

# INITIAL STUDY - DRAFT MITIGATED NEGATIVE DECLARATION



## Tuolumne Utilities District San Diego Raw Water Siphon Replacement

### **Lead agency name and address:**

Tuolumne Utilities District  
18885 Nugget Boulevard  
Sonora, CA 95370

### **Contact person and phone number:**

Kelly Stuart Klyn, (209) 532-5536, ext. 511

### **Project Description:**

The Tuolumne Utilities District owns and operates a 12" diameter welded steel and transite (asbestos-concrete) pipeline which transports raw water below the San Diego Reservoir on the Columbia College campus. The District intends to replace the old pipe with 12" PVC pipe. The total length of new pipeline would be +/-1,030 lineal feet. The construction will involve trenching approximately 4 feet deep, placing sand bedding in the bottom of the trench, laying the pipe, and backfilling to the original grade. It is expected that no trees will need to be removed, however, some branches will need to be trimmed, and some brush and berry vines will need to be removed. The District plans to abandon the old pipe in its current location. Any transite pipe that is intercepted by the new trench will be cut and removed and hauled to the TUD yard for proper handling and disposal. Construction is expected to take approximately two weeks and is anticipated to start towards the end of this summer.

### **Location:**

On the Columbia Community College property situated within the NW ¼ of Sec. 13, T. 2N. R.14 E., M.D.B.&M., Tuolumne County, California. APN: 032-150-77. See attached maps.

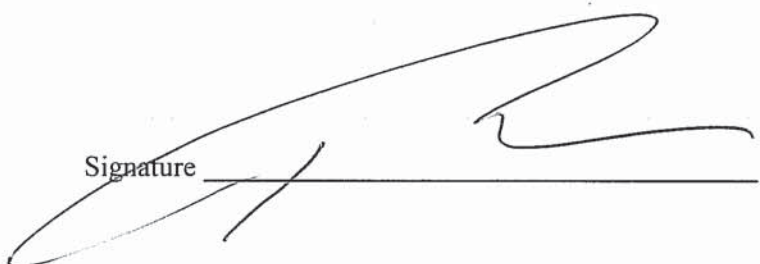
### **General Setting:**

The elevation of the project is approximately 2,300 feet above sea level. The project site is situated in the upper portions of the drainage known as Columbia Gulch, just below (to the southwest of) the San Diego Reservoir. The local bedrock is of the Calaveras Formation, and consists of limestone marble and schist overlain with red Paleolithic clay soils. Karst topography, including limestone caves and sinkholes, is common in the area. An intermittent watercourse crosses the project site. Biological community types in the vicinity of the project site also include foothill riparian woodland, foothill oak woodland, emergent wetland, mixed conifer forest, and chaparral.

**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 the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.
- I find 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" effect on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature   
Printed Name Peter Kampa

Date June 28, 2011  
For Tuolumne Utilities District

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

**Impacts and Mitigation**

**I. AESTHETICS.**

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

**Discussion:**

There would be no impact to scenic vistas from the proposed project. The site is located below the top of the dam of the San Diego Reservoir and near a drainage on the Columbia College campus. The site is not visible from any public roads.

Trenching and construction will be done by Tuolumne Utilities District's work crews. The project will require minor brush removal and trimming several tree branches which will temporarily affect the visual quality of the site. The alignment of the new pipe is mostly along an existing dirt roadway and a benched area where the existing pipeline is located. Two sloped areas will be reseeded for erosion control. Once the work is completed, the proposed pipeline will not be visible.

**Mitigation:** None required.

**II. AGRICULTURAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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"/>	<input checked="" type="checkbox"/>

**Discussion:**

According to the California Department of Conservation, Division of Land Resource Protection, Tuolumne County Important Farmland 1998 map, the project site is not located in an area

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

designated as farmlands. The college is zoned for public use. Replacement of the siphon pipeline will not directly or indirectly result in any conversions of farmland within the project area.

**Mitigation:** None required.

**III. AIR QUALITY.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

The proposed project is located within the “Mountain Counties” Air Basin, which includes Amador, Calaveras, El Dorado, Mariposa, Nevada, Placer, Plumas, Sierra, and Tuolumne counties. This Air Basin is regulated by the Tuolumne County Air Pollution Control District (APCD).

Implementation of the project will result in incremental, temporary increases of emissions due to short-term and limited construction activities. These activities will include mobile heavy equipment usage during construction, truck travel associated with transporting construction materials, and construction employee travel to and from the construction site. Construction equipment, such as trucks, backhoes and other equipment powered by internal combustion engines, would incrementally increase the emissions of carbon monoxide (CO), dust or particulate matter less than or equal to 10 microns in diameter (PM10), oxides of nitrogen (NOx) and reactive organic gasses (ROG) by a minimal amount.

There are college campus buildings within a 1,000’ radius of the project site. These are considered sensitive receptors. Due to the limited amount and short duration of construction activities, substantial amounts of pollutants that may affect sensitive receptors should not result from construction activities associated with the proposed project. In order to minimize emissions during construction activities, the District’s work crews will comply with criteria established by the Tuolumne County Air Pollution Control District. Because construction emissions would be short-term in nature, these impacts are not considered significant.

Once completed, operation of the proposed project will not generate criteria air pollutants in quantities that exceed the significance criteria established by any other applicable state or federal agency.

**INITIAL STUDY**  
**San Diego Siphon Replacement and Realignment**

Any potential air emissions to result from the construction and operation of the project will not violate air quality standards, or contribute substantially to existing air quality violations. While construction activities associated with this project will result in incremental, temporary increases of emissions due to short-term and limited construction activities, it is not expected that such emissions will create objectionable odors affecting a substantial number of people.

**Mitigation:**

The District's crews will perform the necessary work and will therefore be responsible for the control of dust produced by earthwork and construction activities at the site. The District anticipates this project will be done during the Summer/Fall season of 2011. If natural precipitation does not provide adequate moisture for dust control, a watering device, such as a watering truck will be employed, and the work area will be sprayed at the site at the end of each workday, and at intervals, as needed.

**IV. BIOLOGICAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive Natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

This project consists of trenching approximately 4 feet deep, placing sand bedding in the bottom of the trench, laying the pipe, and backfilling to the original grade. It is expected that no trees will need to be removed; however, brush and berry vines will need to be removed. Construction is expected to take approximately two weeks and is anticipated to start towards the end of summer 2011. Nearly all of the proposed route is along previously disturbed road and benched areas for existing pipeline, with the exception of approximately 85'.

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

The work area was surveyed by Dr. Thomas S. Hofstra, PhD, and a Biological Assessment was prepared by his firm, Sierra Botanical Consulting (see attached). No Special Status species were found during the field survey of the site, although there are 62 species that are known to occur within a nine-quad area (nine square miles) surrounding the site. All species identified in the CNDDDB and CNPS search were targeted during the field survey. Field surveys were conducted on March 15th and April 6th, 2011.

The Tuolumne County Wildlife Handbook indicates that the wildlife habitats located around the project site are “third and fourth priority common habitats”. Third priority is defined as having considerable value to wildlife but not as rare or vulnerable to human activities as other identified “target” habitats. Fourth priority habitats are of relatively low value to wildlife. The County Wildlife map classifies the immediate vicinity as Ponderosa Pine (3<sup>rd</sup> priority) and Residential-Park (4<sup>h</sup> priority).

There will be no impact to wetlands as defined by Section 404 of the Clean Water Act. A small wetlands is located adjacent to the project site, however since the proposed work will be within the footprint of an existing access road there will be minimal impacts. There will be no impact to the movement of any native resident or migratory fish or wildlife species or with the established native resident or migratory wildlife corridors.

Oak woodland was found on the site, but is not expected to be impacted by the project. Some trimming of tree branches will be necessary but no trees will be removed.

**Mitigation:**

1. Should bats be found during project activities, work will cease until a qualified biologist can identify the bat species and if necessary, recommend further mitigation measures.
2. Should an occupied raptor or migratory songbird nest be found, all work will cease until the nest is abandoned.
3. Should cavern openings be discovered during project activities, work will cease until a qualified biologist can assess the potential impact to cave dwelling species.
4. Avoidance of an adjacent wetland.

**V. CULTURAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or				

**INITIAL STUDY**  
**San Diego Siphon Replacement and Realignment**

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| unique geologic feature?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Discussion:**

The proposed project is located within a historic mining landscape, which has not been evaluated as a historical resource. The landscape appears to be eligible for the California Register of Historical Resources, and possibly the National Register of Historic Places. The pipeline replacement is anticipated to be less than significant, however, prior to commencing construction activities, a qualified cultural resources specialist will be contracted by Tuolumne Utilities District to conduct a records search, survey the work site, and conduct construction monitoring.

**Mitigation:**

A qualified cultural resources specialist will be contracted to conduct a records search, survey the work site, and conduct construction monitoring. If buried cultural materials are unearthed during construction, work will be halted in the vicinity of the find until a qualified archaeologist can assess their nature and significance. If human remains are unearthed during construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98.

**VI. GEOLOGY AND SOILS.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

There are no known currently active faults within or adjacent to the proposed project site. The project site is located in Seismic Zone III, having minimal seismic activity. No potentially

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

liquefiable soils have been encountered at the project site. No evidence of past slope failure or unstable ground was noted along the pipeline route.

The construction will occur during the dry season. The proposed pipeline is located along an existing access road and an area that was previously benched for the existing pipeline. After installation of the pipeline, the trench will be backfilled and erosion protection - straw wattles, reseeding, and placement of water bars - will be done on slopes as needed to prevent erosion. The proposed project site is not located in an area with unstable geologic formations, or unstable soils.

**Mitigation:**

Placement of wattles and/or water bars and reseeding of slopes as needed along the proposed pipeline.

**VII. HAZARDS AND HAZARDOUS MATERIALS.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
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"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project in the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

Portions of the old pipeline to be replaced is transite material, which contains asbestos fibers. The District intends to abandon the old pipeline in place. If any transite is intercepted by the trench for the new pipeline, it may need to be cut. In that event, it will be removed and hauled to

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

the TUD yard for proper handling and disposal. There are no hazardous materials anticipated for the installation of the proposed pipe.

The project will not result in the emission of hazardous materials or the handling of hazardous or acutely hazardous materials. The site is not included on any lists of hazardous materials site compiled pursuant to Government Code Section 65962.5.

It is located approximately 1.5 miles from the Columbia Airport and there are no private airstrips in the project vicinity, and no safety hazards associated with airstrip activity.

The project will not impair implementation of or physically interfere with emergency response plans and emergency evacuation plans. A water truck will be on-site for dust control as needed.

**Mitigation:** None required.

**VIII. HYDROLOGY AND WATER QUALITY.**

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

**Discussion:**

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

Erosion control measures will be used to prevent significant impact to water quality and comply with waste discharge requirements. Placement of fill over the pipeline not alter the existing drainage pattern of the site, or alter the course of any ephemeral drainages in a manner that would result in substantial erosion or siltation on- or off-site.

The project will not be conducive to creating a substantial increase in the rate or amount of surface runoff that will cause flooding on- or off-site.

There are no identified flood hazard areas shown on the 1990 federal Flood Insurance Rate Map, Community Panel Number 060411-0200 B. The work area is below the dam of the San Diego Reservoir, and adjacent to the toe of the slope of the dam. The proposed trenching will not affect the integrity of the dam.

**Mitigation:**

Placement of wattles and/or water bars and reseeding of slopes as needed along the proposed pipeline.

**IX. LAND USE AND PLANNING.**

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

**Discussion:**

There will be no direct or indirect impacts to established communities resulting from this project. It does not conflict with land use plans, habitat conservation plans or natural community conservation plans

**Mitigation:** None required.

**X. MINERAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would				

**INITIAL STUDY**  
**San Diego Siphon Replacement and Realignment**

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| be of future value to the region and the residents of the state?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Discussion:**

The Tuolumne County Community Development Department reviewed the project site in relation to local mineral site maps. There is historic mining evidence near the project site, but there will be no impact resulting from the loss of availability of known mineral resources resulting from the project.

**Mitigation:** None required.

**XI. NOISE.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

Implementation of the proposed project will include construction activities such as excavation and trenching, and is expected to result in intermittent and temporary increases in ambient noise levels in the project vicinity. The application of standard conditions and implementation of mitigation measures will reduce impact levels to less than significant. Once construction activities on the proposed project are complete, management and operation of the water pipeline will not generate noise levels in excess of these standards.

Noise exposure levels will not be exceeded in accordance with Caltrans Standard Specifications regarding acoustic muffling of heavy equipment. Temporary short-term impacts from the trenching and installation of pipelines will be reduced to less than significant levels by restricting

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

the hours of construction as described below.

**Mitigation:**

All grading and other machinery associated with site development processes will be acoustically muffled in accordance with Caltrans Standard Specifications. Temporary short-term impacts will be reduced to less than significant levels by restricting the hours of construction to 7:00 a.m. to 6:00 p.m. Monday through Friday and no construction will occur on Sundays and Holidays. Limited work on Saturdays may occasionally be necessary.

**XII. POPULATION AND HOUSING.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly or indirectly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

The proposed project will not increase capacity of the San Diego Ditch and will not induce growth directly or indirectly.

**Mitigation:** None required.

**XIII. PUBLIC SERVICES.**

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

**Discussion:**

INITIAL STUDY  
San Diego Siphon Replacement and Realignment

The proposed project will not result in substantial adverse physical impacts to public services. The construction of the pipeline will not require upgrades to the governmental facilities in order to maintain acceptable service ratios, response times and/or performance objectives. The project will not require a need for increased public services beyond those already anticipated in County planning documents. There will be no impacts or any necessary upgrades to fire protection, police protection, schools, parks, and other public facilities.

**Mitigation:** None required.

**XIV. RECREATION.**

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

**Discussion:**

The proposed project will not result in any increases to use of any existing recreational facilities, and does not include the construction or expansion of any existing recreational facilities. An existing walking trail through the project site will be reestablished once the construction of the proposed pipe is completed.

**Mitigation:** None required.

**XV. TRANSPORTATION / TRAFFIC.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Cause an increase in traffic which 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"/>	<input checked="" type="checkbox"/>
b) 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"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**INITIAL STUDY**  
**San Diego Siphon Replacement and Realignment**

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Discussion:**

The proposed project does not involve modifications to traffic or transportation facilities, and will not result in any permanent changes to traffic loads or to transportation facilities.

**Mitigation:** None required.

**XVI. UTILITIES AND SERVICE SYSTEMS.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have significant water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:**

The purpose of the project is to maintain existing raw water infrastructure.

**Mitigation:** None required.

**XVII. MANDATORY FINDINGS OF SIGNIFICANCE.**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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**INITIAL STUDY**  
**San Diego Siphon Replacement and Realignment**

- 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?
- b) Does the project have impacts which 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)
- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

**Discussion:**

- a) The proposed project does not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community. A temporary impact to the quality of the environment during construction will be less than significant.  
  
 Without excavation throughout the project site, it is impossible to conclude that the potential for eliminating important examples of the major periods of California history or prehistory does not exist. With the implementation of the mitigation measures provided, impacts to biological resources, cultural resources, and water quality will be reduced to less than significant.
- b) The proposed project does not have impacts that are individually limited, but cumulatively considerable.
- c) The proposed project does have some potential to result in environmental effects that may cause adverse effects on human beings, specifically, potential exists for exposure of sensitive receptors to substantial pollutant concentrations in the form of dust during construction activities, and exposure to substantial noise levels during construction activities. With the implementation of the mitigation measures provided, potential for impacts may be reduced to less than significant.

**AGENCIES CONTACTED:**

1. Tuolumne County Community Development Department – Planning Division
2. Tuolumne County Air Pollution Control Board
3. Tuolumne County Historical Society
4. Tuolumne Heritage Committee
5. California Department of Fish and Game
6. Central Sierra Environmental Resource Center
7. Sierra Club
8. Columbia College

# Biological Assessment

for

## San Diego Siphon Replacement and Realignment

Prepared by:  
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### INTRODUCTION

#### Proposed Project Description

The Tuolumne Utilities District owns and operates a 12" welded steel and transite raw water pipeline below the San Diego Reservoir on Columbia College property. Approximately 520 lineal feet of 12" welded steel pipe was installed by PG&E in 1951 to replace the badly corroded 10" riveted steel pipe that had been in service since 1910-1920. In 1972, PG&E came back and added another 275 lineal feet of transite pipe to where they had left off with their welded steel pipe. These sections of pipe are still in service and badly in need of replacement.

The District intends to replace the welded steel, transite, and an additional section of old pipe with one continuous length of 12" PVC pipe. The total length of new pipeline would be +/-1,030 lineal feet. The construction will involve trenching approximately 4 feet deep, placing sand bedding in the bottom of the trench, laying the pipe, and backfilling to the original grade. It is expected that no trees will need to be removed, however brush and berry vines will need to be removed. Since transite pipe contains asbestos fibers the District plans to abandon the old pipe in its current location. Any transite pipe that is intercepted by the new trench will be cut and removed and hauled to the TUD yard for proper handling and disposal. Construction is expected to take approximately two weeks.

#### Location and Setting

The project site is located, approximately 3/4 miles southeast of Columbia, California, in the northwest ¼ of Section 13, Township 2 North (T.2N), Range 14 East (R.14E) (Mount Diablo), Columbia Quadrangle, at an elevation of approximately 2200 feet.

The project site is situated in the upper portions of the drainage known as Columbia Gulch, just below (to the southwest of) the San Diego Reservoir. The

local bedrock is of the Calaveras Formation, and consists of limestone marble and schist overlain with red Paleolithic clay soils. Karst topography, including limestone caves and sinkholes, is common in the area. An intermittent watercourse crosses the project site. Biological community types in the vicinity of the project site also include foothill riparian woodland, foothill oak woodland, emergent wetland, mixed conifer forest, and chaparral.

## **METHODS**

Prior to the field survey, preliminary research was conducted consisting of consultation of available databases, references, documents, experts, aerial photos, maps, and other available sources of information pertaining to Special Status species and habitats known or suspected to occur within the project area. Nine-quad database searches centered on the Columbia quad were conducted of The California Department of Fish and Game Natural Diversity Database (CNDDDB) and the California Native Plant Society's Inventory of Rare and Endangered Plants of California. These searches identified 62 Special Status species that are known to occur in the nine-quad area including three amphibians, ten arthropods, seven birds, two fish, seven mammals (all bats), seven mollusks (six snails and a clam), two reptiles, and 23 plant species. All species identified in the CNDDDB and CNPS search were targeted during the field survey. Field surveys were conducted on March 15th and April 6th, 2011.

## **RESULTS**

The vegetation within and surrounding the site consists primarily of an intergrading mixture of foothill oak woodland, mixed conifer forest, foothill riparian woodland and chaparral communities.

Foothill Oak Woodland: Over-story tree species in the oak woodland include *Quercus kelloggii* (black oak), *Q. wislizeni* (interior live oak), *Q. chrysolepsis* (canyon live oak), and *Pinus sabiniana* (foothill gray pine). Shrubby species *Toxicodendron diversilobum* (poison oak), and *Aesculus californica* (California buckeye) dominate the understory.

Mixed Conifer Forest: *Pinus ponderosa* (ponderosa pine), *P. lambertiana* (sugar pine), *Calocedrus decurrens* (incense cedar), and black oak dominate the mixed conifer forest community type in the project vicinity.

Foothill Riparian Woodland: Riparian woodlands are adapted to lake and stream bank conditions, including a shallow water table and a perennial water supply. The riparian woodland that occurs on the project site is found within 30 feet of the watercourse. *Alnus rhombifolia* (white alder), *Salix gooddingii* (black willow) and *Prunus* sp. (cherry) dominate the canopy of the riparian woodland, while shrubby

species *Rubus discolor* (Himalayan blackberry), *R. lacinatus* (cut-leaved blackberry) and *Woodwardia fimbriata* (giant chain fern) occupy the understory.

Chaparral: Shrubby species dominate the chaparral community, including *Arctostaphylos viscida* (white-leaf manzanita), *Cercocarpus betuloides* (birch-leaf mountain mahogany), *Heteromeles arbutifolia* (toyon), and *Ceanothus cuneatus* (buckbrush).

Herbaceous species commonly occurring on the site are listed in table 1.

#### Special Status Plants and Animals

A search of the California Fish and Game California Natural Diversity Database (CNDDDB ) for Special Status species that are known to occur in the nine-quad area identified three amphibians, ten arthropods, seven birds, two fish, seven mammals (all bats), seven mollusks (six snails and a clam), two reptiles, and 23 plant species (see tables 2 and 3).

All species identified in the preliminary research were targeted during the field survey. No Special Status species were found during the field surveys.

#### Water Features

Wetlands, riparian areas, and aquatic habitats are protected by state and federal laws.

A watercourse occurs on the project site. The new pipeline would roughly parallel the drainage for about half the project's length, and cross it in two places (both where an existing access road and sewer line cross the drainage).

Much of the topography of the drainage may have been artificially constructed in the course of intensive placer mining activity dating back to the 1850's. It is probable that this is not a naturally occurring drainage, but rather the product of hydraulic mining, since it originates at the outflow of the San Diego Ditch into the San Diego Reservoir, both of which were constructed in the 1850's. The primary use of water conveyed by the mining ditch was for hydraulic mining through the technique of directed erosion, where water was released or directed from ditches, down over hillsides, and into sluice boxes. Furthermore, the watershed area above the drainage is likely not large enough to naturally produce the current base flows observed in the drainage.

The watercourse in question begins at the San Diego Reservoir dam spillway and continues through the project area. A significant portion (perhaps all) of flows are leaks or overflow from the TUD system. Seeps in the area below the dam maintain soil moisture in the drainage course during the dry season. The seeps most likely are leakage from the San Diego Reservoir as well as from the current

siphon pipe, which leaks in several locations. Precipitation and overflow from the reservoir contribute to storm flows in the wet season and when the reservoir is spilling. Along the project site, the stream's flow is intermittent with perennial pools.

An unpaved access road (along which the new pipe is to be aligned), crosses the watercourse in two places. The upstream crossing (figures 1-3) incorporates a small culvert, and water does not flow over the road surface under base flow conditions.

Immediately downstream of this crossing is a very small (about 400 square feet) jurisdictional wetland. The wetland is located between the upstream and downstream road crossings. A wetland is characterized by saturated soils, wetland hydrology and water-loving (hydrophytic) plants. All three criteria were observed at this location. The wetland is of the type known as an emergent wetland and is characterized by the occurrence of the wetland indicator species *Typha latifolia* (broad-leaved cattail), and *Juncus balticus* (Baltic rush).

The downstream access road crossing is a ford over an un-vegetated, muddy streambed (figures 4-6). The bed and banks of the watercourse in this area are highly disturbed by vehicle and foot traffic. Large pieces of woody debris have been crudely placed to aid in passage by foot. Immediately below the ford, flows are contained in a concrete ditch and, which exits the project area.

After leaving the project area the concrete lined watercourse flows into a vertical drain and culvert, which daylight into an intensively mined area of exposed limestone outcrops known as the "labyrinth", near the northern campus boundary. Off the project site, some flows are also diverted via a culvert from the concrete lined ditch into the campus' abandoned wastewater treatment pond, supporting an ephemeral pond, a small wetland and a riparian woodland.

Fish do not usually occur in the watercourse, however on several recent occasions it was observed that small bluegill were swept over the spillway of the reservoir and were washed downstream as far as the downstream access road crossing. They usually do not survive for more than a week after being swept over the spillway.

Several types of amphibians are associated with the watercourse. Among these are *Pseudacris regilla* (Pacific tree frog), (*Rana catesbeiana*) American bullfrog, *Ensatina eschscholtzii xanthoptica* (yellow-eyed ensatina), and *Batrachoseps* sp. (slender salamander).

Karst Topography: Karst topography is characterized by limestone bedrocks within which caves and sinkholes occur. Although karst topography is not a protected habitat, a number of Special Status species use karst topography as

habitat. Eight Special Status cave inhabiting arthropods (insects, spiders, crustaceans and pseudoscorpions) are known from the nine-quad area within which the project site occurs. Caves are common in the area, but none were found in the vicinity of the project site.

Raptors/Migratory Songbirds: Raptors and migratory songbirds are protected in general under a number of state and federal laws. No raptors or nests were observed during the survey, however potential habitat for raptors as well as migratory songbirds occurs on the site. Since project activities will occur in the late summer, outside the nesting season, no impacts to raptors or migratory songbirds are expected. Should occupied nests be found, all work on the site should cease until the nest is abandoned.

Birds observed during in the vicinity of the project site include black-headed phoebee (nesting on light fixture on the side of the water treatment plant shack), acorn woodpecker (acorn cache in utility pole at top of access road), red-shouldered hawk, American gold finch, spotted towhee, California towhee, turkey vulture, cooper hawk, Canada goose, bushtit, and Anna's hummingbird.

Bats: Seven of the animal species (all the mammals) identified as Special Status species known to occur in the nine-quad area are bats. Potential bat habitat occurs on the project site. Depending on the species, bats may use structures, rock crevices, caves, and trees as roosting or resting sites. Bats may use the area for foraging. Despite careful targeted investigation of potential roosting and resting sites, no bats or signs of bats were found during the survey. Should bats be found during project activities on the site, work should cease until a qualified biologist can identify the bat species and if necessary recommend further mitigation measures.

#### Rare Soil Communities

No rare soil types (e.g. serpentine, lone clay, Mehrten formation, basalt lava cap, or other volcanic soils) were found to occur on the project site.

## CONCLUSIONS and RECOMMENDATIONS

- The project site includes a watercourse that would be crossed twice by the proposed pipeline. California Department of Fish and Game (DFG) Code (Section 1602) requires an entity to notify DFG of any proposed activity that may substantially modify a river, stream, or lake.

Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will: substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or substantially divert or obstruct the natural flow of any river, stream or lake; deposit or dispose of debris, waste, or other material containing crumbled, flaked,

or ground pavement where it may pass into any river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

If you are planning an activity that requires DFG notification, you will need to provide your regional DFG office with a completed notification form and the corresponding fee.

If DFG determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. The Agreement includes reasonable conditions necessary to protect those resources and must comply with the California Environmental Quality Act (CEQA). The entity may proceed with the activity in accordance with the final Agreement.

For more information contact:

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California Department of Fish and Game  
Central Region (4)  
1234 E. Shaw Ave.  
Fresno, CA 93710  
(559) 243-4005 ext. 151  
FAX: (559) 243-4022

- A small jurisdictional wetland is located adjacent to the project site. Given that the project will remain within the footprint of the current access road it is unlikely that the wetland will be impacted. However, it is important to be aware that it is unlawful to fill a wetland unless appropriate permits are obtained (Clean Water Act, Section 404).
- To minimize impacts to the watercourse, stay within the current footprints of the road crossings.
- Restore road-crossings to current conditions to avoid altering hydrology of the watercourse. Alternatively, given DFG approval, replacing the ford with a culvert would protect the stream from further impacts from vehicle travel.
- To further protect the watercourse, wetland, and riparian woodland from impacts to unnecessary vehicle travel in the future, consider placing barriers (e.g. gate or chain) at each end of the access road.
- No Special Status Species were discovered on the site

- Oak woodland occurs on the site. California law requires that significant impacts to oak woodland be mitigated. No oaks are planned to be removed and no impacts to oak woodland are expected.
- Should cavern openings be discovered during the project activities, work should cease until a qualified biologist can assess the potential impact to cave dwelling species.
- Should occupied raptor or migratory songbird nests be found, all work on the site should cease until the nest is abandoned.
- Should bats be found during project activities on the site, work should cease until a qualified biologist can identify the bat species and if necessary recommend further mitigation measures.

## REFERENCES

California Natural Diversity Database (CNDDDB). 2011. California Department of Fish and Game's Natural Heritage Program. Sacramento, California.

Federal Interagency Committee for Wetlands Delineation, 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. US Government Printing Office, Washington D.C., 76 pp.

Inventory of Rare and Endangered Plants (IREP). 2006. California Native Plant Society. Version 7-06c. Sacramento, California.

Sawyer, J. O., and Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society. Sacramento, California.

Storer, T.I., Usinger, R.L., and Lukas, D. 2004. Sierra Nevada Natural History. California Natural History Guides. University of California Press. Berkeley, California.

Table 1. Herbaceous plant species commonly encountered within the project site

Scientific Name	Common Name	native/exotic
<i>Achillea millefolium</i>	yarrow	native
<i>Agoseris retorsa</i>	mountain dandelion	native
<i>Artemisia douglasiana</i>	Mugwort	native
<i>Asclepias cordifolia</i>	purple milkweed	native
<i>Avena barbata</i>	slender wild oat	exotic
<i>Brodiaea elegans</i>	harvest brodiaea	native
<i>Calochortus monophyllus</i>	yellow star tulip	native
<i>Carex integra</i>	sedge	native
<i>Calochortus venustus</i>	butterfly mariposa lily	native
<i>Calochortus monophyllus</i>	yellow star-tulip	native
<i>Castilleja applegatei</i> spp. <i>pinetorum</i>	Applegate's paintbrush	native
<i>Centaurea solstitialis</i>	yellow star-thistle	exotic (weed)
<i>Chloragalum pomeridianum</i>	soap plant	native
<i>Clarkia dudleyana</i>	farewell-to-spring	native
<i>Claytonia perfoliata</i>	miner's lettuce	native
<i>Convovulus arvensis</i>	bind weed	exotic (weed)
<i>Dactylis glomerata</i>	orchard grass	exotic
<i>Dichelostemma capitatum</i>	blue dicks	native
<i>Dodecatheon hendersonii</i>	Henderson's shooting star	native
<i>Eriophyllum lanatum</i>	wooly sunflower	native
<i>Erodium botrys</i>	stork's bill	exotic
<i>Gallium aparine</i>	goose grass	native
<i>Gallium nuttallii</i> ssp. <i>nuttallii</i>	bedstraw	native
<i>Geranium dissectum</i>	cranesbill	exotic
<i>Hordeum murinum</i>	foxtail	exotic
<i>Juncus balticus</i>	Baltic rush	native
<i>Lathyrus latifolius</i>	perennial sweet pea	exotic
<i>Lithophragma bolanderi</i>	Bolander's woodland star	native
<i>Lomatium utriculatum</i>	Foothills lomatium	native
<i>Lupinus benthamii</i>	Bentham's lupine	native
<i>Lupinus bicolor</i>	miniature lupine	native
<i>Nemophila heterophylla</i>	baby white-eyes	native
<i>Pallaea mucronata</i>	bird's-foot fern	native
<i>Pentagramma triangularis</i>	goldback fern	native
<i>Phacelia cicutaria</i>	caterpillar phacelia	native
<i>Phacelia heterophylla</i>	virgate phacelia	native
<i>Plagiobothrys nothofulvus</i>	popcorn flower	native
<i>Plantago lanceolata</i>	English plantain	exotic
<i>Plectritis ciliosa</i>	plectritis	native
<i>Potentilla glandulosa</i>	sticky cinquefoil	native
<i>Ranunculus canus</i>	Foothill buttercup	native
<i>Ranunculus occidentalis</i>	western buttercup	native
<i>Rumex crispus</i>	curly dock	exotic

Table 1 (cont.). Herbaceous plant species commonly encountered within the project site

Scientific Name	Common Name	native/exotic
<i>Sanicula bipinnatifida</i>	purple sanicle	native
<i>Sanicula crassicaulis</i>	gamble weed	native
<i>Selaginella hansenii</i>	Hansen's spike-moss	native
<i>Silene californica</i>	California indian pink	native
<i>Solanum xanti</i>	blue witch	native
<i>Trifolium hirtum</i>	rosy clover	exotic (weed)
<i>Tritelia laxa</i>	Ithuriel's spear	native
<i>Typha latifolia</i>	broad-leaved cattail	native
<i>Urtica dioica</i> var. <i>holosericea</i>	hoary nettle	native
<i>Vicia sativa</i>	vetch	exotic
<i>Viola purpurea</i> ssp. <i>purpurea</i>	mountain violet	native
<i>Wyethia mollis</i>	mule ears	native

Table 2. Special Status animal species known to occur in the nine-quad area centered on the project site.

Scientific Name	Common Name	Phyla	Habitat
<i>Rana boylei</i>	foothill yellow-legged frog	amphibian	shallow, slow, gravelly streams and rivers with sunny banks, in forests, chaparral, woodlands
<i>Rana draytonii</i>	California red-legged frog	amphibian	lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog	amphibian	lakes, meadow streams, isolated pools, sunny riverbanks
<i>Aphrastochthonius grubbsi</i>	Grubbs' Cave pseudoscorpion	arthropod	caves
<i>Banksula martinorum</i>	Martins' cave harvestman	arthropod	caves
<i>Banksula melones</i>	Melones Cave harvestman	arthropod	caves
<i>Banksula tutankhamen</i>	King Tut Cave harvestman	arthropod	caves
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	arthropod	vernal pools
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	arthropod	riparian blue elderberry bushes
<i>Larca laceyi</i>	Lacey's Cave pseudoscorpion	arthropod	caves
<i>Pseudogarypus orpheus</i>	Music Hall Cave pseudoscorpion	arthropod	caves
<i>Stygobromus gradyi</i>	Grady's Cave amphipod	arthropod	caves
<i>Stygobromus harai</i>	Hara's Cave amphipod	arthropod	caves
<i>Accipiter gentilis</i>	northern goshawk	bird	woodland/ forest
<i>Agelaius tricolor</i>	tricolored blackbird	bird	wetlands
<i>Athene cucularia</i>	burrowing owl	bird	grasslands
<i>Falco mexicanus</i>	prairie falcon	bird	grasslands / woodlands
<i>Haliaeetus leucocephalus</i>	bald eagle	bird	near lakes and rivers
<i>Pandion haliaetus</i>	osprey	bird	near lakes and rivers
<i>Strix nebulosa</i>	great gray owl	bird	woodland / forest / meadow
<i>Lavinia symmetricus ssp. 1</i>	San Joaquin roach	fish	intermittent streams with
<i>Lavinia symmetricus ssp. 3</i>	Red Hills roach	fish	permanent pools
Big Tree Forest	Big Tree Forest	habitat	crevices in rocky outcrops and cliffs, caves, mines, trees, and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings.
<i>Antrozous pallidus</i>	pallid bat	mammal	
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	mammal	
<i>Euderma maculatum</i>	spotted bat	mammal	
<i>Eumops perotis californicus</i>	western mastiff bat	mammal	
<i>Lasiurus blossevillii</i>	western red bat	mammal	
<i>Lasiurus cinereus</i>	hoary bat	mammal	
<i>Myotis yumanensis</i>	Yuma myotis	mammal	
<i>Ammonitella yatesii</i>	tight coin (=Yates' snail)	mollusk	caves
<i>Anodonta californiensis</i>	California floater	mollusk	lakes and ponds
<i>Monadenia circumcarinata</i>	keeled sideband	mollusk	streams, rivers, ponds and lakes
<i>Monadenia mormonum buttoni</i>	Button's Sierra sideband	mollusk	
<i>Monadenia mormonum hirsuta</i>	hirsute Sierra sideband	mollusk	
<i>Monadenia tuolumneana</i>	Tuolumne sideband	mollusk	
<i>Punctum hannai</i>	Trinity Spot	mollusk	riparian
<i>Actinemys marmorata</i>	western pond turtle	reptile	streams, rivers, ponds and lakes
<i>Phrynosoma coronatum (frontale por</i>	coast (California) horned lizard	reptile	open areas of sandy soil and low vegetation

Table 3. Special Status plant species known to occur in the nine-quad area centered on the project site

Scientific Name	Common Name	Habitat
		vernal pools, grassland
<i>Agrostis hendersonii</i>	Henderson's bent grass	
		serpentine or volcanic soils
<i>Allium jepsonii</i>	Jepson's onion	
		Mehrten formation
<i>Allium tribracteatum</i>	three-bracted onion	
<i>Allium tuolumnense</i>	Rawhide Hill onion	serpentine soils
<i>Arctostaphylos nissenana</i>	Nissenan manzanita	clay soils
<i>Brodiaea pallida</i>	Chinese Camp brodiaea	serpentine streambeds
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	serpentine soils
<i>Clarkia australis</i>	Small's southern clarkia	serpentine soils
		oak-pine woodland, grasslands
<i>Clarkia rostrata</i>	beaked clarkia	
<i>Cryptantha mariposae</i>	Mariposa cryptantha	serpentine soils
<i>Eryngium pinnatisectum</i>	Tuolumne button-celery	vernal pools
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	vernal pools
<i>Erythronium tuolumnense</i>	Tuolumne fawn lily	chaparral, ponderosa pine forests and woodlands
<i>Horkelia parryi</i>	Parry's horkelia	open chaparral
		yellow pine forest
<i>Iris hartwegii</i> ssp. <i>columbiana</i>	Tuolumne iris	
<i>Lomatium congdonii</i>	Congdon's lomatium	serpentine soils
<i>Lupinus spectabilis</i>	shaggyhair lupine	serpentine soils
<i>Mimulus pulchellus</i>	yellow-lip pansy monkeyflower	vernally wet depressions
<i>Mimulus whipplei</i>	Whipple's monkeyflower	yellow pine forest
<i>Monardella douglasii</i> ssp. <i>venosa</i>	veiny monardella	grassland
<i>Scopelophila cataractae</i>	tongue-leaf copper moss	copper mine tailings
<i>Stellaria longifolia</i>	long-leaved starwort	meadows
<i>Verbena californica</i>	Red Hills vervain	serpentine soils

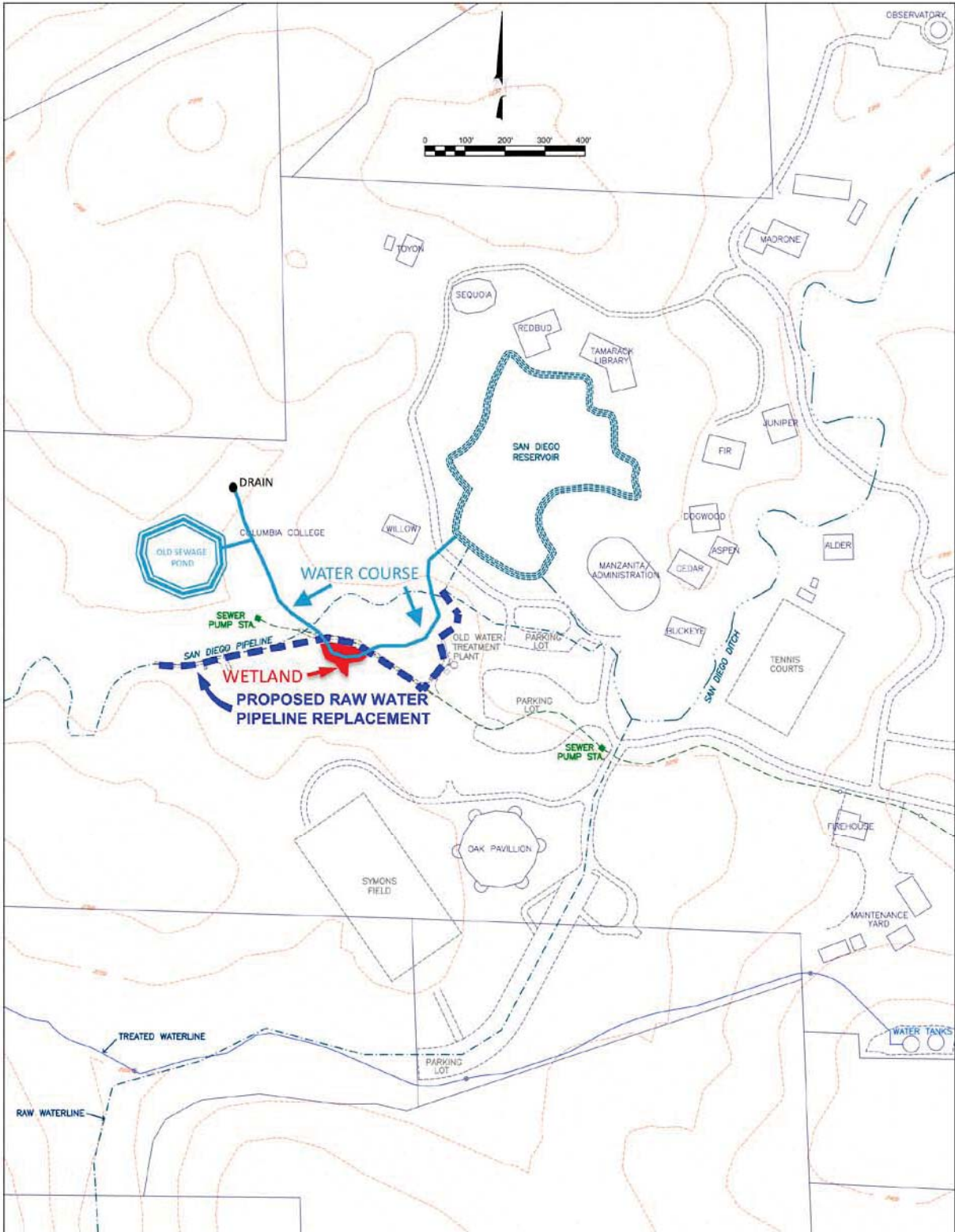




Figure 1: Access road at upper stream crossing (culvert). Looking south.



Figure 2: Looking upstream at upper access road stream crossing.



Figure 3: Looking downstream at upper access road stream crossing.



Figure 4: Access road at lower stream crossing (ford). Looking northwest.



Figure 4: Access road at lower stream crossing (ford). Looking southeast.



Figure 5: Emergent wetland along watercourse between access road crossings.