicals, and other hazardous chemicals. A spill of these materials could result in a significant impact; therefore, avoidance measures and mitigation measures are required.

To avoid or minimize impacts related to potentially hazardous spills, the Petitioner would develop a water pollution control plan in coordination with the State Water Board through the Section 401 Permitting process in obtaining the stormwater management approval for the project. At a minimum, the plan would contain the following best management practices specified in Table 6, Water Quality Pollution Prevention Measures, above.

Implementation of the water pollution control plan would reduce impacts to a less than significant level.

c) Schools: The project is not located within one-quarter mile of an existing school.

d) Listed Governmental Hazardous Waste Site: The proposed project is not located on a known hazardous materials site exists.

e) and f) Airports: The project is not located on a current hazardous materials site or within two miles of a public use airport or a private airstrip.

g) Emergency Response Plan: The project would not physically interfere with an adopted emergency response or evacuation plan.

h) Wildlands/Fire: The project location is not adjacent to wildlands, which would expose

people or structures from risk of wildland fire.

Permit Terms Required

To prevent any threat of impacts by hazardous materials on sensitive receptors or the environment, Petitioner will comply with the Napa County General Plan Safety Element and CWA Section 401 for inadvertent spills of hazardous materials onsite during construction. Any order issued by the State Water Board amending Permit 20428 should include the following mitigating term, substantially as written:

- *Other Agency Permit term (see Hydrology and Water Quality section).*

10. POPULATION AND HOUSING. Would the project:

Issues (and Supporting Information Sources)	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 (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

a), b), and c): The project is located on private land within a rural agricultural area with no public housing available. The construction crew required will be minimal and will not require the construction of additional housing, nor will existing housing be displaced, therefore, no impacts are anticipated to population and housing.

Permit Terms Required

None.

11. TRANSPORTATION/CIRCULATION. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) 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"/>	X
c) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Exceed, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
f) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
g) 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"/>	X

Discussion

The project is located on private land within a rural agricultural area. During construction a minimal number of vehicle trips will be generated by construction workers. During operation of the project an occasional trip will be required to conduct mitigation monitoring activities. However, these additional vehicle trips are so minor as to constitute no impact to transportation.

Permit Terms Required

None.

12. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

a) through e): The project will not result in an increased need for public services, therefore, no impacts to public services are anticipated.

Permit Terms Required

None.

13. UTILITIES AND SERVICE SYSTEMS. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant 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"/>	X
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 impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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 impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>	X
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"/>	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

a) through g): The project is located on private land within a rural agricultural area with no utilities and service systems within the near vicinity. No increase in utilities or service systems would be required for the operation of the proposed project; therefore, no impacts to utilities or services systems are anticipated.

Permit Terms Required

None.

14.AESTHETICS. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
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"/>	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	X	<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"/>	X

Discussion

The terrain within the project vicinity generally consists of gently rolling hills planted in vineyards. Views within the project area consist of Kreuse Creek, vineyards, open spaces as well as residential housing structures located at a distance adjacent to the vineyard. Views upstream of Kreuse Creek include the stream, riparian vegetation, grasses and trees. Views downstream consist of the stream and grassland. Views at the proposed PODs consist of annual grassland, with no shrubs or riparian vegetation present. Creek levels fluctuate according to season, with water flowing subsurface in the vicinity of the project area most of the spring and summer.

a) and b) Scenic Resources: The project would not have an adverse affect on scenic vistas or scenic resources because no scenic vistas or resources are located in the vicinity of the proposed project. The proposed project would not create a new source of substantial light or glare which would affect views in the area.

c) Visual Characteristics: The primary visual characteristic of construction activities would be of typical construction equipment and vehicles including backhoes, graders, and trucks in the construction staging areas. Such impacts would be temporary, and views would be limited in duration.

During operation, the off-stream reservoir would be sited completely within and surrounded by the existing vineyard. The reservoir would exist as a partially in ground structure on the up slope with a visible embankment on the down slope. The visible embankment would have the design feature of agricultural fill as the top layer, allowing establishment of vegetation on the structure. With the implementation of these design features, the impacts to aesthetics would be less than significant.

d) Light or Glare: No new source of substantial light or glare that would decrease nighttime views would occur due to project implementation.

The aesthetic impacts from construction and operation would be less than significant due to the limited duration of construction activities; therefore, no mitigation is necessary.

Permit Terms Required

None.

15. CULTURAL RESOURCES. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

Discussion

A State Water Board Division of Water Rights archeologist performed a cultural resources records search and site evaluation in 1989⁹. The records review found no recorded archeological sites and no record of an archeological field study of the project area. A review of the anthropological sources documented that there are several ethnographic sites in the vicinity, including one noted only a mile to the west or southwest of the project area.

Division staff archeologists determined that an archeological survey was necessary, based on the record search and locational data related to the sensitivity of the project locale.

a-b) Archeological Resources: As a result of the survey, the archeologist's observations noted that there were several widely scattered obsidian flakes in portions of the property already planted in vineyard; however there were not enough in any one location to warrant recordation as an archeological resource. All of these were either simple flakes or lithic debris and the archeologist determined that these would offer no diagnostic value unless collected for hydration analysis. He found that the disturbed nature of the location limits even this potential, and he further stated that a thin scatter of obsidian lithics occurs over virtually the entire Napa Valley and fringing foothills.

During the field inspection the archeologist identified several historic resources associated with Muller Ranch, which was initially developed on the site in the late 19th century. Specific identified historic resources include a barn, two sheds, a garage, a concrete cellar, a rubble pile (which includes the remains of the ranch's two-story house and a shed that stood above the concrete cellar), a bridge over Kreuse Creek, and a rock retaining wall on the south bank of the Creek just downstream of the bridge, a cased well in front of a milking shed, the remains of the ranch orchard, and numerous other features. According to the archeologist, the poor condition of the major structures (now largely piles of debris) lack the uniqueness of the remaining outbuildings, and the common nature of the artifacts (e.g., round nails, standard construction lumber, etc.) indicates that preservation or other types of mitigation are not warranted.

The cultural resource report indicated that these historic resources do not warrant consideration as important under the California Register of Historical Resources or the National Register of Historic Places.

The pipeline route and the construction corridor have been selected to avoid the historic resources.

c) Paleontological Resources, Geologic Features: No recorded paleontological sites occur on the project site and no known or observed geologic features were identified on the property.

d) Human Remains: There is the possibility that an unanticipated discovery of human remains could occur.

- *If human remains are encountered during construction or operation of the project, then the Applicant shall comply with Section 15064.5 (e) (1) of the CEQA Guidelines and the Public Resources Code Section 7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. Project-related ground disturbance, in the vicinity of the find, shall not resume until the process detailed under Section 15064.5 (e) has been completed.*

Implementation of these standard terms related to accidental discovery will reduce unanticipated impacts to further reduce the level of impact.

Permit Terms Required

To prevent any threat of impacts to cultural resources any order issued by the State Water Board amending Permit 20428 should include the following mitigating terms, substantially as written:

- *Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Chief of the Division of Water Rights shall be notified of the discovery and a professional archeologist shall be retained by the Permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Chief of the Division of Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Chief of the Division of Water Rights.*
- *If human remains are encountered during construction or operation of the project, then the Applicant shall comply with Section 15064.5 (e) (1) of the CEQA Guidelines and the Public Resources Code Section 7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. Project-related ground disturbance, in the vicinity of the find, shall not resume until the process detailed under Section 15064.5 (e) has been completed.*

Implementation of these standard terms related to accidental discovery will reduce unanticipated impacts to further reduce the level of impact.

16. RECREATION. Would the project:

Issues (and Supporting Information Sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Discussion

a) and b) Parks and Recreational Facilities: The project is located on private land within a rural agricultural area with no public recreation available, therefore, no impacts to recreation are anticipated.

Permit Terms Required

None.

17. MANDATORY FINDINGS OF SIGNIFICANCE.

Issues (and Supporting Information Sources)	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"/>	X	<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"/>	X	<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 type="checkbox"/>	X

Discussion

a) Fish and Wildlife Species: Petitioner and NMFS, DFG and EDEN, through the protest resolution process, have developed specific Permit terms which modify the project so as to protect fish and wildlife species. These terms include reducing the existing annual diversion to storage from 70 to 35 cfs, changing the diversion season from October 15 to April 30 to December 15 to March 30, providing limits of a maximum rate of direct diversion of 0.8 cfs and a minimum bypass flow of 1 cfs (previously no limits were specified), and changing the diversion type from an onstream reservoir to an infiltration gallery with flow meter, the automated float switch, and automated data logger for diversion to an off-stream reservoir.

The project changes therefore would not have the potential to substantially degrade the environment, reduce the habitat of a fish or wildlife species or cause a fish or wildlife population to drop below self-sustaining levels. The design features of the proposed diversion including the infiltration gallery, would serve to prevent entrainment, and establish a gravel bed as a possible spawning ground for migrating fish. The project would not threaten to eliminate a plant or animal community due to the absence of existing riparian vegetation within the project area. The proposed project would not reduce the number or restrict the range of a rare or endangered plant or animal species, due to the lack of habitat that would be impacted during construction and operation of the project. The proposed project would not eliminate important examples of the major periods of California history or prehistory. Impacts to special-status species and cultural resources have been addressed and mitigated to a less than significant level where necessary.

b) Cumulative Impacts: The hydrology of Kreuse Creek has been evaluated through the WAA/CFII Report in order to determine, in accordance with the DFG/NMFS *Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams, June 17, 2002*, if the proposed diversion would create a negative impact on water availability to fish resources or a cumulative impact to water availability within the project vicinity. The WAA/CFII Report addresses cumulative impacts of the proposed project and concludes that the historic hydrologic data suggests that maintaining a bypass flow of 1 cfs during the season of diversion limit of December 15 to

March 31 would not inhibit the availability to divert up to 35 AF for storage, except in critically dry years. During critically dry years, the Petitioner would rely on available reservoir storage or groundwater supplies if available.

c) Humans: The proposed project would not have a substantial or adverse effect on human beings. The project site is located on private property with no access for public use, the infiltration gallery and transport pipeline would be located underground with no access for humans, the sump design incorporates a childproof cover and the off-stream reservoir is for agricultural purposes. Operation of the proposed project would not create significant levels of noise, operational hazards, and change in land use or agricultural resources.

Based on the above, the State Water Board, Division of Water Rights has determined that the proposed project will not have any significant adverse environmental effects.

III. 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 (see Appendix A). A 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 (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) 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.

Prepared By:

1/18/07

Mr. Mike Urkov/Project Manager/CH2M HILL

Date

Reviewed By:

1/22/07

Mitchell Moody, Water Resources Control Engineer, Watershed Unit 1

Date

1/19/2007

Steven Herrera, Chief, Water Rights Permitting Section

Date

Authority: Public Resources Code Sections 21083, 21084, 21084.1, and 21087.

Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.1 through 21083.3, 21083.6 through 21083.9, 21084.1, 21093, 21094, 21151; *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296 (1988); *Leonoff v. Monterey Board of Supervisors*, 222 Cal. App. 3d 1337 (1990).

(Form updated 4/12/2005)

IV. INFORMATION SOURCES

- ^a Edwards Engineering. 2003. *Kreuse Creek Premier Vineyard, Diversion Structure Plan, Details and Specifications*. Sheet 1 of 13. January 9.
- ^b Edwards Engineering. 2003. *Kreuse Creek Premier Vineyard, Water Storage Reservoir Details*. Sheet 3 of 3. December 9.
- ^c Edwards Engineering. 2003. *Kreuse Creek Premier Vineyard, Water Storage Reservoir Grading Plan*. Sheet 1 of 3. December 9.
- ^d Viessman, Warren and Gary L. Lewis. 1996. *Introduction to Hydrology*. 4th ed. p. 712. Prentice-Hall.
- ^e California Department of Fish and Game (DFG). 2006. California Natural Diversity Database (CNDDDB). January 4.
- ^f U.S. Fish and Wildlife Service (USFWS). 2006. Special-status Species List. Sacramento, California. Update March 1.
- ^g Napa Valley Wines. Accessed 2005. <http://www.napavintners.com/wines>
- ^h California Geological Society. 2006. Index to Official Maps of Earthquake Fault Zones. http://www.consrv.ca.gov/cgs/rghm/ap/Map_index/index.htm. Accessed February.
- ⁱ U.S. Department of Agriculture. 1978. Soil Survey of Napa County, California. August.
- ^j Hanson, James C. 2002. *Kreuse Creek Premier Vineyard, L.P. (APN 046-351-016), Erosion Control Plan for Construction of Water Storage Reservoir*. April.
- ^k Bay Area Air Quality Management District (BAAQMD). 2006. <http://www.baaqmd.gov/>. Accessed February.
- ^l San Francisco Bay Region Water Quality Control Board (SFB). 2003. *Basin Plan*. <http://www.waterboards.ca.gov/sanfranciscobay/>
- ^m Mayer, K.E., and W.F. Laudenslayer, Jr., eds. 1988. *A Guide to Wildlife Habitats of California*. California Department of Forestry and Fire Protection, Sacramento. www.dfg.ca.gov/whdab/html/wildlife_habitats.html
- ⁿ Napa County. 1996 amended. *Napa County General Plan*. <http://www.mynapa.info/Services.asp>
- ^o Sincero, Arcadio P. and Gregoria A. Sincero. 1996. *Environmental Engineering: A Design Approach*. Prentice-Hall, Inc.
- ^p Napa County. 2002. *Napa County Land Use General Plan*. <http://www.mynapa.info/Services.asp>. March 5.

⁹ Soule, William E. 1991, Cultural Resources Survey Report Application 29351 (Kreuse Creek Premium Vineyard, A California Limited Partnership). Report on file at the Division of Water Rights, State Water Resources Control Board, Sacramento, California.

V. LIST OF PREPARERS

CH2M HILL project personnel included the following:

- Laura Harnish, Project Manager
- Summer Bundy, Hydrologist
- Gary Santolo, Biologist
- Julie Rochlitz, Staff Scientist

**APPENDIX A
REQUIRED PERMIT TERMS AND REVISIONS MADE TO THE PROJECT**

APPENDIX A

This section includes standard, modified standard, special and mandatory terms specifically designed to minimize environmental impacts of this project. It also includes terms agreed upon by the petitioner and protestants in order to resolve outstanding protests to the petition. Issuance of a Mitigated Negative Declaration is dependant on the petitioner accepting these terms. The following permit terms, substantially as written, shall be included in any amended water right Permit 20428 (Application 29351):

Standard Permit Terms

- *The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 35 acre-feet per annum to be collected from **December 15** of each year to **March 31** of the succeeding year.*

(000005C)
- *This Permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose.*

(000005I)
- *Construction work and complete application of the water to the authorized use shall be prosecuted with reasonable diligence and completed by December 31, 2010.*

(0000009)
- *No water shall be diverted under this Permit until Permittee has installed a device, satisfactory to the State Water Board, which is capable of measuring the bypass flow required by the conditions of this Permit. Said measuring device shall be properly maintained. In order to insure full compliance with this requirement, Permittee shall implement all provisions of the Permit 20428 (Application 29351) flow bypass compliance plan dated July 19, 2006 on file with the State Water Board.*

(0060062A)
- *Permittee shall install and maintain devices satisfactory to the State Water Board to measure the rate and quantity of water diverted into the reservoir from Kreuse Creek (POD#1) and the Unnamed Stream (POD #3).*

(0060046)
- *The Permittee shall obtain all necessary federal (including U.S. Army Corps of Engineers Section 404), state and local agency Permits required by other agencies prior to construction and diversion of water. Copies of such Permits and approvals shall be forwarded to the Chief, Division of Water Rights.*

(000000J)

- *Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Chief of the Division of Water Rights shall be notified of the discovery and a professional archeologist shall be retained by the Permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Chief of the Division of Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Chief of the Division of Water Rights.*

(0000215)

- *Permittee shall not use more water under the basis of riparian right on the place of use authorized by this permit than permittee would have used absent the appropriation authorized by this permit. Based on the information in the Division's files, riparian water has not been used on the place of use. Therefore, consistent with this term, permittee may not divert any additional riparian water for use on the place of use authorized by this permit under basis of riparian right. With the Chief of the Division's approval, this information may be updated, and permittee may use water under basis of riparian on the authorized place of use, provided that permittee submits reliable evidence to the Chief of the Division quantifying the amount of water that permittee likely would have used under the basis of riparian right absent the appropriation authorized by this permit. The Chief of the Division is hereby authorized to approve or reject any proposal by permittee to use water under the basis of riparian right on the place of use authorized by this permit.*

(0560300b)

Special Permit Terms

- *If human remains are encountered during construction or operation of the project, then the Applicant shall comply with Section 15064.5 (e) (1) of the CEQA Guidelines and the Public Resources Code Section 7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. Project-related ground disturbance, in the vicinity of the find, shall not resume until the process detailed under Section 15064.5 (e) has been completed.*
- *Construction of the offstream reservoir shall not begin until the Napa County Engineer, the United States Natural Resource Conservation Service, or a civil engineer registered by the State of California has approved the plans and specifications for the reservoir. Construction of the reservoir shall be under the direction of said approving party.*
- *No debris, soil, silt, cement that has not set, oil, or other such foreign substance will be allowed to enter into or be placed where it may be washed by rainfall runoff into the waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area.*

- *Prior to and during construction of the dam and reservoir and initial filling of the reservoir, Permittee shall take the following actions to ensure that construction of the dam and reservoir and initial filling of the reservoir shall not harm sensitive species that may be present at or near the reservoir site:*
 - a) *Following consultation with DFG and the U. S. Fish and Wildlife Service (USFWS), hire a qualified biologist acceptable to the Chief of the Division of Water Rights to:*
 - i) *Conduct a pre-construction biological survey of the construction site and surrounding environs to determine if sensitive species, including Northwestern Pond Turtle and California Red-Legged Frog, and/or their habitats may be present;*
 - ii) *Conduct a training session for construction field crews to inform them of the possible presence of sensitive species, their appearance and explain actions to be taken if they are encountered during construction of the reservoir;*
 - iii) *Monitor dam and reservoir construction and initial reservoir filling activities to ensure that harm to sensitive species encountered is avoided, and if it is determined that specific individual species encountered must be physically captured and relocated, ensure that such capture and relocation activities are performed only by a qualified collection biologist duly certified by the DFG and the USFWS; and*
 - b) *Stop all dam and reservoir construction activities if sensitive species are encountered and refrain from resuming construction activities until the biologist hired under part a) above declares that individual species encountered have either safely left the work area or have been safely removed and relocated by a qualified collection biologist duly certified by the DFG and the USFWS.*

The following special terms, substantially as written, are added in accordance with the protest dismissal terms agreed to by and between Petitioner, NMFS, DFG and EDEN as enumerated in Petitioner's September 30, 2005 letter to the Division:

- *The maximum rate of diversion to offstream storage from either POD #1 or POD #3, shall not exceed 0.8 cubic feet per second.*
- *Permittee shall not divert water at POD #1 unless there is at least a minimum bypass flow of 1.0 cubic foot per second at said POD.*
- *Permittee shall install an infiltration gallery for the diversion of water from POD# 1. The infiltration gallery shall meet United States Fish and Wildlife Service recommendations to avoid impacts on fish passage, and shall include an automated float switch within Kreuse Creek above POD #1, for turning the pumps off and on.*
- *Permittee shall install flow meters at POD #1 and POD #3 (one at each location), and these flow meters shall record flow data and diversion information to an automated data logger. This flow and diversion data shall be maintained for the life of the project and submitted to the Division of Water Rights and DFG within 30 days upon request.*
- *Before starting construction and installation of any of the improvements related to the diversion, rediversion or storage of water under this Permit, Permittee shall submit plans and specifications to the Chief of the Division of Water Rights for approval prior to the diversion of water.*
- *Permittee shall develop a water management plan that will set priorities for the use of*

water from the offstream storage reservoir during the irrigation season, and will include a plan for avoiding the use of Permittee's groundwater supplies during the period of July 1 through September 30. A copy of the plan shall be submitted to the Chief, Division of Water Rights. Notwithstanding this condition, it is acknowledged that Permittee reserves any and all of its claims to groundwater rights, and this condition shall not be construed as establishing any jurisdiction over Permittee's water supplies that are legally classified as percolating groundwater.

- An erosion control/revegetation plan and implementation schedule, prepared by a licensed civil engineer, shall be submitted to and approved by the Chief, Division of Water Rights, prior to starting construction. The erosion control plan shall be incorporated into the terms and conditions of any lake or streambed alteration agreement between Permittee and the department of Fish and Game for the diversion works identified in this Permit. Before storing water in the reservoir, Permittee shall furnish evidence, which substantiates that the erosion control/revegetation plan has been implemented. Evidence includes photographs showing the project area vegetation and slopes. (0000207M)

- Permittee shall allow representatives of the State Water Resources Control Board and the Department of Fish and Game reasonable access to the project works to determine compliance with the terms of this Permit.

Mandatory Permit Terms

- A. The amount authorized for appropriation may be reduced in the license if investigation warrants. (0000006)
- B. Progress reports shall be submitted promptly by Permittee when requested by the State Water Resources Control Board until a license is issued. (0000010)
- C. Permittee shall allow representatives of the State Water Resources Control Board and other parties, as may be authorized from time to time by said State Water Resources Control Board, reasonable access to project works to determine compliance with the terms of this permit. (0000011)
- D. Pursuant to California Water Code sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of State Water Resources Control Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the State Water Resources Control Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of Permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the State Water Resources Control Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the State Water Resources Control Board also may be exercised by imposing further limitations on the diversion and use of water by the Permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the State Water Resources Control Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

(0000012)

- E. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the Permittee and an opportunity for hearing, the State Water Resources Control Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the State Water Resources Control Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

(0000013)

- F. This permit does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to

2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the Permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

(0000014)

- G. Permittee shall maintain records of the amount of water diverted and used to enable State Water Resources Control Board to determine the amount of water that has been applied to beneficial use pursuant to Water Code section 1605.

(0000015)

- H. No work shall commence and no water shall be diverted, stored or used under this permit until a copy of a stream or lake alteration agreement between the State Department of Fish and Game and the Permittee is filed with the Division of Water Rights. Compliance with the terms and conditions of the agreement is the responsibility of the Permittee. If a stream or lake agreement is not necessary for this permitted project, the Permittee shall provide the Division of Water Rights a copy of a waiver signed by the State Department of Fish and Game.

(0000063)

This amended permit is issued subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every Permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any Permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city

and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any Permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

REVISIONS MADE TO THE PROJECT

The following revisions in the project have been made by or agreed to by the project proponent (Applicant):

Original Project Revision:

The project description in the Petition for Change in itself represents a major revision to the project. The Petitioner currently holds a water right Permit on Kreuse Creek for diversion and onstream reservoir storage of 70 AF of water per year for irrigation use. The Petition for Change proposes a major revision of the original water right Permit in order to minimize potential impacts to fish on Kreuse Creek. The original Permit allowed for the storage of up to 70 AF in an onstream reservoir. The onstream reservoir was never constructed. The Petition for Change proposes that water be directly diverted from Kreuse Creek through use of an infiltration gallery. Water would be pumped from the infiltration gallery to an off-stream reservoir, to be constructed on the Petitioner's lands. The Petition for change further proposes that the maximum storage be limited to 35 AF per water year. The original Permit allowed a season of diversion of October 15 to April 30. The Petition for Change proposes that the season of diversion be limited to December 15 through March 31.

Resource Agency Comments on Petition:

In response to the posting of the Petition for Change and the Petition for Extension of Time, NMFS, DFG and the environmental group EDEN, submitted protest letters including specific recommendations and protest dismissal terms, respectively. This appendix describes the revisions made to the project in response to those requests.

Season of Diversion

The existing Permit allows diversion of water from Kreuse Creek from October 15 through April 15. Both NMFS and DFG recommended changing the season of diversion to the period of December 15 to March 31, to reduce potential adverse impacts on anadromous salmonids. Accordingly, the Petitioner has proposed to limit the diversion season under the Permit to December 15 through March 31.

Diversion Structure Restoration

After completion of construction of the diversion structure, the creek bed and bank would be improved from its preconstruction condition with the placement of gravels surrounding the bed to prevent silt migration into the streambed and diversion structures.

Bypass Flow

Petitioner has prepared a Water Availability Analysis/CFII (WAA/CFII) for Kreuse Creek

flows which includes an analysis of bypass flow. Both NMFS and DFG suggested that the starting point for determining the minimum bypass flow during the season of diversion be the estimated unimpaired long-term February median flow at the Point of Diversion (POD). There is a limited period of record available from the existing USGS gage located on Tulucay Creek. Data is available for the period 1971 through 1983 and then is unavailable until 2002 when there is less than one year of available data. Based on the period of record 1971-1983 and including 2002, the February median flow at POD #1 is estimated to be 0.8 cfs. Based on the period of record 1971-1983 and excluding 2002, the February median flow at POD #1 is estimated to be 0.9 cfs.⁶

The Petitioner proposes a 1.0 cfs minimum bypass flow. When the flow at POD #1 is less than or equal to 1.0 cfs, the Petitioner will not divert water. This revision to the project was made in response to comments submitted by protestants NMFS and DFG.

Maximum Instantaneous Rate of Diversion

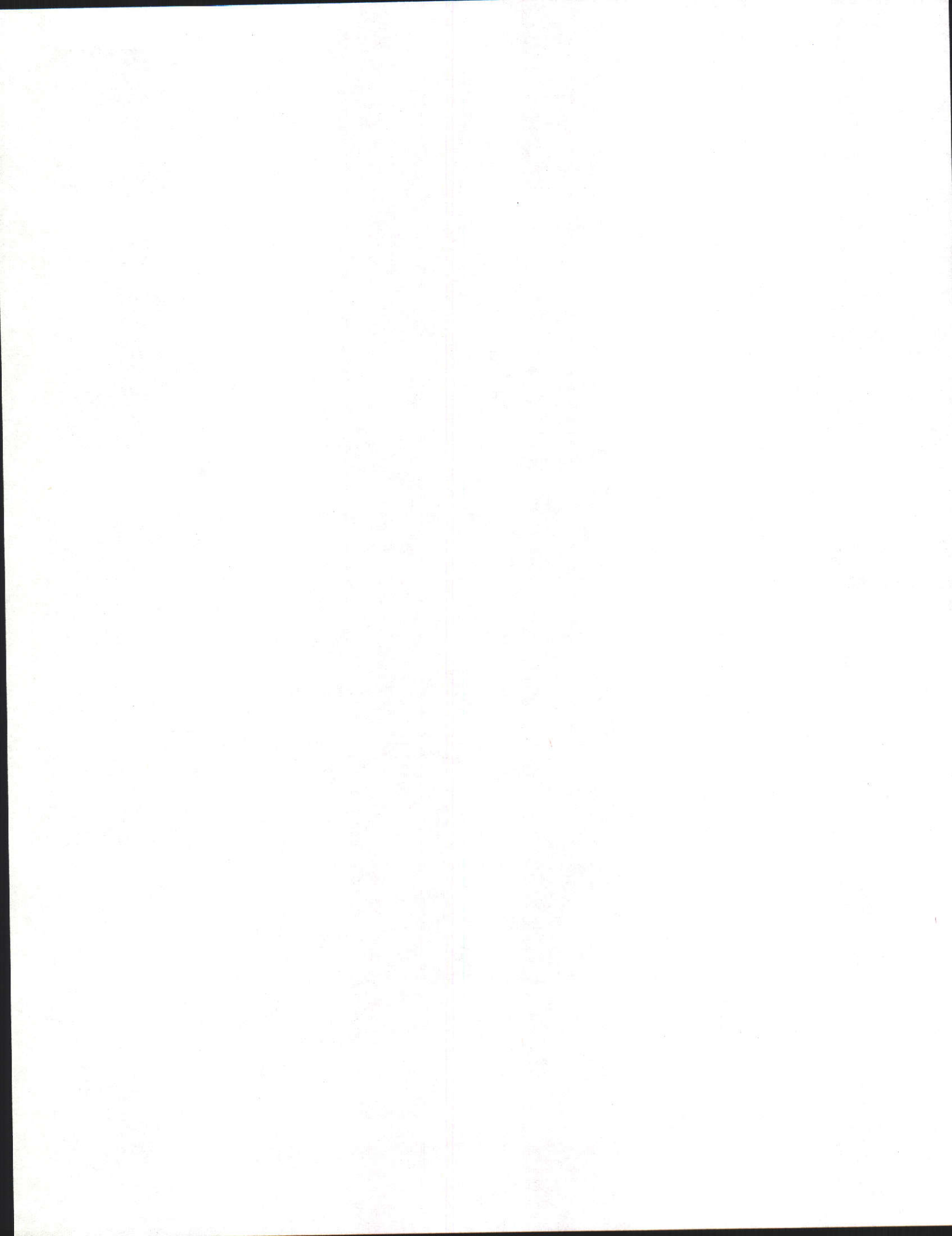
DFG suggested that the maximum instantaneous rate of diversion should be limited to 15 percent of the 20 percent winter exceedance flow. The "20 percent winter exceedance flow" is the flow that would be expected to be exceeded 20 percent of the time. In order to determine this value, the prorated daily flow for Kreuse Creek at the Point of Diversion was evaluated for the season December 15 through March 31. A histogram data analysis was performed, and the 80th percentile value (80 percent of the flows are lower than this value) was identified as 5 cfs. The 80th percentile is equivalent to the 20 percent exceedance (20 percent of the flow are higher than this value). Fifteen percent of this is 0.8 cfs; therefore the maximum instantaneous rate of diversion was calculated to be 0.8 cfs and the Petitioner has revised the project to have a maximum instantaneous rate of 0.8 cfs. The full analysis of maximum instantaneous rate of diversion is included in the Water Availability Analysis.

Monitoring Compliance

Both DFG and NMFS requested access to the site and a monitoring compliance program. In response, the Petitioner revised the project to include a monitoring compliance program that would be established to assure that the bypass flows would be maintained and rates of diversion would not be exceeded by the project. The program would include the following provisions:

- The project would provide DFG personnel access to all points of diversion and rediversion, and places of use for the purpose of conducting routine and or random monitoring and compliance inspections.
- The project would incorporate equipment such as a float switch within Kreuse Creek above the Point of Diversion. The float switch would be set in a pipe that measures height of the stream. Water elevations over a certain point would trigger the pump, which diverts water to the reservoir. In a sandy environment, such as that found in the channel bed of Kreuse Creek, the elevation setting for the float switch would need to be re-calibrated on a regular basis.
- The project would record information to an automated data logger. Collected information on flows and rates of diversions would be submitted to the Division or Water Rights for compliance monitoring.

⁶ Based on the proration of the flow data recorded at the Tulucay Creek gage (USGS Gage Number 11458350; Tulucay, CA; Napa, CA; water years 1971-1983 and 2002).



APPENDIX B
California Department of Fish and Game Natural Diversity Data Base
Napa Quad

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Scientific Name - Portrait
 Napa Quad

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
1 <i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020			G2G3	S2	SC
2 <i>Antrozous pallidus</i> pallid bat	AMACC10010			G5	S3	SC
3 <i>Aster lentus</i> Suisun Marsh aster	PDAST0T540			G2	S2.2	1B/2-2-3
4 <i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	PDFAB0F8R1			G1T1	S1.1	1B/3-2-3
5 <i>Atriplex joaquiniana</i> San Joaquin spearscale	PDCHE041F3			G2	S2.1	1B/2-2-3
6 <i>Downingia pusilla</i> dwarf downingia	PDCAM060C0			G3	S3.1	2/1-2-1
7 <i>Emys (=Clemmys) marmorata marmorata</i> northwestern pond turtle	ARAAD02031			G3G4T3	S3	SC
8 <i>Erigeron angustatus</i> narrow-leaved daisy	PDAST3M5G0			G1	S1.2?	1B/3-2-3
9 <i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	ABPBX1201A			G5T2	S2	SC
10 <i>Juglans hindsii</i> Northern California black walnut	PDJUG02040			G1	S1.1	1B/3-3-3
11 <i>Lasthenia conjugens</i> Contra Costa goldfields	PDAST5L040	Endangered		G1	S1.1	1B/3-3-3
12 <i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	PDFAB250D2			G5T2	S2.2	1B/2-2-3
13 <i>Lilaeopsis masonii</i> Mason's lilaeopsis	PDAPI19030		Rare	G3	S3.1	1B/2-3-3
14 <i>Oncorhynchus mykiss irideus</i> steelhead-central California coast esu	AFCHA0209G	Threatened		G5T2Q	S2	
15 <i>Syncaris pacifica</i> California freshwater shrimp	ICMAL27010	Endangered	Endangered	G1	S1	
16 <i>Taxidea taxus</i> American badger	AMAJF04010			G5	S4	SC
17 <i>Trifolium amoenum</i> showy indian clover	PDFAB40040	Endangered		G1	S1.1	1B/3-3-3
18 <i>Trifolium depauperatum</i> var. <i>hydrophilum</i> saline clover	PDFAB400R5			G5T2?	S2.2?	1B/3-2-3

Agelaius tricolor

tricolored blackbird

Element Code: ABPBXB0020

----- Status ----- NDDDB Element Ranks ----- Other Lists -----
Federal: None Global: G2G3 CDFG Status: SC
State: None State: S2

----- Habitat Associations -----
General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY.
LARGELY ENDEMIC TO CALIFORNIA.
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN
A FEW KM OF THE COLONY.

Occurrence No. 244 Map Index: 23963 EO Index: 7154 ----- Dates Last Seen -----
Occ Rank: Unknown Element: 1993-06-23
Origin: Natural/Native occurrence Site: 1993-06-23
Presence: Presumed Extant
Trend: Unknown
Main Source: BOTTI, F. 1993 (OBS) Record Last Updated: 1993-08-17

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.24707° / -122.27947° Township: 05N
UTM: Zone-10 N4233474 E563047 Range: 04W
Mapping Precision: NON-SPECIFIC Section: 26 Qtr: XX
Symbol Type: POINT Meridian: M
Radius: 2/5 mile Elevation: 15 ft

Location: EAST SIDE OF NAPA RIVER, JUST NORTH OF THE HWY 29 BRIDGE, SOUTH OF NAPA.

Location Detail:

Ecological: HABITAT IS A FRESHWATER MARSH CREATED AS A BORROW DURING CONSTRUCTION OF THE BRIDGE.

Threat:

General: 100 ADULTS OBSERVED NESTING IN 1993.

Owner/Manager: UNKNOWN

----- Sources -----

BOT93F03 BOTTI, FRED. FIELD SURVEY FORM FOR AGELAIUS TRICOLOR (NESTING COLONY). 1993-06-23.

Antrozous pallidus

pallid bat

Element Code: AMACC10010

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G5 CDFG Status: SC
 State: None State: S3

_____ Habitat Associations _____
 General: DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.
 Micro: ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Occurrence No. 44 Map Index: 43204 EO Index: 43204 _____ Dates Last Seen _____
 Occ Rank: Good Element: 1994-11-08
 Origin: Natural/Native occurrence Site: 1994-11-08
 Presence: Presumed Extant
 Trend: Unknown
 Main Source: TATARIAN, G. 1994 (OBS) Record Last Updated: 2000-07-12

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.24949° / -122.32755° Township: 05N
 UTM: Zone-10 N4233710 E558838 Range: 04W
 Mapping Precision: NON-SPECIFIC Section: 29 Qtr: XX
 Symbol Type: POINT Meridian: M
 Radius: 1/10 mile Elevation: 90 ft

Location: SAINTSBURY WINERY, SW OF LOS CARNEROS AVE AND WITHERS RD, ~4 MILES SW OF NAPA (PO).
 Location Detail: ARTIFICIAL ROOST/RADIO TELEMETRY STUDY SITE, OCCASIONAL WINTER ROOST IN STRUCTURE.
 Ecological: OWNERS VERY PROTECTIVE AND SUPPORTIVE OF COLONY, VINEYARD AND WINERY, SURROUNDED BY RURAL RESIDENTIAL/RANCHES.
 Threat: POSSIBLE ILLEGAL PEST CONTROL OFFSITE.
 General: MATERNITY/BACHELOR ROOSTS AND FORAGING AREA, 50-100 BATS OBSERVED, 1994.
 Owner/Manager: PVT

_____ Sources _____
 TAT94F01 TATARIAN, GREG. FIELD SURVEY FORM FOR ANTROZOUS PALLIDUS (PALLID BAT). 1994-11-09.

Antrozous pallidus

pallid bat

Element Code: AMACC10010

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
Federal: None Global: G5 CDFG Status: SC
State: None State: S3

_____ Habitat Associations _____
General: DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.
Micro: ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Occurrence No. 71 Map Index: 48800 EO Index: 48800 _____ Dates Last Seen _____
Occ Rank: Unknown Element: 2000-04-23
Origin: Natural/Native occurrence Site: 2000-04-23
Presence: Presumed Extant
Trend: Unknown
Main Source: TATARIAN, G. K. 2001 (PERS) Record Last Updated: 2002-09-18

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.26381° / -122.32775° Township: 05N
UTM: Zone-10 N4235299 E558809 Range: 04W
Mapping Precision: NON-SPECIFIC Section: 20 Qtr: XX
Symbol Type: POINT Meridian: M
Radius: 1/5 mile Elevation: 100 ft

Location: CARNEROS REGION, NAPA
Location Detail:
Ecological:
Threat:
General: 4 MALES CAPTURED/TRANSMITTERS ATTACHED/RELEASED, 30 MAY-12 JUN 1999. 12 MALES, 4 FEMALES, AND 1 OF UNKNOWN AGE BANDED AND RELEASED ON 23 APR 2000.
Owner/Manager: UNKNOWN

_____ Sources _____
TAT01U01 TATARIAN, GREG K. DFG ANNUAL REPORT OF SPECIMENS CAPTURED. 2001-XX-XX.

Antrozous pallidus

pallid bat

Element Code: AMACC10010

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S3	

_____ Habitat Associations _____

General: DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.

Micro: ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Occurrence No. 73	Map Index: 48803	EO Index: 48803	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1999-06-12
Origin: Natural/Native occurrence			Site: 1999-06-12
Presence: Presumed Extant			
Trend: Unknown			
Main Source: TATARIAN, G. K. 2001 (PERS)			Record Last Updated: 2002-09-18

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.27504° / -122.29527°	Township: 05N
UTM: Zone-10 N4236567 E561641	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 15 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 1/5 mile	Elevation: 15 ft

Location: SHEVELAND LANE, NAPA
Location Detail:
Ecological:
Threat:
General: 4 ADULT MALES CAPTURED (TRANSMITTERS ATTACHED) AND RELEASED FROM 30 MAY-12 JUN 1999.
Owner/Manager: UNKNOWN

_____ Sources _____

TAT01U01 TATARIAN, GREG K. DFG ANNUAL REPORT OF SPECIMENS CAPTURED. 2001-XX-XX.

Antrozous pallidus

pallid bat

Element Code: AMACC10010

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
Federal: None Global: G5 CDFG Status: SC
State: None State: S3

_____ Habitat Associations _____

General: DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.
Micro: ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Occurrence No. 99 Map Index: 61248 EO Index: 61284 _____ Dates Last Seen _____
Occ Rank: Good Element: 2004-06-03
Origin: Natural/Native occurrence Site: 2004-06-03
Presence: Presumed Extant
Trend: Unknown
Main Source: TATARIAN, G. 2004 (OBS) Record Last Updated: 2005-05-06

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.28738° / -122.36680° Township: 05N
UTM: Zone-10 N4237891 E555375 Range: 05W
Mapping Precision: SPECIFIC Section: 12 Qtr: SW
Symbol Type: POINT Meridian: M
Radius: 80 meters Elevation: 300 ft

Location: CARNEROS VALLEY ON EAST SIDE OF HENRY ROAD. ABOUT 1.5 MILES NORTHWEST OF INTERSECTION BETWEEN HENRY ROAD AND DEALY LANE.

Location Detail:

Ecological: HABITAT IS AN OAK-BAY WOODLAND AND A PREVIOUSLY GRAZED NON-NATIVE GRASSLAND.
Threat: SURROUNDING LAND USED FOR FARMING OPERATIONS & GRAZING ALSO THREATENED BY LOSS OF FARM BUILDINGS PROVIDING ROOST HABITAT
General: BAT DETECTED BIOACCOUSTICALLY AND SPOTLIGHTED FOR VERIFICATION.

Owner/Manager: PVT

_____ Sources _____

TAT04F05 TATARIAN, G. (WILDLIFE RESEARCH ASSOCIATES). FIELD SURVEY FORM FOR ANTROZOUS PALLIDUS. 2004-06-03.

Aster lentus

Suisun Marsh aster

Element Code: PDAST0T540

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G2	CNPS List: 1B
State: None	State: S2.2	R-E-D Code: 2-2-3

_____ **Habitat Associations** _____

General: MARSHES AND SWAMPS (BRACKISH AND FRESHWATER).

Micro: MOST OFTEN SEEN ALONG SLOUGHS WITH PHRAGMITES, SCIRPUS, BLACKBERRY, TYPHA, ETC. 0-3M.

Occurrence No. 55	Map Index: 37564	EO Index: 32566	— Dates Last Seen —
Occ Rank: Poor			Element: 1992-07-22
Origin: Natural/Native occurrence			Site: 1992-07-22
Presence: Presumed Extant			
Trend: Unknown			
Main Source: CUNEO, K. 1992 (OBS)			Record Last Updated: 1998-09-03

Quad Summary: NAPA (3812233/500D)

County Summary: NAPA

Lat/Long: 38.26729° / -122.28055°	Township: 05N
UTM: Zone-10 N4235716 E562936	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 23 Qtr: XX
Symbol Type: POLYGON	Meridian: M
Area: 57.6 ac	Elevation: 5 ft

Location: WEST SIDE OF NAPA MUNICIPAL GOLF COURSE, NAPA.

Location Detail: IN DITCH AND ON RR BERM PARALLEL WITH WEST BOUNDARY OF GOLF COURSE. PLANT OCCURS SPORADICALLY ALONG THE DITCH TO THE NORTH END OF KENNEDY PARK.

Ecological: GROWING WITH RUDERAL SPECIES AND DISTICHLIS SPICATA.

Threat: GOLF COURSE IS REGULARLY MOWED.

General: ABOUT 15 PLANTS OBSERVED IN 1992.

Owner/Manager: UNKNOWN

_____ **Sources** _____

CUN92F03 CUNEO, K. FIELD SURVEY FORM FOR ASTER LENTUS. 1992-07-22.

Astragalus tener var. tener

alkali milk-vetch

Element Code: PDFAB0F8R1

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G1T1	CNPS List: 1B
State: None	State: S1.1	R-E-D Code: 3-2-3

_____ Habitat Associations _____

General: ALKALI PLAYA, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.
 Micro: LOW GROUND, ALKALI FLATS, AND FLOODED LANDS; IN ANNUAL GRASSLAND OR IN PLAYAS OR VERNAL POOLS. 1-170M.

Occurrence No. 41	Map Index: 24734	EO Index: 5219	_____ Dates Last Seen _____
Occ Rank: None			Element: 1982-03-28
Origin: Natural/Native occurrence			Site: 1983-XX-XX
Presence: Extirpated			
Trend: Unknown			
Main Source: RUYGT, J. 1982 (OBS)			Record Last Updated: 1994-08-17

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.25024° / -122.27326°	Township: 05N
UTM: Zone-10 N4233830 E563588	Range: 04W
Mapping Precision: SPECIFIC	Section: 26 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 80 meters	Elevation: 15 ft

Location: NAPA, APPROX. 2.5 KM (1.5 MI) SOUTH OF NAPA COLLEGE.
 Location Detail: 0.8 KM (0.5 MI) SOUTH OF KAISER RD, BWETWEEN HWY 221 AND THE RIVER.
 Ecological: OPEN GRASSLAND WITH VERNAL POOLS, SUBALKALINE FLATS, ROCK OUTCROPS. ASSOCIATES INCLUDE DOWNINGIA PUSILLA, PSILOCARPHUS OREGANUS, MYOSURUS MINIMUS (NOW EXTINCT IN NAPA CO.) LAYIA CHRYSANTHEMOIDES, ORTHOCARPUS DENSIFLORUS, BROMUS, & ERODIUM.
 Threat: SITE DESTROYED IN 1983 DUE TO CONSTRUCTION OF CORPORATE PARK.
 General: APPROX. 50 PLANTS OBSERVED IN 1982. ASSOCIATED MYOSURUS MINIMUS IS NOW EXTIRPATED IN NAPA COUNTY.
 Owner/Manager: PVT

_____ Sources _____

CNPND01 NAPA COUNTY CNPS. CALIFORNIA NATIVE PLANT SOCIETY PLANT LOCATIONS PROVIDED AS ARCVIEW SHAPEFILES. XXXX-XX-XX.
 RUY82F01 RUYGT, J. FIELD SURVEY FORM AND MAP FOR ASTRAGALUS TENER VAR. TENER. 1982-03-28.

Atriplex joaquiniana

San Joaquin spearscale

Element Code: PDCHE041F3

_____ Status _____	NDDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G2	CNPS List: 1B
State: None	State: S2.1	R-E-D Code: 2-2-3

_____ Habitat Associations _____

General: CHENOPOD SCRUB, ALKALI MEADOW, VALLEY AND FOOTHILL GRASSLAND.
 Micro: IN SEASONAL ALKALI WETLANDS OR ALKALI SINK SCRUB WITH DISTICHLIS SPICATA, FRANKENIA, ETC.
 1-250M.

Occurrence No. 38	Map Index: 24876	EO Index: 6733	— Dates Last Seen —
Occ Rank: Fair			Element: 1991-07-19
Origin: Natural/Native occurrence			Site: 1991-07-19
Presence: Presumed Extant			
Trend: Unknown			
Main Source: RUYGT, J. 1991 (OBS)			Record Last Updated: 2001-10-09

Quad Summary: NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.27342° / -122.28800°	Township: 05N
UTM: Zone-10 N4236392 E562279	Range: 04W
Mapping Precision: SPECIFIC	Section: 15 Qtr: XX
Symbol Type: POLYGON	Meridian: M
Area: 15.8 ac	Elevation: 5 ft

Location: WEST OF NAPA RIVER, 0.8 KM (0.5 MI) SOUTH OF THE COOMBS ST/IMOLA AVE INTERSECTION, NAPA.
 Location Detail: FROM SOUTHEAST OF THE SOUTH END OF JEFFERSON STREET EAST TOWARDS THE RIVER. TWO POLYGONS MAPPED; ONE SOUTH OF LEVEE AND ONE TO THE NORTH.
 Ecological: LOW, NEARLY FLAT FIELD, GRASSLAND ON ALKALINE SOIL. ASSOCIATED WITH SALICORNIA AND CRESSA IN THE LOWEST AREAS.
 Threat: PRESENTLY IN PASTURE, SITE IS PLOWED IN SOME YEARS.
 General: APPROXIMATELY 500 PLANTS OBSERVED IN 1991.
 Owner/Manager: UNKNOWN

_____ Sources _____

CNPND01 NAPA COUNTY CNPS. CALIFORNIA NATIVE PLANT SOCIETY PLANT LOCATIONS PROVIDED AS ARCVIEW SHAPEFILES. XXXX-XX-XX.
 RUY91F11 RUYGT, J. FIELD SURVEY FORM AND MAP FOR ATRIPLEX JOAQUINIANA. 1991-07-19.

Downingia pusilla

dwarf downingia

Element Code: PDCAM060C0

----- Status -----	NDDB Element Ranks	----- Other Lists -----
Federal: None	Global: G3	CNPS List: 2
State: None	State: S3.1	R-E-D Code: 1-2-1

----- Habitat Associations -----
General: VALLEY AND FOOTHILL GRASSLAND (MESIC SITES), VERNAL POOLS.
Micro: VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES. IN SEVERAL TYPES OF VERNAL POOLS. 1-485M.

Occurrence No. 20	Map Index: 09260	EO Index: 5229	----- Dates Last Seen -----
Occ Rank: None			Element: 1981-05-21
Origin: Natural/Native occurrence			Site: 1983-05-21
Presence: Extirpated			
Trend: Unknown			
Main Source: HOLLAND, R. 1983 (OBS)			Record Last Updated: 2004-03-16

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.24742° / -122.27617°	Township: 05N
UTM: Zone-10 N4233515 E563336	Range: 04W
Mapping Precision: SPECIFIC	Section: 26 Qtr: SW
Symbol Type: POLYGON	Meridian: M
Area: 3.3 ac	Elevation: 15 ft

Location: WEST OF HIGHWAY 12/29, EAST OF NAPA RIVER AT HORSESHOE BEND, APPROXIMATELY 0.6 AIRMILE NE OF SUSCOL.

Location Detail: 2 SMALL COLONIES MAPPED IN THE SW1/4 OF SEC 26. N COLONY ~0.5 MILE S OF KAISER RD, MAPPED JUST N OF OLD ROAD TOWARDS S END OF HORSESHOE BEND. S COLONY DIRECTLY BENEATH EAST-WEST TRENDING TRANSMISSION LINES, 0.17 AIRMI TO THE SW.

Ecological: VERNAL POOL ON COOMBS GRAVELLY LOAM IN OPEN GRASSLAND. ASSOC: LASTHENIA GLABERIMA, PLEUROPOGON CALIFORNICUS, PLAGIOBOTHRYUS STIPITATA VAR. MICRANTHA, ASTRAGALUS TENER V. TENER, PSILOCARPUS OREGANUS, LAYIA CHRYSANTHEMOIDES, ET AL.

Threat: SITE DESTROYED BY CONSTRUCTION OF INDUSTRIAL/CORPORATE PARK IN 1983; CATTLE GRAZING PRIOR.

General: N COLONY (FMR OCC#28): ABUNDANT IN 1960. EXTIRPATED BY 1983 (LAST OBS 19820328). MYOSURUS MINIMUS, NOW EXTIRPATED IN NAPA COUNTY, ALSO AT SITE. S COLONY: >1000 IN 1983, POP. EXTIRPATED BY 1989 ACC TO J. CALLIZO. FRMR OCC 28 ALSO HERE.

Owner/Manager: PVT

----- Sources -----

- CAL89U04 CALLIZO, J. ANNOTATED NDDB PRINTOUT. 1989-01-18.
- CNPND01 NAPA COUNTY CNPS. CALIFORNIA NATIVE PLANT SOCIETY PLANT LOCATIONS PROVIDED AS ARCVIEW SHAPEFILES. XXXX-XX-XX.
- HOL83F01 HOLLAND, R. FIELD SURVEY FORM FOR DOWNINGIA HUMILIS. 1983-05-21.
- HOL83S03 HOLLAND, R. HOLLAND #1233 JEPS #82341. 1983-05-21.
- RUY82F01 RUYGT, J. FIELD SURVEY FORM AND MAP FOR ASTRAGALUS TENER VAR. TENER. 1982-03-28.
- WEI60S03 WEILER, J. WEILER #60103 JEPS #29133, UC #1188751. 1960-04-22.

Emys (=Clemmys) marmorata marmorata

northwestern pond turtle

Element Code: ARAAD02031

----- Status ----- NDDB Element Ranks ----- Other Lists -----
Federal: None Global: G3G4T3 CDFG Status: SC
State: None State: S3

----- Habitat Associations -----
General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 93 Map Index: 36724 EO Index: 31721 ----- Dates Last Seen -----
Occ Rank: Unknown Element: 1996-05-08
Origin: Natural/Native occurrence Site: 1996-05-08
Presence: Presumed Extant
Trend: Unknown
Main Source: COOK, D. 1996 (OBS) Record Last Updated: 1997-09-15

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.26306° / -122.27874° Township: 05N
UTM: Zone-10 N4235249 E563098 Range: 04W
Mapping Precision: NON-SPECIFIC Section: 23 Qtr: XX
Symbol Type: POINT Meridian: M
Radius: 1/5 mile Elevation: 5 ft

Location: BETWEEN HWY 12 AND NAPA RIVER, NORTH OF STRENBLOW ROAD, SOUTH END OF NAPA.
Location Detail: SITE IS A DUCK POND ON THE EAST SIDE OF THE RAILROAD TRACKS.
Ecological: HABITAT CONSISTS OF A DUCK POND, VEGETATED BY BULRUSH ON THE NORTH END AND WILLOWS ON THE SOUTH END.
Threat:
General: 2 ADULTS OBSERVED ON 8 MAY 1996.
Owner/Manager: UNKNOWN

----- Sources -----
COO96F02 COOK, DAVE. FIELD SURVEY FORM FOR CLEMMYS MARMORATA PALLIDA. 1996-05-08.

Emys (=Clemmys) marmorata marmorata

northwestern pond turtle

Element Code: ARAAD02031

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
Federal: None Global: G3G4T3 CDFG Status: SC
State: None State: S3

_____ Habitat Associations _____
General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 94 Map Index: 36725 EO Index: 31722 _____ Dates Last Seen _____
Occ Rank: Unknown Element: 1996-05-08
Origin: Natural/Native occurrence Site: 1996-05-08
Presence: Presumed Extant
Trend: Unknown
Main Source: COOK, D. 1996 (OBS) Record Last Updated: 2000-01-31

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.27114° / -122.28331° Township: 05N
UTM: Zone-10 N4236142 E562691 Range: 04W
Mapping Precision: NON-SPECIFIC Section: 22 Qtr: XX
Symbol Type: POINT Meridian: M
Radius: 1/5 mile Elevation: 5 ft

Location: ON THE WEST SIDE OF THE RAILROAD TRACKS AND EAST OF THE NAPA RIVER, 0.5 MILE SOUTH OF NAPA COLLEGE, SOUTH END OF NAPA.

Location Detail: SITE IS A DREDGE CANAL.

Ecological: HABITAT CONSISTS OF A DREDGE CANAL, TRIBUTARY TO THE NAPA RIVER; CHANNEL IS BORDERED BY BULRUSH AND RIP-RAP.

Threat:

General: 4 ADULTS OBSERVED ON 8 MAY 1996.

Owner/Manager: UNKNOWN

Sources

COO96F03 COOK, DAVE. FIELD SURVEY FORM FOR CLEMMYS MARMORATA PALLIDA. 1996-05-08.

Emys (=Clemmys) marmorata marmorata

northwestern pond turtle

Element Code: ARAAD02031

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
Federal: None Global: G3G4T3 CDFG Status: SC
State: None State: S3

_____ Habitat Associations _____
General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 107 Map Index: 41494 EO Index: 41494 _____ Dates Last Seen _____
Occ Rank: Fair Element: 1999-05-15
Origin: Natural/Native occurrence Site: 1999-05-15
Presence: Presumed Extant
Trend: Unknown
Main Source: KJELDEN, D. & C. KJELDEN, 1999 (OBS) Record Last Updated: 1999-08-18

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.34120° / -122.35380° Township: 06N
UTM: Zone-10 N4243870 E556471 Range: 05W
Mapping Precision: SPECIFIC Section: 25 Qtr: XX
Symbol Type: POLYGON Meridian: M
Area: 2.9 ac Elevation: 250 ft

Location: WSW OF THE INTERSECTION OF DRY CREEK ROAD AND ORCHARD AVENUE, NNW OF NAPA.
Location Detail: SITE CONSISTS OF TWO AGRICULTURAL RESERVOIRS USED FOR VINEYARD IRRIGATION AND FROST PROTECTION.
Ecological: HABITAT CONSISTS OF TWO AGRICULTURAL RESERVOIRS SURROUNDED BY ABANDONED VINEYARD AND UPLAND OAK WOODLAND.
Threat:
General: 15+ ADULTS OBSERVED ON 15 MAY 1999. SITE IS GOING TO BE REPLANTED TO VINEYARD, AND ONE OF THE RESERVOIRS WILL BE EXPANDED.
Owner/Manager: PVT

_____ Sources _____
KJE99F01 KJELDEN, DANIEL T. AND CHRIS K. KJELDEN. FIELD SURVEY FORM FOR CLEMMYS MARMORATA MARMORATA. 1999-05-15.

Emys (=Clemmys) marmorata marmorata

northwestern pond turtle

Element Code: ARAAD02031

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G3G4T3 CDFG Status: SC
 State: None State: S3

_____ Habitat Associations _____
 General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
 Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 184 Map Index: 52613 EO Index: 52613 _____ Dates Last Seen _____
 Occ Rank: Fair Element: 2003-05-13
 Origin: Natural/Native occurrence Site: 2003-05-13
 Presence: Presumed Extant
 Trend: Unknown
 Main Source: GALLOWAY, M. 2003 (OBS) Record Last Updated: 2003-09-24

Quad Summary: NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.28624° / -122.27516° Township: 05N
 UTM: Zone-10 N4237823 E563390 Range: 04W
 Mapping Precision: SPECIFIC Section: 14 Qtr: XX
 Symbol Type: POINT Meridian: M
 Radius: 80 meters Elevation: 15 ft

Location: TULUCAY CREEK, AT THE SOSCOL AVENUE (HIGHWAY 121) BRIDGE OVERCROSSING, NAPA
 Location Detail:
 Ecological: HABITAT CONSISTS OF PERENNIAL CREEK, WITH STEEP SLOPING BANKS & DEEP POOLING AREAS,
 FLOWING THROUGH COMMERCIAL/RESIDENTIAL AREAS OF NAPA; DOMINATED BY CATTAILS, WILLOWS,
 AND BLACKBERRY ALONG CREEK MARGINS UPSTREAM AND DOWNSTREAM OF BRIDGE.
 Threat:
 General: 2 ADULTS OBSERVED ON 13 MAY 2003.
 Owner/Manager: CALTRANS

_____ Sources _____
 GAL03F03 GALLOWAY, MICHAEL (CALTRANS). FIELD SURVEY FORM FOR CLEMMYS (=EMYS) MARMORATA MARMORATA.
 2003-05-13.

Emys (=Clemmys) marmorata marmorata

northwestern pond turtle

Element Code: ARAAD02031

_____ Status _____	NDDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G3G4T3	CDFG Status: SC
State: None	State: S3	

_____ Habitat Associations _____
 General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
 Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 202	Map Index: 55516	EO Index: 55516	_____ Dates Last Seen _____
Occ Rank: Good			Element: 2004-05-08
Origin: Natural/Native occurrence			Site: 2004-05-08
Presence: Presumed Extant			
Trend: Unknown			
Main Source: FAWCETT, M. H. 2004 (OBS)			Record Last Updated: 2004-05-17

Quad Summary: NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.32633° / -122.25492°	Township: 06N
UTM: Zone-10 N4242286 E565124	Range: 04W
Mapping Precision: SPECIFIC	Section: 36 Qtr: XX
Symbol Type: POLYGON	Meridian: M
Area: 2.7 ac	Elevation: 100 ft

Location: GOOSE LAKE, ON THE WEST SIDE OF VICHY AVENUE AND NORTH OF HAGEN ROAD, NAPA
Location Detail: OWNER PLANS TO IMPROVE THE POND BY CREATING SHALLOWER AREAS, PLANTING BULRUSH AND OTHER EMERGENTS, AND CONTROLLING FLOATING ALGAE.
Ecological: HABITAT CONSISTS OF A MAN-MADE RESERVOIR BUILT IN THE 1970'S; MAXIMUM DEPTH = 12', FILLED WITH POTAMOGETON SP AND HYDRODICTYON SP. POND CONTAINS BREEDING POPULATIONS OF BLUEGILL AND LARGEMOUTH BASS.
Threat: THREATENED BY THE PRESENCE OF BREEDING POPULATIONS ON NON-NATIVE CENTRARCHIDS (BASS AND BLUEGILLS).
General: 1 JUVENILE (~100MM CARAPACE LENGTH) OBSERVED HIDING IN A BURROW IN THE BANK AT THE WATER LINE, ON 8 MAY 2004.
Owner/Manager: PVT

_____ Sources _____
 FAW04F02 FAWCETT, MICHAEL H. FIELD SURVEY FORM FOR CLEMMYS MARMORATA (MARMORATA). 2004-03-22.

Erigeron angustatus

narrow-leaved daisy

Element Code: PDAST3M5G0

----- Status ----- NDDDB Element Ranks ----- Other Lists -----
 Federal: None Global: G1 CNPS List: 1B
 State: None State: S1.2? R-E-D Code: 3-2-3

----- Habitat Associations -----
 General: CHAPARRAL.
 Micro: SERPENTINE AND VOLCANIC SUBSTRATES, GENERALLY IN SHRUBBY VEGETATION. 75-1060M.

Occurrence No. 1 Map Index: 34514 EO Index: 297 Dates Last Seen -----
 Occ Rank: Unknown Element: 1938-08-07
 Origin: Natural/Native occurrence Site: 1938-08-07
 Presence: Presumed Extant
 Trend: Unknown
 Main Source: TRACY #16089 DS, LL, UC (HERB) Record Last Updated: 1996-01-26

Quad Summary: NAPA (3812233/500D), YOUNTVILLE (3812243/500A)
 County Summary: NAPA

Lat/Long: 38.38037° / -122.28224° Township: 06N
 UTM: Zone-10 N4248263 E562690 Range: 04W
 Mapping Precision: NON-SPECIFIC Section: 10 Qtr: XX
 Symbol Type: POLYGON Meridian: M
 Area: 331.0 ac Elevation: 300 ft

Location: SODA CREEK CANYON, NAPA VALLEY BETWEEN NAPA CITY AND YOUNTVILLE.

Location Detail: TYPE COLLECTION BY GREENE "DRY HILLS ON EITHER SIDE OF NAPA VALLEY" IS INCLUDED WITH THIS OCCURRENCE.

Ecological:

Threat:

General: TWO COLLECTIONS ATTRIBUTED TO THIS SITE: TRACY #16089 (DS, LL, UC) IN 1938, AND GREENE #339 (GH) IN 1874.

Owner/Manager: UNKNOWN

----- Sources -----

- GRE74S01 GREENE, E. GREENE #339 GH. 1874-08-13.
- NES92A01 NESOM, G. REVISION OF ERIGERON SECT. LINEARIFOLII. PHYTOLOGIA 72(3): 157-208. 1992-03-XX.
- TRA38S05 TRACY. TRACY #16089 DS, LL, UC. 1938-08-27.

Geothlypis trichas sinuosa

saltmarsh common yellowthroat

Element Code: ABPBX1201A

----- Status ----- NDDB Element Ranks ----- Other Lists -----
Federal: None Global: G5T2 CDFG Status: SC
State: None State: S2

----- Habitat Associations -----
General: RESIDENT OF THE SAN FRANCISCO BAY REGION, IN FRESH AND SALT WATER MARSHES.
Micro: REQUIRES THICK, CONTINUOUS COVER DOWN TO WATER SURFACE FOR FORAGING; TALL GRASSES, TULE PATCHES, WILLOWS FOR NESTING.

Occurrence No. 94 Map Index: 59872 EO Index: 59908 ----- Dates Last Seen -----
Occ Rank: Unknown Element: 1989-06-01
Origin: Natural/Native occurrence Site: 1989-06-01
Presence: Presumed Extant
Trend: Unknown
Main Source: SOGGE, M. 1989 Record Last Updated: 2005-02-08

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.26499° / -122.28352° Township: 05N
UTM: Zone-10 N4235459 E562677 Range: 04W
Mapping Precision: SPECIFIC Section: 22 Qtr: E
Symbol Type: POLYGON Meridian: M
Area: 12.9 ac Elevation: 7 ft

Location: ALONG THE EAST SIDE OF THE NAPA RIVER, 0.75 MILE NORTH OF HORSESHOE BEND, SOUTH OF NAPA.
Location Detail:
Ecological: HABITAT CONSISTS OF A 10-30 METER BAND OF TULE BORDERING RAISED LEVEES THAT SUPPORTED STRIPS OF BACCHARIS. OTHER PLANTS INCLUDE SALICORNIA AND SPARTINA.
Threat:
General: 2 MALES DETECTED 1 JUN 1989 IN A COE SURVEY. SITE USED FOR BREEDING.
Owner/Manager: UNKNOWN

----- Sources -----
SOG89F10 SOGGE, MARK K. FIELD SURVEY FORM FOR GEOTHLYPIS TRICHAS SINUOSA. 1989-06-01.

Geothlypis trichas sinuosa

saltmarsh common yellowthroat

Element Code: ABPBX1201A

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G5T2	CDFG Status: SC
State: None	State: S2	

_____ Habitat Associations _____

General: RESIDENT OF THE SAN FRANCISCO BAY REGION, IN FRESH AND SALT WATER MARSHES.

Micro: REQUIRES THICK, CONTINUOUS COVER DOWN TO WATER SURFACE FOR FORAGING; TALL GRASSES, TULE PATCHES, WILLOWS FOR NESTING.

Occurrence No. 95	Map Index: 59873	EO Index: 59909	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1989-06-01
Origin: Natural/Native occurrence			Site: 1989-06-01
Presence: Presumed Extant			
Trend: Unknown			
Main Source: SOGGE, M. 1989			Record Last Updated: 2005-02-07

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.28663° / -122.28217°	Township: 05N
UTM: Zone-10 N4237862 E562777	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 15 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 1/10 mile	Elevation: 12 ft

Location: ALONG THE EAST SIDE OF THE NAPA RIVER, 0.4 MILE NORTH OF IMOLA AVE WEST, NAPA

Location Detail:

Ecological: HABITAT CONSISTS OF A 10-30 METER BAND OF TULE BORDERING RAISED LEVEES THAT SUPPORTED STRIPS OF BACCHARIS. OTHER PLANTS INCLUDE SALICORNIA AND SPARTINA.

Threat:

General: 1 MALE DETECTED 1 JUN 1989 IN A COE SURVEY

Owner/Manager: UNKNOWN

_____ Sources _____

SOG89F10 SOGGE, MARK K. FIELD SURVEY FORM FOR GEOTHLYPIS TRICHAS SINUOSA. 1989-06-01.

Juglans hindsii

Northern California black walnut

Element Code: PDJUG02040

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G1	CNPS List: 1B
State: None	State: S1.1	R-E-D Code: 3-3-3

_____ Habitat Associations _____

General: RIPARIAN FOREST, RIPARIAN WOODLAND. FEW EXTANT NATIVE STANDS REMAIN; WIDELY NATURALIZED.
Micro: DEEP ALLUVIAL SOIL ASSOCIATED WITH A CREEK OR STREAM. 0-395M.

Occurrence No. 6	Map Index: 50068	EO Index: 50068	_____ Dates Last Seen _____
Occ Rank: None			Element: 2001-03-XX
Origin: Natural/Native occurrence			Site: 2005-06-13
Presence: Extirpated			
Trend: Unknown			
Main Source: HOFFMAN, J. 2001 (LIT)		Record Last Updated: 2005-07-27	

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.29080° / -122.28294°	Township: 05N
UTM: Zone-10 N4238323 E562706	Range: 04W
Mapping Precision: SPECIFIC	Section: 10 Qtr: SE
Symbol Type: POINT	Meridian: M
Radius: 80 meters	Elevation: 15 ft

Location: NAPA CITY PARK, AT RIVERSIDE DRIVE AT INTERSECTION OF PINE & CROSS STREETS.
Location Detail: WITHIN CITY PARK.
Ecological:
Threat:
General: ONE SPECIMEN OBSERVED. CIRCUMFERENCE MEASURED AT 4.5 FEET ABOVE GROUND WAS OVER 20'.
 A THOROUGH SEARCH IN 2005 FAILED TO LOCATE THIS TREE. OCCURRENCE EXTIRPATED.
Owner/Manager: CITY OF NAPA

_____ Sources _____

BIT05F04 BITTMAN, R. & J. CALLIZO. FIELD SURVEY FORM FOR JUGLANS HINDSII NOTING EO #6 IS EXTIRPATED.
 2005-06-13.

HOF01A01 HOFFMAN, J. ARTICLE ENTITLED "SPECIES SPOTLIGHT: NORTHERN CALIFORNIA BLACK WALNUT (JUGLANS
 CALIFORNICA VAR. HINDSII) IN THE CNPS NAPA CHAPTER FAWN LILY PUBLICATION VOL 7(2). 2001-03-XX.

Lasthenia conjugens

Contra Costa goldfields

Element Code: PDAST5L040

————— Status —————	————— NDDB Element Ranks —————	————— Other Lists —————
Federal: Endangered State: None	Global: G1 State: S1.1	CNPS List: 1B R-E-D Code: 3-3-3

————— **Habitat Associations** —————

General: VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS, CISMONTANE WOODLAND. EXTIRPATED FROM MOST OF ITS RANGE; EXTREM. ENDANGERED.

Micro: VERNAL POOLS, SWALES, LOW DEPRESSIONS, IN OPEN GRASSY AREAS. 1-445M.

Occurrence No. 2	Map Index: 09230	EO Index: 16732	————— Dates Last Seen —————
Occ Rank: None			Element: 1960-04-62
Origin: Natural/Native occurrence			Site: 1989-XX-XX
Presence: Extirpated			
Trend: Unknown			
Main Source: ORNDUFF, ROBERT #6116 UC, SD (HERB)		Record Last Updated: 2001-10-02	

Quad Summary: NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.36634° / -122.29592°	Township: 06N
UTM: Zone-10 N4246697 E561507	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 15 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 1/5 mile	Elevation: 60 ft

Location: EAST SIDE OF SILVERADO TRAIL, 0.9 MILE NORTH OF SODA CANYON ROAD, NORTH OF NAPA.

Location Detail:

Ecological: IN LOW WET DEPRESSIONS IN A GRASSY, GRAZED FIELD.

Threat:

General: AREA ALL CONVERTED TO VINEYARDS WHEN VISITED BY CALLIZO IN 1988. NO PLANTS SEEN IN 1989 SEARCH.

Owner/Manager: PVT

- **Sources** —————
- CAL88F04 CALLIZO, J. FIELD SURVEY FORM FOR LASTHENIA CONJUGENS. 1988-XX-XX.
 - CAL89U02 CALLIZO, J. ANNOTATED PRINTOUT FOR LASTHENIA CONJUGENS. 1989-01-18.
 - CNPND01 NAPA COUNTY CNPS. CALIFORNIA NATIVE PLANT SOCIETY PLANT LOCATIONS PROVIDED AS ARCVIEW SHAPEFILES. XXXX-XX-XX.
 - GUR90U01 GURNEE, A. PETITION TO THE FISH AND GAME COMMISSION TO LIST LASTHENIA CONJUGENS. 1990-03-XX.
 - ORN60S02 ORNDUFF, R. ORNDUFF #6116 SD, UC #1363760. 1960-04-26.
 - ORN66A01 ORNDUFF, R. "BIOSYSTEMATIC SURVEY OF THE GOLDFIELD GENUS LASTHENIA". 1966-XX-XX.

Lasthenia conjugens

Contra Costa goldfields

Element Code: PDAST5L040

Status	NDDB Element Ranks	Other Lists
Federal: Endangered State: None	Global: G1 State: S1.1	CNPS List: 1B R-E-D Code: 3-3-3

Habitat Associations

General: VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS, CISMONTANE WOODLAND. EXTIRPATED FROM MOST OF ITS RANGE; EXTREM. ENDANGERED.

Micro: VERNAL POOLS, SWALES, LOW DEPRESSIONS, IN OPEN GRASSY AREAS. 1-445M.

Occurrence No. 40	Map Index: 63292	EO Index: 63384	Dates Last Seen
Occ Rank: None			Element: 1994-XX-XX
Origin: Natural/Native occurrence			Site: 1994-XX-XX
Presence: Possibly Extirpated			
Trend: Unknown			
Main Source: COLLINGE, S. ET AL. 2003 (LIT)			Record Last Updated: 2005-12-01

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.26892° / -122.29465°	Township: 05N
UTM: Zone-10 N4235888 E561701	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 22 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 3/5 mile	Elevation: 230 ft

Location: EASTERN EDGE OF HIGHWAY 121, APPROX 1.0 KM WEST OF THE NAPA RIVER.

Location Detail: ELEVATION DOES NOT MATCH LOCATION DESCRIPTION; MAPPED BETWEEN HWY 121 AND NAPA RIVER, JUST SOUTH OF NAPA.

Ecological: LARGE VERNAL POOL IN A SLOPING PASTURE.

Threat: AGRICULTURAL DEVELOPMENT.

General: SEVERAL THOUSAND PLANTS (ORNDUFF 1994). SITE HAS BEEN RECENTLY DEVELOPED INTO AGRICULTURAL LAND AND FEW, IF ANY, L. CONJUGENS REMAIN (COLLINGE 2003).

Owner/Manager: UNKNOWN

Sources

COL03A01 COLLINGE, S., C. WISE, & B. WEAVER. "GERMINATION, EARLY GROWTH, AND FLOWERING OF A VERNAL POOL ANNUAL IN RESPONSE TO SOIL MOISTURE AND SALINITY". MADRONO VOL 50, NO 2, PP. 83-93. 2003-XX-XX.

ORN94U01 ORNDUFF, R. COLLECTION OF LASTHENIA CONJUGENS, WEST OF NAPA RIVER (CITED IN COL03A01). 1994-XX-XX.

Lathyrus jepsonii* var. *jepsonii

Delta tule pea

Element Code: PDFAB250D2

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
Federal: None Global: G5T2 CNPS List: 1B
State: None State: S2.2 R-E-D Code: 2-2-3

_____ Habitat Associations _____
General: FRESHWATER AND BRACKISH MARSHES.
Micro: OFTEN FOUND W/TYPHA, ASTER LENTUS, ROSA CALIF., JUNCUS SPP., SCIRPUS, ETC. USUALLY ON MARSH AND SLOUGH EDGES.

Occurrence No. 89 Map Index: 36724 EO Index: 32692 _____ Dates Last Seen _____
Occ Rank: Poor Element: 1991-XX-XX
Origin: Natural/Native occurrence Site: 1991-XX-XX
Presence: Presumed Extant
Trend: Unknown
Main Source: CUNEO, K. 1991 (OBS) Record Last Updated: 1997-12-10

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.26306° / -122.27874° Township: 05N
UTM: Zone-10 N4235249 E563098 Range: 04W
Mapping Precision: NON-SPECIFIC Section: 23 Qtr: XX
Symbol Type: POINT Meridian: M
Radius: 1/5 mile Elevation: 5 ft

Location: SOUTHWEST CORNER OF NAPA MUNICIPAL GOLF COURSE, NAPA.
Location Detail: IN DITCH NEAR JOHN F. KENNEDY MEMORIAL PARK.
Ecological: UNDER PLANTED PINE TREES.
Threat: MOWING, PRUNING, OTHER GOLF COURSE ACTIVITIES.
General: 10 PLANTS OBSERVED IN 1991.
Owner/Manager: UNKNOWN

_____ Sources _____
CUN91F02 CUNEO, K. FIELD SURVEY FORM FOR LATHYRUS JEPSONII VAR. JEPSONII. 1991-XX-XX.

Lathyrus jepsonii* var. *jepsonii

Delta tule pea

Element Code: PDFAB250D2

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G5T2	CNPS List: 1B
State: None	State: S2.2	R-E-D Code: 2-2-3

_____ Habitat Associations _____

General: FRESHWATER AND BRACKISH MARSHES.
Micro: OFTEN FOUND W/TYPHA, ASTER LENTUS, ROSA CALIF., JUNCUS SPP., SCIRPUS, ETC. USUALLY ON MARSH AND SLOUGH EDGES.

Occurrence No. 130	Map Index: 49480	EO Index: 49480	_____ Dates Last Seen _____
Occ Rank: Poor			Element: 2002-06-01
Origin: Natural/Native occurrence			Site: 2002-06-01
Presence: Presumed Extant			
Trend: Unknown			
Main Source: PARTRIDGE, D. 2002 (OBS)			Record Last Updated: 2002-11-26

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.28141° / -122.28439°	Township: 05N
UTM: Zone-10 N4237281 E562587	Range: 04W
Mapping Precision: SPECIFIC	Section: 15 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 80 meters	Elevation: 30 ft

Location: EAST BANK OF THE NAPA RIVER, UNDER MAXWELL BRIDGE, IMOLA AVE WEST AT THE NAPA RIVER, NAPA.

Location Detail: ON EASTERLY BANK OF THE NAPA RIVER. FROM TOP OF BANK TO EDGE OF MARSH TERRACE, JUST BELOW DRIP LINE OF MAXWELL BRIDGE. PLANTS EXTEND NORTHWARD ABOUT 70 FEET FROM RIDGE.

Ecological: IN HIGHLY DISTURBED RIVER BANK IN AN URBANIZED AREA. IMMEDIATE ASSOCIATES INCLUDES SYMPHORICARPOS ALBUS VAR. LAEVIGATUS AND ROSA CALIFORNICA.

Threat: HOMELESS ENCAMPMENT/TRAMPLING. SITE WILL BE EXTIRPATED BY NEW BRIDGE CONSTRUCTION IN 2003.

General: 3 TO 10 PLANTS ESTIMATED IN 1999. ONE PATCH OF PLANTS OBSERVED IN 2002. SITE SCHEDULED TO BE EXTIRPATED IN LATE SUMMER OF FALL OF 2003. IN 2002 SEEDS COLLECTED FROM THE SOLE FLOWERING PLANT AND STORED AT RANCHO SANTA ANA BOTANIC GARDEN.

Owner/Manager: CALTRANS

_____ Sources _____

- DUR02U01 DURIO, H. REPORT OF LATHYRUS JEPSONII VAR. JEPSONII OCCURRENCE AT MAXWELL BRIDGE. 2002-10-28.
- DUR99F02 DURIO, H. FIELD SURVEY FORM FOR LATHYRUS JEPSONII VAR. JEPSONII. 1999-10-25.
- PAR02F01 PARTRIDGE, D. FIELD SURVEY FORM FOR LATHYRUS JEPSONII VAR. JEPSONII. 2002-06-01.

Lilaeopsis masonii

Mason's lilaeopsis

Element Code: PDAP19030

_____ Status _____	_____ NDDB Element Ranks _____	_____ Other Lists _____
Federal: None	Global: G3	CNPS List: 1B
State: Rare	State: S3.1	R-E-D Code: 2-3-3

_____ **Habitat Associations** _____

General: FRESHWATER AND BRACKISH MARSHES, RIPARIAN SCRUB.
Micro: TIDAL ZONES, IN MUDDY OR SILTY SOIL FORMED THROUGH RIVER DEPOSITION OR RIVER BANK EROSION. 0-10M.

Occurrence No. 10	Map Index: 09250	EO Index: 13987	_____ Dates Last Seen _____
Occ Rank: Good			Element: 2002-06-01
Origin: Natural/Native occurrence			Site: 2002-06-01
Presence: Presumed Extant			
Trend: Unknown			
Main Source: MATHIAS & CONSTANCE 1977 (LIT)			Record Last Updated: 2003-01-27

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.26769° / -122.28607°	Township: 05N
UTM: Zone-10 N4235757 E562452	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 22 Qtr: XX
Symbol Type: POLYGON	Meridian: M
Area: 488.9 ac	Elevation: 10 ft

Location: ALONG MARGINS OF NAPA RIVER FROM NAPA TO SOUTH OF RATTO LANDING.
Location Detail: SCATTERED LOCATIONS, NOT CONTINUOUS, CNDDDB HAS ORIGINAL MAPS WITH POINTS.
Ecological: ALONG RIVERBANK OR ON WOOD PILINGS GROWING IN ASSOCIATION WITH ATRIPLEX PATULA HASTATA, SCIRPUS SP. SALICORNIA VIRGINIANA, ELEOCHARIS PARVULA, SPERGULARIA MARINA, DISTICHLIS SPICATA, TRIGLOCHIN SP. POLYPOGON SP., PLANTAGO SP., AND CAREX SP.
Threat: GRAZING, DEVELOPMENT, RIP-RAP, FISHING ACCESS, HOMELESS ENCAMPMENT AND FLOOD CONTROL IMPROVEMENTS ARE THREATS.
General: 22 SUBPOPULATIONS; IN OVERALL GOOD CONDITION IN 1987. 20 PLANTS UNDER BRIDGE AT SUSCOL IN 1991. DETAILED SURVEYS DONE IN 2001 & 2002, DATA AVAILABLE AT CNDDDB. SOME PLANTS TO BE TRANSPLANTED IN 2003. INCLUDES FORMER EOS #35, #36 & #132.
Owner/Manager: PVT, CITY OF NAPA

_____ **Sources** _____

CAL78F01 CALLIZO, J. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 1978-XX-XX.
 CAL88F11 CALLIZO, J. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 1988-07-15.
 CAL88M01 CALLIZO, J. AND J. RUYGT. MAPS OF LOCATIONS OF RARE PLANT POPULATIONS IN NAPA CO. 1988-06-XX.
 CAL89F07 CALLIZO, J. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 1989-07-08.
 CAL90F06 CALLIZO, J. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 1990-07-21.
 CNPNDD01 NAPA COUNTY CNPS. CALIFORNIA NATIVE PLANT SOCIETY PLANT LOCATIONS PROVIDED AS ARCVIEW SHAPEFILES. XXXX-XX-XX.
 CUN91F01 CUNEO, K. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 1991-XX-XX.
 FIE01F01 FIEDLER, P. (L.C. LEE & ASSOCIATES). FIELD SURVEY FORMS FOR LILAEOPSIS MASONII. 2001-05-10.
 FIE01F02 FIEDLER, P. (L.C. LEE & ASSOCIATES). FIELD SURVEY FORMS FOR LILAEOPSIS MASONII. 2001-05-08.
 GOL91R01 GOLDEN, M. AND P. FIEDLER. FINAL REPORT: CHARACTERIZATION OF THE HABITAT FOR LILAEOPSIS MASONII (UMBELLIFERAE): A CALIFORNIA STATE-LISTED RARE PLANT SPECIES. 1991-06-03.
 MAT77A01 MATHAIS, AND CONSTANCE. TWO NEW LOCAL UMBELLIFERAE (APIACEAE) FROM CA. MADRONO 24:78-83

Lilaeopsis masonii

Mason's lilaeopsis

Element Code: PDAPI19030

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 1B
State: Rare	State: S3.1	R-E-D Code: 2-3-3

Habitat Associations

General: FRESHWATER AND BRACKISH MARSHES, RIPARIAN SCRUB.

Micro: TIDAL ZONES, IN MUDDY OR SILTY SOIL FORMED THROUGH RIVER DEPOSITION OR RIVER BANK EROSION. 0-10M.

Sources

(ORIGINAL DESCRIPTION), 1977-XX-XX.

- PAR02F03 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-01.
- PAR02F04 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-01.
- PAR02F05 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-01.
- PAR02F06 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-02.
- PAR02F07 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-03.
- PAR02F08 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-03.
- PAR02F09 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-03.
- PAR02F10 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-03.
- PAR02F11 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-03.
- PAR02F12 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-05-03.
- PAR02F13 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-06-01.
- PAR02F14 PARTRIDGE, D. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 2002-06-01.
- PAR02U01 PARTRIDGE, D. (L.C. LEE AND ASSOCIATES). COVER LETTER FROM 2001 FIELD SURVEYS OF LILAEOPSIS MASONII FOR THE NAPA RIVER/NAPA CREEK FLOOD PROTECTION PROJECT. 2002-05-22.
- RUY86F05 RUYGT, J. FIELD SURVEY FORM FOR LILAEOPSIS MASONII. 1986-08-07.
- RUY87F03 RUYGT, J. 22 FIELD SURVEY FORMS FOR LILAEOPSIS MASONII. 1987-07-13.
- SUK13S01 SUKSDORF. SUKSDORF #630 UC. 1913-07-24.

Oncorhynchus mykiss irideus

steelhead-central California coast esu

Element Code: AFCHA0209G

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
Federal: Threatened Global: G5T2Q CDFG Status:
State: None State: S2

_____ Habitat Associations _____
General: FROM RUSSIAN RIVER, SOUTH TO SOQUEL CR & TO, BUT NOT INCLUDING, PAJARO RIVER. ALSO SAN FRANCISCO & SAN PABLO BAY BASINS.

Micro:

Occurrence No. 7 Map Index: 52261 EO Index: 52261 _____ Dates Last Seen _____
Occ Rank: Fair Element: 2003-07-15
Origin: Natural/Native occurrence Site: 2003-07-15
Presence: Presumed Extant
Trend: Unknown
Main Source: GALLOWAY, M.. 2003 (OBS) Record Last Updated: 2003-08-27

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.25575° / -122.36710° Township: 05N
UTM: Zone-10 N4234381 E555373 Range: 05W
Mapping Precision: SPECIFIC Section: 25 Qtr: XX
Symbol Type: POLYGON Meridian: M
Area: 10.1 ac Elevation: 600 ft

Location: HUICHICA CREEK, AT THE HIGHWAY 121 CROSSING, 4 MILES SW OF NAPA
Location Detail: JUVENILE STEELHEAD WERE FOUND IN THE MAIN BRANCH OF HUICHICA CREEK, BOTH UPSTREAM AND DOWNSTREAM OF HIGHWAY 121.
Ecological: HABITAT CONSISTS OF POOLED AREAS OF HUICHICA CREEK; FISH PASSAGE IS RESTRICTED DUE TO LOW FLOWS DURING SUMMER MONTHS AND THE DESIGN OF THE CULVERT STRUCTURE.
Threat: THREATENED BY FUTURE DEVELOPMENT AND POSSIBLE ROADWAY WIDENING.
General: 5 JUVENILE STEELHEAD OBSERVED ON 15 JUL 2003.
Owner/Manager: CALTRANS

_____ Sources _____
GAL03F02 GALLOWAY, MICHAEL (CALTRANS). FIELD SURVEY FORM FOR ONCORHYNCHUS MYKISS IRIDEUS (CENTRAL COAST ESU). 2003-07-15.

Syncaris pacifica

California freshwater shrimp

Element Code: ICMAL27010

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: Endangered	Global: G1	CDFG Status:
State: Endangered	State: S1	

_____ Habitat Associations _____

General: ENDEMIC TO MARIN, NAPA, & SONOMA COS. FOUND IN LOW ELEV, LOW GRADIENT STREAMS WHERE RIPARIAN COVER IS MODERATE TO HEAVY.

Micro: SHALLOW POOLS AWAY FROM MAIN STREAMFLOW. WINTER: UNDERCUT BANKS W/EXPOSED ROOTS. SUMMER: LEAFY BRANCHES TOUCHING WATER.

Occurrence No. 5	Map Index: 09016	EO Index: 13326	_____ Dates Last Seen _____
Occ Rank: Excellent			Element: 1990-10-XX
Origin: Natural/Native occurrence			Site: 1990-10-XX
Presence: Presumed Extant			
Trend: Unknown			
Main Source: ENG, L. 1981 (LIT)			Record Last Updated: 2005-01-04

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D), SONOMA (3812234/500C)

County Summary: NAPA

Lat/Long: 38.25588° / -122.36772°	Township: 05N
UTM: Zone-10 N4234395 E555319	Range: 05W
Mapping Precision: SPECIFIC	Section: 25 Qtr: XX
Symbol Type: POLYGON	Meridian: M
Area: 147.6 ac	Elevation: 120 ft

Location: PORTION OF HUICHICA CREEK, TRIBUTARY TO NAPA RIVER.

Location Detail: SHRIMP ARE FOUND IN THE SPRING-FED MID-REACHES OF THE CREEK. POPULATION IS RESTRICTED BY BARRIERS TO UPSTREAM MOVEMENT.

Ecological: NARROW RIPARIAN HABITAT CONSISTING OF A SUNKEN, STEEP SIDED STREAM CHANNEL SURROUNDED BY VINEYARDS. POOLS SHADED BY ALDER, BAY.

Threat: GRAZING, WATER DIVERSION, VINEYARD CONVERSION, POOL SEDIMENTATION, POLLUTION, NON NATVE PREDATORS, DEVELOPMENT

General: IN 1988/89 SURVEY, 87 NETTED. IN 1990 123 NETTED 0.8 KM UPSTREAM FROM HWY 12/121, 280 NETTED 2 KM DOWNSTREAM FROM HWY 12/121.

Owner/Manager: PVT

_____ Sources _____

- ENG81R02 ENG, L.L. DISTRIBUTION, LIFE HISTORY, AND STATUS OF THE CA. FRESHWATER SHRIMP. INLAND FISHERIES ENDG. SPECIES PROGRAM, SPECIAL PUB. 81-1. 1981-02-XX.
- FWS98R01 U.S. FISH & WILDLIFE SERVICE. RECOVERY PLAN FOR THE CALIFORNIA FRESHWATER SHRIMP (SYNCARIS PACIFICA, HOLMES 1895). 1998-XX-XX.
- GRA85U01 GRAY AND COLTON. MEMORANDUM TO FILES. 1985-11-19.
- GRA89F01 GRAY, F. FIELD SURVEY FORM FOR SYNCARIS PACIFICA. 1989-08-03.
- MAR04A01 MARTIN, JOEL W. AND MARY K. WICKSTEN. REVIEW AND REDESCRIPTION OF THE FRESHWATER ATYID SHRIMP GENUS SYNCARIS HOLMES, 1900, IN CALIFORNIA. JOUR. CRUSTACEAN BIOL., 24(3):447-462. 2004-XX-XX.
- MES89R01 MESSER, R.J. AND J. BRUMBAUGH. THE DISTRIBUTION & STATUS OF THE CA FRESHWATER SHRIMP, SYNCARIS PACIFICA (HOLMES). 1989-XX-XX.
- SER83U01 SERPA, LARRY. SUMMARY OF 1982-1983 RESEARCH ON SYNCARIS PACIFICA. 1983-12-20.
- SER84U01 SERPA, LARRY. MAPS SHOWING CURRENTLY KNOWN DISTRIBUTION OF SYNCARIS PACIFICA IN THE FOLLOWING STREAMS: SONOMA, YULUPA, EAST AUSTIN, BIG AUSTIN, GREEN VALLEY, JONIVE, BLUCHER, & HUICHICA CREEKS. 1984-09-23.

Syncaris pacifica

California freshwater shrimp

Element Code: ICMAL27010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered State: Endangered	Global: G1 State: S1	CDFG Status:

Habitat Associations

General: ENDEMIC TO MARIN, NAPA, & SONOMA COS. FOUND IN LOW ELEV, LOW GRADIENT STREAMS WHERE RIPARIAN COVER IS MODERATE TO HEAVY.

Micro: SHALLOW POOLS AWAY FROM MAIN STREAMFLOW. WINTER: UNDERCUT BANKS W/EXPOSED ROOTS. SUMMER: LEAFY BRANCHES TOUCHING WATER.

Sources

SER90R01 SERPA, L. CALIF. FRESHWATER SHRIMP CONTRACT SURVEY PROGRESS REPORT FOR U.S. FISH & WILDLIFE SERVICES. 1990-XX-XX.

Taxidea taxus

American badger

Element Code: AMAJF04010

_____ Status _____	NDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S4	

_____ Habitat Associations _____

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 203	Map Index: 56958	EO Index: 56974	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1911-11-03
Origin: Natural/Native occurrence			Site: 1911-11-03
Presence: Presumed Extant			
Trend: Unknown			
Main Source: MVZ 2004 (MUS)			Record Last Updated: 2004-09-23

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.25929° / -122.30887°	Township: 05N
UTM: Zone-10 N4234810 E560464	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 21 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 1 mile	Elevation: 40 ft

Location: 3 MILES SOUTHWEST OF NAPA.

Location Detail: MAPPED ACCORDING TO LAT/LONG GIVEN BY MVZ; MAX ERROR DISTANCE GIVEN AS 5.99 MI.

Ecological:

Threat:

General: MVZ #16378; FEMALE COLLECTED BY CHARLES L. CAMP ON 3 NOV 1911.

Owner/Manager: UNKNOWN

_____ Sources _____

- DFG86R04 DEPARTMENT OF FISH AND GAME. MAMMALIAN SPECIES OF SPECIAL CONCERN IN CALIFORNIA, AMERICAN BADGER ACCOUNT. 1986-XX-XX.
- MVZ04S05 MVZ SPECIMEN DATABASE QUERY (UC BERKELEY). PRINT-OUT OF TAXIDEA TAXUS SPECIMENS FOR CALIFORNIA FROM THE MVZ DATABASE. 2004-09-13.

Taxidea taxus

American badger

Element Code: AMAJF04010

_____ Status _____ NDDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G5 CDFG Status: SC
 State: None State: S4

_____ Habitat Associations _____
 General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.
 Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 301 Map Index: 46525 EO Index: 57536 _____ Dates Last Seen _____
 Occ Rank: Unknown Element: XXXX-XX-XX
 Origin: Natural/Native occurrence Site: XXXX-XX-XX
 Presence: Presumed Extant
 Trend: Unknown
 Main Source: CDFG 1986 (LIT) Record Last Updated: 2004-11-01

Quad Summary: NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.29747° / -122.28784° Township: 05N
 UTM: Zone-10 N4239060 E562272 Range: 04W
 Mapping Precision: NON-SPECIFIC Section: 10 Qtr: XX
 Symbol Type: POINT Meridian: M
 Radius: 1 mile Elevation: 100 ft

Location: NAPA.
 Location Detail:
 Ecological:
 Threat:
 General: INFORMATION TAKEN FROM: GRINNELL, J., J. S. DIXON & J. M. LINSDALE. 1937. FUR-BEARING MAMMALS OF CALIFORNIA. THEIR NATURAL HISTORY, SYSTEMATIC STATUS, AND RELATIONS TO MAN. UNIV. CALIF. PRESS, BERKELEY 1:1-375, 2:376-777.
 Owner/Manager: UNKNOWN

_____ Sources _____
 DFG86R04 DEPARTMENT OF FISH AND GAME. MAMMALIAN SPECIES OF SPECIAL CONCERN IN CALIFORNIA, AMERICAN BADGER ACCOUNT. 1986-XX-XX.

Trifolium amoenum

showy indian clover

Element Code: PDFAB40040

Status	NDDB Element Ranks	Other Lists
Federal: Endangered State: None	Global: G1 State: S1.1	CNPS List: 1B R-E-D Code: 3-3-3

Habitat Associations

General: VALLEY AND FOOTHILL GRASSLAND, COASTAL BLUFF SCRUB.

Micro: SOMETIMES ON SERPENTINE SOIL, OPEN SUNNY SITES, SWALES. MOST RECENTLY SITED ON ROADSIDE AND ERODING CLIFF FACE. 5-560M.

Occurrence No. 7	Map Index: 46525	EO Index: 46525	Dates Last Seen
Occ Rank: Unknown			Element: 1951-06-24
Origin: Natural/Native occurrence			Site: 1951-06-24
Presence: Presumed Extant			
Trend: Unknown			
Main Source: RAVEN, P. #3005 CAS (HERB)			Record Last Updated: 2001-11-27

Quad Summary: NAPA (3812233/500D)
County Summary: NAPA

Lat/Long: 38.29747° / -122.28784°	Township: 05N
UTM: Zone-10 N4239060 E562272	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 10 Qtr: XX
Symbol Type: POINT	Meridian: M
Radius: 1 mile	Elevation: 100 ft

Location: NAPA.
Location Detail:
Ecological:
Threat:
General: SPECIES SEEN IN 1951. ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1951 COLLECTION BY RAVEN FROM "NAPA"; NEEDS FIELDWORK.
Owner/Manager: UNKNOWN

Sources

RAV51S01 RAVEN, P. RAVEN #3005 CAS. 1951-06-24.

Trifolium depauperatum* var. *hydrophilum

saline clover

Element Code: PDFAB400R5

_____ Status _____	NDDDB Element Ranks _____	Other Lists _____
Federal: None	Global: G5T2?	CNPS List: 1B
State: None	State: S2.2?	R-E-D Code: 3-2-3

_____ Habitat Associations _____
 General: MARSHES AND SWAMPS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.
 Micro: MESIC, ALKALINE SITES. 0-300M.

Occurrence No. 13	Map Index: 49398	EO Index: 49398	_____ Dates Last Seen _____
Occ Rank: None			Element: 1982-04-07
Origin: Natural/Native occurrence			Site: 1982-04-07
Presence: Extirpated			
Trend: Unknown			
Main Source: RUYGT, J. #1173 JEPS #95202 (HERB)			Record Last Updated: 2002-11-14

Quad Summary: CUTTINGS WHARF (3812223/483A), NAPA (3812233/500D)
 County Summary: NAPA

Lat/Long: 38.25122° / -122.27314°	Township: 05N
UTM: Zone-10 N4233939 E563598	Range: 04W
Mapping Precision: NON-SPECIFIC	Section: 26 Qtr: XX
Symbol Type: POLYGON	Meridian: M
Area: 617.1 ac	Elevation: 10 ft

Location: SUSCOL PLAIN, BETWEEN ROCKTRAM AND HIGHWAY 29, SOUTH OF NAPA.
 Location Detail: MAPPED AS PER TRS GIVEN IN RUYGT COLLECTION.
 Ecological: IN ROCK[Y] VOLCANIC SUBSTRATE AMONG RUSHES ON MARSHY GROUND.
 Threat:
 General: HABITAT ELIMINATED BY DEVELOPMENT.
 Owner/Manager: UNKNOWN

_____ Sources _____
 RUY00U01 RUYGT, J. EMAIL TO: D. TIBOR RE: URGENT: TRIFOLIUM DEPAUPERATUM VAR. HYDROPHILUM. 2000-02-16.
 RUY82S01 RUYGT, J. RUYGT #1173 JEPS #95202. 1982-04-07.
 RUY99U01 RUYGT, J. COMMENTS ON SPECIES FROM JAKE RUYGT. 1999-02-XX.

APPENDIX C
USFWS Napa Quad Special Status Species List

Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
NAPA (500D)
U.S.G.S. 7 1/2 Minute Quad
Database Last Updated: March 1, 2006
Document Number: 060320102914

Listed Species

Invertebrates

- Branchinecta conservatio* - Conservancy fairy shrimp (E)
- Syncaris pacifica* - California freshwater shrimp (E)

Fish

- Hypomesus transpacificus* - delta smelt (T)
- Oncorhynchus mykiss* - Central California Coastal steelhead (T)
- Oncorhynchus mykiss* - Central Valley steelhead (T)
- Oncorhynchus mykiss* - Critical habitat, Central California coastal steelhead (X)
- Oncorhynchus tshawytscha* - Central Valley spring-run chinook salmon (T)
- Oncorhynchus tshawytscha* - winter-run chinook salmon, Sacramento River (E)

Amphibians

- Rana aurora draytonii* - California red-legged frog (T)

Birds

- Haliaeetus leucocephalus* - bald eagle (T)
- Sterna antillarum* (=albifrons) *browni* - California least tern (E)
- Strix occidentalis caurina* - northern spotted owl (T)

Mammals

- Reithrodontomys raviventris* - salt marsh harvest mouse (E)

Plants

- Lasthenia conjugens* - Contra Costa goldfields (E)
- Lasthenia conjugens* - Critical habitat, Contra Costa goldfields (X)

Candidate Species

Fish

- Oncorhynchus tshawytscha* - Central Valley fall/late fall-run chinook salmon (C)
- Oncorhynchus tshawytscha* - Critical habitat, Central Valley fall/late fall-run chinook (C)

Species of Concern

Invertebrates

- Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)

Fish

- Pogonichthys macrolepidotus* - Sacramento splittail (SC)
- Spirinchus thaleichthys* - longfin smelt (SC)

Amphibians

- Rana aurora aurora* - Northern red-legged frog (SC)
Rana boylei - foothill yellow-legged frog (SC)
Spea hammondi (was *Scaphiopus h.*) - western spadefoot toad (SC)

Reptiles

- Clemmys marmorata marmorata* - northwestern pond turtle (SC)

Birds

- Agelaius tricolor* - tricolored blackbird (SC)
Amphispiza belli belli - Bell's sage sparrow (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Cypseloides niger - black swift (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Riparia riparia - bank swallow (CA)
Selasphorus rufus - rufous hummingbird (SC)
Selasphorus sasin - Allen's hummingbird (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

- Corynorhinus* (= *Plecotus*) *townsendii townsendii* - Pacific western big-eared bat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)

Plants

- Aster lentus* - Suisun Marsh aster (SC)
Atriplex joaquiniana - San Joaquin sparscale (=saltbush) (SC)
Lathyrus jepsonii var. *jepsonii* - delta tule-pea (SC)
Lilaeopsis masonii - Mason's lilaeopsis (SC)
Linanthus jepsonii - Jepson's linanthus (SLC)

Key:

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed

APPENDIX D
Environmental Information for Petitions, June 22, 2004

TECHNICAL MEMORANDUM

CH2MHILL

Kreuse Creek Vineyard Proposed Water Storage Reservoir Site Visit

PREPARED FOR: Laura Harnish, Project Manager, CH2M HILL
PREPARED BY: Gary Santolo, Biologist, CH2M HILL
COPIES: Meri Miles, Biology Task Lead, CH2M HILL
DATE: March 24, 2004

On Wednesday, March 24, 2004, I conducted a reconnaissance-level site visit to the Kreuse Creek Premier Vineyard, 2184 East Imola Avenue, Napa, CA. I was met by Howard Kaplan at the site and was given a brief tour of the site in which the location for the water diversion and proposed reservoir were pointed out to me. The purpose of this site visit was to identify the habitat and wildlife in the vicinity of the proposed water diversion and reservoir and to photodocument the site to provide the information necessary for completing the State of California, State Water Resources Control Board, Division of Water Rights, Environmental Information For Petitions.

ENVIRONMENTAL SETTING

Color photographs showing the vegetation currently existing at the following locations are attached:

- a. Along the stream channel immediately downstream from the proposed point(s) of diversion
- b. Along the stream channel immediately upstream from the proposed point(s) of diversion
- c. At the place(s) where the water is to be used

The general plant community types which best describe those which occur within the project area Valley Foothill Riparian, Annual Grassland, Riverine, Orchard-Vineyard, and Urban.

The diversion structure is in a cut bank under the road in this part of the creek and no vegetation would be disturbed. The reservoir and support facilities will be sited within the vineyard, therefore no natural vegetation would be damaged or removed due to implementation of the proposed changes.

FISH AND WILDLIFE

A 6-inch (approximately) dead rainbow trout was observed in a pool on the west edge of the vineyard. This pool was about 15 to 10 feet long and 6-feet wide and water in the creek to the north and south of the pool was below ground level.

A variety of avian and terrestrial wildlife species were observed during the site visit

and presented in Table 1. The reservoir and facilities will be located within the vineyard and should not affect wildlife using the riparian habitat along the Kreuse Creek.

Common Name	Scientific Name
Red-tailed hawk	<i>Buteo jamaicensis</i>
Turkey vulture	<i>Cathartes aura</i>
Anna's hummingbird	<i>Calypte anna</i>
Northern flicker	<i>Colaptes auratus</i>
Black phoebe	<i>Sayornis nigricans</i>
Common raven	<i>Corvus corax</i>
Western scrub-jay	<i>Aphelocoma californica</i>
Western bluebird	<i>Sialia mexicana</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
House finch	<i>Carpodacus mexicanus</i>
Botta's pocket gopher	<i>Thomomys botta</i>
California ground squirrel	<i>Spermophilus beecheyi</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>

Kreuse Creek, in the area of the water diversion and west of the proposed water storage reservoir is a mostly shallow and slow-moving creek where there is surface water with pools created by water going subsurface. The creek bed is made up of 3-to10-inch cobbles covered by algae. The air temperature was about 21° C (70°F) and the creek water temperature at the diversion site was about 15°C (60°F).

No amphibians were observed during the site visit, however, this is before the breeding season for many amphibians. The stream corridor within the project area is not optimal habitat for either species. Based on its depth, the pool containing the dead trout has some potential for California red-legged frog, although there is very little vegetative cover present. The area of the water diversion has some potential for foothill yellow-legged frog upstream based on its gradient (0 to 4 percent), low water velocity, and low density foothill hardwood riparian and overhanging canopy cover.

Laura Harnish
CH2M HILL
510.525.1424 (office)
510.289.2352 (cell)
lharnish@ch2m.com

From: Santolo, Gary/SAC
Sent: Wednesday, March 24, 2004 5:35 PM
To: 'Harnish, Laura/EXT'; Miles, Meri/SAC
Subject: Kreuse Creek Site Visit 2

Here is the water diversion area...



















GOVERNMENTAL REQUIREMENTS

Before a final decision can be made on your change petition, we must consider the information contained in an environmental document prepared in compliance with the requirements of CEQA. If an environmental document has been prepared for your proposed changes by another agency, we must consider it. If one has not been prepared, a determination must be made as to who is responsible for the preparation of the environmental document for your change petition. The following questions are designed to aid us in that determination.

2. Contact your county planning or public works department for the following information:
- a. Person contacted Brian Bordona Date of contact August 2003
Department Planning Telephone (707) 253-4417
 - b. Assessor's Parcel No. 046-351-016
 - c. County Zoning Designation Agricultural Watershed
 - d. Are any county permits required for your proposed changes? Yes
If yes, check appropriate space below:
 Grading Permit, _____ Use Permit, _____ Watercourse
Obstruction Permit, _____ Change of Zoning, _____ General Plan
Change, Other (explain):

 - e. Have you obtained any of the required permits described above? No
If yes, provide a complete copy of each permit obtained.
3. Are any additional state or federal permits required for your proposed changes? Yes (i.e., from Federal Energy Regulatory Commission, U.S. Forest Service, Bureau of Land Management, Soil Conservation Service, Department of Water Resources (Division of Safety of Dams), Reclamation Board, Coastal Commission, State Lands Commission, etc.) For each agency from which a permit is required provide the following information:
- Permit type 1603 Streambed Alteration Agreement
- Person (s) contacted Greg Martinelli Agency CDFG
- Date of contact September 2003 Telephone (707) 944-5520
4. Has any public agency prepared an environmental document for any aspect of your proposed changes? NO

If so, please submit a copy of the latest environmental document (s) prepared, including a copy of the notice of determination adopted by the public agency. If not, explain below whether you expect that a public agency other than the State Water Resources Control Board will be preparing an environmental document for your change petition or whether the applicant, if it is a California public agency, will be preparing the environmental document for your change petition:

Petitioner is a private entity, and therefore understands that the SWRCB will be preparing and adopting any necessary environmental documentation.

Note: When completed, please submit a copy of the final environmental document (including notice of determination) or notice of exemption to the State Water Resources Control Board. Processing of your change petition cannot proceed until such documents are submitted.

5. Will your proposed changes, during construction or operation, generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or cause erosion, turbidity or sedimentation? Yes If so, explain: See attached.

If yes or you are unsure of your answer, contact your local Regional Water Quality Control Board for the following information (See attachment for address and telephone number):

Will a waste discharge permit be required for your petition? _____

Person contacted Keith Lichten Date of contact May 10, 2004

What method of treatment and disposal will be used? Best Management Practices for erosion control will be implemented.

6. Have any archeological reports been prepared on this project, or will you be preparing an archeological report to satisfy another public agency? See attached.

Do you know of any archeological or historic sites located within the general project area?

No. If so, explain: _____

ENVIRONMENTAL SETTING

7. Attach **THREE COMPLETE SETS** of color photographs, clearly dated and labeled, showing the vegetation currently existing at the following locations:

- a. Along the stream channel immediately downstream from the proposed point(s) of diversion
- b. Along the stream channel immediately upstream from the proposed point(s) of diversion
- c. At the place(s) where the water is to be used

Note: It is very important that you submit no less than three complete sets of photographs as required above. If less than three sets are submitted, processing of your change petition will be delayed until you furnish the remaining sets!

8. From the list given below, mark or circle the general plant community types which best describe those which occur within your project area (Note: See footnote denoted by * under Question 11 below):

Tree Dominated Communities

- Subalpine Conifer
- Red Fir
- Lodgepole Pine
- Mixed Conifer
 - Sierran Mixed Conifer
 - White Fir
 - Klamath Mixed Conifer
- Douglas-Fir
- Jeffrey Pine
- Ponderosa Pine
- Eastside Pine
- Redwood
- Pinyon-Juniper
- Juniper
- Aspen
- Closed-Cone Pine-Cypress
- Montane Hardwood-Conifer
- Montane Hardwood
- Valley Foothill Hardwood
 - Blue Oak Woodland
 - Valley Oak Woodland
 - Coastal Oak Woodland
- Valley Foothill Hardwood-Conifer
 - Blue Oak-Digger Pine
- Eucalyptus
- Montane Riparian
- Valley Foothill Riparian
- Desert Riparian
- Palm Oasis
- Joshua Tree

Shrub Dominated Communities

- Alpine Dwarf-Shrub
- Low Sage
- Bitterbrush
- Sagebrush
- Montane Chaparral
- Mixed Chaparral
- Chamise-Redshank Chaparral
- Coastal Scrub
- Desert Succulent Shrub
- Desert Wash
- Desert Scrub
- Alkali Desert Scrub

Herbaceous Dominated Communities

- Annual Grassland
- Perennial Grassland
- Wet Meadow
- Fresh Emergent Wetland
- Saline Emergent Wetland
- Pasture

Aquatic Communities

- Riverine
- Lacustrine
- Estuarine
- Marine

Developed Communities

- Cropland
- Orchard-Vineyard
- Urban

Literature source: Mayer, K.E., and W.F. Laudenslayer, Jr., (eds). 1988. A Guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection, Sacramento. 166 pp. (Note: You may view a copy of this document at our public counter at the address given

at the top of this form or you may purchase a copy by calling the California Department of Fish and Game, Wildlife Habitat Relationships (WHR) Program at (916) 653-7203).

9. Provide below an estimate of the type, number, and size (trunk/stem diameter at chest height) of trees and large shrubs that are planned to be removed or destroyed due to implementation of the proposed changes. Consider all aspects of your change petition, including changes in diversion structures, water distribution and use facilities, and changes in the place of use due to additional water development.

No trees or shrubs would be damaged or removed as part of the proposed project. The water diversion structure will be sited in annual grassland immediately adjacent to an existing gravel road, and the conveyance pipeline will be located on annual grassland and existing vineyard. The proposed reservoir site will also be located on existing vineyard and annual grassland.

FISH AND WILDLIFE CONCERNS

10. Identify the typical species of fish which occur in the source(s) from which you propose to divert water and discuss whether or not any of these fish species or their habitat has been or would be affected by your proposed changes. (Note: See footnote denoted by * under Question 11 below):

See Attachment.

11. Identify the typical species of riparian and terrestrial wildlife in the area and discuss whether or not any of these species and/or their habitat has been or would be affected by your proposed changes through construction of additional water diversion and distribution works and/or changes in land use in the place of water use. (Note: See footnote denoted by * below):

See attached.

***Note:** The purposes of Question 10 and 11 are to provide a preliminary assessment of the presence of typical plant and animal species in the area and whether these species might be affected by your proposed changes. Detailed site surveys to quantify populations of specific species or determine the presence of rare or endangered species may be required at a later date. It is very important that you answer these questions accurately. If you are unable to obtain appropriate answers from your local California Department of Fish and Game biologists (See attachment for address and telephone number) or you do not have adequate information or expertise to complete your answers, you should hire a fishery consultant and/or a wildlife consultant to review your project and prepare suitable answers for you. For information on available qualified fishery or wildlife consultants near you, consult your local telephone directory yellow pages under Environmental and Ecological Services, or call the California Environmental Protection Agency, Registered Environmental Assessor (REA) Program, at (916) 324-6881 or the University of California, Cooperative Extension Service (See your local telephone directory white pages).

12. Do your proposed changes involve any construction or grading-related activity which has significantly altered or would significantly alter the bed or bank of any stream or lake? No

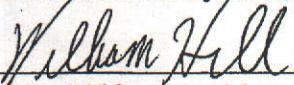
If so, explain: The construction of the diversion would temporarily alter the bed of Kreuse Creek as it crosses over the existing dirt roadway on the site. After completion of construction of the diversion structure the bed and bank would be improved from its preconstruction condition with the placement of gravels surrounding the bed to prevent silt migration into the streambed and diversion structures.

CERTIFICATION

I hereby certify that the statements I have furnished above and in the attached exhibits are complete to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

By: Premier Vineyard Associates, G.P.
By: Premier Pacific Vineyards, L.P., G.P.
By: Premier Pacific Vineyards, Inc., G.P.

Date June 22, 2004

Signature By: 
William Hill, President

**Attachment to Accompany
ENVIRONMENTAL INFORMATION
FOR PETITIONS**

(THIS IS NOT A CEQA DOCUMENT)

APPLICATION NO. 29351 PERMIT NO. 20428

Item 1:

This project involves an existing water rights permit (Permit 20428; Application 29351) to divert from Kreuse Creek and a nearby Unnamed Stream in Napa County to storage, and redirection for application to approximately 75 acres of vineyards. Permittee has filed concurrently herewith a Minor Petition for Change to remove the previously authorized on-stream reservoir from the permit, and change the location of the off-stream storage reservoir and the corresponding point of redirection authorized under the permit. In order to provide adequate time for processing the petition for change, complete any necessary regulatory compliance and environmental review, and complete construction of the relocated off-stream reservoir, permittee has also filed concurrently herewith a petition for extension of time to extend the deadline for the completion of construction to October 31, 2006, and to extend the deadline to December 2007 for completing the application of the water for the authorized purposes of use. The new proposed off-stream storage reservoir site is located approximately 1000 feet to the west of the currently authorized off-stream storage site. The off-stream storage reservoir to be constructed is depicted in the Water Storage Reservoir Grading Plan, which is attached hereto as Exhibit 1. There are no other proposed changes in how the water will be used under the permit.

Item 5:

Construction of the offstream reservoir and diversion facility could cause short-term erosion, turbidity or sedimentation. To comply with Napa County requirements for a grading permit an erosion control plan will be prepared which will include detailed erosion and sediment control measures such as the use of cover crops, silt fences and straw bale waterbars. Implementation of these measures is intended to avoid or minimize erosion, turbidity or sedimentation.

Item 6:

A report will be prepared to satisfy CEQA requirements.

Item 7:

Please see digital photos attached hereto as Exhibit 2, which were taken by Gary Santolo during a site visit on March 24, 2004.

Item 10:

A dead rainbow trout (*Oncorhynchus mykiss*) (approx. six inches in length) was observed downstream of the proposed diversion site on Kreuse Creek during a March 24, 2004 field survey by CH2M HILL biologist Gary Santolo. Information provided by Friends of the Napa River also documents the occurrence of juvenile steelhead (*Oncorhynchus mykiss irideus*) in Kreuse Creek. Data on steelhead use of the Napa River watershed is being collected as part of a multi-year study led by Dr. Charley Dewberry and coordinated through Friends of the Napa River. Additional data on steelhead abundance and distribution in Kreuse Creek has been requested for this project.

The proposed water diversion structure and offstream storage reservoir are not anticipated to adversely affect steelhead and resident rainbow trout that may be using the stream corridor upstream and downstream of the project area, nor adversely affect fish passage through the project area. The water intake structure would consist of an infiltration gallery located along a cut bank adjacent to an existing road on the creekbed margins. (See photo attached hereto as Exhibit 3.) The area proposed for the infiltration gallery currently consists of annual grassland and does not support shrubs or riparian vegetation. Anecdotal information suggests that the surface of the creekbed is dry at this location for most of the spring and summer. At the time of the March 2004 survey, the creek was flowing subsurface at the proposed intake location, however, surface flows were observed both upstream and downstream of the proposed intake site. The lack of spring and summer water at the intake location precludes the use of the area for juvenile steelhead rearing. Diversion from the creek would only occur during high winter flows, and the water velocity at the infiltration gallery would be within CDFG and NOAA Fisheries standards and guidelines to prevent fish entrainment. Because the diversion site lacks spring and summer aquatic habitat and riparian vegetation, and because the project would incorporate measures protective of aquatic resources to avoid entrainment and provide adequate passage flows for adult and juvenile fish during winter months, the project is not expected to result in any adverse effects to fish resources.

Item 11: During a reconnaissance-level biological survey of the project area on March 24, 2004, by Gary Santolo of CH2M HILL, a variety of avian and terrestrial wildlife species were observed and are presented in Table 1.

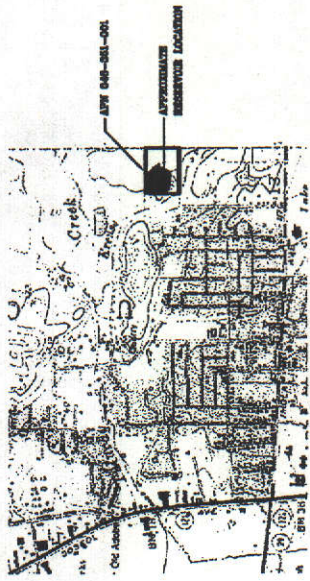
Common Name	Scientific Name
Red-tailed hawk	<i>Buteo jamaicensis</i>
Turkey vulture	<i>Cathartes aura</i>
Anna's hummingbird	<i>Calypte anna</i>
Northern flicker	<i>Colaptes auratus</i>
Black phoebe	<i>Sayornis nigricans</i>
Common raven	<i>Corvus corax</i>
Western scrub-jay	<i>Aphelocoma californica</i>
Western bluebird	<i>Sialia mexicana</i>

Northern mockingbird	<i>Mimus polyglottos</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
House finch	<i>Carpodacus mexicanus</i>
Botta's pocket gopher	<i>Thomomys botta</i>
California ground squirrel	<i>Spermophilus beecheyi</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>

In addition to the field survey, a special-status species list was generated using the California Natural Diversity Database (CNDDDB) on March 29, 2004, for the "Napa" U.S. Geological Survey 7.5-minute quadrangle (quad), which includes the project site. A special-status species list for the "Napa" quad was also obtained through the U.S. Fish and Wildlife Service on March 29, 2004 (see database printouts attached). Listed species with potential for occurrences on or near the project site include the federally threatened steelhead (central California coast Ecologically Significant Unit [ESU]) and the northwestern pond turtle (*Clemmys marmorata marmorata*), a federal species of concern. The nearest recorded sighting of northwestern pond turtle was on September 24, 2003 on Tulucay Creek at the Soscol Avenue Bridge Overcrossing in Napa, California (Observed by Michael Galloway of Caltrans as reported in the CNDDDB).

No observations of California red-legged frog or foothill yellow-legged frog have been recorded within the project vicinity (CNDDDB query on March 29, 2004). No amphibians were observed during the field survey, however, this site visit occurred before the breeding season for many amphibians. The stream corridor at the water intake location is not optimal habitat for either species due to its lack of vegetative cover and seasonal absence of spring and summer water. The pool has some potential for California red-legged frog use based on its depth, although there is very little vegetative cover present. The area of the water intake has some potential for foothill yellow-legged frog use upstream based on its gradient (0 to 4 percent), low water velocity, and limited riparian and overhanging canopy cover. However, the temperature in the stream was approximately 60° Fahrenheit, which is the upper temperature limit for foothill yellow-legged frogs. If the creek is used by frogs, it would likely be upstream in more shaded portions of the creek.

No riparian vegetation is present at the location of the proposed water intake, conveyance pipeline, or storage reservoir. The proposed reservoir would be sited completely within the existing vineyard area, and project water would be used to support existing vineyard. The proposed project would not result in any changes in land use nor result in adverse impacts to natural habitats. For these reasons, no adverse impacts to riparian and terrestrial wildlife are anticipated as a result of the proposed project.

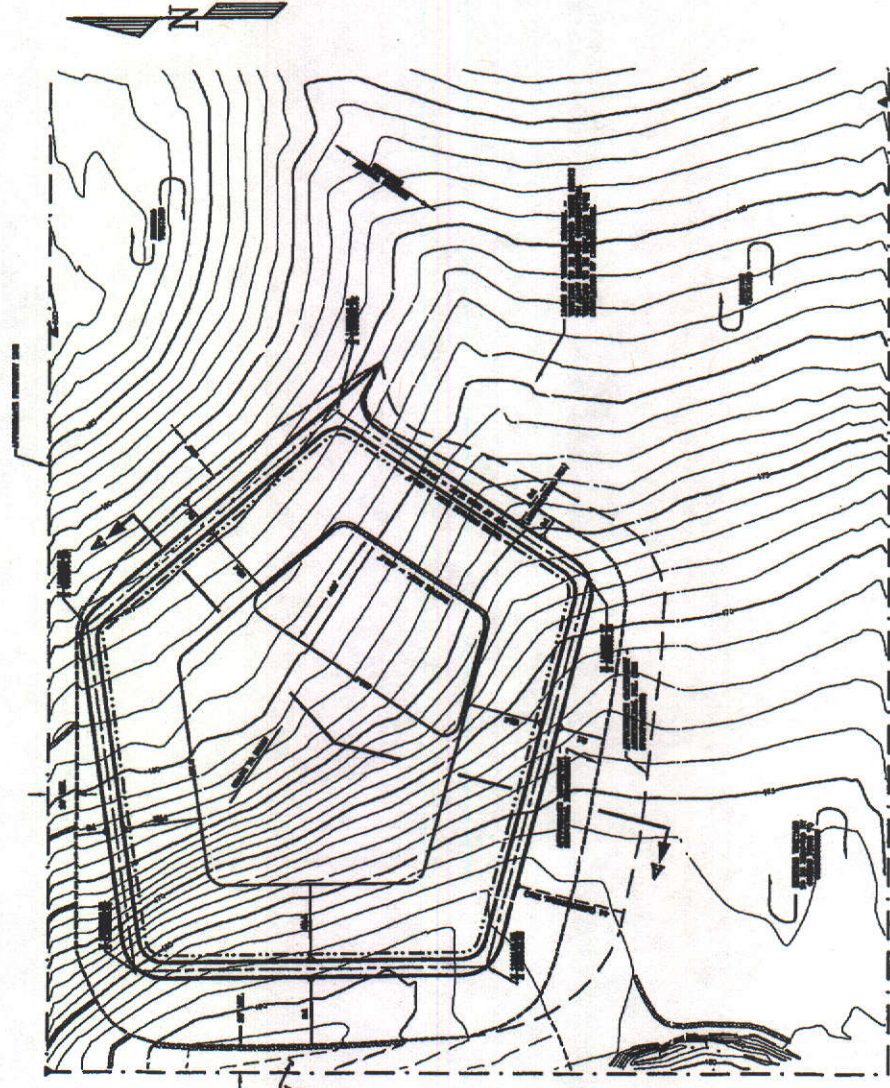


LEGEND

1. EXISTING TOPOGRAPHY
 2. EXISTING GRADE
 3. PROPOSED GRADE
 4. PROPOSED EMBANKMENT
 5. PROPOSED CUTS
 6. PROPOSED DRAINAGE
 7. PROPOSED STRUCTURES
 8. PROPOSED ACCESS ROADS
 9. PROPOSED UTILITY LINES
 10. PROPOSED FENCE LINE
 11. PROPOSED PROPERTY LINE
 12. PROPOSED ADJACENT PROPERTY
 13. PROPOSED ADJACENT ROAD
 14. PROPOSED ADJACENT CREEK
 15. PROPOSED ADJACENT WETLANDS
 16. PROPOSED ADJACENT WOODLAND
 17. PROPOSED ADJACENT OPEN SPACE
 18. PROPOSED ADJACENT AGRICULTURE
 19. PROPOSED ADJACENT INDUSTRIAL
 20. PROPOSED ADJACENT RESIDENTIAL

1. EXISTING TOPOGRAPHY
 2. EXISTING GRADE
 3. PROPOSED GRADE
 4. PROPOSED EMBANKMENT
 5. PROPOSED CUTS
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1. EXISTING TOPOGRAPHY
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 19. PROPOSED ADJACENT INDUSTRIAL
 20. PROPOSED ADJACENT RESIDENTIAL



EDWARDS ENGINEERING 1000 EAST INDIAN AVENUE RENO, NEVADA 89502 (775) 785-1111	WATER STORAGE RESERVE GRADING PLAN	1	KIDDER CREEK FERRIS VINEYARD 2104 EAST INDIAN AVENUE RENO, CALIFORNIA
		PLAN 1-1	

EXHIBIT 1



Exhibit 2b - Upstream of proposed point of diversion (Item 7b)

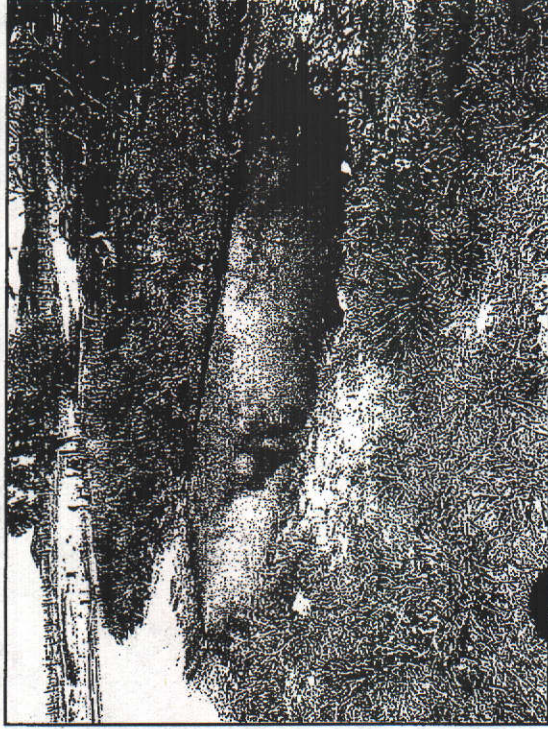


Exhibit 3 - Location of point of diversion (Item 10)



Exhibit 2a - Downstream of proposed point of diversion. (Item 7a)

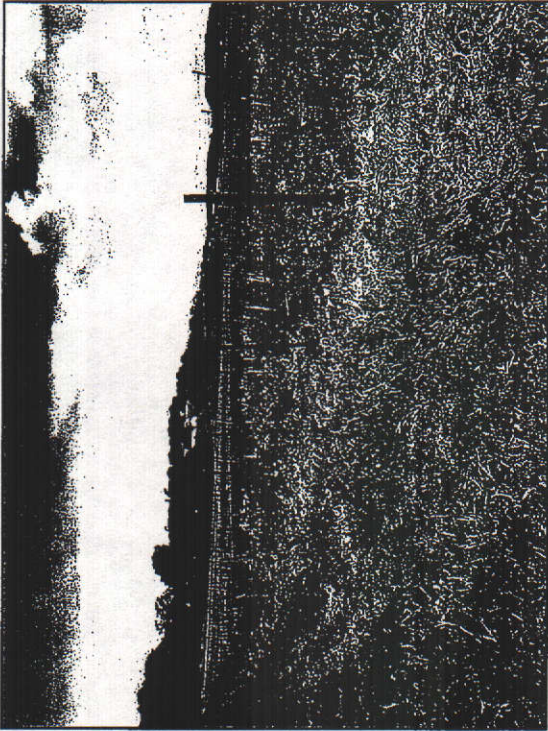


Exhibit 2c - Place where water is to be used (Item 7c)

APPENDIX E
Site Photos



Downstream of Proposed Diversion



Upstream of Proposed Diversion



Location Where Water is to be Used



Location of Point of Diversion