

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 001		Date: 5/16/11
Project Title:	Calaveras Dam Replacement Project	
MEA Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Booker Holton, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: SFPUC	
Landowner:	SFPUC	East Bay Regional Park District & Garcia Resident
Vegetative Cover/Land Use:	Landscaped, paved, gravel areas; bare soil, disturbed grassland	Net Acreage Affected: 0.005 acre (200 sq. ft.)
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: Project Design
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

This MPM proposes the installation of 13 temporary perimeter air quality monitoring stations at new locations. The proposed locations of these stations and access routes are within and around the perimeter of the Calaveras Dam Replacement Project Work Limit Area (see Figure 1). All of the proposed stations would be accessed using existing roads. The location for each new ambient air quality (A) and perimeter air quality (P) monitoring station is described as follows:

Station A2 - Located on a residential property (Garcia residence), adjacent to an active construction zone.

Station A3 - Located on East Bay Regional Park District property, next to the Interpretive Center building. The proposed station location is 220 feet to the southeast of the existing Baseline Air Quality Monitoring Station 28.

Station A5 - Located at the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol, CA.

Station P2 - Located approximately 0.4 mile south of the Calaveras Dam access road gate, adjacent to Calaveras Road.

Station P3 - Located approximately 420 feet south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road.

Station P4 - Located in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a.

Station P5 - Located adjacent to the Parcel E Trail (Camp Ohlone Road), approximately 0.86 mile north of Calaveras Reservoir in the vicinity of Alameda Creek.

Station P6 - Located approximately 0.31 mile to the northeast of Calaveras Dam adjacent to an existing dirt access road.

Station P7 - Located in the vicinity of Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence.

Station P8 - Located in the vicinity of Calaveras Dam near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7.

Station P9 - Located at the south end of the reservoir near the proposed Borrow Area E.

Station P10 - Located at the south end of the reservoir near the proposed Borrow Area E.

Station P11 - Located near the confluence of Calaveras Creek and Alameda Creek, approximately 0.81 mile north of Calaveras Reservoir.

DESCRIPTION OF AIR QUALITY MONITORING STATIONS

The proposed structures will provide secure locations for pumps and/or meters that will be used to collect air samples for the analyses of asbestos and/or metals. The proposed air quality monitoring stations, as shown in Figure 2, would be identical to the 17 air quality monitoring stations previously installed for this investigation. The proposed stations will reuse/relocate the station structures used in the baseline monitoring, which consist of a 4' x 4' x 6' tall dog kennel enclosed by a chain link fence placed on 4' x 4' concrete pavers and secured by 36" metal stakes for each leg of the cage. The air quality monitoring stations are temporary facilities that would be removed following completion of the Calaveras Dam Replacement Project.

ENVIRONMENTAL IMPACTS

The installation of air monitoring stations is in compliance with perimeter monitoring requirements identified in FEIR Mitigation Measure 5.9.2a to mitigate the impact of a release of airborne naturally occurring asbestos (NOA) and naturally occurring metals during CDRP construction. Each of the proposed air quality monitoring sites is located on level ground, at grade, that would require only minimal site preparation. Anticipated site preparation would include clearing rocks to provide a level surface for the concrete pavers and installation of four steel posts that will support the chain link enclosure. The installation of the 13 air monitoring stations would not result in new or additional impacts to the physical, biological, and cultural historic environment beyond those analyzed in the Calaveras Dam Replacement FEIR.

Biological <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cultural <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Photos <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other <input type="checkbox"/> Yes <input type="checkbox"/> No
Attachments: Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS, March 10, April 22, and April 27, 2011.			
Biological <input checked="" type="checkbox"/> No Resources Present <input type="checkbox"/> Resources Present <input type="checkbox"/> NA			
Previous Biological Survey Report Reference:			
Cultural <input checked="" type="checkbox"/> No Resources Present <input type="checkbox"/> Resources Present <input type="checkbox"/> Within Project APE <input type="checkbox"/> NA (paved/graveled area and no ground disturbance)			
Previous Cultural Survey Report Reference:			

Conditions of Approval or Reasons for Denial

SFPUC Required Signatures for Environmental Approval:

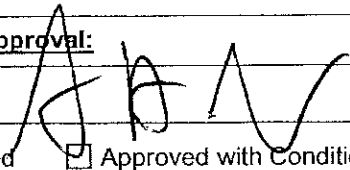
ECCM: Kerry O'Neill Date: 5/16/11

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

MEA Required Signatures for Approval:

Signee:  Date: 5/17/11

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	Each air monitoring station would occupy 16 square feet of surface soil, paved areas, landscaped areas, lawns or disturbed grassland. There would be no surface excavation required to install the stations. There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input checked="" type="checkbox"/> Y	No hazardous materials or wastes would be stored at the air monitoring stations. Equipment and vehicles used to install the stations would contain fuel and other hazardous materials. Impacts associated with accidental release of hazardous materials from equipment are analyzed in the FEIR. As discussed in the FEIR, in accordance with state and federal laws, the spill prevention and control measures identified for the project would be adhered to. As a result, there would be no impacts beyond those identified in the FEIR.
	<input type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	The air monitoring stations would all be installed on flat paved areas, landscaped areas, lawns, of disturbed grassland. The stations would not be located within wetlands, drainage channels, creek beds, or riparian habitat. Each station would be installed on the surface, requiring no excavation or grading, and each would occupy 16 square feet of surface area that would not significantly alter site hydrology. There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	The proposed monitoring station locations are all in previously disturbed areas, primarily adjacent to roads and other facilities. Ground disturbance related to installation of each station would be limited to four 36-inch stakes to secure the station. Each station location was the subject of recent pedestrian surveys (March 10, 2011; April 22, 2011, and April 27, 2011) and no cultural resources were encountered (see attached URS technical memo). Although ground disturbance would be limited, all unexpected discoveries of cultural resources will be handled as per FEIR Mitigation Measure 5.10.2. There would be no new significant cultural resource impacts beyond those analyzed in the FEIR.
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	The proposed monitoring station locations are primarily adjacent to existing paved roads, or interior compacted soil and gravel roads within SFPUC

	<input checked="" type="checkbox"/> N	lands or within the proposed CDRP construction work limits. The installation of air monitoring stations and associated periodic monitoring activities do not necessitate numbers of vehicles that would exceed Level of Service (LOS) and capacity of existing paved roads or contribute to traffic congestion or impede vehicular circulation. There would be no new traffic and circulation impacts beyond those identified in the FEIR.
Air Quality	<input type="checkbox"/> Y	Installation of the air monitoring stations would not involve excavations, soil disturbance, or other potential dust-generating activities. The stations would be installed on grade on flat paved areas, landscaped areas, lawns, of disturbed grassland. No significant fugitive dust emissions are expected. The relatively small number of vehicles or equipment would not result in exhaust emissions that would be beyond what was analyzed in the FEIR. There would be no new air quality impacts.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	The pumps and meters enclosed within the cage air monitoring station structures will be battery powered with motors that are less than 1/20 horsepower. The noise generated by the units will be comparable to a quiet conversation (below 60 decibels) at a distance of 5 feet. The proposed monitoring station locations are all in previously disturbed areas, primarily adjacent to roads and other facilities. There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	Some of the air monitoring stations (A5, P4, P5, P6, P7, P8, P9, P10 and P11) would be located within existing SFPUC property areas (Hetch Hetchy Yard in Sunol or within the proposed construction work limits of the CDRP) or near existing air monitoring stations. Other stations (A2, A3, P2, and P3) would be located at a private residence, on East Bay Regional Park District property, or along Calaveras Road. These stations would be visible to the public. The approximate 6-foot tall, chain link enclosed, 16-square foot stations would not be significantly visually intrusive and would not significantly block views. The surrounding viewshed of each station location would be dominated by existing topography and vegetation. There would be no new significant visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	Each air monitoring station would occupy 16 square feet of surface soil, paved areas, landscaped areas, lawns or disturbed grassland. There would be no surface excavation and no vegetation clearing required to install the stations. Each station location was the subject of recent biological surveys (March 10, 2011; April 22, 2011, and April 27, 2011) and no special-status plant or wildlife species or their habitats, wetlands, riparian habitat, or other sensitive habitat occur within the locations of the air monitoring stations (see attachment URS technical memo). There would be no new significant vegetation or wildlife impacts beyond those analyzed in the FEIR, applicable mitigation measures will be implemented.
	<input type="checkbox"/> N	



Memorandum

Date: May 10, 2011

To: Kerry O'Neill, SFPUC

From: Maureen Kick and Gilda Barboza, URS Corporation

Subject: *Calaveras Dam Replacement Project, Minor Project Modification-Environmental review for additional air quality monitoring station locations*

The San Francisco Public Utilities Commission (SFPUC) has retained URS Corporation (URS) to provide professional engineering and related environmental services for the Final Design phase of the Calaveras Dam Replacement Project (SFPUC Contract No. CS-716). Consistent with the established scope of work, URS evaluated the environmental considerations for 13 new air quality monitoring station locations that would be used during construction. Figure 1 depicts the locations of the proposed monitoring stations and the project vicinity. The UTM coordinates for the proposed air quality monitoring stations are presented in Table 1.

This memorandum summarizes the proposed project modification and environmental information to support an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054. This environmental review memorandum is organized into the following sections:

- 1) Project Description
- 2) Biological Resources, and
- 3) Cultural Resources

PROJECT DESCRIPTION

SFPUC proposes to install 13 temporary air quality monitoring stations at new locations. The proposed locations of these stations and access routes are shown on Figure 1. All of the proposed stations would be accessed using existing roads. The location for each new station is described as follows:

Ambient Air Quality Monitoring Station 2 (Station A2)

The proposed location for the Ambient Air Quality Monitoring Station 2 is on a residential property (Garcia residence), adjacent to an active construction zone.

Ambient Air Quality Monitoring Station 3 (Station A3)

The proposed location for the Ambient Air Quality Monitoring Station 3 is on East Bay Regional Park District property, next to the Interpretive Center building. The proposed station location is 220 feet to the southeast of the existing Baseline Air Quality Monitoring Station 28.

Ambient Air Quality Monitoring Station 5 (Station A5)

The proposed Perimeter Air Quality Monitoring Station 5 is located at the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol, CA.

Perimeter Air Quality Monitoring Station 2 (Station P2)

The proposed location for the Perimeter Air Quality Monitoring station 2 is approximately 0.4 mile south of the Calaveras Dam access road gate, adjacent to Calaveras Road.

Perimeter Air Quality Monitoring Station 3 (Station P3)

The proposed location for the Perimeter Air Quality Monitoring Station 3 is approximately 420 feet south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road.

Perimeter Air Quality Monitoring Station 4 (Station P4)

The proposed location for the Perimeter Air Quality Monitoring Station 4 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a.

Perimeter Air Quality Monitoring Station 5 (Station P5)

The proposed location for Perimeter Air Quality Monitoring Station 5 is adjacent to the Parcel E Trail (Camp Ohlone Road), approximately 0.86 mile north of Calaveras Reservoir in the vicinity of Alameda Creek.

Perimeter Air Quality Monitoring Station 6 (Station P6)

The proposed location for the Perimeter Air Quality Monitoring Station 6 is approximately 0.31 mile to the northeast of Calaveras Dam adjacent to an existing dirt access road.

Perimeter Air Quality Monitoring Station 7 (Station P7)

The proposed location for the Perimeter Air Quality Monitoring Station 7 is in the vicinity of Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence.

Perimeter Air Quality Monitoring Station 8 (Station P8)

The proposed location for the Perimeter Air Quality Monitoring Station 8 is in the vicinity of Calaveras Dam near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7.

Perimeter Air Quality Monitoring Station 9 (Station P9)

The proposed Perimeter Air Quality Monitoring Station 9 is located at the south end of the reservoir near the proposed Borrow Area E.

Perimeter Air Quality Monitoring Station 10 (Station P10)

The proposed location for the Perimeter Air Quality Monitoring Station 10 is at the south end of the reservoir near the proposed Borrow Area E.

Perimeter Air Quality Monitoring Station 11 (Station P11)

The proposed location for Perimeter Air Quality Monitoring Station 11 is near the confluence of Calaveras Creek and Alameda Creek, approximately 0.81 mile north of Calaveras Reservoir.

Other Stations Not Evaluated

Three additional air quality monitoring stations would be located at sites that have been previously evaluated and are therefore not considered in this review:

Ambient Air Quality Monitoring Station 1 (Station A1)

This monitoring station is proposed in the same location as existing Ambient Air Quality Monitoring Station 27.

Ambient Air Quality Monitoring Station 4 (Station A4)

This monitoring station is proposed in the same location as existing Baseline Air Quality Monitoring Station 3.

Perimeter Air Quality Monitoring Station 1 (Station P1)

This monitoring station is proposed in the same location as existing Baseline Air Quality Monitoring Station 16.

Description of Air Quality Monitoring Stations

The proposed air quality monitoring stations would be identical to the 17 air quality monitoring stations previously installed for this investigation. The proposed stations will reuse/relocate the station structures used in the baseline monitoring, which consist of a 4-foot by 4-foot dog kennel enclosed by a chain link fence placed on concrete pavers and secured by 36" metal stakes for each leg of the cage as shown in Figure 2. The air quality monitoring stations are temporary facilities that would be removed following completion of the Calaveras Dam Replacement Project.

The proposed structures will provide secure locations for pumps and/or meters that will be used to collect air samples for the analyses of asbestos and/or metals. The concrete pavers for the outdoor monitoring station will be approximately 4-feet by 4-feet and the chain link enclosure will be approximately 6-feet tall so that air monitoring equipment can be suspended 5 feet above the ground surface. Four, 4-inch diameter steel posts will support the chain link enclosure.

Each of the proposed air quality monitoring sites is located on level ground that would require only minimal site preparation. Anticipated site preparation would include clearing rocks for the concrete pad and installation of four steel posts that will support the chain link enclosure. These components would be removed after completion of the monitoring program.

The proposed air quality monitoring stations will be used to collect air samples for the analyses of asbestos and/or metals. The pumps and meters will be battery powered with motors that are less than 1/20 horsepower. The noise generated by the units will be comparable to a quiet conversation (below 60 decibels) at a distance of 5 feet. The proposed pumps and meters each measure approximately 6 x 6 x 5 inches. The pumps would be connected to the sampling media (clean plastic cassettes that measure approximately 1½ x 1½ x 1½ inches) with a piece of clear tubing that is approximately 2 feet in length and ½ inch in diameter. The cassettes contain a filter that collects the ambient dust for analysis.

BIOLOGICAL RESOURCES

Potential adverse effects to sensitive biological resources were evaluated based upon a review of background information and a field reconnaissance survey. The background research included records from (1) the California Department of Fish and Game's Natural Diversity Database, (2) the California Native Plant Society's On-line Electronic Inventory, (3) the U.S. Fish and Wildlife Service Sacramento Field Office's list of species that may occur within the Calaveras Reservoir and La Costa Valley 7.5 minute USGS quadrangles, (4) the Biological Assessment for the Calaveras Dam Replacement Project (EDAW 2009), (5) the Wetland Delineation for the Calaveras Dam Replacement Project (May and Associates 2006) and the Draft EIR for the Calaveras Dam Replacement Project (SF Planning Department 2009).

Based on the above background research, four federally listed species have the potential to occur in the vicinity of the proposed air monitoring stations:

- Alameda whipsnake (*Masticophis lateralis euryxanthus*) – Federal and State threatened
- California red-legged frog (*Rana draytonii*) – Federal threatened
- California tiger salamander (*Ambystoma californiense*) – Federal and State threatened
- Callippe silverspot butterfly (*Speyeria callippe callippe*) – Federal endangered

URS biologist, Gilda Barboza, conducted a biological field reconnaissance of the proposed air quality monitoring station locations on March 10, April 22, and April 27, 2011. Each of the monitoring station locations was visually inspected. The purpose of the field reconnaissance was to identify potential habitat for the listed and/or sensitive species and sensitive resources (i.e., active nests of migratory birds, wetlands, and other waters) identified during the background research, and to identify locations that would avoid any potential impacts from installation of the proposed stations.

Based on the observations from the field visit, as described below, installation of the monitoring stations at the proposed sites would not affect habitats that are likely to be occupied or utilized by the special status species listed above. In addition, no waters of the U.S. or other wetland resources were identified at the proposed monitoring station locations or in the immediate vicinity of these sites during the field reconnaissance.

Station A2 is located in a heavily disturbed area at a residential property, adjacent to active construction activities. The station would be placed in an open landscaped area, dominated by non-native moss pygmy weed (*Crassula trillaea*). Furthermore, the open area is surrounded by an asphalt and graveled driveway and residential buildings. No sensitive biological resources were observed at this station location.

Station A3 is located within disturbed habitat, in the parking lot of the Sunol Wilderness visitor center and picnic area. The station would be placed within the recreational lawn area designated for the public. Because their location is within previously disturbed habitat, the proposed station would not affect sensitive biological resources.

Station A5 is located within the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol. The proposed station would be placed on the existing gravel surface within the maintenance yard. Adjacent vegetation outside the maintenance yard includes coast live oak, valley oak, non-native grasses,

noxious weeds, and elderberry. Acorn woodpeckers, barn swallows, and European starlings were observed on the adjacent property but no sensitive biological resources were observed at the proposed station location.

Station P2 is in an open grassland area adjacent to Calaveras Road above a ravine. Adjacent vegetation is potentially suitable nesting habitat for migratory birds, however, no bird nests were observed. The proposed location is approximately 100 feet from the margins of the nearest tree canopies. Several ground squirrel burrows were noted nearby, however, no ground squirrel burrows were observed within the proposed station location or the immediate vicinity. No other biological resources were observed at this location.

Station P3 would be located approximately 420 feet to the south of the gate to the Calaveras dam area, on the shoulder of Calaveras Road. The area is previously disturbed from road construction. No burrows or other potential refugia, for California tiger salamander are present. The proposed station location is not habitat for Alameda whipsnake or California red-legged frog. No nesting birds or other sensitive biological resources were observed at this location.

Stations P4 and P5 are located within or adjacent to existing access roads. Station P4 would be located on a flat, grassy area that is heavily used by cattle and is near a feeding/watering station. The ground surface has been significantly disturbed from cattle use. Neither of the proposed locations would disturb burrows or other potential refugia for California tiger salamander. The proposed station locations are not habitat for Alameda whipsnake or California red-legged frog. No nesting birds or other sensitive biological resources were observed at these locations.

Stations P6 and P7 are located adjacent to dirt and graveled roads adjacent to serpentine grasslands and in proximity to serpentine outcrops, suitable for the callippe silverspot butterfly. The proposed locations for both stations were modified to avoid impacts to outcrops of serpentine that potentially support special status plant species. Station P6 is located in an area that is disturbed by cattle activity associated with a nearby feeding/watering station. Station P7 is located immediately adjacent to a gravel road, within an area previously disturbed by road maintenance.

Station P8 would be located adjacent to a dirt access road. No sensitive biological resources were observed at this location. The proposed location is within grasslands near serpentine outcrops but outside the limits of the special status plant populations documented by May and Associates in 2006 that are documented in the DEIR. The proposed location would not affect johnny jump-up (*Viola pedunculata*) that are the host plant of the callippe silverspot butterfly.

Stations P9 and P10 are located near the south shore of Calaveras Reservoir. Both stations are located within open grasslands that are intensively grazed and disturbed. No burrows or other habitats potentially utilized by sensitive biological resources are present at these locations.

Station P11 is located near the confluence of Alameda Creek and Calaveras Creek in a disturbed grassland area adjacent to a service road. The open grassland is comprised of non-native grasses and forbs. The grassland is surrounded by coast live oaks, blue oaks, western sycamores, California buckeye, and bay laurel. An inactive stick nest was observed in one of the sycamore trees. Aside from the inactive nest, no other sensitive biological resources were observed at the proposed monitoring station location.

CULTURAL RESOURCES

The proposed air quality monitoring station locations were subject to an intensive pedestrian archaeological survey on March 10, 2011 by Maureen Kick, a Registered Professional Archaeologist who also meets the Secretary of the Interior's Standards for Archaeology and on April 22 and April 27, 2011 by Alexandra Greenwald under Ms. Kick's supervision.

Prior to the field survey, records obtained from previously conducted records searches at the Northwest Information Center of the California Historical Resources Information System were reviewed. Survey and geoarchaeological reports produced for the Calaveras Dam Replacement Project were also reviewed. No previously recorded resources are located in the vicinity of any of the proposed monitoring station locations.

The proposed monitoring station locations are all in previously disturbed areas, primarily adjacent to roads and other facilities. Cattle grazing has also caused ground disturbance at several of the locations. Ground disturbance from installation of the stations is expected to be limited to four 36-inch stakes used to secure the stations.

No prehistoric or historic-era artifacts or evidence of an archaeological deposit, such as dark soils, shell or charcoal were observed at any of the locations. Whenever possible, rodent burrows and burrow spoils were inspected for signs of archaeological midden or artifacts. None were observed.

Ambient Air Quality Monitoring Station 2 (Station A2)

The proposed location for the Ambient Air Quality Monitoring Station 2 is within the Garcia property, south of Sunol and west of Calaveras Road. The proposed location is in the unpaved center of a roundabout driveway. The area has been heavily disturbed by long term residential and landscaping activity, and is currently planted with a variety of fruit trees. Ground visibility was excellent. No cultural resources were observed during the survey.

Ambient Air Quality Monitoring Station 3 (Station A3)

The proposed location for the Ambient Air Quality Monitoring Station 3 is in the Sunol Regional Wilderness, in the vicinity of the park offices and the public restrooms. The proposed station would be located in the visitor center parking lot and picnic area. No cultural resources were observed during the survey.

Ambient Air Quality Monitoring Station 5 (Station A5)

The proposed location for the Ambient Air Quality Monitoring Station 5 is within the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol. The area, on the western perimeter of the yard and equidistant between the Main Street entry gate and Niles Canyon Road, has been previously disturbed by nearby road and building construction and ground visibility is partially obscured by pipes currently being stored there and imported gravels. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 2 (Station P2)

The proposed location for the Perimeter Air Quality Monitoring station 2 is approximately 0.4 mile south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road. This location is on a gently

sloping alluvial terrace at the confluence of two seasonal creeks and is grazed by cattle. Ground visibility was low due to dense annual grasses; however exposed backdirt from rodent burrows and ground disturbance caused by cattle were inspected. Rock outcroppings present in the area were closely examined. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 3 (Station P3)

The proposed location for the Perimeter Air Quality Monitoring Station 3 is approximately 420 feet to the south of the gate to the Calaveras dam area, on the shoulder of Calaveras Road. The area is previously disturbed from road construction. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 4 (Station P4)

The proposed location for the Perimeter Air Quality Monitoring Station 4 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a. This flat, grassy area is heavily used by cattle and is near a feeding/watering station. The ground surface has been significantly disturbed from cattle use. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 5 (Station P5)

The proposed location for the Perimeter Air Monitoring Station 5 is along Parcel E Trail, north of Calaveras Reservoir. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 6 (Station P6)

The proposed location for the Perimeter Air Quality Monitoring Station 6 is in the vicinity of Calaveras Dam, 0.31 mile to the northeast of the dam. The proposed location is in an open grassy area previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 7 (Station P7)

The proposed location for the Perimeter Air Quality Monitoring Station 7 is in the vicinity of the Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence. This proposed location is adjacent to an existing road within a previously disturbed zone impacted by road construction and ongoing road maintenance. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 8 (Station P8)

The proposed location for the Perimeter Air Quality Monitoring Station 8 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7. This proposed location is adjacent to an existing road within a previously disturbed zone impacted by road construction and ongoing road maintenance. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 9 (Station P9)

The proposed location for the Perimeter Air Quality Monitoring Station 9 is located on the south end of the reservoir. This proposed location has been previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 10 (Station P10)

The proposed location for the Perimeter Air Quality Monitoring Station 10 is located near the south end of the reservoir. This proposed location has been previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 11 (Station P11)

The proposed location for the Perimeter Air Quality Monitoring Station 11 is located on a terrace above the confluence of Alameda Creek and Calaveras Creek on gravelly deposits. No cultural resources were observed during the survey.

Should cultural resources be encountered, work in the immediate vicinity of the discovery will be redirected until a qualified archeologist can assess the nature and significance of the finds. In the event human remains are discovered, consistent with State law, the County Coroner will be contacted. If the Coroner determines the remains are Native American, the California Native American Heritage Commission will be contacted and they will appoint a Most Likely Descendant to work with the landowner to make recommendations for the treatment or disposition of the remains and associated grave goods.

Please contact Steve Leach at (510) 874-3205 or Maureen Kick at (510) 874-3107 if you have any questions regarding this memorandum.

REFERENCES

- EDAW. 2006. Preliminary Draft Biological Assessment for the Calaveras Dam Replacement Project. Prepared for the U.S. Army Corps of Engineers on behalf of the San Francisco Public Utilities Commission, 1155 Market Street, San Francisco, CA. Contract No. CS-732. Prepared by EDAW, Inc., San Francisco, CA. 21 December.
- May and Associates. 2006. Final Delineation of Waters of the United States. Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California.
- San Francisco Planning Department. 2009. Draft Environmental Impact Report for the San Francisco Public Utilities Commission (SFPUC) Calaveras Dam Replacement Project. File No. 2005.0161E
- U.S. Fish and Wildlife Service (USFWS). 2005. Critical Habitat – What is it? Fact sheet prepared by the U.S. Fish and Wildlife Service. Online document accessed on 4-18-08:
http://www.fws.gov/endangered/factsheets/Critical_Habitat_12_05.pdf

Table 1. UTM Coordinates for the Proposed Air Quality Monitoring Stations

Station	UTM Coordinates	
	Meters East	Meters North
A1	601209.67531	4152812.91928
A2	600112.94473	4157148.35977
A3	603310.66819	4152707.35815
A4	601328.01145	4154474.18098
A5	598360.06837	4161249.81182
P1	603499.27224	4149887.75112
P2	603228.18429	4150740.07168
P3	603230.66065	4151286.37674
P4	604199.55688	4150921.00769
P5	603979.14031	4151417.64771
P6	604773.83262	4150304.82189
P7	604367.00000	4149421.99993
P8	604335.26883	4148992.55095
P9	605387.00000	4145736.99993
P10	604604.23448	4145952.14387
P11	604237.96130	4151409.70211

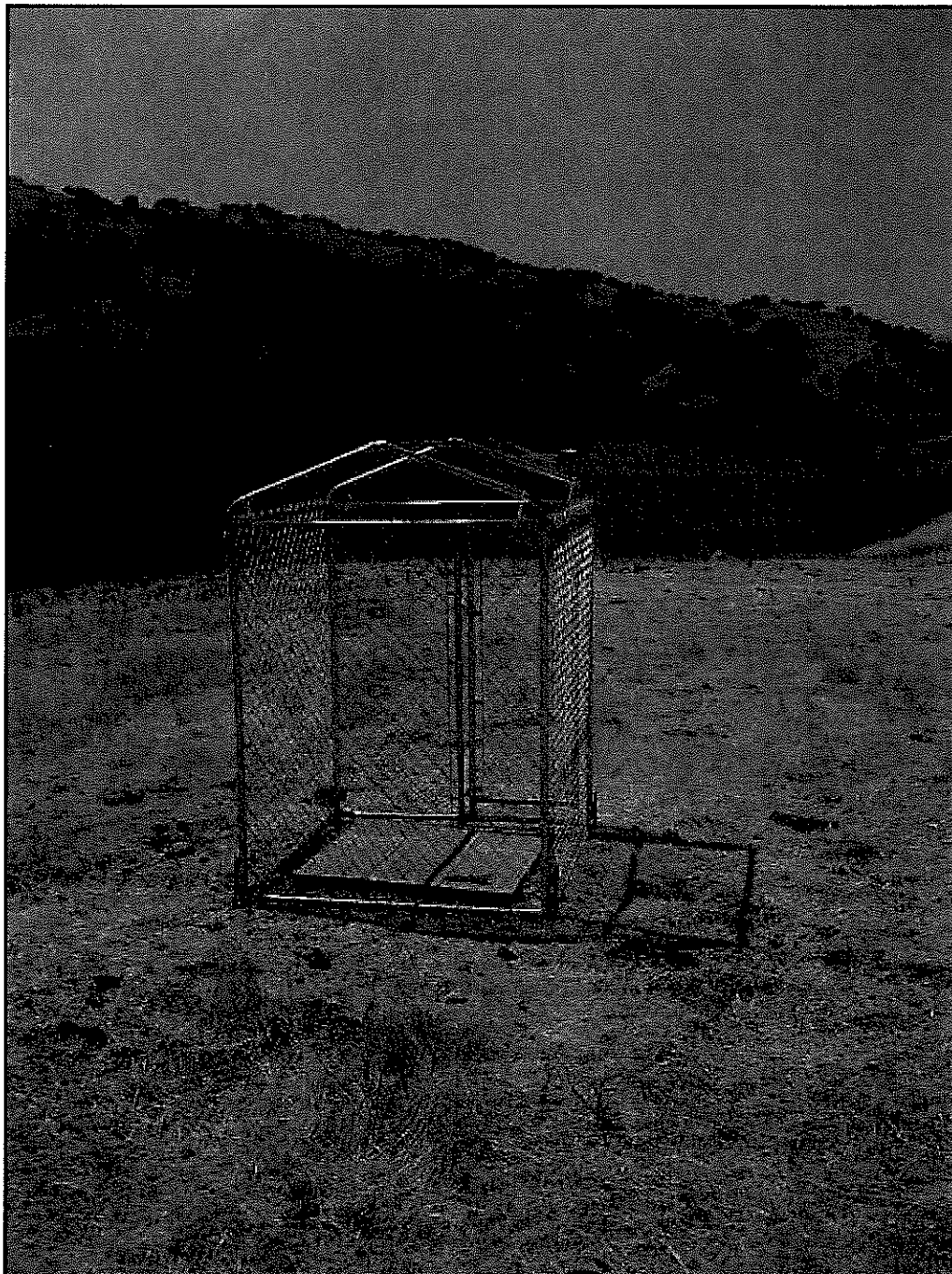


Figure 2. Example of Monitoring Station

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EXPRESSED PERMISSION OF THE SFPUC**

MINOR PROJECT MODIFICATION

 <p style="font-size: small;">SFPUC WATER WASTE POWER</p>	<p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p>	 <p style="font-size: small;">HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM</p>
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Minor Project Modification Number:	006	Date: 11/17/11
Project Title:	Calaveras Dam Replacement Project	
MEA Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Emma Jack EC	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: SFPUC	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Landscaped, paved, gravel areas; bare soil, disturbed grassland	Net Acreage Affected: N/A
Modification to:	<input checked="" type="checkbox"/> Mitigation Measure: <input type="checkbox"/> Other: Project Design	
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

This MPM proposes to modify the CDRP Final EIR Mitigation Measure 5.4.1a, regarding protection of the California tiger salamander (CTS):

"A California tiger salamander salvage and relocation plan will be prepared in coordination with USFWS and CDFG. A qualified biologist will carry out the salvage and relocation operations at construction sites where upland habitat has been identified. Surveys and trapping of California tiger salamanders will occur in the rainy season prior to construction or as directed by resource agency permits. The effort shall be appropriately timed with respect to salamander activity for the year and proposed construction activities. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. USFWS trapping protocols will be followed. Exclusion fencing (described in Mitigation Measure 5.4.2, Construction Measures) will be regularly maintained and monitored until the start of and throughout construction."

To reflect the project's USFWS Biological Opinion (BO), Avoidance and Minimization Measures for California Tiger Salamander, CTS-3 regarding trapping and relocating CTS in upland areas:

" A California tiger salamander trapping and relocation plan will be prepared for review and approval by the Service and CDFG. A permitted biologist will carry out the salvage and relocation operations at construction sites where upland habitat that is potentially occupied by California tiger salamander has been identified. Trapping and relocation efforts will be timed to coincide with likely periods of California tiger salamander activity during the rainy season prior to the start of construction. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. Service trapping protocols will be followed. Exclusion fencing will be regularly maintained and monitored until construction activities are completed in the affected habitat."

During 2011, upland habitat potentially occupied by CTS was identified as defined in Mitigation Measure 5.4.1a:

“Aestivation habitat will be defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites (i.e., the presence of a single isolated gopher hole would not be considered habitat).”

This MPM would eliminate the need to install traps in areas of the site that do not possess suitable aestivation habitat for CTS. Trapping and relocation efforts will be concentrated on areas that are potentially occupied by CTS and which have been identified during pre-construction surveys prior to ground disturbing activities. A map of CTS aestivation habitat in upland areas of the site is provided in Figure 1.

ENVIRONMENTAL IMPACTS

Modification of Mitigation Measure 5.4.1a would not result in new or additional impacts to the physical and/or cultural historic environment beyond those analyzed in the Calaveras Dam Replacement FEIR, or change impact avoidance and minimization intent of the Mitigation Measure.

Attachments:

- Figure 1. Map of CTS aestivation habitat located in upland areas of CDRP

Biological Yes No **Cultural** Yes No **Photos** Yes No **Other** Yes No

Resources:

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

Calaveras Dam Replacement Project FEIR and updated field surveys conducted by SFPUC consultant Shaw, March 10, April 22, and April 27, 2011. Pre-construction California tiger salamander surveys conducted by SFPUC consultant Shaw: June, July, August, September, and October 2011.

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Cultural Survey Report Reference:

Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS, March 10, April 22, and April 27, 2011 (see Attachment A).

Conditions of Approval or Reasons for Denial

SFPUC Required Signatures for Environmental Approval:

ECCM: _____ Date: _____

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code:

MEA Required Signatures for Approval:

Signee: _____ Date: _____

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new significant cultural resource impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new significant traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR>
	<input checked="" type="checkbox"/> N	

Visual Resources	<input type="checkbox"/> Y	There will be no new visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	There would be no new significant vegetation or wildlife impacts beyond those analyzed in the FEIR, applicable Mitigation Measures will be implemented. In accordance with the project's USFWS Biological Opinion "A California tiger salamander trapping and relocation plan will be prepared for review and approval by the Service and CDFG. A permitted biologist will carry out the salvage and relocation operations at construction sites where upland habitat that is potentially occupied by California tiger salamander has been identified. Trapping and relocation efforts will be timed to coincide with likely periods of California tiger salamander activity during the rainy season prior to the start of construction. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. Service trapping protocols will be followed. Exclusion fencing will be regularly maintained and monitored until construction activities are completed in the affected habitat"
	<input type="checkbox"/> N	

VOID

Date: May 10, 2011

To: Kerry O'Neill, SFPUC

From: Maureen Kick and Gilda Barboza, URS Corporation

Subject: *Calaveras Dam Replacement Project, Minor Project Modification-Environmental review for additional air quality monitoring station locations*

The San Francisco Public Utilities Commission (SFPUC) has retained URS Corporation (URS) to provide professional engineering and related environmental services for the Final Design phase of the Calaveras Dam Replacement Project (SFPUC Contract No. CS-716). Consistent with the established scope of work, URS evaluated the environmental considerations for 13 new air quality monitoring station locations that would be used during construction. Figure 1 depicts the locations of the proposed monitoring stations and the project vicinity. The UTM coordinates for the proposed air quality monitoring stations are presented in Table 1.

This memorandum summarizes the proposed project modification and environmental information to support an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054. This environmental review memorandum is organized into the following sections:

- 1) Project Description
- 2) Biological Resources, and
- 3) Cultural Resources

PROJECT DESCRIPTION

SFPUC proposes to install 13 temporary air quality monitoring stations at new locations. The proposed locations of these stations and access routes are shown on Figure 1. All of the proposed stations would be accessed using existing roads. The location for each new station is described as follows:

Ambient Air Quality Monitoring Station 2 (Station A2)

The proposed location for the Ambient Air Quality Monitoring Station 2 is on a residential property (Garcia residence), adjacent to an active construction zone.

Ambient Air Quality Monitoring Station 3 (Station A3)

The proposed location for the Ambient Air Quality Monitoring Station 3 is on East Bay Regional Park District property, next to the Interpretive Center building. The proposed station location is 220 feet to the southeast of the existing Baseline Air Quality Monitoring Station 28.

Ambient Air Quality Monitoring Station 5 (Station A5)

The proposed Perimeter Air Quality Monitoring Station 5 is located at the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol, CA.

Perimeter Air Quality Monitoring Station 2 (Station P2)

The proposed location for the Perimeter Air Quality Monitoring station 2 is approximately 0.4 mile south of the Calaveras Dam access road gate, adjacent to Calaveras Road.

Perimeter Air Quality Monitoring Station 3 (Station P3)

The proposed location for the Perimeter Air Quality Monitoring Station 3 is approximately 420 feet south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road.

Perimeter Air Quality Monitoring Station 4 (Station P4)

The proposed location for the Perimeter Air Quality Monitoring Station 4 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a.

Perimeter Air Quality Monitoring Station 5 (Station P5)

The proposed location for Perimeter Air Quality Monitoring Station 5 is adjacent to the Parcel E Trail (Camp Ohlone Road), approximately 0.86 mile north of Calaveras Reservoir in the vicinity of Alameda Creek.

Perimeter Air Quality Monitoring Station 6 (Station P6)

The proposed location for the Perimeter Air Quality Monitoring Station 6 is approximately 0.31 mile to the northeast of Calaveras Dam adjacent to an existing dirt access road.

Perimeter Air Quality Monitoring Station 7 (Station P7)

The proposed location for the Perimeter Air Quality Monitoring Station 7 is in the vicinity of Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence.

Perimeter Air Quality Monitoring Station 8 (Station P8)

The proposed location for the Perimeter Air Quality Monitoring Station 8 is in the vicinity of Calaveras Dam near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7.

Perimeter Air Quality Monitoring Station 9 (Station P9)

The proposed Perimeter Air Quality Monitoring Station 9 is located at the south end of the reservoir near the proposed Borrow Area E.

Perimeter Air Quality Monitoring Station 10 (Station P10)

The proposed location for the Perimeter Air Quality Monitoring Station 10 is at the south end of the reservoir near the proposed Borrow Area E.

Perimeter Air Quality Monitoring Station 11 (Station P11)

The proposed location for Perimeter Air Quality Monitoring Station 11 is near the confluence of Calaveras Creek and Alameda Creek, approximately 0.81 mile north of Calaveras Reservoir.

Other Stations Not Evaluated

Three additional air quality monitoring stations would be located at sites that have been previously evaluated and are therefore not considered in this review:

Ambient Air Quality Monitoring Station 1 (Station A1)

This monitoring station is proposed in the same location as existing Ambient Air Quality Monitoring Station 27.

Ambient Air Quality Monitoring Station 4 (Station A4)

This monitoring station is proposed in the same location as existing Baseline Air Quality Monitoring Station 3.

Perimeter Air Quality Monitoring Station 1 (Station P1)

This monitoring station is proposed in the same location as existing Baseline Air Quality Monitoring Station 16.

Description of Air Quality Monitoring Stations

The proposed air quality monitoring stations would be identical to the 17 air quality monitoring stations previously installed for this investigation. The proposed stations will reuse/relocate the station structures used in the baseline monitoring, which consist of a 4-foot by 4-foot dog kennel enclosed by a chain link fence placed on concrete pavers and secured by 36" metal stakes for each leg of the cage as shown in Figure 2. The air quality monitoring stations are temporary facilities that would be removed following completion of the Calaveras Dam Replacement Project.

The proposed structures will provide secure locations for pumps and/or meters that will be used to collect air samples for the analyses of asbestos and/or metals. The concrete pavers for the outdoor monitoring station will be approximately 4-feet by 4-feet and the chain link enclosure will be approximately 6-feet tall so that air monitoring equipment can be suspended 5 feet above the ground surface. Four, 4-inch diameter steel posts will support the chain link enclosure.

Each of the proposed air quality monitoring sites is located on level ground that would require only minimal site preparation. Anticipated site preparation would include clearing rocks for the concrete pad and installation of four steel posts that will support the chain link enclosure. These components would be removed after completion of the monitoring program.

The proposed air quality monitoring stations will be used to collect air samples for the analyses of asbestos and/or metals. The pumps and meters will be battery powered with motors that are less than 1/20 horsepower. The noise generated by the units will be comparable to a quiet conversation (below 60 decibels) at a distance of 5 feet. The proposed pumps and meters each measure approximately 6 x 6 x 5 inches. The pumps would be connected to the sampling media (clean plastic cassettes that measure approximately 1 1/2 x 1 1/2 x 1 1/2 inches) with a piece of clear tubing that is approximately 2 feet in length and 1/2 inch in diameter. The cassettes contain a filter that collects the ambient dust for analysis.

BIOLOGICAL RESOURCES

Potential adverse effects to sensitive biological resources were evaluated based upon a review of background information and a field reconnaissance survey. The background research included records from (1) the California Department of Fish and Game's Natural Diversity Database, (2) the California Native Plant Society's On-line Electronic Inventory, (3) the U.S. Fish and Wildlife Service Sacramento Field Office's list of species that may occur within the Calaveras Reservoir and La Costa Valley 7.5 minute USGS quadrangles, (4) the Biological Assessment for the Calaveras Dam Replacement Project (EDAW 2009), (5) the Wetland Delineation for the Calaveras Dam Replacement Project (May and Associates 2006) and the Draft EIR for the Calaveras Dam Replacement Project (SF Planning Department 2009).

Based on the above background research, four federally listed species have the potential to occur in the vicinity of the proposed air monitoring stations:

- Alameda whipsnake (*Masticophis lateralis euryxanthus*) – Federal and State threatened
- California red-legged frog (*Rana draytonii*) – Federal threatened
- California tiger salamander (*Ambystoma californiense*) – Federal and State threatened
- Callippe silverspot butterfly (*Speyeria callippe callippe*) – Federal endangered

URS biologist, Gilda Barboza, conducted a biological field reconnaissance of the proposed air quality monitoring station locations on March 10, April 22, and April 27, 2011. Each of the monitoring station locations was visually inspected. The purpose of the field reconnaissance was to identify potential habitat for the listed and/or sensitive species and sensitive resources (i.e., active nests of migratory birds, wetlands, and other waters) identified during the background research, and to identify locations that would avoid any potential impacts from installation of the proposed stations.

Based on the observations from the field visit, as described below, installation of the monitoring stations at the proposed sites would not affect habitats that are likely to be occupied or utilized by the special status species listed above. In addition, no waters of the U.S. or other wetland resources were identified at the proposed monitoring station locations or in the immediate vicinity of these sites during the field reconnaissance.

Station A2 is located in a heavily disturbed area at a residential property, adjacent to active construction activities. The station would be placed in an open landscaped area, dominated by non-native moss pygmy weed (*Crassula trillaea*). Furthermore, the open area is surrounded by an asphalt and graveled driveway and residential buildings. No sensitive biological resources were observed at this station location.

Station A3 is located within disturbed habitat, in the parking lot of the Sunol Wilderness visitor center and picnic area. The station would be placed within the recreational lawn area designated for the public. Because their location is within previously disturbed habitat, the proposed station would not affect sensitive biological resources.

Station A5 is located within the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol. The proposed station would be placed on the existing gravel surface within the maintenance yard. Adjacent vegetation outside the maintenance yard includes coast live oak, valley oak, non-native grasses,

noxious weeds, and elderberry. Acorn woodpeckers, barn swallows, and European starlings were observed on the adjacent property but no sensitive biological resources were observed at the proposed station location.

Station P2 is in an open grassland area adjacent to Calaveras Road above a ravine. Adjacent vegetation is potentially suitable nesting habitat for migratory birds, however, no bird nests were observed. The proposed location is approximately 100 feet from the margins of the nearest tree canopies. Several ground squirrel burrows were noted nearby, however, no ground squirrels burrows were observed within the proposed station location or the immediate vicinity. No other biological resources were observed at this location.

Station P3 would be located approximately 420 feet to the south of the gate to the Calaveras dam area, on the shoulder of Calaveras Road. The area is previously disturbed from road construction. No burrows or other potential refugia, for California tiger salamander are present. The proposed station location is not habitat for Alameda whipsnake or California red-legged frog. No nesting birds or other sensitive biological resources were observed at this location.

Stations P4 and P5 are located within or adjacent to existing access roads. Station P4 would be located on a flat, grassy area that is heavily used by cattle and is near a feeding/watering station. The ground surface has been significantly disturbed from cattle use. Neither of the proposed locations would disturb burrows or other potential refugia for California tiger salamander. The proposed station locations are not habitat for Alameda whipsnake or California red-legged frog. No nesting birds or other sensitive biological resources were observed at these locations.

Stations P6 and P7 are located adjacent to dirt and graveled roads adjacent to serpentine grasslands and in proximity to serpentine outcrops, suitable for the callippe silverspot butterfly. The proposed locations for both stations were modified to avoid impacts to outcrops of serpentine that potentially support special status plant species. Station P6 is located in an area that is disturbed by cattle activity associated with a nearby feeding/watering station. Station P7 is located immediately adjacent to a gravel road, within an area previously disturbed by road maintenance.

Station P8 would be located adjacent to a dirt access road. No sensitive biological resources were observed at this location. The proposed location is within grasslands near serpentine outcrops but outside the limits of the special status plant populations documented by May and Associates in 2006 that are documented in the DEIR. The proposed location would not affect johnny jump-up (*Viola pedunculata*) that are the host plant of the callippe silverspot butterfly.

Stations P9 and P10 are located near the south shore of Calaveras Reservoir. Both stations are located within open grasslands that are intensively grazed and disturbed. No burrows or other habitats potentially utilized by sensitive biological resources are present at these locations.

Station P11 is located near the confluence of Alameda Creek and Calaveras Creek in a disturbed grassland area adjacent to a service road. The open grassland is comprised of non-native grasses and forbs. The grassland is surrounded by coast live oaks, blue oaks, western sycamores, California buckeye, and bay laurel. An inactive stick nest was observed in one of the sycamore trees. Aside from the inactive nest, no other sensitive biological resources were observed at the proposed monitoring station location.

CULTURAL RESOURCES

The proposed air quality monitoring station locations were subject to an intensive pedestrian archaeological survey on March 10, 2011 by Maureen Kick, a Registered Professional Archaeologist who also meets the Secretary of the Interior's Standards for Archaeology and on April 22 and April 27, 2011 by Alexandra Greenwald under Ms. Kick's supervision.

Prior to the field survey, records obtained from previously conducted records searches at the Northwest Information Center of the California Historical Resources Information System were reviewed. Survey and geoarchaeological reports produced for the Calaveras Dam Replacement Project were also reviewed. No previously recorded resources are located in the vicinity of any of the proposed monitoring station locations.

The proposed monitoring station locations are all in previously disturbed areas, primarily adjacent to roads and other facilities. Cattle grazing has also caused ground disturbance at several of the locations. Ground disturbance from installation of the stations is expected to be limited to four 36-inch stakes used to secure the stations.

No prehistoric or historic-era artifacts or evidence of an archaeological deposit, such as dark soils, shell or charcoal were observed at any of the locations. Whenever possible, rodent burrows and burrow spoils were inspected for signs of archaeological midden or artifacts. None were observed.

Ambient Air Quality Monitoring Station 2 (Station A2)

The proposed location for the Ambient Air Quality Monitoring Station 2 is within the Garcia property, south of Sunol and west of Calaveras Road. The proposed location is in the unpaved center of a roundabout driveway. The area has been heavily disturbed by long term residential and landscaping activity, and is currently planted with a variety of fruit trees. Ground visibility was excellent. No cultural resources were observed during the survey.

Ambient Air Quality Monitoring Station 3 (Station A3)

The proposed location for the Ambient Air Quality Monitoring Station 3 is in the Sunol Regional Wilderness, in the vicinity of the park offices and the public restrooms. The proposed station would be located in the visitor center parking lot and picnic area. No cultural resources were observed during the survey.

Ambient Air Quality Monitoring Station 5 (Station A5)

The proposed location for the Ambient Air Quality Monitoring Station 5 is within the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol. The area, on the western perimeter of the yard and equidistant between the Main Street entry gate and Niles Canyon Road, has been previously disturbed by nearby road and building construction and ground visibility is partially obscured by pipes currently being stored there and imported gravels. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 2 (Station P2)

The proposed location for the Perimeter Air Quality Monitoring station 2 is approximately 0.4 mile south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road. This location is on a gently

sloping alluvial terrace at the confluence of two seasonal creeks and is grazed by cattle. Ground visibility was low due to dense annual grasses; however exposed backdirt from rodent burrows and ground disturbance caused by cattle were inspected. Rock outcroppings present in the area were closely examined. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 3 (Station P3)

The proposed location for the Perimeter Air Quality Monitoring Station 3 is approximately 420 feet to the south of the gate to the Calaveras dam area, on the shoulder of Calaveras Road. The area is previously disturbed from road construction. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 4 (Station P4)

The proposed location for the Perimeter Air Quality Monitoring Station 4 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a. This flat, grassy area is heavily used by cattle and is near a feeding/watering station. The ground surface has been significantly disturbed from cattle use. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 5 (Station P5)

The proposed location for the Perimeter Air Monitoring Station 5 is along Parcel E Trail, north of Calaveras Reservoir. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 6 (Station P6)

The proposed location for the Perimeter Air Quality Monitoring Station 6 is in the vicinity of Calaveras Dam, 0.31 mile to the northeast of the dam. The proposed location is in an open grassy area previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 7 (Station P7)

The proposed location for the Perimeter Air Quality Monitoring Station 7 is in the vicinity of the Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence. This proposed location is adjacent to an existing road within a previously disturbed zone impacted by road construction and ongoing road maintenance. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 8 (Station P8)

The proposed location for the Perimeter Air Quality Monitoring Station 8 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7. This proposed location is adjacent to an existing road within a previously disturbed zone impacted by road construction and ongoing road maintenance. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 9 (Station P9)

The proposed location for the Perimeter Air Quality Monitoring Station 9 is located on the south end of the reservoir. This proposed location has been previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 10 (Station P10)

The proposed location for the Perimeter Air Quality Monitoring Station 10 is located near the south end of the reservoir. This proposed location has been previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 11 (Station P11)

The proposed location for the Perimeter Air Quality Monitoring Station 11 is located on a terrace above the confluence of Alameda Creek and Calaveras Creek on gravelly deposits. No cultural resources were observed during the survey.

Should cultural resources be encountered, work in the immediate vicinity of the discovery will be redirected until a qualified archeologist can assess the nature and significance of the finds. In the event human remains are discovered, consistent with State law, the County Coroner will be contacted. If the Coroner determines the remains are Native American, the California Native American Heritage Commission will be contacted and they will appoint a Most Likely Descendant to work with the landowner to make recommendations for the treatment or disposition of the remains and associated grave goods.

Please contact Steve Leach at (510) 874-3205 or Maureen Kick at (510) 874-3107 if you have any questions regarding this memorandum.

REFERENCES

- EDAW. 2006. Preliminary Draft Biological Assessment for the Calaveras Dam Replacement Project. Prepared for the U.S. Army Corps of Engineers on behalf of the San Francisco Public Utilities Commission, 1155 Market Street, San Francisco, CA. Contract No. CS-732. Prepared by EDAW, Inc., San Francisco, CA. 21 December.
- May and Associates. 2006. Final Delineation of Waters of the United States. Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California.
- San Francisco Planning Department. 2009. Draft Environmental Impact Report for the San Francisco Public Utilities Commission (SFPUC) Calaveras Dam Replacement Project. File No. 2005.0161E
- U.S. Fish and Wildlife Service (USFWS). 2005. Critical Habitat – What is it? Fact sheet prepared by the U.S. Fish and Wildlife Service. Online document accessed on 4-18-08:
http://www.fws.gov/endangered/factsheets/Critical_Habitat_12_05.pdf

Table 1. UTM Coordinates for the Proposed Air Quality Monitoring Stations

Station	UTM Coordinates	
	Meters East	Meters North
A1	601209.67531	4152812.91928
A2	600112.94473	4157148.35977
A3	603310.66819	4152707.35815
A4	601328.01145	4154474.18098
A5	598360.06837	4161249.81182
P1	603499.27224	4149887.75112
P2	603228.18429	4150740.07168
P3	603230.66065	4151286.37674
P4	604199.55688	4150921.00769
P5	603979.14031	4151417.64771
P6	604773.83262	4150304.82189
P7	604367.00000	4149421.99993
P8	604335.26883	4148992.55095
P9	605387.00000	4145736.99993
P10	604604.23448	4145952.14387
P11	604237.96130	4151409.70211

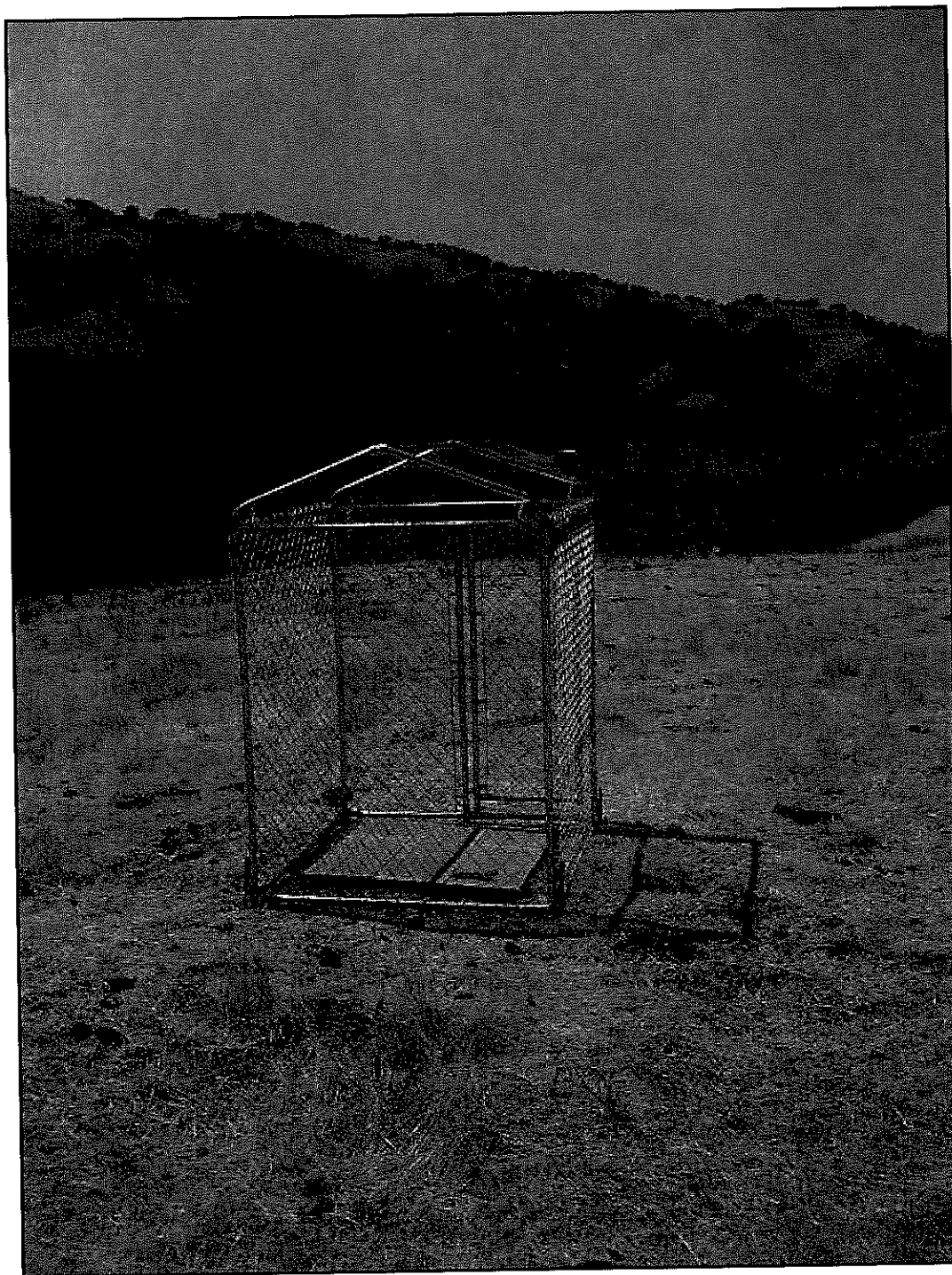


Figure 2. Example of Monitoring Station



Memorandum

Date: October 31, 2011

To: Kerry O'Neill, San Francisco Public Utilities Commission

From: Maureen Kick, URS Corporation

Subject: *Environmental Review of Proposed Project Modifications
Calaveras Dam Replacement Project (CUW 37401)*

This memo presents an evaluation of the biological and cultural resource considerations for three proposed modifications to the Calaveras Dam Replacement Project (CDRP). The evaluation presented in this memo supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

The memorandum is organized into the following sections:

- 1) Description of proposed project modifications
- 2) Biological resources
- 3) Cultural resources
- 4) Conclusions

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

SFPUC proposes to implement three minor project modifications. The proposed modifications are described below.

- 1) Boat ramp project area addition – improve access to the boat ramp area by paving the existing dirt access road from Calaveras Road.
- 2) Right abutment to project area addition – increase the limits of work by approximately 0.52 acre to accommodate a road connection from the crest of the new dam to an existing watershed access road.
- 3) Access road to Disposal Site 7 – widen and improve road that would be utilized to access Disposal Site 7.

These proposed project modifications are located within the biological resource study area for the CDRP (e.g. ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007). However, the affected areas may not have been reviewed during previous cultural resources surveys, including the Historical Resources Inventory and Evaluation Report (JRP 2008), Archaeological Survey Report (ART and EDAW 2008), and Archaeological Survey Report Addendum I and II (URS 2009a).

BIOLOGICAL RESOURCES

A URS biologist reviewed the biological resource data summarized by ETJV (2006a, 2006b, 2006c, and 2007), additional data summarized in the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and the CDRP California tiger salamander impact evaluation that was submitted to CDFG in June 2011 (SFPUC 2011). The results of this review are summarized below.

Boat Ramp Project Area Addition

No special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by this project modification. Preconstruction surveys for nesting birds should be conducted consistent with the CEQA MMRP.

Right Abutment to Project Area Addition

The affected area is vegetated with coast live oak and moderate to dense understory vegetation on a steep slope. The existing habitat is unlikely to be utilized by California tiger salamander based on data included in the CDRP California tiger salamander supplement to the CDFG Incidental Take Permit application (SFPUC 2011). However, the affected area is potential foraging and dispersal habitat for the federal and state-listed Alameda whipsnake (SFPUC 2011). No jurisdictional wetlands or other waters are present in the additional area that would be affected by this modification (ETJV 2006b).

Access Road to Disposal Site 7

Widening and improving existing dirt roads from Calaveras Dam to Disposal Site 7 would occur within the existing road corridor that was evaluated in the CDRP EIR and the permit applications reviewed by the resource agencies and addressed in the final permits and agreements. The potential of the proposed modifications to affect the California tiger salamander or the Alameda whipsnake is discountable due to the small area that would be disturbed by this modification. No wetlands or other jurisdictional waters would be affected based on the verified delineation (ETJV 2006b).

CULTURAL RESOURCES

Existing records search information and previously prepared reports were reviewed by URS to identify any potential archaeological or built environment cultural resources that could be impacted by the minor change in the limits of excavation and limits of work for the CDRP (ART and EDAW 2008, JRP Historical 2008, Kaijankoski and Meyer 2009, URS 2008, URS 2009a, URS 2009b). No significant historical resources area located within the footprint or adjacent to the project modifications.

The areas that would be affected by the three project modifications were reviewed during an intensive pedestrian archaeological survey on August 24, 2011. The survey was conducted by URS archeologist Maureen Kick, a Registered Professional Archaeologist who meets the Secretary of the Interior's Standards for Archaeology, and Meredith Pecora, a URS staff archaeologist. Existing conditions and observations during the survey are described below by project modification.

Boat Ramp Project Area Addition

This proposed modification includes paving approximately 800 feet of an existing dirt access road from Calaveras Road to the existing paved boat ramp. The road and adjacent areas were surveyed; no cultural resources were identified. This project modification is within the boundaries of site P-01-10870, Desmond Camp; however, this site has been evaluated and is not a historical resource or unique

archaeological resource as defined by CEQA (URS 2009b). Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little chance of buried archaeological deposits in
this area (Kaijankoski and Meyer 2009).

Right Abutment to Project Area Addition

This proposed project modification would affect an additional 0.52 acre located on a moderate to steep
slope. The affected area has an overstory of coast live oak and moderate to dense understory vegetation.
The area was surveyed using 10-15 meter transects. The steepest areas were not subject to survey due to
safety concerns and the low probability of archaeological materials being present. Ground visibility was
low due to grasses and ground cover; however, occasional rodent burrows, cattle trails and nearby road
cuts provided good visibility and were subject to intensive inspection. No cultural materials or evidence
of archaeological deposition were identified, and no rock outcrops were noted within the area of impact.
Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little
chance of buried archaeological deposits in this area (Kaijankoski and Meyer 2009).

Access Road to Disposal Site 7

This project modification consists of widening and improving existing dirt roads from Calaveras Dam to
Disposal Site 7. One built-environment resource, the watershed keeper residence, is adjacent to the
project modification. However, this resource has been evaluated, and is not a historical resource as
defined by CEQA (JRP Historical 2008). All roads and adjacent areas were subject to survey. No new
cultural resources were identified. Geologically, the area is mapped as pre-
quaternary deposits and
bedrock, indicating that there is little chance of buried archaeological deposits in this area (Kaijankoski
and Meyer 2009).

CONCLUSIONS

The proposed project modifications at the right abutment and the Disposal Site 7 access road could affect
additional habitats that are potentially utilized by the federal and State-listed California tiger salamander
and Alameda whipsnake. However, the potential habitat modifications of the Disposal Site 7 access road
are likely to be minimal. Coordination with CDFG and USFWS is recommended to confirm that the
project modifications can be approved under the CDFG Incidental Take Permit and the USFWS
Biological Opinion. No additional wetlands, other waters or other sensitive habitats would be affected by
the proposed project modifications.

The proposed project modifications would not impact known archaeological resources. Should
unidentified surface or subsurface archaeological deposits be encountered during construction of the
CDRP, appropriate mitigation measures identified in the EIR would apply and all work in the immediate
vicinity of the discovery should be redirected until a qualified archeologist could assess the nature and
significance of the discovery. In the event human remains are discovered, consistent with State law, the
County Coroner should be contacted. If the Coroner determines the remains are Native American the
California Native American Heritage Commission should be contacted and they will appoint a Most
Likely Descendant to work with SFPUC to make recommendations for the treatment or disposition of the
remains and associated grave goods.

Please contact Maureen Kick at (510) 874-3107 or Steve Leach at (510) 874-3205 if you have any
questions.

REFERENCES

- ART and EDAW 2008. Calaveras Dam Replacement Project: Archaeological Survey Report. Prepared for EDAW Turnstone, San Francisco. On file at URS-Oakland.
- EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.
- EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.
- EDAW & Turnstone Joint Venture (ETJV). 2006c. California Red-legged Frog and California Tiger Salamander Habitat Assessment for the Calaveras Dam Replacement Project. Field work from April-May 2006, unpublished. EDAW, Sacramento, CA.
- EDAW & Turnstone Joint Venture (ETJV). 2007. California tiger salamander and California red-legged frog habitat assessment field notes by Stephanie Coppeto, 21 March 2007, unpublished.
- EDAW, Sacramento, CA. JRP Historical 2008. Calaveras Dam Replacement Project: Historic Resources Inventory and Evaluation Report. Prepared for EDAW Turnstone, San Francisco. On file at URS-Oakland.
- Kajjankoski, P. and J. Meyer 2009. Geoarchaeological Assessment and Subsurface Explorations for the Calaveras Dam Replacement Project, Santa Clara and Alameda Counties, California. Prepared for Jay Rehor, URS Corporation. On file at URS – Oakland.
- San Francisco Planning Department 2009. Draft Environmental Impact Report for the San Francisco Public Utilities Commission (SFPUC) Calaveras Dam Replacement Project. File No. 2005.0161E
- San Francisco Public Utilities Commission (SFPUC) 2010. Application for Incidental Take Permit. Prepared for the California Department of Fish and Game. Submitted November 2010.
- San Francisco Public Utilities Commission (SFPUC) 2011. Calaveras Dam Replacement Project California Tiger Salamander Impact Evaluation. Prepared for the California Department of Fish and Game. Submitted June 2011.
- URS 2008. Draft Archaeological Survey Plan, Calaveras Dam Replacement Project. Prepared for San Francisco Public Utilities Commission. On File at URS-Oakland.
- URS 2009a. Archaeological Survey Report, Calaveras Dam Replacement Project, Addendum I and II. Prepared for San Francisco Public Utilities Commission. On file at URS-Oakland.

URS 2009b. Archaeological Testing and Evaluation Report, Desmond Camp, P-01-10870, Alameda County, California. Prepared for San Francisco Public Utilities Commission. On file at URS-Oakland.

USACE. Calaveras Dam Replacement Project, Finding of No Adverse Effects. On file at URS-Oakland.

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number:	003	Date: 7/8/11
Project Title:	Calaveras Dam Replacement Project	
Environmental Planning Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Booker Holton, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: SFPUC	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	N/A	Net Acreage Affected: N/A
Modification to:	<input checked="" type="checkbox"/> Mitigation Measure: <input type="checkbox"/> Other:	
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

This MPM proposes to clarify the CDRP Final EIR Mitigation Measure 5.4.1a, regarding protection of the California tiger salamander (CTS):

"A California tiger salamander salvage and relocation plan will be prepared in coordination with USFWS and CDFG. A qualified biologist will carry out the salvage and relocation operations at construction sites where upland habitat has been identified. Surveys and trapping of California tiger salamanders will occur in the rainy season prior to construction or as directed by resource agency permits. The effort shall be appropriately timed with respect to salamander activity for the year and proposed construction activities. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. USFWS trapping protocols will be followed. Exclusion fencing (described in Mitigation Measure 5.4.2, Construction Measures) will be regularly maintained and monitored until the start of and throughout construction."

On July 5, 2011 the CDFG and USFWS stated that implementation of a CTS trapping and relocation plan for the 2010 through fall 2011 work season would not be required (see attached email). The SFPUC has submitted to CDFG and USFWS a salvage and relocation plan and it is currently under review. This plan will be implemented 2011-2012 rainy season in accordance with FEIR Mitigation Measure 5.4.1a and the project's USFWS Biological Opinion (BO), Avoidance and Minimization Measures for California Tiger Salamander, CTS-3.

ENVIRONMENTAL IMPACTS

Clarification of Mitigation Measure 5.4.1a would not result in new or additional impacts to the physical, biological, and cultural historic environment beyond those analyzed in the Calaveras Dam Replacement FEIR, or change the impact avoidance and minimization intent of the Mitigation Measure.

--

Biological <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Cultural <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Photos <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	--	--	---

Attachments:
 July 5, 2011 email concurrence from Ryan Olah, USFWS representative and Greg Martinelli, CDFG representative.

Biological <input type="checkbox"/> No Resources Present <input type="checkbox"/> Resources Present <input checked="" type="checkbox"/> NA

Previous Biological Survey Report Reference:

Cultural <input type="checkbox"/> No Resources Present <input type="checkbox"/> Resources Present <input checked="" type="checkbox"/> Within Project APE <input type="checkbox"/> NA (paved/graveled area and no ground disturbance)
--

Previous Cultural Survey Report Reference:

Conditions of Approval or Reasons for Denial

SFPUC Required Signatures for Environmental Approval:

ECCM: <u>Kerry O'Neill</u>	Date: <u>7/8/11</u>
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved with Conditions (see conditions above) <input type="checkbox"/> Denied	

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

Environmental Planning Required Signatures for Approval:

Signee: <u>[Signature]</u>	Date: <u>7/11/11</u>
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved with Conditions (see conditions above) <input type="checkbox"/> Denied	

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	

Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new significant cultural resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	There would be no new significant vegetation or wildlife impacts beyond those analyzed in the FEIR, applicable mitigation measures will be implemented. In accordance with the project's mitigation measure: "A <i>California tiger salamander salvage and relocation plan</i> will be prepared in coordination with USFWS and CDFG. Surveys and trapping of California tiger salamanders will occur in the rainy season prior to construction or as directed by resource agency permits." and both resource agencies have directed that this plan can be implemented beginning in the rainy season 2011-2012.
	<input type="checkbox"/> N	

MINOR PROJECT MODIFICATION

	SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM	
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Minor Project Modification Number:	004	Date:	10/19/11
Project Title:	Calaveras Dam Replacement Project		
MEA Case No./Project No.	2005.0161E/CUW37401		
MPM Prepared By:	Cullen Wilkerson, ECM		
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO	<input checked="" type="checkbox"/> Other: SFPUC
Landowner:	SFPUC		
Vegetative Cover/Land Use:	Mixed oak woodland/riparian	Net Acreage Affected:	0.08 acres
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> FEIR	<input type="checkbox"/> Other:
	<input checked="" type="checkbox"/> Permit:	CDFG LSAA 1600-2010-0322-03 and ITP 2081-2010-033-03, USFWS B.O., RWQCB 401	

Detailed Description of Minor Project Modification:

This Minor Project Modification proposes to expand the construction limits of the Calaveras Dam Replacement Project by 0.08 acres. The approval of this Minor Project Modification is required by the Lead CEQA agency (Major Environmental Agency), the Regional Water Quality Control Board (RWQCB), California Department of Fish and Game, and the U.S. Fish and Wildlife Service.

The installation of a rock dike will require more work area than originally anticipated. The proposed area of expansion is located at Disposal Site 3 (DS3) as identified in the Calaveras Dam Replacement Project Final Environmental Impact Report (FEIR) (Section 3.5.1.6). DS3 is located on the most northwestern corner of the Calaveras reservoir. A perennial creek flows through the proposed DS3 location (see attached figure). DS3 was configured to avoid impacts to the perennial creek and the reservoir; however, due to the determination of insufficient support ground for the rockfill dike at the southern portion of DS3, the support ground must be strengthened and enlarged through soil mixing (i.e., increase strength by adding bentonite and concrete slurry to existing soil). Due to the enlargement of the support structure for the dike, DS3 must be shifted to the northwest. Due to this shift, a 0.08 acre zone which consists of mixed oak woodland and riparian vegetation is to be temporarily impacted in order to install a temporary rock dike bypass pipe inlet structure to install the stream diversion pipes. The temporary bypass pipe will be installed to convey water around the DS3 work area to prevent impedance of the dike construction and prevent erosion of the materials in the disposal area; thereby meeting required RWQCB and National Marine Fisheries Service water quality objectives for Calaveras reservoir. The inlet structure and bypass pipe will be removed after the disposal site is completed. SFPUC will implement the restoration plan previously submitted to the RWQCB that describes the habitat restoration for the vegetation in this zone.

The RWQCB and CDFG have approved to the modifications in DS3 (see attached correspondence).

ENVIRONMENTAL IMPACTS

The impacts to the oak woodland and riparian area would be temporary and would not result in new impacts to the physical, biological, and cultural historic environment beyond those analyzed in the FEIR. All applicable mitigation measures will be implemented during pre, concurrent, and post construction activities.

Biological Yes No **Cultural** Yes No **Photos** Yes No **Other** Yes No

Attachments:

Cultural and Biological Survey Report – URS dated 10/18/11
 Email Concurrence from CDFG – 10/13/11
 Email Concurrence from RWQCB – 10/12/11

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Previous Cultural Survey Report Reference:**Conditions of Approval or Reasons for Denial****SFPUC Required Signatures for Environmental Approval:**

ECCM: Kerry O'Neill Date: 10/19/11

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

MEA Required Signatures for Approval:

Signee: Steven H. Smith Date: 10/19/11

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
		Geology, Soils and Seismicity

Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	Based on a pedestrian survey of the location there would be no new significant cultural resource impacts beyond those analyzed in the FEIR. If cultural resources are discovered the project will implement accidental discovery measures in Mitigation Measure 5.10.1 and measures related to human remains an associated or unassociated funerary objects.
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	There would be an additional 0.08 acres of temporary impact to vegetation or wildlife (i.e., wildlife habitat), but not beyond those analyzed in the FEIR. Applicable mitigation measures will be implemented to reduce impacts to less than significant.
	<input type="checkbox"/> N	

O'Neill, Kerry

From: Steve Smith [Steve.Smith@sfgov.org]
Sent: Wednesday, October 19, 2011 11:28 AM
To: O'Neill, Kerry
Subject: RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3
Attachments: MPM-004 Diversion Pipe Changes (rev 2).doc; MPM-004 Diversion Pipe Changes-signed.doc

Approved.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

To "Steve Smith" <Steve.Smith@sfgov.org>

cc

10/19/2011 11:01 AM

Subject RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Thanks Steve, I've made the revisions in track changes. Let me know if there is anything else that you need corrected.

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Wednesday, October 19, 2011 10:49 AM
To: O'Neill, Kerry
Subject: RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Hi Kerry - Based on the URS report, it looks like MM's for inadvertent archeo resources and humans remains are potentially applicable for Cultural Resources. If so, a response on the MPM similar to Vegetation and Wildlife (i.e., checked "y" and notes MM's would be implemented) seems applicable. If you agree, please revise and resend the MPM form (I can also do). Otherwise, let me know why you disagree. I'll get this approved either way shortly after I hear back from you.

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

10/19/2011 08:01 AM

Subject RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

10/19/2011

Steve, attached is the revised MPM 4 and a .pdf of all the attachments including the cultural/bio. memo prepared by URS. We haven't yet obtained concurrence from USFWS but anticipate it shortly and I'll forward it to you for your records when we get it.

From: O'Neill, Kerry
Sent: Monday, October 17, 2011 10:27 AM
To: Steve Smith (Steve.Smith@sfgov.org)
Subject: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Attached is Minor Project Modification (MPM) 4 for the Calaveras Dam Replacement Project that I called you about last week. This MPM is for an additional 0.08 acre of extra workspace for the installation of an intake structure for a diversion pipe at Disposal Site 3. As I mentioned on the phone we're awaiting concurrence from USFWS but we have obtained concurrence from both CDFG and RWQCB and I've attached their email approvals. Please call me with questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

10/19/2011

Date: October 18, 2011

To: Kerry O'Neill, SFPUC

From: Steve Leach and Jay Rehor, URS Corporation

Subject: *Calaveras Dam Replacement Project, Minor Project Modification-Environmental review for modification of Disposal Site 3 bypass pipe intake structure*

The SFPUC proposes to add 0.08 acre to the CDRP project limits at Disposal Site 3. Figure 1 presents the location of the proposed modification relative to Disposal Site 3.

This memorandum describes a cultural and biological resource evaluation of the additional project area that was conducted by URS Corporation. The evaluation was conducted to support an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

This memorandum is organized into the following sections:

- 1) Project Description
- 2) Biological Resources, and
- 3) Cultural Resources.

PROJECT DESCRIPTION

The limits of fill along the southwest side of Disposal Site 3 have been modified to accommodate a larger stream diversion pipe that is required to bypass potential stream flows during construction. The modified work limits would increase the area of disturbance by approximately 0.08 acre. Installation of a temporary pipeline is necessary while the disposal site is being constructed to divert stream and storm water flows past the work area. Existing trees would be avoided during construction of the inlet structure. Both the inlet structure and the pipeline will be removed after Disposal Site 3 is completed. The affected area will be planted with native vegetation as described in the approved conceptual restoration plan.

BIOLOGICAL RESOURCES

URS evaluated potential adverse effects to sensitive biological resources based upon a review of background information. The background information included records from (1) the California Department of Fish and Game's Natural Diversity Database, (2) the California Native Plant Society's On-line Electronic Inventory, (3) the U.S. Fish and Wildlife Service Sacramento Field Office's list of species that may occur within the Calaveras Reservoir and La Costa Valley 7.5 minute USGS quadrangles, (4) the Biological Assessment for the Calaveras Dam Replacement Project (EDAW 2009), (5) the Wetland Delineation for the Calaveras Dam Replacement Project (May and Associates 2006) and the Final EIR for the Calaveras Dam Replacement Project (SF Planning Department 2011).

Based on the above background information, there are no wetlands or other waters of the U.S. within the additional area proposed for the rock dike. However, the affected area includes riparian vegetation that is regulated by the California Department and Fish and Game under the California Fish and Game Code and the Regional Water Quality Control Board under the Porter-Cologne Act.

The 0.08 acre area that would be affected was previously surveyed for special status plants and habitats utilized by federal and state-listed species. No special status plants are present in the additional area.

Three federally listed species, including two state-listed species, have the potential to occur in the vicinity of the proposed disposal site modification:

- Alameda whipsnake (*Masticophis lateralis euryxanthus*) – Federal and State threatened
- California red-legged frog (*Rana draytonii*) – Federal threatened
- California tiger salamander (*Ambystoma californiense*) – Federal and State threatened

Other sensitive biological resources (e.g., active nests of migratory birds or maternal roost sites for sensitive bat species) would not be affected by the proposed activities because the work would be conducted during the non-nesting period (August 1 through January 30).

Based on previous field survey observations, installation of the rock dike inlet structure would increase the affected area of habitat for federal and state-listed species by 0.08 acre. This is less than a 0.03 percent increase compared to the area authorized in the USFWS Biological Opinion and the CDFG Incidental Take Permit. Therefore, the proposed increase in the area of disturbance is discountable for sensitive biological resources and would not substantially change the effects determinations presented in the permit documents.

CULTURAL RESOURCES

The proposed area of project modifications was subject to an intensive pedestrian archaeological survey on October 18, 2011, by URS Senior Archaeologist, Jay Rehor, a Registered Professional Archaeologist who also meets the Secretary of the Interior's Standards for Archaeology.

Prior to the field survey, records obtained from previously conducted records searches at the Northwest Information Center of the California Historical Resources Information System were reviewed. Survey and geoarchaeological reports produced for the Calaveras Dam Replacement Project were also reviewed. No previously recorded resources are located in the vicinity of any of the proposed minor project modifications.

The proposed modification is located in a mixed oak woodland/riparian setting along a small drainage that feeds the northwest end of Calaveras Reservoir. The modification is primarily located on a small flat on the south side of the drainage, surrounded on all sides by steep hills. Ground visibility was generally poor due to vegetation and leaf litter. Intermittent surface scrapes were made to expose the surface soil, using a hand mattock. In addition, the cut bank of the drainage, with an exposure of several feet in depth, was carefully examined. No cultural resources were identified as a result of these inspections. In addition, no developed paleosols, which could potentially harbor buried archaeological resources, were identified through examination of the cut bank.

No prehistoric or historic-era artifacts or evidence of an archaeological deposit, such as dark soils, shell or charcoal were observed. Given the factors discussed above, as well as the limited areal extent and depth of the proposed actions, it is highly unlikely that the project modifications will cause impacts to potentially significant cultural resources. However, should cultural resources inadvertently be encountered, work in the immediate vicinity of the discovery will be redirected until a qualified archeologist can assess the nature and significance of the finds. In the event human remains are discovered, consistent with State law, the County Coroner will be contacted. If the Coroner determines the remains are Native American, the California Native American Heritage Commission will be contacted and they will appoint a Most Likely Descendant to work with the landowner to make recommendations for the treatment or disposition of the remains and associated grave goods.

Please contact Steve Leach at (510) 874-3205 or Jay Rehor at (510) 874-1726 if you have any questions regarding this memorandum.

REFERENCES

- EDAW. 2006. Preliminary Draft Biological Assessment for the Calaveras Dam Replacement Project. Prepared for the U.S. Army Corps of Engineers on behalf of the San Francisco Public Utilities Commission, 1155 Market Street, San Francisco, CA. Contract No. CS-732. Prepared by EDAW, Inc., San Francisco, CA. 21 December.
- May and Associates. 2006. Final Delineation of Waters of the United States. Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California.
- San Francisco Planning Department. 2011. Final Environmental Impact Report for the San Francisco Public Utilities Commission (SFPUC) Calaveras Dam Replacement Project. File No. 2005.0161E. January 5.
- U.S. Fish and Wildlife Service (USFWS). 2005. Critical Habitat – What is it? Fact sheet prepared by the U.S. Fish and Wildlife Service. Online document accessed on 4-18-08:
http://www.fws.gov/endangered/factsheets/Critical_Habitat_12_05.pdf

O'Neill, Kerry

From: Craig Weightman [CWEIGHTMAN@dfg.ca.gov]
Sent: Thursday, October 13, 2011 4:41 PM
To: Steve Leach
Cc: Greg Martinelli; Craven-Green, Deborah; O'Neill, Kerry; Michael Forrest
Subject: Modification of Disposal Site 3 work limits LSAA 1600-2010-0322-03, ITP 2081-2010-033-03

Attachments: CDRP 10-06-11 minor change request.pdf; Disposal_site_3_Mod(2011-10-06).pdf;
CDRP_impact_tracking_table.xls



CDRP 10-06-11 Disposal_site_3_MoCDRP_impact_tracki
minor change req... d(2011-10-06... ng_table.xls...

Steve,

I am approving the modification to Disposal Site 3 as described in the email below, illustrated in the attached pdf "Disposal_site_3_Mod(2011-10-06).pdf", and quantified in the attached pdf "CDRP 10-06-11 minor change request.pdf". This approval covers changes to LSAA 1600-2010-0322-03 and ITP 2081-2010-033-03

The approval is conditioned on the SFPUC applying for an amendment to the ITP and LSAA no later than the end of calendar year 2011. The amendment application will incorporate the requested changes and propose a condition which would authorize minor changes to impacted covered species habitat.

It is anticipated that the amendment would require use of the attached excel file "CDRP_impact_tracking_table.xls" to facilitate tracking of impacts and determine if overall habitat impacts will be exceeded, as well as a map indicating the location of changes. The basis of the amendment would be to allow changes to the location and amount of impacts so long as a balance of authorized habitat disturbance exists.

Please let me know if the conditions of my approval are acceptable.
Thank You
Craig

Craig J. Weightman
Senior Environmental Scientist
Calif. Department of Fish and Game
7329 Silverado Trail
Napa, CA 94558

(707) 944-5577 voice
(707) 944-5563 fax

>>> "Leach, Steve" <steve.leach@urs.com> 10/10/2011 7:47 PM >>>
Craig, I have updated the tracking table as discussed. The Section 1602 impacts/requests have been updated to address both permanent and temporary effects. As discussed, the proposed impact will not affect the length of the impact to perennial stream because the additional area is parallel to a section of the stream already addressed in the LSAA.

Please contact me if you have any questions.

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205

fax: 510-874-3268
steve.leach@urs.com

Please note new e-mail address...

From: Leach, Steve
Sent: Saturday, October 08, 2011 9:51 PM
To: Craig Weightman (cweightman@dfg.ca.gov)
Cc: Deborah Craven-Green (DCravenGreen@sfgwater.org); Kerry O'Neill (KONeill@sfgwater.org);
Forrest, Michael
Subject: CDRP - Request to modify Disposal Site 3 work limits

Craig, thank you for reviewing the draft tracking table. I have revised the attached table based on your input.

The SFPUC requests confirmation that the Calaveras Dam contractor can proceed with the following proposed changes to Disposal Site 3 pending a future amendment to the 1602 and 2081 agreements.

The proposed changes to Disposal Site 3 are illustrated on the attached figure and summarized below.

1) A temporary bypass pipe will be installed to move water around the work area. The bypass pipeline requires a rock dike at the inlet to direct water into the pipe and prevent erosion of the materials in the disposal area. Approximately 0.08 acre would be disturbed outside the limits of work during installation of the rock; the rock dike would occupy about 0.03 acre within the 0.08 acre. The rock fill will be removed after the disposal site is completed and the pipe will be removed. SFPUC will implement the restoration plan previously submitted to CDFG that describes the riparian habitat restoration and channel restoration at this location.

2) The rockfill dike at the south end of the disposal site is being relocated uphill to reduce work within the reservoir. The proposed change will reduce the area of fill in the reservoir by approximately 0.44 acre. At the southwest corner additional work area is required on the uphill side of the rock dike (0.22 acre) and another location at the southeast corner (0.07 acre). The additional areas associated with the south end of Disposal Site 3 have already been addressed in the impacts for the 2081 ITP under the category of reservoir inundation. No change to the total area of impact or mitigation is required for this change.

Please contact me if you have any questions. Thank you for your assistance with this request.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com<mailto:steve.leach@urs.com>

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O'Neill, Kerry

From: Xavier Fernandez [xafernandez@waterboards.ca.gov]
Sent: Wednesday, October 12, 2011 7:54 AM
To: steve.leach@urs.com
Cc: Craven-Green, Deborah; O'Neill, Kerry; Bill Hurley
Subject: Re: CDRP - Request for approval of minor project modification

Hi Steve,

We approve the minor modifications. Please send a spreadsheet tracking the minor modifications to the project. Thus far, our accounting indicates that minor modifications to the Calaveras Dam Replacement Project have resulted in a net reduction in impacts to waters of the state.

Regards,

Xavier

Xavier Fernandez
Environmental Scientist
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Phone: 510-622-5685

>>> "Leach, Steve" 10/08/11 10:12 PM >>>

Xavier, as discussed last Thursday, the SFPUC requests confirmation from the RWQCB that the Calaveras Dam contractor can proceed with minor changes to Disposal Site 3. The proposed changes are described below and illustrated on the attached figure.

- 1) A **temporary** bypass pipe will be installed to convey water around the work area. The bypass pipeline requires a temporary rock dike at the inlet to direct water into the pipe and prevent erosion of the materials in the disposal area. Installation of the rock dike will require more work area than originally anticipated. Approximately 0.08 acre would be disturbed outside the limits of work during installation of the rock (see attached figure). The rock will occupy about 0.03 acre within the 0.08 acre. The rock fill will be removed after the disposal site is completed and the pipe will be removed. SFPUC will implement the restoration plan previously submitted to the RWQCB that describes the riparian habitat restoration and channel restoration at this location.
- 2) The rockfill dike at the south end of the disposal site is being relocated uphill to reduce work within the reservoir. The proposed change will reduce the area of fill in the reservoir by approximately 0.44 acre. At the southwest corner additional work area is required on the uphill side of the rock dike (0.22 acre) and another location at the southeast corner (0.07 acre). The additional areas associated with the south end of Disposal Site 3 are included in the impacts authorized in the RWQCB's Final Order (R2-2011-0013) under the category of reservoir inundation. **No change to the total area of impact or mitigation is required for this change.**

Please contact me if you have any questions. Thank you for your assistance with this request.

Regards,

Steve

10/17/2011

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

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10/17/2011

Jack, Emma

From: O'Neill, Kerry
Sent: Monday, December 10, 2012 3:35 PM
To: Jack, Emma
Subject: FW: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3
Attachments: MPM-004 CEQA Approval.pdf

Steve, didn't sign MPM #4 but below is his email approval.

From: Steve Smith [<mailto:Steve.Smith@sfgov.org>]
Sent: Wednesday, October 19, 2011 11:28 AM
To: O'Neill, Kerry
Subject: RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Approved.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

To "Steve Smith" <Steve.Smith@sfgov.org>

cc

10/19/2011 11:01 AM

Subject RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Thanks Steve, I've made the revisions in track changes. Let me know if there is anything else that you need corrected.

From: Steve Smith [<mailto:Steve.Smith@sfgov.org>]
Sent: Wednesday, October 19, 2011 10:49 AM
To: O'Neill, Kerry
Subject: RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Hi Kerry - Based on the URS report, it looks like MM's for inadvertent archeo resources and humans remains are potentially applicable for Cultural Resources. If so, a response on the MPM similar to Vegetation and Wildlife (i.e., checked "y" and notes MM's would be implemented) seems applicable. If you agree, please revise and resend the MPM form (I can also do). Otherwise, let me know why you disagree. I'll get this approved either way shortly after I hear back from you.

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

10/19/2011 08:01 AM

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

Subject RE: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

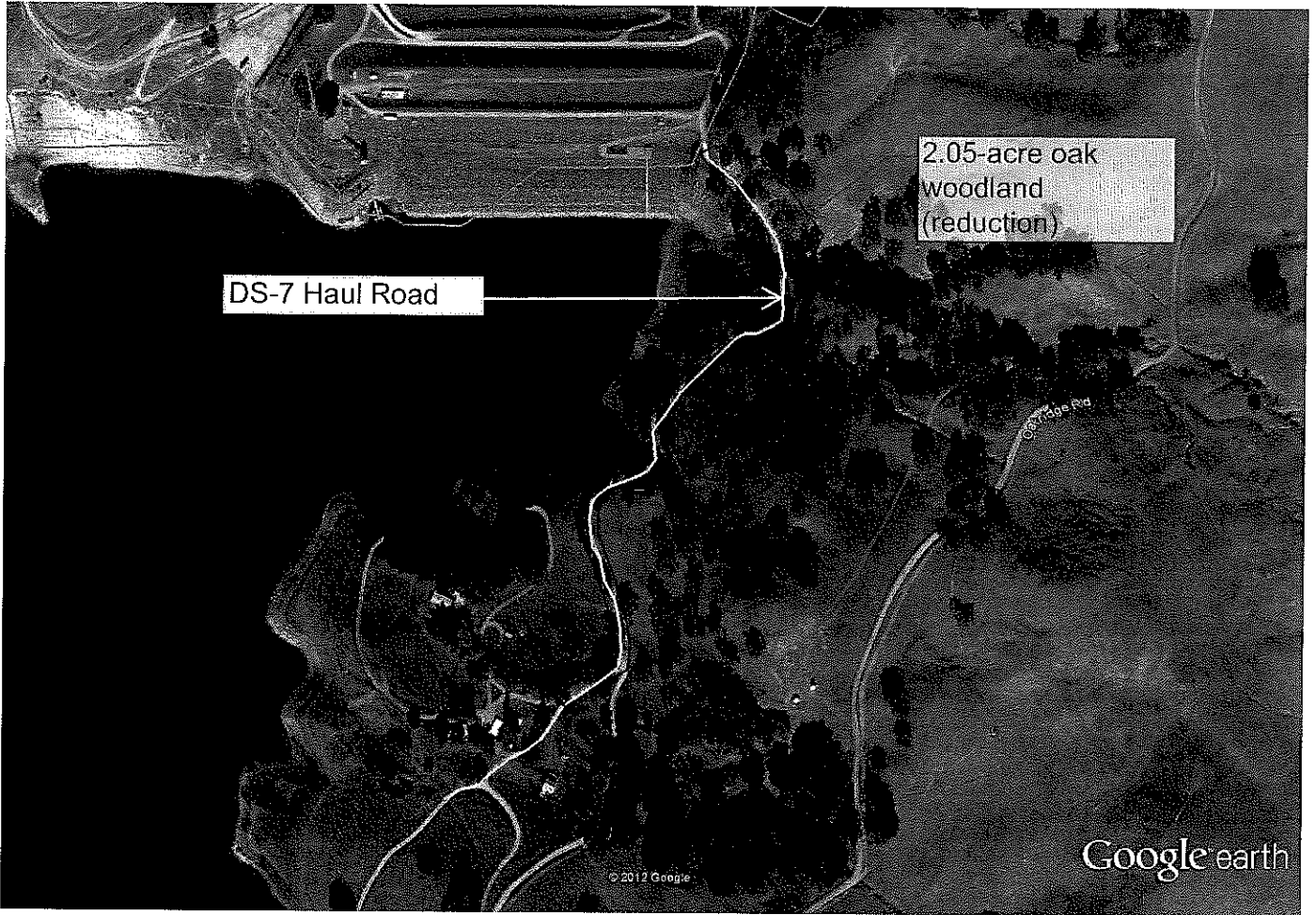
Steve, attached is the revised MPM 4 and a .pdf of all the attachments including the cultural/bio. memo prepared by URS. We haven't yet obtained concurrence from USFWS but anticipate it shortly and I'll forward it to you for your records when we get it.

From: O'Neill, Kerry
Sent: Monday, October 17, 2011 10:27 AM
To: Steve Smith (Steve.Smith@sfgov.org)
Subject: Calaveras MPM - 4 for Extra Workspace @ Disposal Site 3

Attached is Minor Project Modification (MPM) 4 for the Calaveras Dam Replacement Project that I called you about last week. This MPM is for an additional 0.08 acre of extra workspace for the installation of an intake structure for a diversion pipe at Disposal Site 3. As I mentioned on the phone we're awaiting concurrence from USFWS but we have obtained concurrence from both CDFG and RWQCB and I've attached their email approvals. Please call me with questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

Disposal Site 7 Haul Road



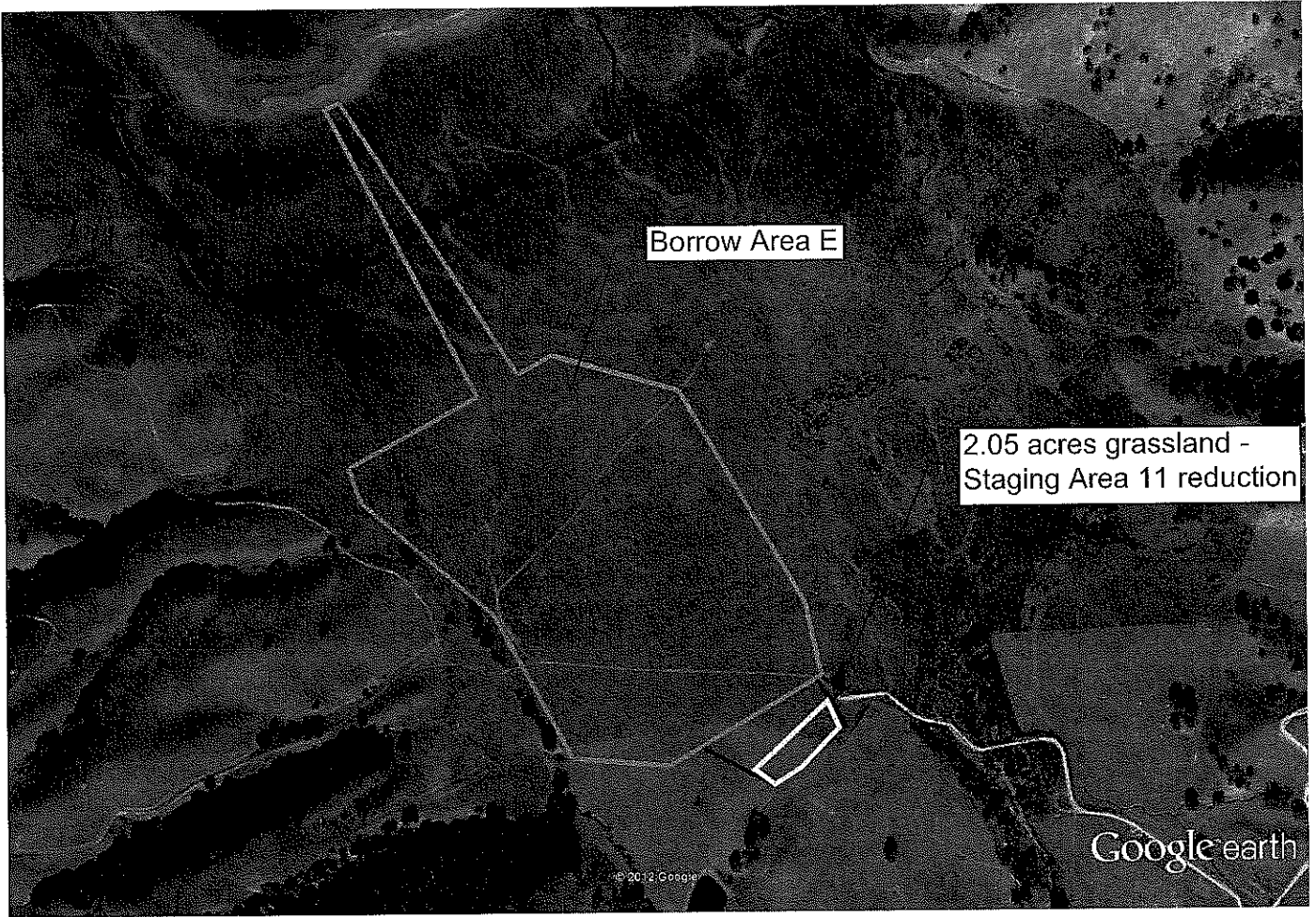
Google earth

feet
meters



Figure 3 - DS-7 Haul Road acreage reduction

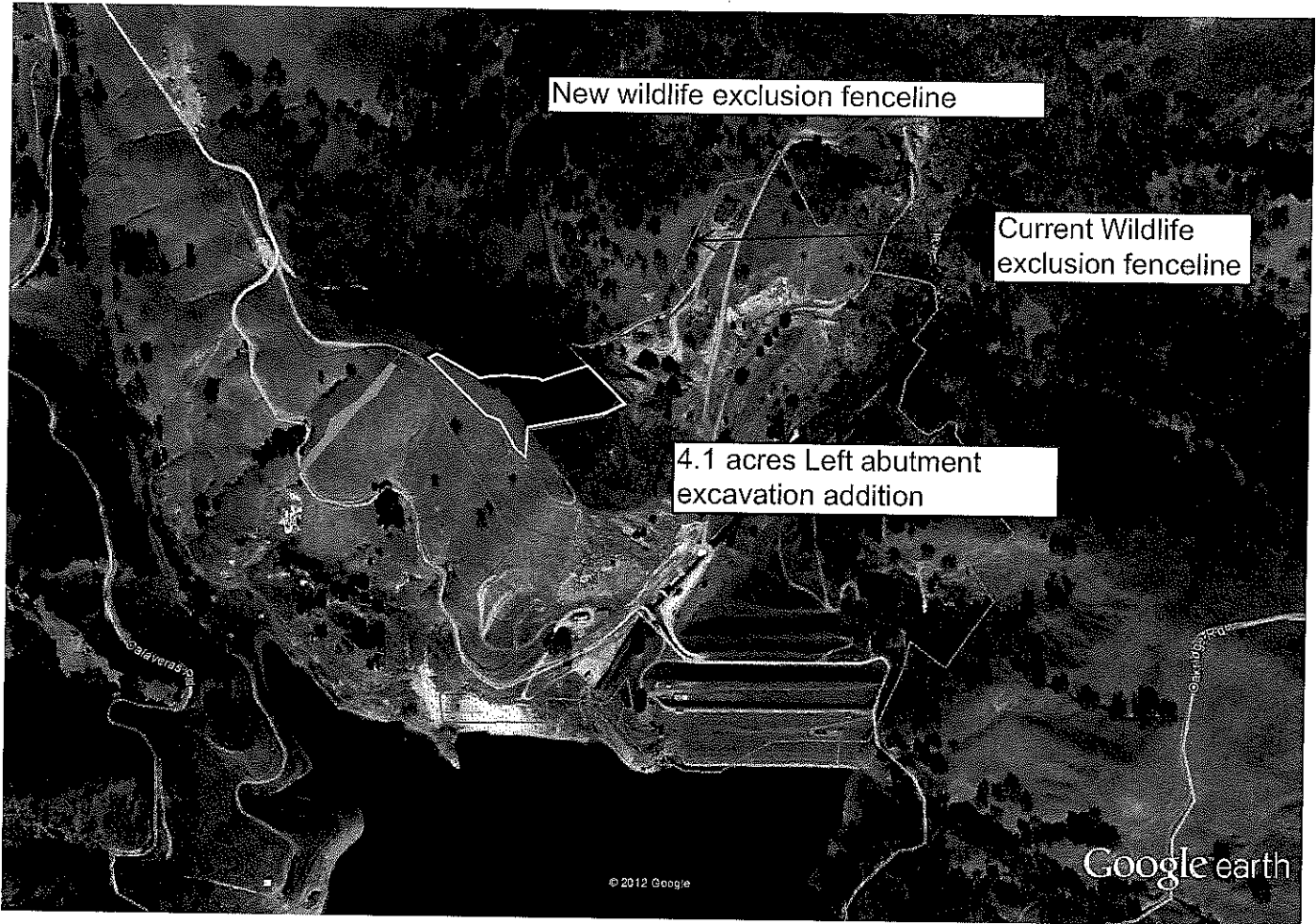
Staging Area 11 and Borrow Area E



Google earth



Figure 2 - Staging Area 11 acreage reduction



Google earth



Figure 1 - Left abutment excavation addition



Photo 1 – Left Abutment Excavation



View of current air monitoring station (left of photo) location and the proposed relocation area (center of photo).

RECOMMENDATIONS

The proposed project modifications could affect additional habitats that are potentially utilized by Alameda whipsnake. However, the potential habitat modifications are minimal and the following proposed mitigation will reduce the potential for take to a less than significant level.

- During removal of the station, a biologist should be present to insure no sensitive species have taken refuge beneath the cement base of the station.
- Prior to placement of the station at the new location, a biologist should survey the area to insure no special status species are present and also to insure placement of the new weather station does not impact potential Alameda whipsnake refugia (mammal burrows, rock outcrops).

Please contact Cullen Wilkerson at (510) 685-1497 or Bill Stagnaro at (415) 440-4267 if you have any questions.

REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California.

Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.

EDAW & Turnstone Joint Venture (ETJV). 2006c. California Red-legged Frog and California Tiger Salamander Habitat Assessment for the Calaveras Dam Replacement Project. Field work from April-May 2006, unpublished. EDAW, Sacramento, CA.

EDAW & Turnstone Joint Venture (ETJV). 2007. California tiger salamander and California red-legged frog habitat assessment field notes by Stephanie Coppeto, 21 March 2007, unpublished.

The following photographs provide representative views of the current and proposed weather station locations.

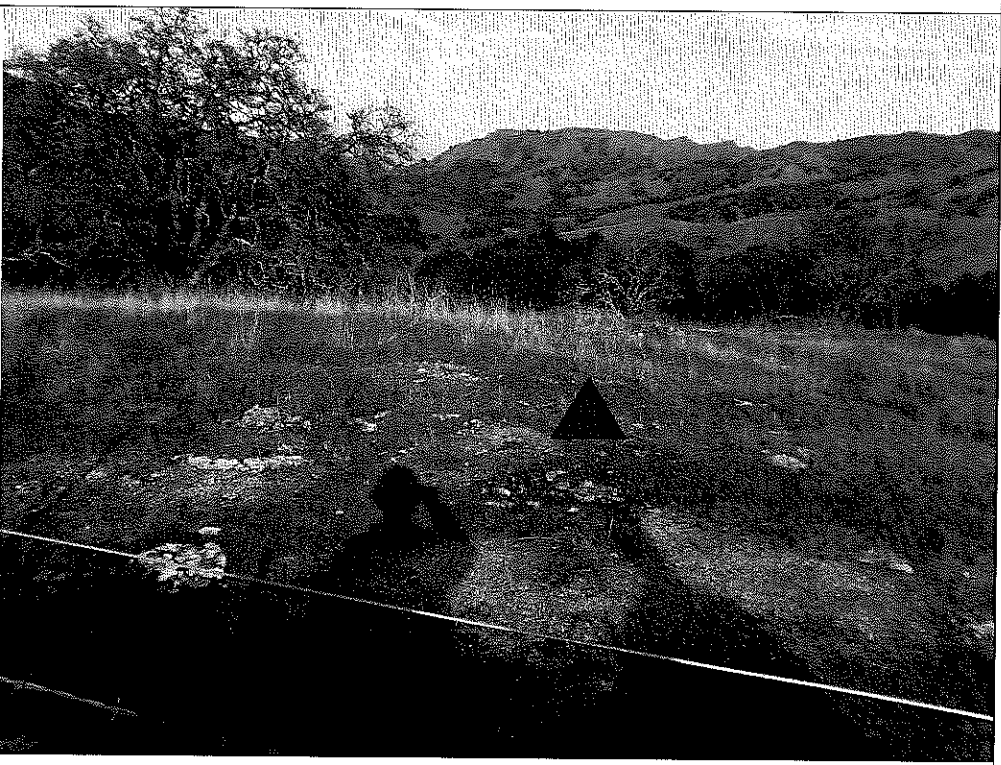
Photo 1



Description/Comments

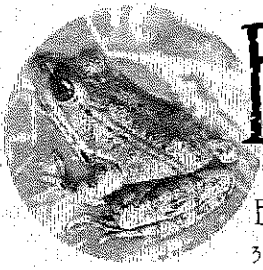
Current SA7 location of the air sampling station.

Photo 2



Description/Comments

Proposed location of the air sampling station.



BioMaAS

Biological Monitoring and Assessment Specialists, Inc.
333 Valencia Street, Suite #324, San Francisco, CA 94103
Phone (415)255-8077 Fax (925)887-4702 www.BioMaAS.com

Date: December 8, 2011
To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental Management
From: Bill Stagnaro, BioMaAS
Subject: **Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project (CUW 37401)**

This memo presents an evaluation of the biological for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The contractor is requesting to relocate a air sampling station in the Staging Area 7 location to a new location outside of the exclusion fence, approximately 50 feet to the north.

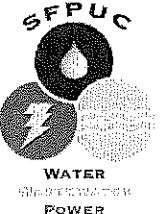

These proposed project modifications are located within the biological resource study area for the CDRP (e.g. ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007).

BIOLOGICAL RESOURCES

A BioMaAS biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion (81420-2009-F-1339).

The proposed site is located in non-native grassland approximately 50 feet from the current location. The exact location is unclear, however, no wetland features were evident in this general vicinity and there are no sensitive plant species known to occur in this area (ETJA, 2006a). Potential special status wildlife species habitat in the immediate vicinity consists of rock outcrops and fossorial mammal burrows. These two features may be considered potential habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*).

MINOR PROJECT MODIFICATION

	SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM	
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Minor Project Modification Number:	005	Date: 10/17/11
Project Title:	Calaveras Dam Replacement Project	
MEA Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: SFPUC	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	NA	Net Acreage Affected: NA
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

This Minor Project Modification proposes to extend the construction work hours identified in the Calaveras Dam Replacement Project Environmental Impact Report (FEIR). Section 3.5.5 of the FEIR states "Construction activity would generally consist of two 10-hour shifts per day, 6 days per week". The SFPUC requests to increase the construction work hours to 24-hours per day Monday through Friday, 12 hours on Saturdays, and equipment maintenance and repair on Sundays for a total of 55 days beginning in November 2011. Hauling of materials from off site will adhere to the times identified in the FEIR Construction Schedule (Section 3.5.5).

Due to the additional construction necessary in Disposal Site 3 and to meet the Construction Schedule, the SFPUC is making this request.

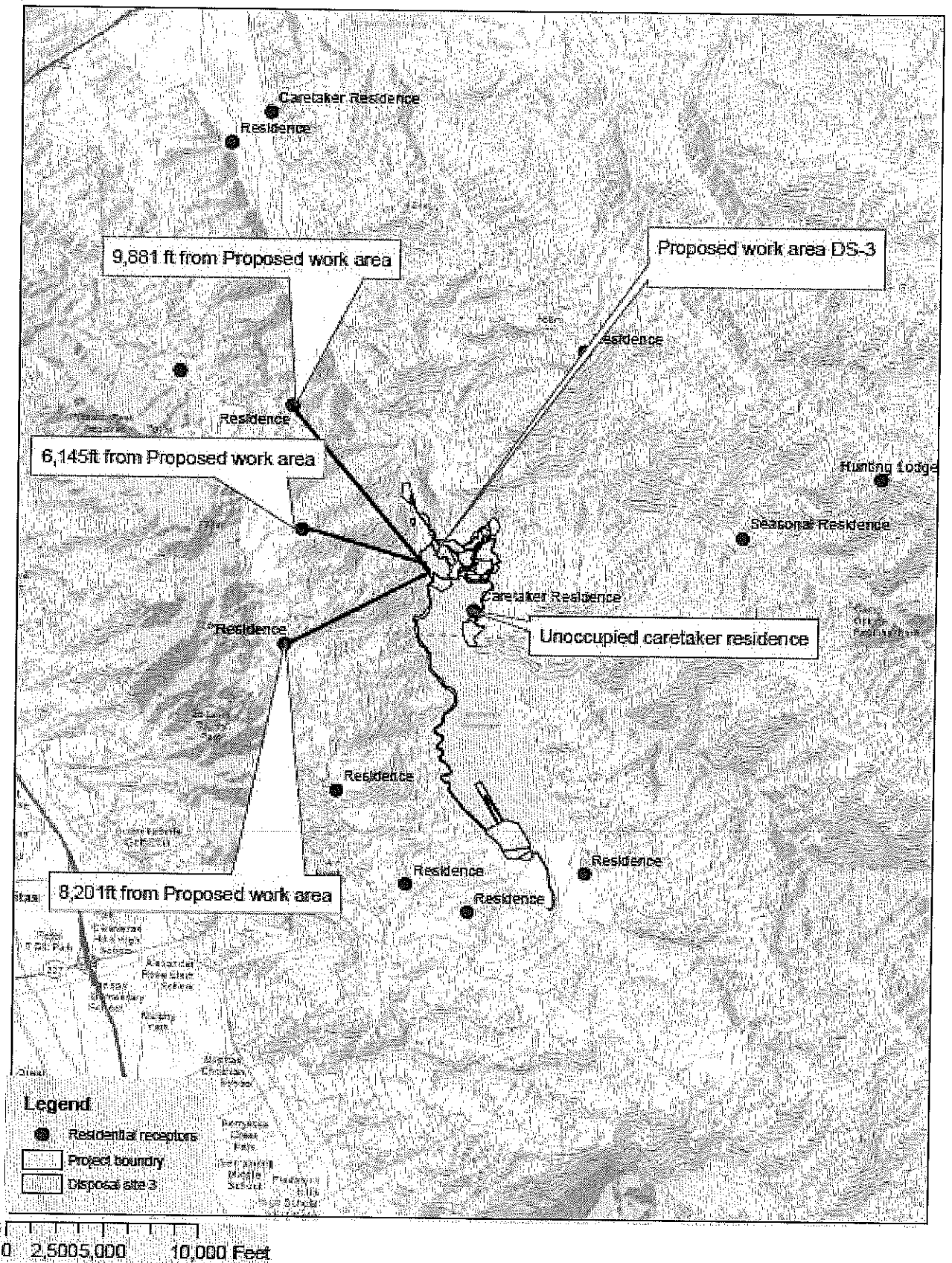
ENVIRONMENTAL IMPACTS

No additional environmental impacts were identified.

Biological <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Cultural <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Photos <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>Attachments:</u> Map identifying nearest visual and noise receptors.			
Biological <input type="checkbox"/> No Resources Present <input type="checkbox"/> Resources Present <input checked="" type="checkbox"/> NA			

	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. The nearest residence is over 6,000 feet away (see Map).
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. The nearest receptor is over 6,000 feet away and has no direct line of sight.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input type="checkbox"/> Y	There would be no new significant vegetation and wildlife resource impacts beyond those analyzed in the FEIR. Vegetation consists of mature oak woodland, Diablo scrub and grassland habitats.
	<input checked="" type="checkbox"/> N	

MPM005 Map of Nearest Sensitive Receptors to Disposal Site 3



Wilkerson, Cullen

From: King, Terry
Sent: Thursday, October 27, 2011 7:30 AM
To: Wilkerson, Cullen
Subject: RE: Calaveras MPM 5 - Night Time Work
Thanks Cullen!!

From: Wilkerson, Cullen
Sent: Wednesday, October 26, 2011 6:53 PM
To: King, Terry
Subject: FW: Calaveras MPM 5 - Night Time Work

FYI.

From: O'Neill, Kerry
Sent: Wednesday, October 26, 2011 3:48 PM
To: Wilkerson, Cullen
Cc: Jack, Emma
Subject: RE: Calaveras MPM 5 - Night Time Work

Cullen attached is a .pdf of the approved MPM 5 with attachment and MEA email approval for your files.

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Wednesday, October 26, 2011 3:28 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: Calaveras MPM 5 - Night Time Work

Approved and attached.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

10/26/2011 11:44 AM

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>

Subject RE: Calaveras MPM 5 - Night Time Work

Your addition looks fine. tx

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Wednesday, October 26, 2011 11:01 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: Re: Calaveras MPM 5 - Night Time Work

Hi Kerry - I've added a sentence under Visual Resources to explicitly note no nighttime lighting issue would result. If you are OK with this, let me know and I should be able to sign/approve today.

Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

10/20/2011 04:57 PM

To <Steve.Smith@sfgov.org>

cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>

Subject Calaveras MPM 5 - Night Time Work

As we discussed attached in MPM 5 for night time work at Disposal Site 3 (see attached Word and .pdf version). Please call or email with any questions.

Kerry O'Neill

Environmental Construction Compliance Manager

Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103

Voice: 415-554-2474; Fax: 415-934-5750

[attachment "MPM-005 Night time work at DS-3.doc" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "MPM-005 Night time work at DS-3.pdf" deleted by Steve Smith/CTYPLN/SFGOV]

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 007		Date: 12/07/11
Project Title:	Calaveras Dam Replacement Project	
MEA Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
	<input checked="" type="checkbox"/> Other: SFPUC	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Live oak woodland, grassland, developed, scrub	Net Acreage Affected: 0.82 (permanent)
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 1600-2010-0322-R3, 2081-2010-033-03

Detailed Description of Minor Project Modification:

This Minor Project Modification proposes to increase the construction limits identified in the Calaveras Dam Replacement Project Environmental Impact Report (FEIR). Attached FEIR Figure 3.8 that shows the project's construction limits and reservoir "pool line" now includes the location of the proposed right abutment addition and boat ramp access road.

Right Abutment Project Area Addition - The SFPUC requests to increase the construction work limits at the right abutment location by 0.52 acres that is vegetated with coast live oak and moderate to dense understory vegetation to accommodate a permanent road connection from the crest of the new dam to an existing watershed access road (see attached Contract Drawing FD-1).

Boat Ramp Access Road Improvements - The SFPUC requests to use the boat ramp access road that extends from Calaveras Road to the western edge of Calaveras Reservoir. The boat ramp access road is required to allow construction to access the area to build the West haul Road, to construct the floating Boat House, and to allow safe access for future operations in this area of the reservoir. By paving this existing access road the currently seasonal road will be accessible during construction and post construction to the construction contractor and biologists who need to get out onto the reservoir to perform required sampling/monitoring activities. In order to use this road safely during construction, improvements are required including removal of an existing concrete curb, widening the road in specific sections, and installation of an all-weather surface (see attached Contract Drawing AR-16). The dirt road is considered developed and extends through non native grassland and Diablan sage scrub plant communities. The roadway improvements (i.e., all-weather surfacing) and the proposed area to be widened (located within the Diablan sage scrub plant community) would increase impacts by 0.3 acres. This impact would be permanent.

ENVIRONMENTAL IMPACTS

The impacts to the oak woodland and grassland area would be permanent and the SFPUC is coordinating with the USFWS and CDFG regarding compensation for Alameda whipsnake habitat. All applicable mitigation measures will be implemented during preconstruction, construction, and post construction activities.

Biological Yes No **Cultural** Yes No **Photos** Yes No **Other** Yes No

Attachments:

FEIR Figure 3.8 that shows the project's construction limits and reservoir "pool line" now includes the location of the proposed right abutment addition and boat ramp access road.

Cultural and Biological Resource memorandum (URS, dated 10/31/11).

Contract Drawing FD-1 showing right abutment project area addition.

Contract Drawing AR-16 showing existing boat ramp road and improvements.

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Previous Cultural Survey Report Reference:

FEIR Section 4.10 – Archaeological Survey Report (ASR) (ETJV 2008) and Historic Resources Inventory Evaluation Report (HRIER) (JRP 2007).

Conditions of Approval or Reasons for Denial

Subject to concurrence from CDFG and USFWS and all applicable stipulations provided by these agencies.

SFPUC Required Signatures for Environmental Approval:

ECCM: Kerry O'Neill Date: 12/05/11

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

MEA Required Signatures for Approval:

Signee: Steven H. Smith Date: 12/7/11

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
		Geology, Soils and Seismicity <input type="checkbox"/> Y <input checked="" type="checkbox"/> N

Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	<p>Based on a pedestrian survey of the location there would be no new significant cultural resource impacts beyond those analyzed in the FEIR. If cultural resources are discovered the project will implement accidental discovery measures in Mitigation Measure 5.10.1 and measures related to human remains an associated or unassociated funerary objects. (see attached Cultural and Biological Memo and below summary of memo).</p> <p>Right abutment project area addition – No cultural materials or evidence of archaeological deposits were identified during a survey of the area, and no rock outcrops were noted. The geology of pre-quaternary deposits and bedrock indicate that there is little chance of buried archaeological deposits in this area.</p> <p>Boat ramp project area addition – The road and adjacent areas were surveyed and no cultural resources were identified. The project modification is within the boundaries of site P-01-10870, Desmond Camp; however, this site has been evaluated and is not a historical resource or unique archaeological resource as defined by CEQA. The geology of pre-quaternary deposits and bedrock indicate that there is little chance of buried archaeological deposits in this area.</p>
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. The nearest residence is over 6,000 feet away.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. The nearest receptor is over 6,000 feet away and has no direct line of sight.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	<p>There would be an additional 0.82 acres of permanent impact to vegetation or wildlife (i.e., wildlife habitat). Applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures, will be implemented to reduce impacts to less than significant. (See attached Cultural and Biological Memo and below summary of memo).</p> <p>Right abutment project area addition – The existing habitat is unlikely to be utilized by California tiger salamander. However, the area is potential foraging and dispersal habitat for Alameda whipsnake. No jurisdictional wetlands or other waters are present in the affected area. The project area addition will require clearing of 0.52 acres that is vegetated with coast live oak.</p>
	<input type="checkbox"/> N	

		<p><u>Boat ramp project area addition</u> – The footprint of the existing dirt area is disturbed and the additional 0.3 acres where the road will be widened will impact 0.3 acres of non diablan sage scrub plant community. Per Figure 4 of the Final Botanical Survey Report (2006) by May & Associates, the plant community in the area of impact is designated Diablan sage scrub. The definition of diablan sage scrub is “stands that are dominated by California sagebrush (<i>Artemisia californica</i>), California buckwheat (<i>Erigonum fasciculatum</i>), and black sage (<i>Salvia mellifera</i>) with plenty of sticky monkey flower (<i>Mimulus auranticus</i>) also present” (Mooney 1988), and coyote brush (<i>Baccharis pilularis</i>) among other species (JSA 2004). The scrub plant community in this area is dominated by coyote brush, fennel (<i>Foeniculum vulgare</i>), and poison hemlock (<i>Conium maculatum</i>). All scrub plant communities within and adjacent to the CDRP site are considered habitat for Alameda whipsnake.</p>
--	--	--

at ramp
 roadway
 improvements,

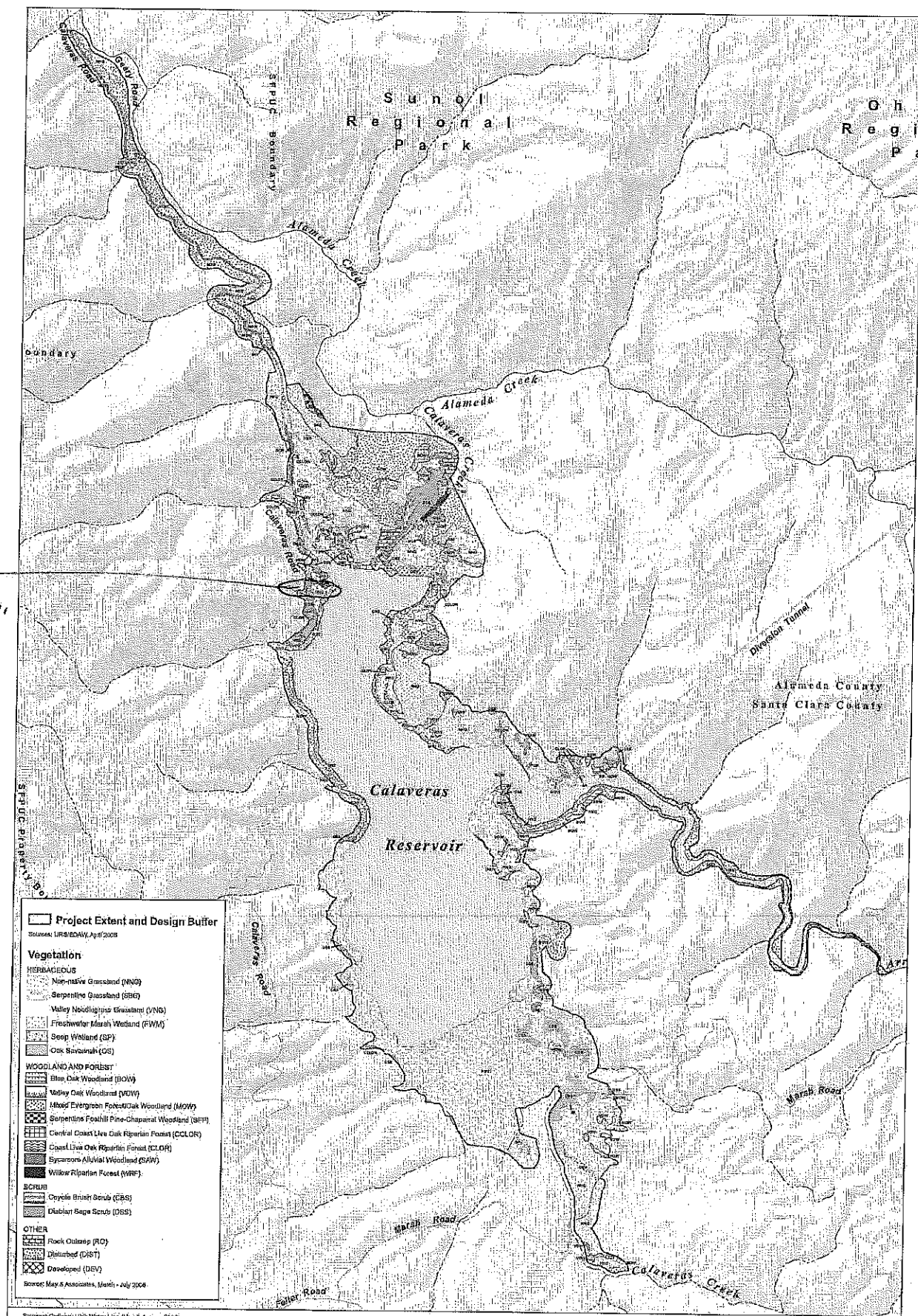


Figure 4: Vegetation Communities

Calaveras Dam Replacement Project
 San Francisco Public Utilities Commission
 Revision Date: November 8, 2008

3.2.2.3 Diablan Sage Scrub

Diablan sage scrub communities make up 2 percent (~ 51 acres) of the project study area. Diablan sage scrub is a subunit of coastal sage scrub (one of two major scrub formations in the California floristic province) and is the scrub classification used in the Alameda Watershed HCP. Coastal sage scrub is characterized by low to medium-height shrubs with semi-woody, flexible stems and soft leaves that are facultatively drought-deciduous. Characteristic species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and several sage (*Salvia*) species (Mooney 1988). It co-occurs with chaparral but typically grows where there is less available soil moisture because of low rainfall, slope aspect, or edaphic factors (Harrison et al. 1971). Coastal sage scrub is a vegetation formation that is composed of many different subunits rather than a uniform plant community (JSA 2004).

Diablan sage scrub occurs in the inner Coast Ranges from Mount Diablo south to San Luis Obispo County (Axelrod 1978, Holland 1986). In the study area, shrub or semi-shrub species associated with this habitat include bush monkeyflower (*Mimulus auranticus*), coyote brush (*Baccharis pilularis*), California matchweed (*Gutierrezia californica*), poison oak (*Toxicodendron diversilobum*), California broom (*Lotus scoparius*), and bush lupine (*Lupinus albifrons*) (JSA 2004).

Diablan sage scrub was found in several small patches, mostly ranging in size from 0.3- to 1.5-acres. The two largest patches of Diablan sage scrub were 6.7 acres and 19.8 acres in size. This habitat was considered moderate to high quality based on species richness, lack of disturbance, importance to dependent wildlife, and importance as a wildlife movement corridor. This vegetation community is considered sensitive because of its limited regional distribution; threats to remaining occurrences; and important habitat values to sensitive species.

3.2.2.4 Coast Live Oak Riparian Forest

Coast live oak riparian forests make up less than 1 percent (~21 acres) of the study area. The Alameda Watershed Management Plan² (Management Plan) [San Francisco Public Utilities Commission 2001] draws a distinction between *coast live oak riparian forest* and *central coast live oak riparian forest* based on moisture regime. As described in the Management Plan, coast live oak riparian forest is found along ephemeral streams while central coast live oak riparian forest (described in following sections) occurs on floodplains and in canyons along perennial or intermittent streams. Coast live oak riparian is found in dry, isolated drainages surrounded by scrub or grassland. (JSA 2004)

Coast live oak riparian forest is dominated by coast live oaks (*Quercus agrifolia*) with an understory of grassland species. Shrubs, including coyote brush, poison oak, and blue elderberry (*Sambucus mexicanus*) were also found scattered in the understory along ephemeral drainages. Coast live oak riparian forest was identified in 11 patches ranging from 0.3- to 7.6-acres in size. This habitat was considered moderate to high quality based on species richness, lack of disturbance, and importance to dependent wildlife.

This vegetation community is considered sensitive because of its limited regional distribution; threats to remaining occurrences; and important habitat values to sensitive species. Portions of this habitat (i.e. the waterways) are considered jurisdictional wetlands or waters, and may be

² As previously discussed, vegetation community mapping followed protocols from the Alameda Watershed HCP, which incorporated habitat communities and protocols described in the Alameda Watershed Management Plan.

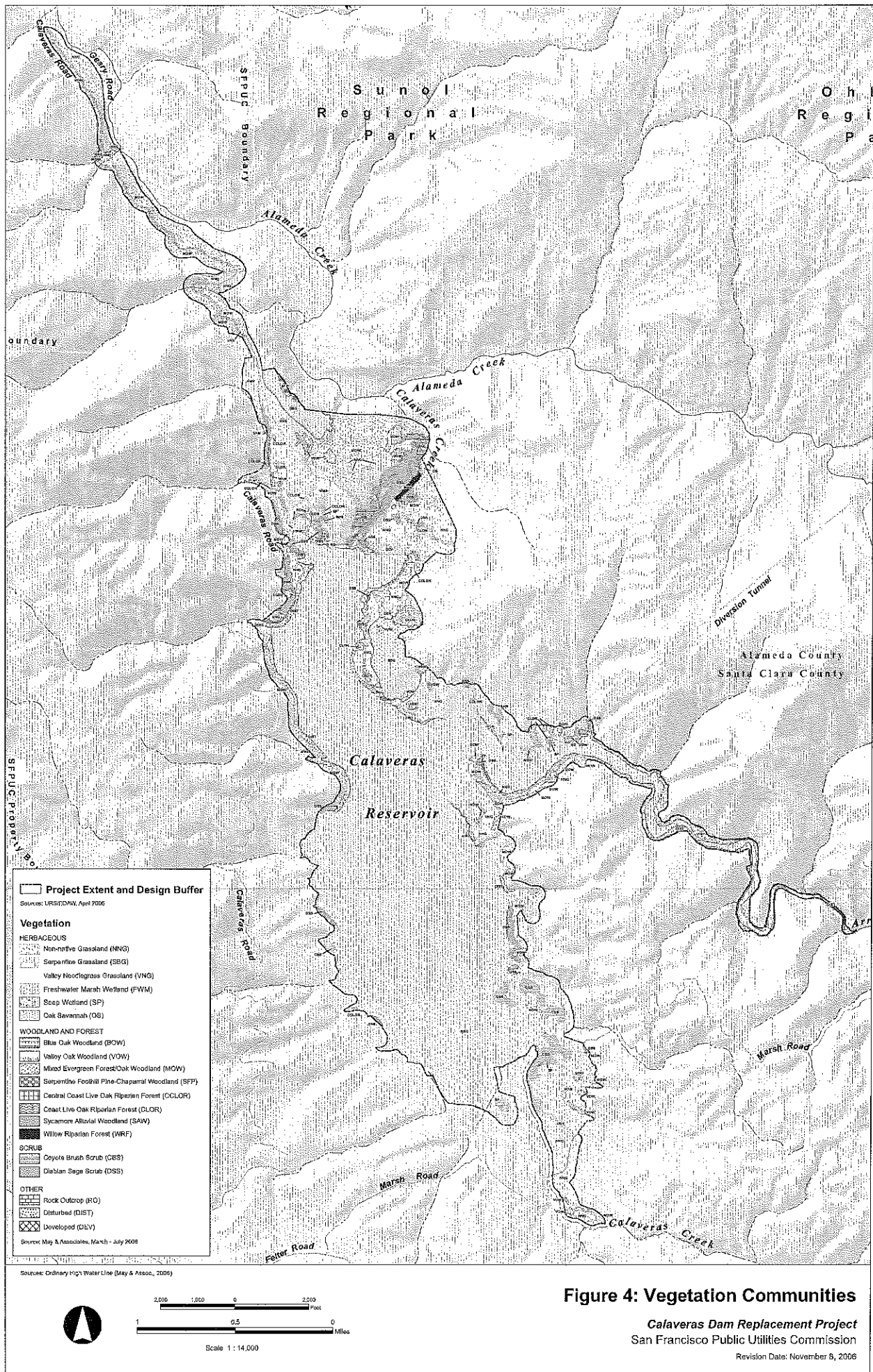
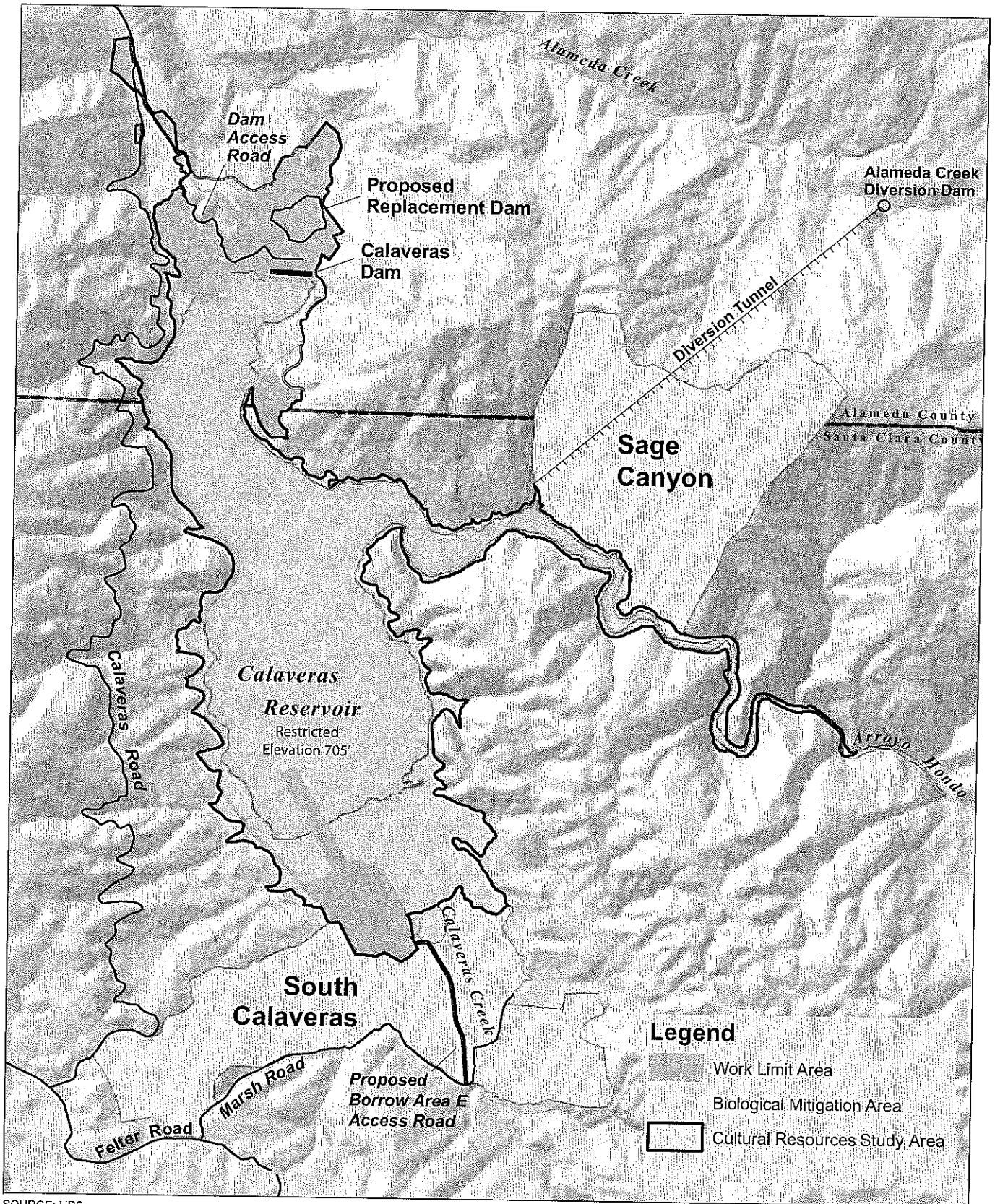
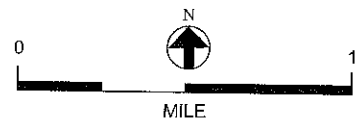


Figure 4: Vegetation Communities

Calaveras Dam Replacement Project
 San Francisco Public Utilities Commission
 Revision Date: November 9, 2006

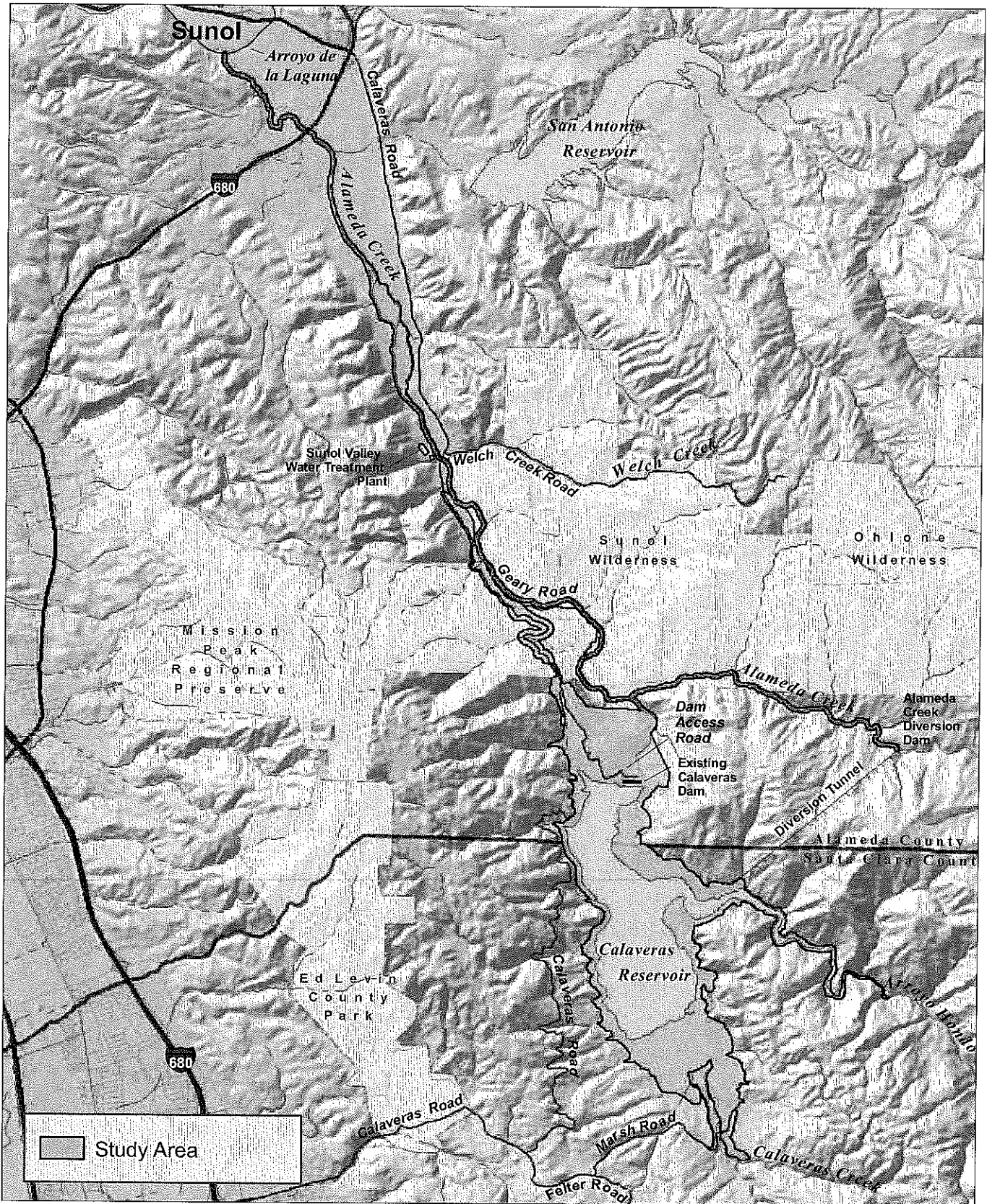


SOURCE: URS



CALAVERAS DAM REPLACEMENT PROJECT

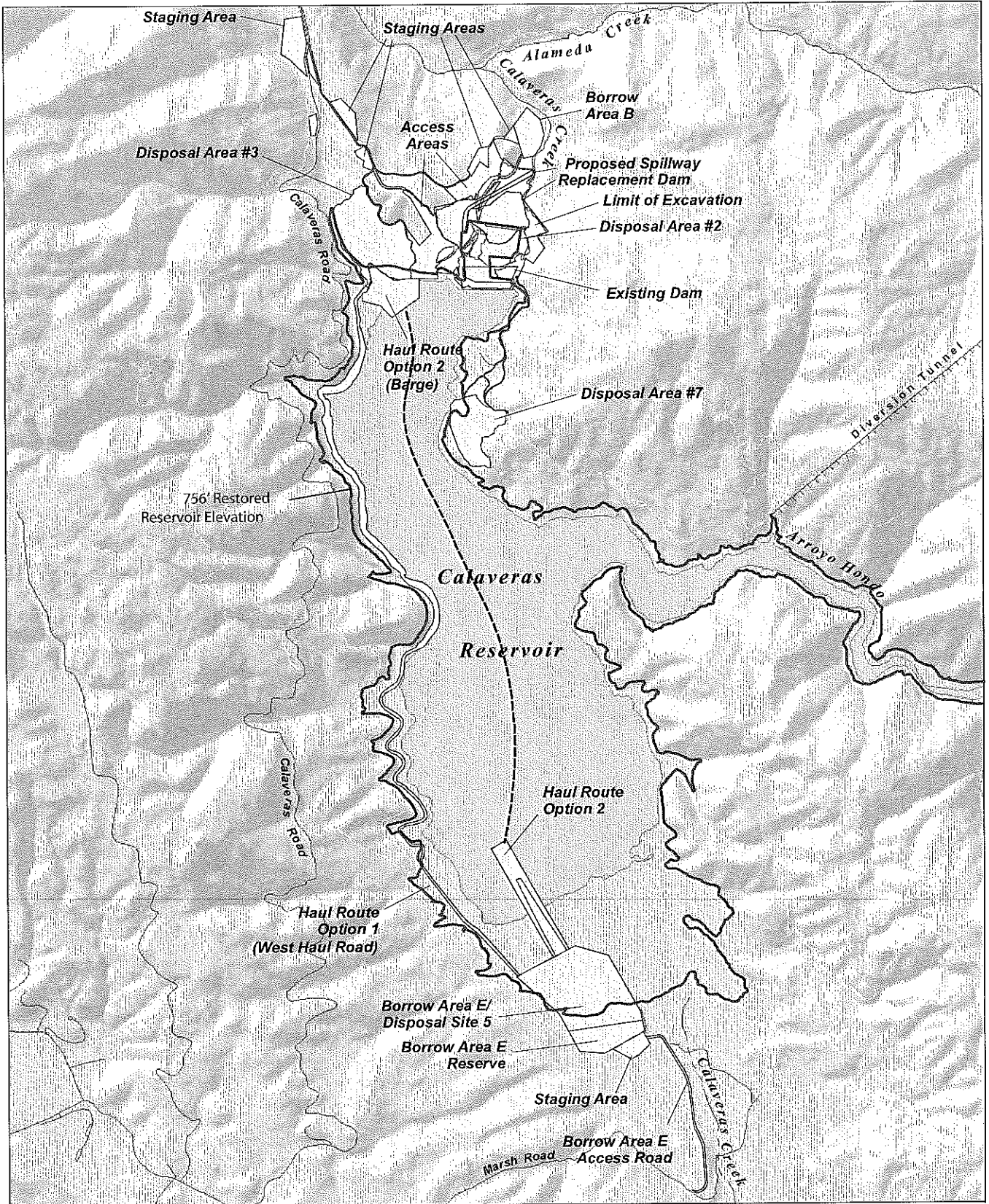
FIGURE 4.10.1: CULTURAL RESOURCES STUDY AREA AND WORK LIMIT AREA



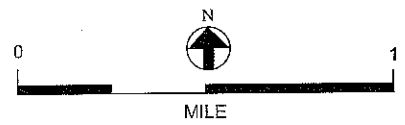
SOURCE: ETJV 2006b.

CALAVERAS DAM REPLACEMENT PROJECT

FIGURE 4.4.1: VEGETATION AND WILDLIFE STUDY AREA

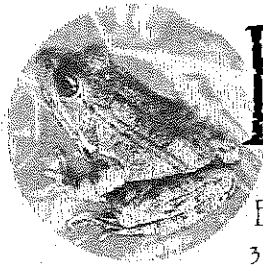


SOURCE: URS



CALAVERAS DAM REPLACEMENT PROJECT

FIGURE 3.8: WORK LIMIT AREA



BioMaAS

Biological Monitoring and Assessment Specialists, Inc.
333 Valencia Street, Suite #324, San Francisco, CA 94103
Phone (415)255-8077 Fax (925)887-4702 www.BioMaAS.com

Date: November 18, 2011
To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental Management
From: Bill Stagnaro, BioMaAS
Subject: **Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project (CUW 37401)**

This memo presents an evaluation of the biological resources for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The contractor is requesting, per the contract specifications to install survey monument points in two locations outside of the construction limits. The monument installation is within the Calaveras Dam Replacement project Final Environmental impact Report study areas.

These proposed project modifications are located within the biological resource study area for the CDRP (e.g. ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007). However, the affected areas may not have been reviewed during previous cultural resources surveys, including the Historical Resources Inventory and Evaluation Report (JRP 2008), Archaeological Survey Report (ART and EDAW 2008), and Archaeological Survey Report Addendum I and II (URS 2009a).

BIOLOGICAL RESOURCES

A BioMaAS biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion (81420-2009-F-1339). In addition, the biologist reviewed the Contract Drawing (GN-8) for proposed placement of monument points (Site).

Site 110. Site 110 is located atop Observation Hill and is approximately 200 feet outside of the Project Area. The site consists of non native grassland. A few scattered rock outcroppings are located along the ridge top in and adjacent to the site. Habitat immediately adjacent to this site consists of non native grassland and oak woodland. The proposed access route to this location is an area approximately 200 feet long along the ridge top from a preexisting fire road. This area is potential foraging, dispersal and refugia habitat for the federal and state-listed Alameda whipsnake (*Masticophis lateralis euryxanthus*) and the federal listed California red-legged frog

(*Rana draytonii*) (SFPUC 2011). No other special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by this project modification. Preconstruction surveys for sensitive herpetofauna and nesting birds (dependent upon the timing of the proposed work) should be conducted at the project site and along the access route. Surveys should be consistent with the CEQA MMRP and potential herpetofauna refugia (burrows, rock outcroppings) should be avoided to the fullest extent possible.

Site 112. Site 112 is located adjacent to a fire road and consists of nonnative grassland. The site is currently grazed. This area is potential foraging and dispersal habitat for the Alameda whipsnake, California red-legged frog and California tiger salamander (SFPUC 2011). No other special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by this project modification. Preconstruction surveys for sensitive herpetofauna and nesting birds (dependent upon the timing of the proposed work) should be conducted at the project site and along the access route. Surveys should be consistent with the CEQA MMRP and potential herpetofauna refugia (burrows, rock outcroppings) should be avoided to the fullest extent possible.

PROJECT PHOTOGRAPHS

The following photographs provide an overview of selected project activities and representative views of activities related to the Mitigation Monitoring and Reporting Program.

Photo 1



View of Site 110 (staked area) located atop Observation Hill and approximately 200 feet outside of the Project Area.

Photo 2



Site 112 is located adjacent to a fire road and consists of nonnative grassland that is currently grazed.

CONCLUSIONS

The proposed project modifications could affect additional habitats that are potentially utilized by California tiger salamander, California red-legged frog and Alameda whipsnake. However, the potential habitat modifications are minimal and the proposed mitigation (preconstruction surveys) will reduce the potential for take to a less than significant level.

Please contact Cullen Wilkerson at (510) 685-1497 or Bill Stagnaro at (415) 440-4267 if you have any questions.

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San Francisco Public Utilities Commission (SFPUC) 2011. Calaveras Dam Replacement Project California Tiger Salamander Impact Evaluation. Prepared for the California Department of Fish and Game. Submitted June 2011.



Memorandum

Date: October 31, 2011

To: Kerry O'Neill, San Francisco Public Utilities Commission

From: Maureen Kick, URS Corporation

Subject: *Environmental Review of Proposed Project Modifications
Calaveras Dam Replacement Project (CUW 37401)*

This memo presents an evaluation of the biological and cultural resource considerations for three proposed modifications to the Calaveras Dam Replacement Project (CDRP). The evaluation presented in this memo supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

The memorandum is organized into the following sections:

- 1) Description of proposed project modifications
- 2) Biological resources
- 3) Cultural resources
- 4) Conclusions

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

SFPUC proposes to implement three minor project modifications. The proposed modifications are described below.

- 1) Boat ramp project area addition – improve access to the boat ramp area by paving the existing dirt access road from Calaveras Road.
- 2) Right abutment to project area addition – increase the limits of work by approximately 0.52 acre to accommodate a road connection from the crest of the new dam to an existing watershed access road.
- 3) Access road to Disposal Site 7 – widen and improve road that would be utilized to access Disposal Site 7.

These proposed project modifications are located within the biological resource study area for the CDRP (e.g. ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007). However, the affected areas may not have been reviewed during previous cultural resources surveys, including the Historical Resources Inventory and Evaluation Report (JRP 2008), Archaeological Survey Report (ART and EDAW 2008), and Archaeological Survey Report Addendum I and II (URS 2009a).

BIOLOGICAL RESOURCES

A URS biologist reviewed the biological resource data summarized by ETJV (2006a, 2006b, 2006c, and 2007), additional data summarized in the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and the CDRP California tiger salamander impact evaluation that was submitted to CDFG in June 2011 (SFPUC 2011). The results of this review are summarized below.

Boat Ramp Project Area Addition

No special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by this project modification. Preconstruction surveys for nesting birds should be conducted consistent with the CEQA MMRP.

Right Abutment to Project Area Addition

The affected area is vegetated with coast live oak and moderate to dense understory vegetation on a steep slope. The existing habitat is unlikely to be utilized by California tiger salamander based on data included in the CDRP California tiger salamander supplement to the CDFG Incidental Take Permit application (SFPUC 2011). However, the affected area is potential foraging and dispersal habitat for the federal and state-listed Alameda whipsnake (SFPUC 2011). No jurisdictional wetlands or other waters are present in the additional area that would be affected by this modification (ETJV 2006b).

Access Road to Disposal Site 7

Widening and improving existing dirt roads from Calaveras Dam to Disposal Site 7 would occur within the existing road corridor that was evaluated in the CDRP EIR and the permit applications reviewed by the resource agencies and addressed in the final permits and agreements. The potential of the proposed modifications to affect the California tiger salamander or the Alameda whipsnake is discountable due to the small area that would be disturbed by this modification. No wetlands or other jurisdictional waters would be affected based on the verified delineation (ETJV 2006b).

CULTURAL RESOURCES

Existing records search information and previously prepared reports were reviewed by URS to identify any potential archaeological or built environment cultural resources that could be impacted by the minor change in the limits of excavation and limits of work for the CDRP (ART and EDAW 2008, JRP Historical 2008, Kajankoski and Meyer 2009, URS 2008, URS 2009a, URS 2009b). No significant historical resources area located within the footprint or adjacent to the project modifications.

The areas that would be affected by the three project modifications were reviewed during an intensive pedestrian archaeological survey on August 24, 2011. The survey was conducted by URS archeologist Maureen Kick, a Registered Professional Archaeologist who meets the Secretary of the Interior's Standards for Archaeology, and Meredith Pecora, a URS staff archaeologist. Existing conditions and observations during the survey are described below by project modification.

Boat Ramp Project Area Addition

This proposed modification includes paving approximately 800 feet of an existing dirt access road from Calaveras Road to the existing paved boat ramp. The road and adjacent areas were surveyed; no cultural resources were identified. This project modification is within the boundaries of site P-01-10870, Desmond Camp; however, this site has been evaluated and is not a historical resource or unique

archaeological resource as defined by CEQA (URS 2009b). Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little chance of buried archaeological deposits in
this area (Kaijankoski and Meyer 2009).

Right Abutment to Project Area Addition

This proposed project modification would affect an additional 0.52 acre located on a moderate to steep
slope. The affected area has an overstory of coast live oak and moderate to dense understory vegetation.
The area was surveyed using 10-15 meter transects. The steepest areas were not subject to survey due to
safety concerns and the low probability of archaeological materials being present. Ground visibility was
low due to grasses and ground cover; however, occasional rodent burrows, cattle trails and nearby road
cuts provided good visibility and were subject to intensive inspection. No cultural materials or evidence
of archaeological deposition were identified, and no rock outcrops were noted within the area of impact.
Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little chance of buried archaeological deposits in this area (Kaijankoski and Meyer 2009).

Access Road to Disposal Site 7

This project modification consists of widening and improving existing dirt roads from Calaveras Dam to
Disposal Site 7. One built-environment resource, the watershed keeper residence, is adjacent to the
project modification. However, this resource has been evaluated, and is not a historical resource as
defined by CEQA (JRP Historical 2008). All roads and adjacent areas were subject to survey. No new
cultural resources were identified. Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little chance of buried archaeological deposits in this area (Kaijankoski
and Meyer 2009).

CONCLUSIONS

The proposed project modifications at the right abutment and the Disposal Site 7 access road could affect
additional habitats that are potentially utilized by the federal and State-listed California tiger salamander
and Alameda whipsnake. However, the potential habitat modifications of the Disposal Site 7 access road
are likely to be minimal. Coordination with CDFG and USFWS is recommended to confirm that the
project modifications can be approved under the CDFG Incidental Take Permit and the USFWS
Biological Opinion. No additional wetlands, other waters or other sensitive habitats would be affected by
the proposed project modifications.

The proposed project modifications would not impact known archaeological resources. Should
unidentified surface or subsurface archaeological deposits be encountered during construction of the
CDRP, appropriate mitigation measures identified in the EIR would apply and all work in the immediate
vicinity of the discovery should be redirected until a qualified archeologist could assess the nature and
significance of the discovery. In the event human remains are discovered, consistent with State law, the
County Coroner should be contacted. If the Coroner determines the remains are Native American the
California Native American Heritage Commission should be contacted and they will appoint a Most
Likely Descendant to work with SFPUC to make recommendations for the treatment or disposition of the
remains and associated grave goods.

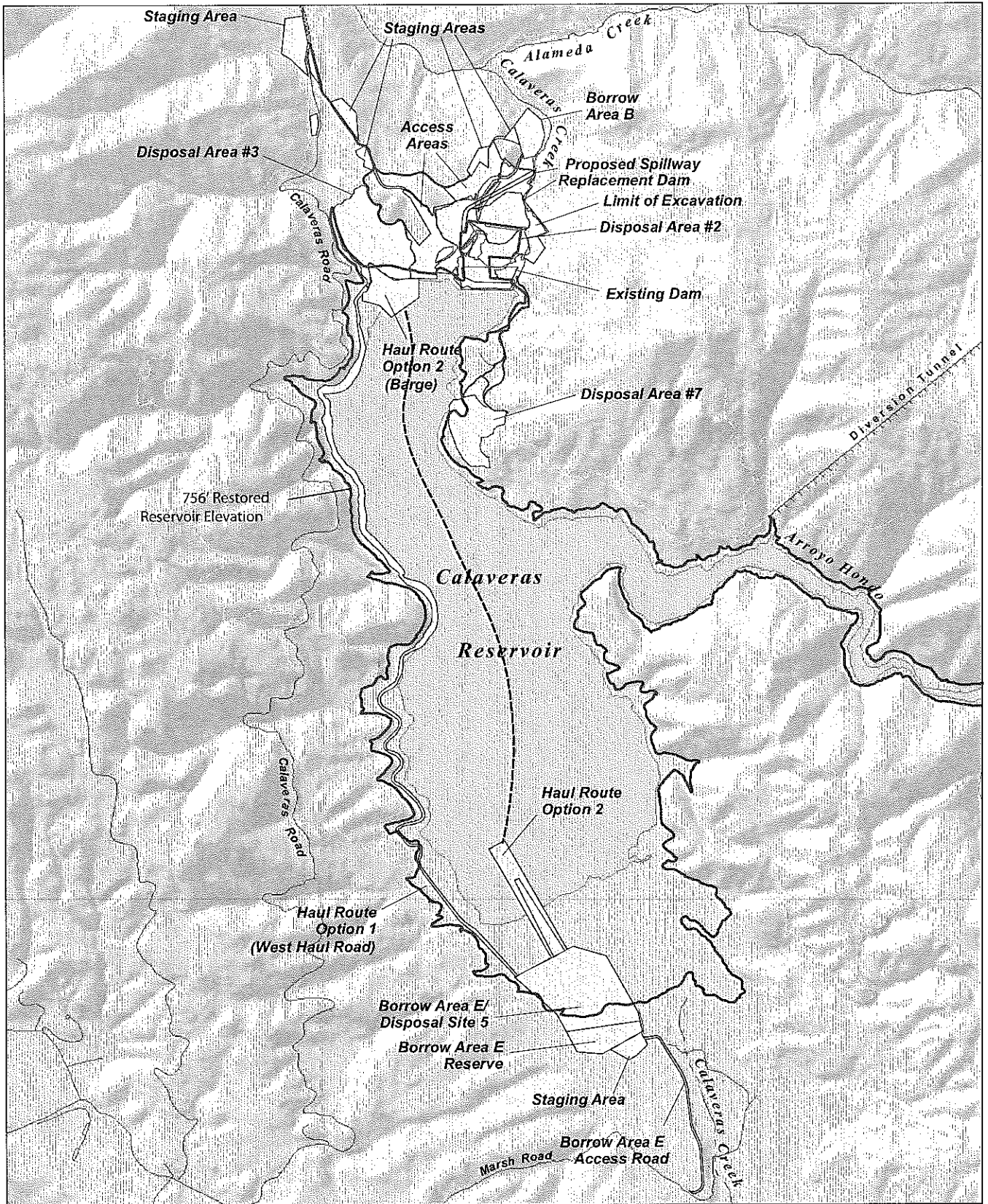
Please contact Maureen Kick at (510) 874-3107 or Steve Leach at (510) 874-3205 if you have any
questions.

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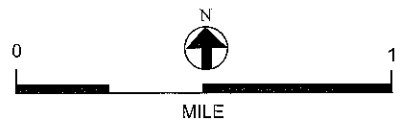
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USACE. Calaveras Dam Replacement Project, Finding of No Adverse Effects. On file at URS-Oakland.



SOURCE: URS



CALAVERAS DAM REPLACEMENT PROJECT

FIGURE 3.8: WORK LIMIT AREA



holman & ASSOCIATES
Archaeological Consultants
"SINCE THE BEGINNING"

3615 FOLSOM ST. SAN FRANCISCO,
CALIFORNIA 94110 415/550-7286

Memorandum

DATE: December 5, 2011
TO: Cullen Wilkerson, San Francisco Public Utilities Commission
Environmental Compliance Manager
FROM: Eric Strother, Holman & Associates
SUBJECT: **Minor Project Modification: Cultural Resources Surveys for the Calaveras Dam Replacement Project**

INTRODUCTION

This memorandum was prepared by Holman & Associates for the Calaveras Dam Replacement Project (CDRP or Project), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memo presents the results of archaeological survey of four proposed construction deviations: (1) Installation of Survey Monument No. 110; (2) Installation of Survey Monument No. 112; (3) Construction of four vehicular turn-outs along a shoulder of an access road, near the northeast edge of the reservoir; and (4) Widening of the main gate leading into the dam facility. The proposed locations of all four CDRP supplemental facilities can be seen on the United States Geological Survey (USGS) Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 [photorevised in 1980]), and a portion of the USGS La Costa Valley, California 7.5 minute topographic quadrangle (1996) (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the *Final Environmental Impact Report* [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey of the proposed construction deviations was requested by the SFPUC. The proposed construction deviations are located within the previously delineated cultural resources APE (ART and EDAW 2008). On December 1, 2011 Holman & Associates completed a cultural resources survey of the four proposed CDRP supplemental facilities. No evidence of prehistoric or historic-era cultural materials was observed.

LITERATURE REVIEW

Multiple cultural resources studies have been conducted in conjunction with the CDRP. URS completed a literature review and two pedestrian surveys of portions of the C-APE during initial

design phases of the Project (URS 2003, 2005). As part of the environmental review process for the Project, Archaeological Resources Technology (ART) conducted additional research and an intensive pedestrian survey of the Project C-APE in 2006, documented in the Calaveras Dam Replacement Project Archaeological Survey Report (ART and EDAW 2008). Historic-era built environment resources identified within the C-APE were addressed in the Calaveras Dam Replacement Project Historic Resources Inventory and Evaluation Report (JRP 2008). Since 2008, additional CDRP cultural resource investigations have included URS (2009a; 2009b; 2009c; and 2010), Kajankoski and Meyer (2009), Wiberg (2011), and Wiberg and Psota (2011a and 2011b). As a result of these studies, eight cultural resources have been identified within the vicinity of the proposed CDRP supplemental facilities (described below).

Review of the literature indicates that there are no previously recorded cultural resources in or within the immediate vicinity of the proposed CDRP supplemental facilities.

Survey Monument No. 110

Seven previously recorded cultural resources are located within ½-mile of the proposed location of Survey Monument No.110: P-43-010674, -010675, -010676, CD-H&A-1, and three recently discovered isolated historic-era cultural resources in the upper False Cut Area (Wiberg and Psota 2011b). All seven sites were determined to be historic-era resources, likely associated with dam construction and/or early geotechnical exploration in the area. Site P-43-010674, a historic-era mine adit, is located over 2,000 feet to the east, above Calaveras Creek to the north of the dam. P-43-010675, located approximately 850 feet east/southeast, is a debris scatter measuring 20 feet by 20 feet. P-43-010676 is the structural remains of a stone wall located on Observation Hill, approximately 750 feet to the south/southeast. CD-H&A-1, recorded by Holman & Associates in 2011, is a spread footing foundation associated with a sparse surface scatter of structural remains and possible stock pond, located on the south slope of Observation Hill. CD-H&A-1 is located approximately 950 feet to the south/southeast. Lastly, in November 2011, Holman & Associates recorded an historic-era artifact scatter, a culvert, and exposed pipe within approximately 900 feet east of Survey Monument No. 110. These resources were encountered in the upper False Cut area during power screen excavations.

All seven of these known historic-era sites are a considerable distance from the proposed location of Survey Monument No. 110 and are not expected to be affected by construction.

Survey Monument No. 112

Sites P-43-010674 and CD-H&A-2 are located within 1,600 feet of the proposed location of Survey Monument No. 112 and will not be affected by construction. P-43-010674 is a mine adit located 1,500 feet to the northwest. CD-H&A-2 is a discrete refuse dump consisting primarily of rusted cans and bottles. It is located just over 1,000 feet to the west of Survey Monument No. 112.

Road Turn-Out Construction

There are no known sites in the locations or within the vicinity of where the road turn-outs will be constructed. Site CD-H&A-2, a historic-era refuse dump, is located approximately 900 feet north and will not be affected by construction.

Main Gate Extension (Road Widening)

No previously recorded cultural resources are located in or within ½-mile of the location of the main gate.

PROJECT LOCATIONS AND DESCRIPTIONS

Survey Monument No. 110

Proposed Survey Monument No. 110 is located on a knoll in an open grassy area, approximately 1,870 feet northwest of the west end of the dam (Figure 2). This area of the Project has been used primarily for cattle grazing. Gopher burrows are located throughout the vicinity. In order to install the monument, a mechanical auger will be used to bore six feet below surface. A threaded rod will be centered in the hole and concrete and grout will be injected into the hole to stabilize the rod. Equipment used in the process will include a rubber-tracked Bobcat tractor equipped with a mechanical auger, a pick-up truck, and hand tools. Surface and sub-surface disturbance is expected to be minimal as it will occur only within the immediate vicinity of the auger hole. Survey Monument No. 110 will be located between two existing access roads; no new roads will be constructed (graded) for access to the location. T-posts with plastic fencing may be installed to deter cattle from entering the area.

Survey Monument No. 112

Proposed Survey Monument No. 112 is located approximately 1,325 feet northeast of the northeast corner of the dam (Figure 2). An existing graded dirt road is located within 50 feet west of the proposed monument. The surrounding grassy area is used for cattle grazing (a cattle feeding trough sits approximately 100 feet to the south), and has a westerly exposure. A mechanical auger will be used to bore six feet below surface for monument installation. A threaded rod will be centered in the hole and concrete and grout will be injected into the hole to stabilize the rod. Equipment used in the process will include a rubber-tracked Bobcat tractor equipped with a mechanical auger, a pick-up truck, and hand tools. Surface and sub-surface disturbance is expected to be minimal as it will occur only within the immediate vicinity (approximately 10-15 ft. diameter) of the auger hole. As Survey Monument No. 112 is located near an existing graded dirt road, no new roads will be constructed for access to the location. T-posts with plastic fencing may be installed to deter cattle from entering the area.

Road Turn-out Construction

Four shoulder vehicular turn-outs will be constructed along an approximately 1,200 foot section of paved road near the northeast portion of the reservoir (Figure 2). Currently, the road is paved and very narrow in some sections, making it difficult for opposing traffic to pass. Construction of the turnouts will be limited to 20 feet east and west from the centerline of the existing road. The shoulders along the road where the turnouts will be constructed have been graded (during original grading of the road), and impacts to the area are expected to be minimal due to previous disturbance. Heavy equipment such as graders and bulldozers will be used to construct the turnouts.

Main Gate Extension (Road Widening)

The existing main gate and road into the dam facility will be widened to allow passage for larger vehicles in and out of the facility. Currently, the gate and one-lane road accommodate only one vehicle at a time. The gate will be widened and an additional lane will be constructed to the east of the existing road. Cutting and grading will be required within approximately 50 feet east and extend approximately 50 feet in each direction to the north and south of the existing gate (for a total of ~100 feet) (Figure 2). This area has been previously disturbed by the placement and continuous use of the existing gravel road leading in and out of the facility. The vicinity east of the gate slopes uphill to the east and has a westerly exposure. The area has been heavily grazed by cattle. At the time of the survey surface vegetation was very low, consisting primarily of grasses and forbs. Heavy construction equipment, including graders, bulldozers, and excavators will be used to construct the additional lane, as approximately 50 feet of the sloping hillside will need to be cut back to accommodate the new lane and widened gate.

SURVEY RESULTS

On December 2, 2011, Eric Strother of Holman & Associates, accompanied by Emma Jack, Environmental Coordinator for the SFPUC, completed a pedestrian survey of the four construction deviation C-APEs. In general, surface visibility was good to excellent (~80% - 90%) at the proposed Survey Monument locations (No.110 and No. 112). Surface soils were inspected by using a hand trowel to scrape back vegetation. Soils at both locations were silty, containing small angular gravels, and were brownish-yellow in color. Rodent burrows were inspected for cultural materials. The four proposed turn-out locations along the paved road near the northeast portion of the reservoir were also inspected. It was noted that these areas had been graded in the past, likely during the original construction of the road. Soils along the shoulder of the 1,200 foot section of road consisted of light yellow brown silty clays with angular gravels. Lastly, soil visibility in the vicinity of the main gate area was good to excellent (~80% - 90%) due to low-lying surface vegetation. Soils were brownish-yellow in color and consisted of silty clays with small angular gravels.

No previously recorded prehistoric or historic-era archaeological materials were located within the four construction deviation C-APEs and none were observed during the field survey. It is unlikely any of the four construction deviations will disturb archaeological resources. Although no evidence of archaeological materials was observed at the four construction deviation sites, the

possibility remains that archaeological features and materials could be located in the proposed C-APEs. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the *Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project* (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) should be implemented.

References

ART and EDAW

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2011 *Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project*.

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2005 *Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures*. Prepared for San Francisco Public Utilities Commission.
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2009b *Calaveras Dam Replacement Project Archaeological Survey Report, Addendum I Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2009c *Calaveras Dam Replacement Project Archaeological Survey Report, Addendum II Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2010 *Technical Memorandum. Archaeological Survey Report/Historic Resources Inventory and Evaluation Report Addendum, PG&E Power Line Upgrade Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, CA*. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

- 1961 *Calaveras Reservoir, California 7.5 minute topographic quadrangle (photorevised 1980)*.
1996 *La Costa Valley, California 7.5 minute topographic quadrangle*.

Wiberg, R.

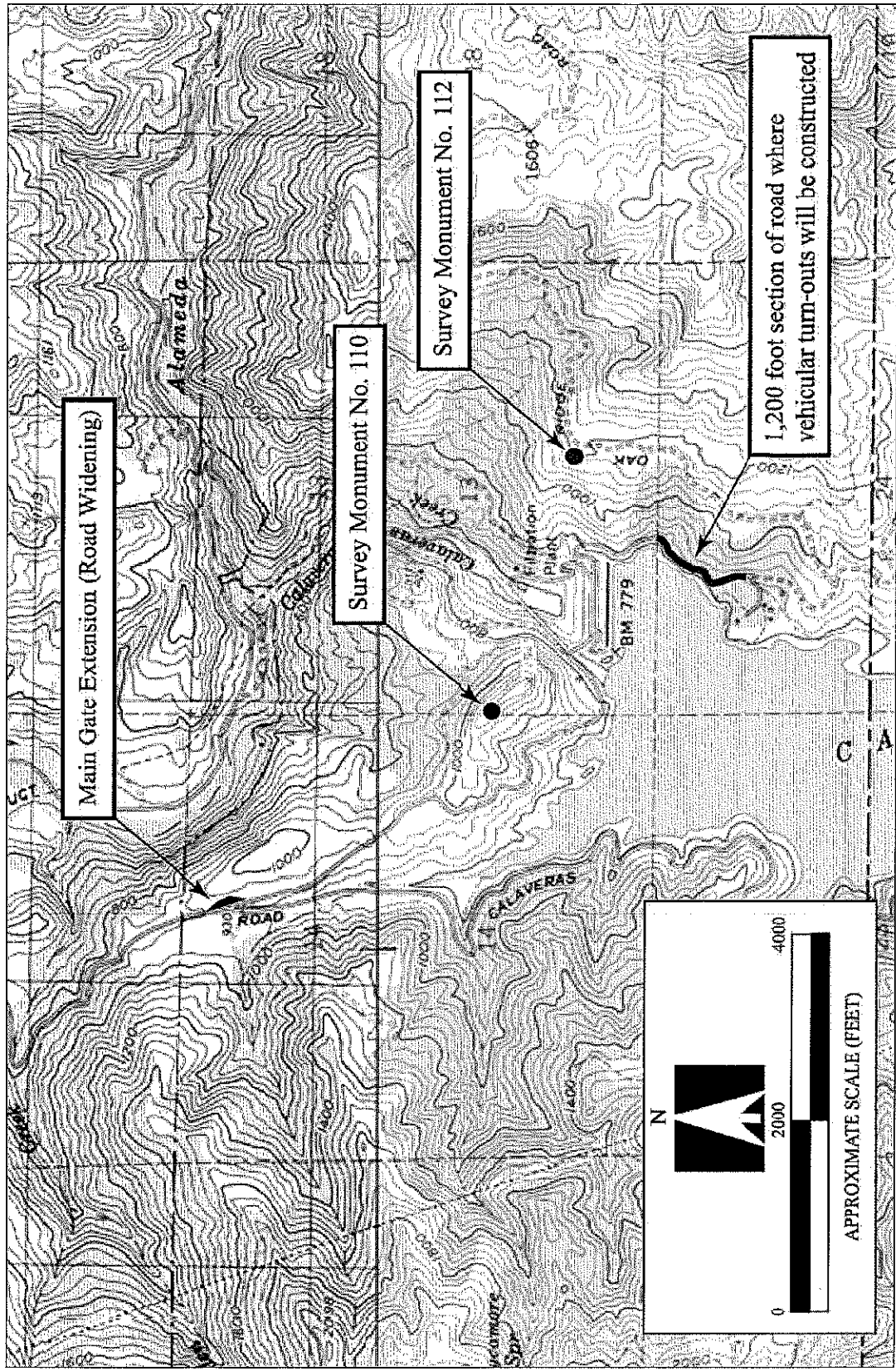
- 2011 *Final Archaeological Monitoring Plan Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California*. Prepared for the San Francisco Public Utilities Commission and City and County of San Francisco Planning Department, Case No. 2005.0161E.

Wiberg, R. and S. Psota

- 2011a *Technical Memorandum: Calaveras Dam Replacement Project: Previously Unidentified Historic-era Cultural Resources near Right and Left Dam Abutments*. Prepared for the San Francisco Public Utilities Commission.

Wiberg, R. and S. Psota

- 2011b *Technical Memorandum: Calaveras Dam Replacement Project: Additional Historic-era Cultural Resources Discovered in the Upper False Cut Area*. Prepared for the San Francisco Public Utilities Commission.



CDRP Cultural Resources Survey (Construction Deviations)
Figure 1
 Project Location Map

SOURCE: USGS 7.5" Calaveras Reservoir and La Costa Valley



CDRP Cultural Resources Survey (Construction Deviations)
Figure 2
 Area of Potential Effects

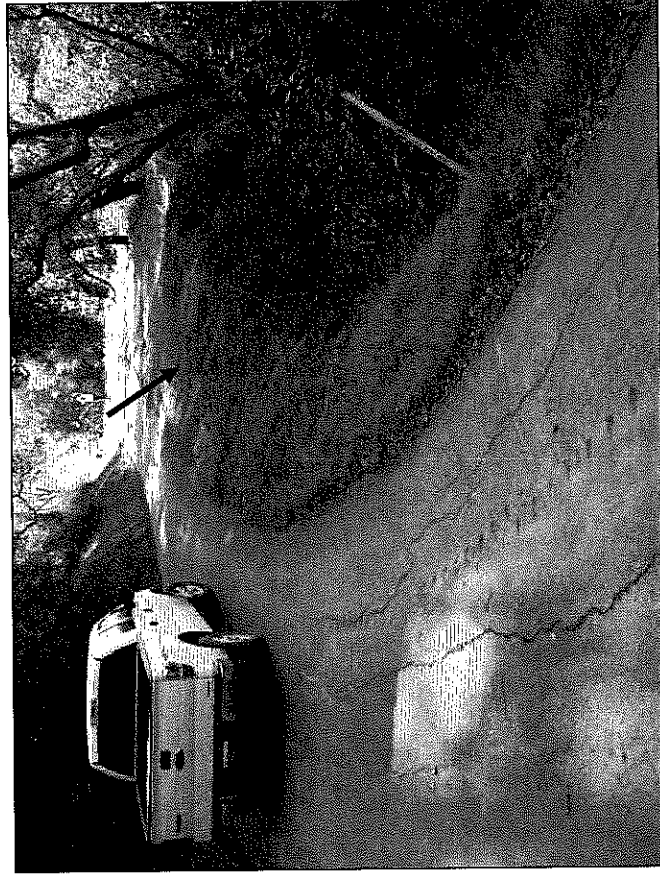
SOURCE: Google Earth



**Proposed Location of Survey Monument No. 110.
View to the South.**



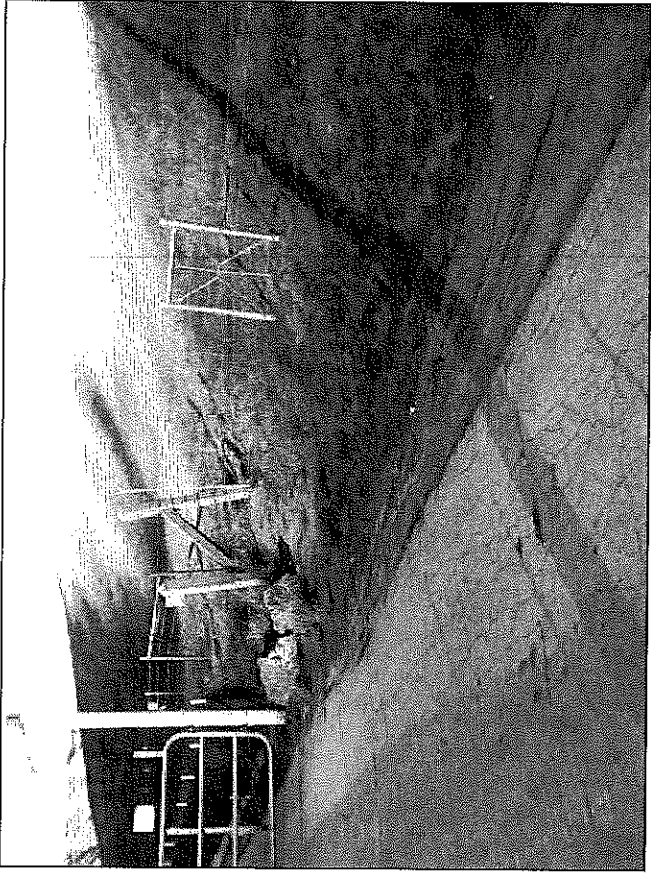
**Proposed Location of Survey Monument No. 112.
View to the North.**



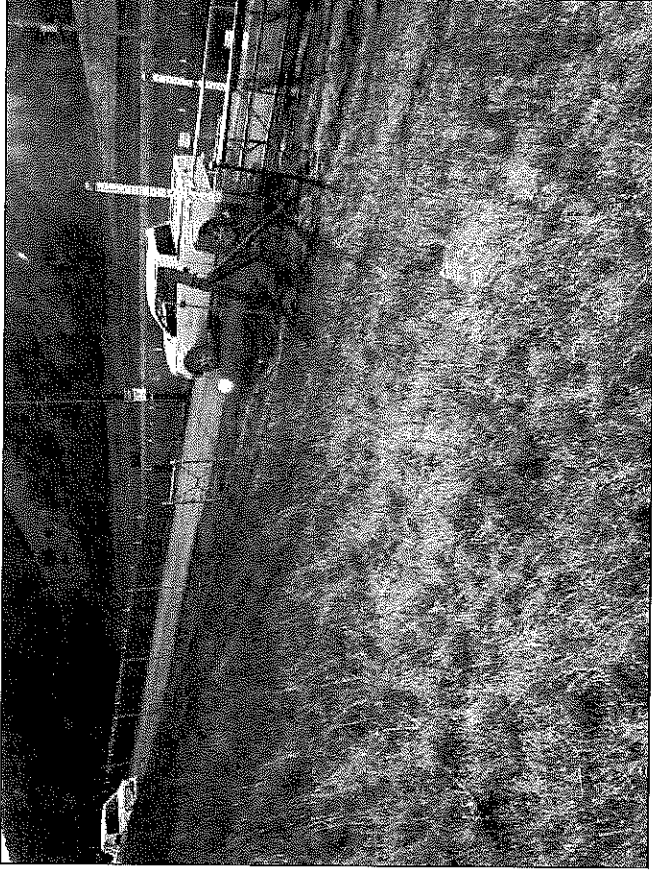
**Proposed Location of a Turn-out along paved road.
View to the South.**



**Proposed Location of a Turn-out along paved road.
View to the North.**



**Proposed Location of the Main Gate and Road Expansion.
View to the Northeast.**



**Proposed Location of the Main Gate and Road Expansion.
View to the Southwest.**

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 008 – Survey monuments		Date: 12/05/11	
Project Title:	Calaveras Dam Replacement Project		
MEA Case No./Project No.	2005.0161E/CUW37401		
MPM Prepared By:	Cullen Wilkerson, ECM		
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO	<input checked="" type="checkbox"/> Other: SFPUC
Landowner:	SFPUC		
Vegetative Cover/Land Use:	NA	Net Acreage Affected: 0.00004 (Permanent)	
Modification to:	<input type="checkbox"/> Mitigation Measure:		<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input checked="" type="checkbox"/> Permit:		CDFG 2081-2010-033-03 MM-8.2

Detailed Description of Minor Project Modification:

The SFPUC proposes to install two survey monuments outside the construction limits identified in the Calaveras Dam Replacement Project Environmental Impact Report (FEIR). Section 3.4.2.5 of the FEIR states "Instrumentation would be installed in the dam embankment and foundation, downstream of the dam, and in the abutments". Table 3.2 lists the types and purpose of the instrumentation. Of the survey monuments to be installed for the project, the two survey monuments to be installed outside the construction limits are designated as the "control" points. The purpose of the survey monuments are to monitor for ground settlement issues during and following construction.

The Incidental Take Permit No. 2081-2010-033-03, take Minimization Measure 8.2 states "... No construction activities shall be permitted outside the designated construction areas other than the limited activities to erect the fencing".

The two survey monuments (Sites 110 and 112) are located outside of the construction limits (see attached Contract Drawing GN-8). Site 110 is located within the general area of the construction limits and has been previously surveyed per the FEIR Figures 3.8, 4.4.1, and 4.10.1 (see attached Figures). Site 112 is located a significant distance from the construction limits but is accessible via a developed and well maintained fire road. Per the FEIR Figures, it is uncertain whether this area was included in the original assessments. Recent archaeological, paleontological, and biological resource surveys were conducted and the results of the surveys are attached as memorandums.

Construction equipment used to install survey monuments will consist of a rubber tracked skidsteer, auger, water buffalo, trailer, and mixer. Approximately three construction personnel will perform the installation of the survey monument points. All activities will be monitored by a resource representative.

ENVIRONMENTAL IMPACTS

No additional environmental impacts were identified.

Biological Yes No**Cultural** Yes No**Photos** Yes No**Other** Yes No**Attachments:**

FEIR Figures: 3.8 – Work Limit Area

4.4.1 – Vegetation and Wildlife Study Area

4.10.1 – Cultural Resources Study Area and Work Limit Area

Biological Resources Memorandum 11/18/11

Cultural Resources Memorandums– Archaeology (12/05/11) and Paleontology (11/30/11)

Vicinity Map - Identifying nearest visual and noise receptors.

Contract drawing GN-8 – Placement of Survey Monuments

Biological No Resources Present Resources Present NA**Previous Biological Survey Report Reference:**

Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project, November 18, 2011

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)**Previous Cultural Survey Report Reference:**EDAW and Turnstone Joint Venture (ETJV). 2008. *Calaveras Dam Replacement Project, Archaeological Survey Report*, October 2008.JRP Historical Consulting (JRP). 2008. *Calaveras Dam Replacement Project, Historic Resources Inventory and Evaluation Report*, October 2008.Cultural Memorandum, Holman and Associates, *Monument Survey Cultural Resources Report*, December 5, 2011.Cultural Memorandum, Applied Technologies & Science, *Monument Survey Cultural Resources Report*, November 30, 2011.**Conditions of Approval or Reasons for Denial****SFPUC Required Signatures for Environmental Approval:**ECCM: Kerry O'NeillDate: 12/05/11 Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

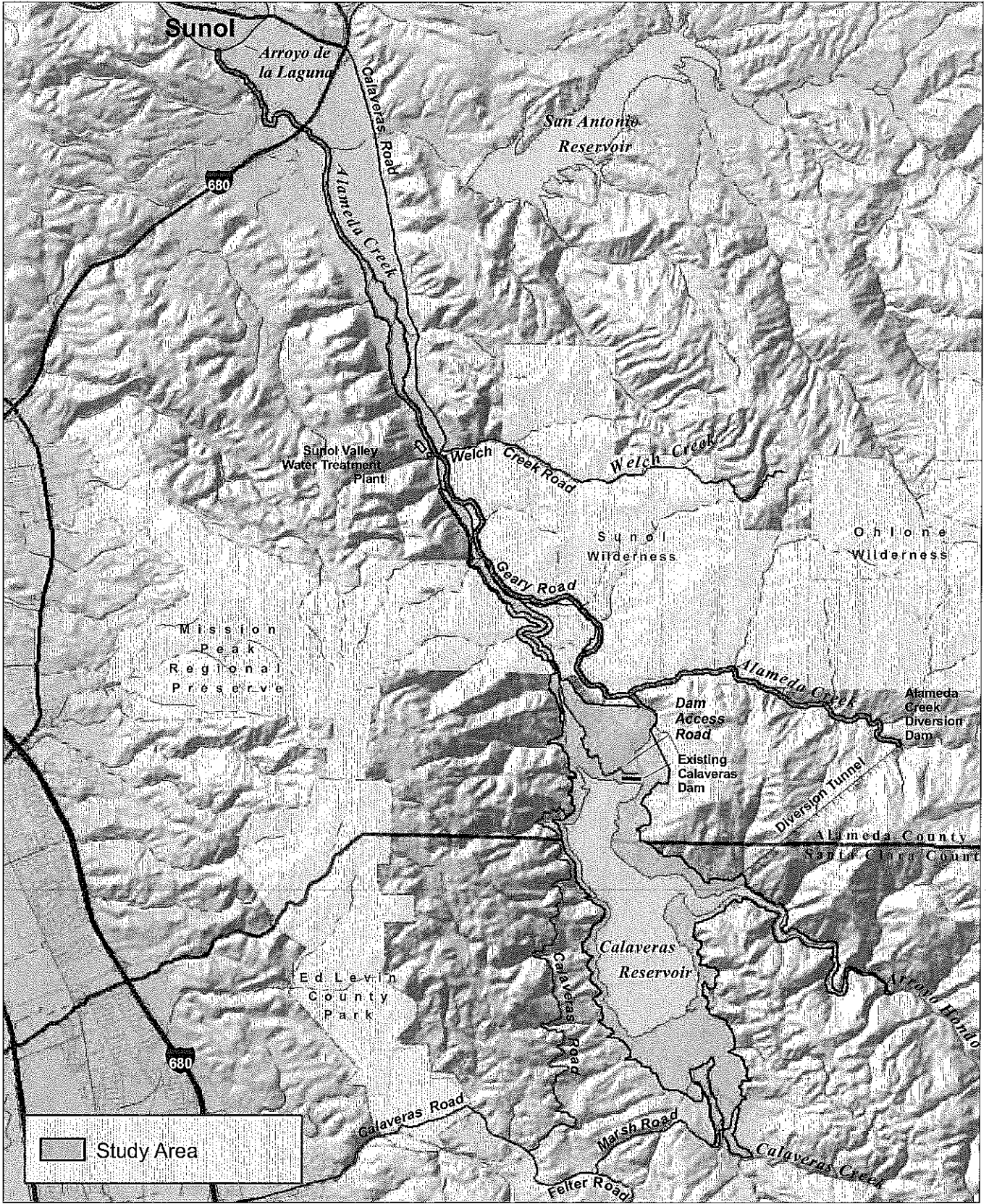
Charge Code: CUW37401**MEA Required Signatures for Approval:**

Signee: _____

Date: _____

 Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new significant cultural resource impacts beyond those analyzed in the FEIR (see attached Cultural Memorandums).
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. The nearest residence is over 6,000 feet away (see Vicinity Map).
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. The nearest receptor is over 6,000 feet away and has no direct line of sight (see Vicinity Map).
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input type="checkbox"/> Y	There would be no new significant vegetation and wildlife resource impacts beyond those analyzed in the FEIR. All mitigation measures and permit requirements would be implemented during installation.
	<input checked="" type="checkbox"/> N	



SOURCE: ETJV 2006b.

CALAVERAS DAM REPLACEMENT PROJECT

FIGURE 4.4.1: VEGETATION AND WILDLIFE STUDY AREA

Applied Technology & Science

5 Third Street, Suite 1010, CA 94103 Tel: (415) 777-4287, Fax: (415) 777-3287



Prepared for: Cullen Wilkerson

November 30th , 2011

Prepared By: James R. Allen
M.Sci. Geology, PG #8335
5300 Iron Horse Parkway # 369
Dublin, CA 94568
Cell (925)413-0054

Re: The placement of additional survey monuments outside the existing project area.

At the request of Cullen Wilkerson on November 30th, 2011, we have reviewed the plans for the placement of four additional Dam Survey Points referred to as Monuments 110, 111, 112 and 113. Based on the map positions provided and the Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project (2011) included herein, the monuments 110, 111, and 113 will need paleontological monitoring. At the least, part-time paleontological construction excavation monitoring is strongly recommended due to the fact these formations have yielded important, significant paleontological resources in the past and the yield paleontological resources collected thus far via field monitoring during our current monitoring and mitigation phase to date. This monitoring shall take place at commencement of ground disturbing activities. If after inspection of the newly exposed formation reveals clues as to the formation's fossiliferous nature, adjustments to monitoring can be made at that time.

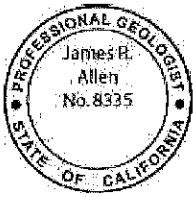
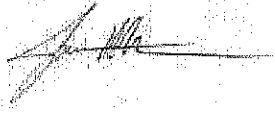
The Following recommendations are based on Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project (2011), mapping by Graymer and others (1996) and field visits by Mr. James Walker MS, PG.

Monument 112 is situated in the Jurassic-Cretaceous Franciscan Complex, a rock unit with a low sensitivity paleontological ranking and so will not require monitoring.

Monument 110 is situated in the Miocene Temblor Formation. Monument 111 is located in the Miocene Monterey Group and Monument 113 is located in Holocene Alluvium. These three units were all assigned high paleontological sensitivity rankings in the attached Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project. Therefore the placement of monuments 110, 111 and 113 will require the presence of paleontological monitor.

If there are any questions about the units involved or the rankings assigned, please feel free to contact us.

Sincerely,



James R. Allen, RPG
5300 Iron Horse Parkway #369
Dublin, CA 94568
Cell: 925-413-0054

References

Allen, J R, 2011, Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project (CDRP).

Graymer, R.W, Jones, D.L., and Brabb, E.E., 1996, Preliminary geologic map emphasizing bedrock formations in Alameda County, California: A digital database: U.S. Geological Survey Open-File Report 96-252.

Calaveras Dam Replacement

Paleontological Evaluation Report and Paleontological Monitoring Plan

Prepared by: James R. Allen, PG

Date: August 11, 2011

1 INTRODUCTION

The Calaveras Dam Replacement Project (Project) is a 343-acre site located in Alameda County, California (Figure 1). According to the Project's Final Environmental Impact Report (FEIR) (City and County of San Francisco Planning Department 2011), the Project will require excavations into sensitive paleontological geologic formations/deposits at a number of specific locations to accommodate a new dam and stilling basin, spillway discharge, borrow areas, and staging (Figures 2 & 3; see Figures 3.7, 3.8, 3.9, 3.11 and 3.13 of the FEIR). The Project construction work areas are identified in the FEIR (Figure 3; see FEIR Figure 4.10.1: Cultural Resources Study Area and Work Limit Area (Revised)). The defined Work Limit Areas encompasses all construction activities including construction of new structures, excavation, disposal areas, haul roads, power line and access and staging areas. Areas identified herein for paleontological monitoring are within and occupy several of the defined Work Limit Areas (Figure 3). The power line upgrade will occur in the PG&E corridor the majority of which runs along the west side of Weller Road. Project construction will extend for approximately 4.5 years.

The project's excavation activities during construction may adversely impact paleontological resources. The project EIR addresses one specific impacts related to construction activities:

- Impact 4.10.5: Construction impacts on unknown paleontological resources

There are known paleontological resources in the project area and the project is located in an area where there is a high probability of paleontological resources to occur. As a result, the EIR identifies impact avoidance and minimization measures (Mitigation Measure 5.10.5) to protect paleontological resources. These include:

- Environmental Awareness Training of Construction Crews
- Pre-Construction Surveys
- Pre-Construction Surface Salvage (as required), and

- Construction Monitoring

ATS was retained to prepare this "Paleontological Evaluation Report and Paleontological Monitoring Plan" that summarizes the literature review, field survey results, and recommended monitoring procedures and other general and specific measures to minimize impacts to sensitive paleontological resources during project construction. This plan also defines procedures required for the salvage of sensitive paleontological resources. The plan was written using professional standards set by the Society of Vertebrate Paleontologists (SVP, 1995). The information and documentation required for this work has been prepared for Project environmental compliance under the California Environmental Quality Act (CEQA), and other applicable statutes, regulations, and policies.

Some of the excavations will affect the following high sensitivity geological units where the probability for the presence of paleontological resources high (see Table 1): Temblor Formation, Monterey Group (Claremont Formation), Briones Formation, Orinda Formation, and Quaternary Alluvium (Figures 2 and 3).

This report is in response to an impact analysis relating to paleontological (fossil) resources and recommended measures to reduce significant project impacts to these resources to a less than significant level as presented in the Project's FEIR. Impact 4.10.5 that states: "*Construction of the project could have a significant adverse impact on paleontological resources.*"

Mitigation Measure 5.10.5 is required by the FEIR to reduce impacts to a less than significant Level:

Paleontological Resources Training

Prior to the initiation of any site preparation or start of construction, the SFPUC shall ensure that all construction forepersons and field supervisors receive training overseen by a qualified professional paleontologist or a California Registered Professional Geologist (California RPG) with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (SVP 1995 Guidelines), who is experienced in teaching non-specialists, to ensure that forepersons and field supervisors can recognize fossil materials in the event that any are discovered during construction. Training on paleontological resources shall also be provided to all other construction workers, but may include videotape of the initial training and/or the use of written materials rather than in-person training by a paleontologist. Training shall include an explanation of which portions of the project (i.e., excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin cut slope, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade) that possess a high sensitivity for potential paleontological resources.

Pre-Construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources

Pre-construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources within excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above an elevation of approximately 780 feet; Borrow Area

E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade which would be constructed partially or wholly in geologic units with a high potential for paleontological resources.

Prior to construction, the SFPUC shall implement the following:

A literature review shall be conducted by a California RPG with appropriate paleontological expertise or a qualified professional paleontologist, as defined by the SVP 1995 Guidelines to ensure the geologist/paleontologist is familiar with previous documentation prepared for the project, and the latest data on fossil localities within the formations in the project region.

A reconnaissance-level field assessment of the highly sensitive areas where ground disturbance (grading or excavation) activities shall be conducted. The field assessment shall be limited to identifying potentially significant features at the surface. In areas of thick ground cover, this assessment may need to be conducted after vegetation clearing.

The results of the field assessment shall be documented in a technical memorandum to be submitted for review and approval by the ERO or designee prior to the start of construction, which shall include recommendations for appropriate and feasible procedures to avoid or minimize damage to any paleontological resources expected to be present. The memorandum shall also make recommendations regarding the need, if any, for paleontological monitoring of ground-disturbing activities. In the event that the memorandum identifies recommendations for monitoring, it shall include information on where, when, and how this monitoring shall be conducted. The ERO or designee shall review and approve the memorandum in consultation with the SFPUC.

If the evaluation and field assessment result in the discovery of a paleontological resource exposed at the surface, or confirm the potential for impacts on significant paleontological resources, then avoidance and/or salvage and monitoring shall also be implemented as described below.

If a significant paleontological resource is discovered at the ground surface as a result of the preconstruction assessment and cannot be avoided through exclusion of the area from project disturbance (e.g., through a project change or the installation of exclusion fencing), the SFPUC shall retain a qualified professional paleontologist to salvage and treat the resource prior to construction activity in the immediate vicinity of the find. Salvage of the resource shall include recovering the item and properly documenting, preparing, and curating the find. Recommendations for any treatment that is required will be consistent with SVP 1995 Guidelines and currently accepted scientific practice. If required, treatment of the resource may include preparation and recovery of fossil materials for housing in an appropriate museum or university collection, and may also include preparation of a report for publication describing the find. If no report is required, the SFPUC will ensure that information on the nature, location, and depth of all finds is available to the scientific community through university curation or other appropriate means. No construction activities at the location of the find shall be allowed until the salvage operation is completed and authorization is provided by the ERO or designee.

If determined necessary by the ERO or designee after review of the preconstruction assessment memorandum, a qualified professional paleontologist, as defined by the SVP 1995 Guidelines, shall conduct periodic monitoring during ground disturbing activities (e.g., grading and excavation) at sites where paleontological resources are confirmed or likely to be present (i.e., within the Briones, Orinda, or Claremont Formations; Temblor Sandstone; Older Alluvium; or colluvium or landslide deposits derived from these units formations). The paleontologist shall also be retained on-call by the SFPUC and its contractor throughout ground-disturbing activities.

Paleontological monitoring, if required, will consist of periodically inspecting disturbed, graded, and excavated areas. The monitor will have authority to divert grading or excavation away from exposed areas temporarily in order to examine disturbed areas more closely, and/or recover fossils. The monitor will coordinate with the construction manager so that monitoring is thorough but does not result in unnecessary delays.

If potential fossils are discovered during construction, all earthwork or other types of ground-disturbance within 50 feet of the find shall stop immediately until a qualified professional paleontologist, as defined by the SVP 1995 Guidelines, can assess the nature and importance of the find and recommend appropriate salvage and treatment (as described above). Once the monitor has assessed the find, the monitor may propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. The monitor's recommendations shall be subject to review and approval by the ERO or designee. The SFPUC shall be responsible for ensuring that the recommendations of the paleontological monitor regarding treatment and reporting are implemented and reported to the San Francisco Planning Department.

The following is a summary of the literature review and a summary assessment of the nature of paleontological resources at the Project. This monitoring plan is presented in Section 3 & 4 of this report corresponding to Phase 1, measures to be taken before and during excavation on the Project, and Phase 2, measures to be taken following salvage of significant specimens to ensure that they receive proper treatment and permanent curation into an appropriate museum collection.

2 PALEONTOLOGIC ASSESSMENT

Information regarding the potential paleontological resources within the site of Project and their possible scientific significance has been presented in the FEIR (City and County of San Francisco Planning Department 2011). Subsequent investigations have not substantially altered the findings in that document. This source has been supplemented by geologic and paleontological literature review and a pre-construction paleontological field survey conducted by Mr. James Walker MS, PG on June 24, 2011 and on July 12, 2011 (see Appendix A).

The paleontological and geological literature review was conducted on April 5th and 6th, 2011 at the United States Geological Survey, Menlo Park, California, the Earth Sciences and Map Library at U.C. Berkeley, Berkeley, California and at California State University East Bay, Hayward, California. Literature reviewed is listed in the References section herein.

Stratigraphic units within the Project include the Cretaceous Great Valley Sequence (GVS), Miocene Temblor Formation, Miocene Monterey Formation (Claremont Formation), Miocene Briones Formation, Orinda Formation, as well as Pleistocene deposits which may underlie Holocene deposits at depth. Several of these units have produced vertebrate and invertebrate fossils in the Project vicinity in the past.

According to Kintzer (1980), Graymer et al. (1996) and Wentworth (1997), the late Miocene Temblor Formation (Tm) and Monterey Group (Tmg) overlies the Jurassic-Cretaceous Franciscan Complex (Kfss, Kfm, Kfs) along angular unconformity in the northern and eastern portions of the Project. The western portion of the Project is situated within mapped limits of the Briones Formation (Tbr), Orinda Formation (Tor) and Great Valley Sequence (Kss, Ks, Ksh).

The southern portion of the Project contains Quaternary Alluvium (Qu, Qhc, Qpa) which could be Pleistocene in age.

Several of these formations and deposits have been known to contain significant, non-renewable micro, invertebrate, vertebrate and paleobotanical paleontological resources within the region (Hay, 1927; Sturton, 1939; Savage, 1951; Louderback, 1951; Hall, 1958; Payne, 1962; Axelrod, 1971; Bennison, 1991; Hill, 1978, 1979; Hilton, 2003; Holland and Allen, 2003; Bell et al., 2004).

Some noteworthy fossil localities within the area of the Briones Dam and Mission Peak area are included in Appendix B.

Significance criteria and mitigation recommendations here and in the cited sources follow those presented by the SVP (1995 and 1996), standard guidelines which have been widely accepted by industry and local, state, and federal permitting agencies.

Geologic units are rated for paleontological sensitivity following guidelines set by the SVP (1995 and 1996). The SVP standard guidelines identify three categories to describe the likelihood that a geologic unit contains significant fossil materials: high potential, undetermined potential, and low potential, as indicated below in Table 1.

Table 1: Terminology

Sensitivity Designation	Characteristics of Geologic Units in This Category
High Potential (High Sensitivity) Temblor Formation (Tm)	Formations or sedimentary deposits from which vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a

Monterey Group (Tmg) Briones Formation (Tbr) Orinda Formation (Tor) Quaternary Alluvium (Qu, Qhc, Qpa)	have potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.
Undetermined Potential (Undetermined Sensitivity) Great Valley Sequence (Kss, Ks, Ksh)	This category includes sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.
Low Potential (Low Sensitivity) Jurassic-Cretaceous Franciscan Complex (Kfss, Kfm, Kfs)	This category includes rock units of intrusive igneous origin, most extrusive igneous rocks, and moderate- to high-grade metamorphic rocks.

The Jurassic-Cretaceous Franciscan Complex (Wakabayashi et al., 2010) exposed at the Project site has a low paleontological sensitivity rating due to its metamorphic nature which is unsuitable for fossil preservation (Figure 1). The Cretaceous sedimentary formations (Great Valley Sequence) has an unknown paleontological sensitivity rating. The late Miocene sedimentary formations at the Project site (Temblor formation, Monterey Group (Claremont Formation), Briones Formation and Orinda Formation) have a high paleontological sensitivity. Surficial deposits (Quaternary Alluvium), which are currently concealed by soil and vegetation are mapped in several portions of the Project area (Figure 1). These deposits could be Pleistocene in age and therefore have potential to contain significant nonrenewable paleontological resources.

3 PHASE 1 – PRE-CONSTRUCTION TRAINING, CONSTRUCTION MONITORING AND FOSSIL SALVAGE

3.1 Pre-Construction Awareness Training

The Project Paleontologist will be a practicing scientist who is recognized in the paleontologic community and is proficient in vertebrate paleontology, as demonstrated by (SVP 1995):

- a. institutional affiliations or appropriate credentials;
- b. ability to recognize and recover vertebrate fossils in the field;
- c. local geological and biostratigraphic expertise;
- d. proficiency in identifying vertebrate fossils; and
- e. publications in scientific journals.

Prior to the initiation of excavation activities at the site, the Project Paleontologist will develop the paleontological portion of the Supervisory Level Training Program and Crew Level Training. All construction personnel working on the project shall attend the environmental training prior to the start of work. This training will help to familiarize construction personnel with:

- a. CEQA and other legal requirements for protection and/or salvage of significant fossils,
- b. The nature and appearance of the kinds of fossils likely to be encountered at the construction site, and
- c. The need for the presence of a Paleontological Monitor during excavation.

Obligations of the construction personnel and the Paleontological Monitor to ensure personal safety will be emphasized. The paleontological training portion of Supervisory Level Training will be conducted in conjunction with other environmental awareness presentations such as those addressing biological and archaeological concerns. Crew Level Training will be conducted by a Paleontological Monitor, Environmental Inspector, other qualified environmental representative, or by viewing a video. Additional training of personnel new to the Project (i.e., new supervisory level personnel) can be conducted by viewing a video of the initial Supervisory Level Training.

3.2 Construction Monitoring

3.2.1 Paleontological Personnel

The person conducting paleontologic monitoring may be either the Project Paleontologist or an individual designated by the Project Paleontologist who "must be qualified and experienced in salvaging fossils" (SVP 1995). A Paleontological Monitor is defined as a person with a B.S./B.A. in geology or paleontology and a minimum of one year of monitoring experience in local sedimentary rocks. Experience may be substituted for academic training on approval from the Department. Prior to the beginning of any excavation, clear lines of communication will be established between construction supervisory personnel, Project Environmental Inspector(s), and

the Project Paleontologist. Protocols will also be established to ensure that the Project Paleontologist is notified, at least **24 hours** in advance, of any planned excavation requiring the presence of a Paleontological Monitor.

While it is not the responsibility of the Paleontological Monitor to definitively identify environmentally sensitive plants, animals, or areas, they will report evidence of such concerns encountered in the field to the Environmental Inspector and/or Project's Environmental Compliance Manager (ECM).

The Project Paleontologist and Paleontological Monitor(s) shall attend any required safety training programs and environmental compliance training for the Project.

3.2.2 Monitoring Zones

Figure 2 identifies the Project's work limit areas and the areas requiring monitoring during excavation. Monitoring is required in rock units with high potential (i.e., high sensitivity for paleontological yields). In accordance with the Project's FEIR (see page 4.10-55) "*Depending on the results of these assessments, monitoring may also be required during soil disturbing activities. These measures would be applicable to portions of the Study Area where ground-disturbing construction activities would occur in rock units with a high potential for paleontological resources.*" High potential areas within the Project include the following: Temblor Formation (Tm), Monterey Group (Tmg), Briones Formation (Tbr), Orinda Formation (Tor) and Quaternary Alluvium (Qu, Qhc, Qpa). In general the monitoring zones including excavation of the left abutment core and shell foundation trench; right dam abutment; stilling basin cut slope above an elevation of approximately 780 feet; cut slope above spillway discharge channel; the top formation of Borrow Area B, above an elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; and Staging Areas 5, 7, and 8) in rock units with a high potential for paleontological resources (per FEIR Mitigation Measure 5.10.5).

The Project Paleontologist and Paleontological Monitor(s) will be notified by the Environmental Inspector or Environmental Compliance Manager a minimum of 24 hours in advance of the start of construction excavation activities in a monitoring zone.

1. The Project Paleontologist will annotate construction plans to show monitoring zones for paleontological resources similar to Figure 2. This submittal will be at a sufficient scale to clearly define the areas where monitoring will be required and the relative positions of original and final grades.
2. In all monitoring zones shown on Figure 2, a Paleontological Monitor will be present to observe ground disturbance activities. It is the Environmental Inspector's responsibility to keep the Project Paleontologist and, in turn, the Paleontological Monitor(s) up-to-date with current plans and any construction or scheduling changes. The Paleontological Monitor(s)

will coordinate with the Project Paleontologist, Environmental Inspector, or other designated persons to determine the timing for monitoring in the identified monitoring zones. It will be the Project Paleontologist's responsibility to maintain communication and coordination with the construction management team.

3.2.3 Monitoring Activities

The objective of the paleontological monitoring is to observe excavation and ground-disturbing activities in Project areas designated as high potential/high sensitivity for paleontological resources and to respond in the event that potentially significant paleontological resources are unearthed during these activities (see Figure 1, and FEIR Mitigation Measure 5.10.5).

A single on-site Paleontological Monitor should be sufficient to observe grading and excavation activities. When grading and excavation activities are occurring in multiple monitoring zones at one time, the on-site Paleontological Monitor will rove to the various zones under construction during the day to ensure that each high potential/high sensitivity formations/deposits is periodically monitored in accordance with the Project's mitigation measure 5.10.5 that states:

"...If determined necessary by the ERO or designee after review of the preconstruction assessment memorandum, a qualified professional paleontologist, as defined by the SVP 1995 Guidelines, shall conduct periodic monitoring during ground disturbing activities (e.g., grading and excavation) at sites where paleontological resources are confirmed or likely to be present..."

The Paleontological Monitor will observe grading and excavation activities within formations or deposits designated as high potential/high sensitivity. Monitoring will occur at a safe distance from operating heavy equipment. Spoils temporarily stockpiled will be inspected by the monitor. When it is safe, this monitoring will involve physical inspection of fresh bedrock exposures for contained fossils, and/or examination of newly excavated areas and spoils piles as soon as this can be safely conducted. Monitoring of boring work, if required, will be restricted to observation of spoils. In this case the Paleontological Monitor will inspect spoils as they are stockpiled outside of the borings or excavations.

In each area of planned excavation where fossils have been recovered, and where new outcrop is available, the recording of stratigraphic data will be an on-going aspect of excavation monitoring to provide context for any eventual fossil discoveries. Outcrops exposed in active cuts and finished slopes should be examined and observed geologic features recorded on grading plans and in field notes. The goal of this work will be to delimit the nature of fossiliferous sedimentary rock units along the Project alignment, determine their areal distribution and depositional

contacts, and record any evidence of structural deformation. Standard geologic and stratigraphic data collected include lithologic descriptions (color, sorting, texture, structures, and grain size), stratigraphic relationships (bedding type, thickness, and contacts), and topographic position. Measurement of stratigraphic sections should be routinely done and areas containing exposures of fossiliferous sedimentary rocks should be studied in detail and fossil localities recorded on measured stratigraphic sections.

In the event of a potentially significant paleontological resource discovery, the following procedures will be followed:

- The Paleontological Monitor and the Project Paleontologist have the authority to temporarily stop construction or grading work at a discovery location. In the event of a potential discovery, the Paleontological Monitor will divert or temporarily halt ground disturbing activities in the area of discovery and establish an initial 50-foot no disturbance buffer around the potential discovery. When work is stopped, the Paleontological Monitor will immediately contact the ECM who will alert the Project Construction Manager.
- The Paleontological Monitor under the direction of the Project Paleontologist will conduct a preliminary evaluation of potentially significant paleontological resources to determine if additional mitigation (i.e., collection and curation) is required. The Paleontological Monitor, after making a reasonable effort to assess the identity, integrity, and significance of any encountered paleontological deposit or resource, will immediately notify the Project Paleontologist. The Project Paleontologist will immediately notify the ECM presenting the findings of the assessment. The ECM will then notify SFPUC ECCM who will then notify the San Francisco Planning Department of any discovery and will provide the findings of the assessment to the ERO or designee.
- Work may continue at the direction of the Paleontological Monitor or Project Paleontologist once the potential resource has been moved to a designated collection area.

3.2.4 Field Documentation

The Paleontological Monitor will maintain detailed field notes recording dates, times, locations within the project site, activities undertaken, and especially the details of fossil finds and their geologic contexts.

Written records of specific locations and geologic circumstances of each observed specimen locality will be supplemented by field photographs showing specimens in situ, field number(s), and appropriate ruler or other scale objects within the view field. GPS determinations of latitude and longitude or UTM coordinates, with error estimates, will be noted for each collected

specimen or concentrated locality. The locations of fossil finds and noteworthy geologic features will also be noted on copies of appropriately scaled engineering plans for the project.

Geologic and geographic relationships of fossil localities to visible features within the enclosing geologic formation, such as changes in color or clast size will be noted.

Per guidelines of the SVP (1995) and only if significant fossils are found, oriented sediment samples will be collected, preferably at one meter intervals through the local stratigraphic section, for later paleomagnetic analysis.

In addition to field notes, the Paleontological Monitor will complete brief one-page Daily Monitoring Log in accordance with Construction Management Procedure 057. The Daily Monitoring Log will include daily activity summaries for each day on site. These will be submitted to the Environmental Inspector at the end of each monitoring day.

3.2.5 Termination of Monitoring

The monitoring outlined above will continue during grading and excavation unless the following applies:

If the Project Paleontologist and Paleontological Monitor find, through their course of studying newly excavated outcrops for the Project, that fossils will not be encountered, the paleontologists can, from that point on, depart the site for that particular work area and remain on an "on-call" basis. Construction crews trained in Project-specific paleontological resources identification coupled with communication with the Environmental Inspector, paleontologists can remain on an "on-call-basis". Should significant fossil be encountered, the EI shall immediately redirect work and notify the Project Paleontologist. This decision to depart the site and remain "on-call" will be site specific within the Project and will be made by the Project Paleontologist via communication with the EI.

After at least 50 percent by volume of excavation at each individual high sensitivity site within the overall Project has been completed with few or no significant fossil discoveries, paleontological monitoring of that particular individual site may be reduced to an on-call basis. The Project Paleontologist will ultimately express his/her professional judgment per individual site within the overall Project and may determine that monitoring activities should be reduced or terminated. This will be communicated to the on-site Environmental Inspector (EI) and documented in a brief memorandum to the SFPUC. Subsequently, if potentially significant fossils appear at the site, work within 50 feet of the find will be halted or redirected to a zone outside the 50-foot buffer zone. The Project Paleontologist will be contacted and will determine, at the earliest possible time, whether the find warrants salvage. In light of new finds, if the Project Paleontologist determines that it is warranted, a revised monitoring schedule may be

designed and implemented in coordination with the ECM and SFPUC Environmental Construction Compliance Manager.

3.2.6 Post-construction Report

Following completion of all grading and excavation at the Project site, the Project Paleontologist will prepare a report describing the paleontological mitigation efforts conducted and summarizing significant fossil finds and their geological context. The report will adhere to guidelines set by the SVP (1995) and will include, at a minimum, discussions of Project effects, regulatory requirements, regional geologic context, Project stratigraphy, stratigraphic and geographic distribution of paleontological resources. The report will also include a discussion of the remaining measures (Phase 2, below) to be undertaken to ensure that all significant fossils recovered during the field mitigation program are properly prepared and stabilized, and arrangements made for permanent curation in an authorized institution maintaining paleontological collections. Paper and electronic copies of the report will be submitted to the SFPUC, who will provide the report to the San Francisco Planning Department, and any other requesting agencies or individuals.

3.3 Fossil Salvage

3.3.1 Significant Resources

The significance of the discovered resources will be determined by the Project Paleontologist. Because of the infrequency of fossil preservation, fossils are considered to be nonrenewable resources. Because of their rarity, and because of the scientific information they provide, fossils can be significant records of ancient life, thus, fossils can be considered to be of significant scientific interest if one or more of the following criteria apply.

- The fossils provide data on the evolutionary relationships and developmental trends among organisms, both living and extinct;
- The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
- The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
- The fossils demonstrate unusual or spectacular circumstances in the history of life;
- The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and/or those that add to an existing body of knowledge in specific areas – stratigraphically, taxonomically, and/or regionally. They can include fossil remains of large to very small aquatic and terrestrial vertebrates (including animal trackways), remains of plants and animals previously not represented in certain portions of the stratigraphy, and fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species.

3.32 Recovery Methods

In the event of the discovery of a significant paleontological resources, a data recovery program will be initiated, and an itemized scope of work and budget to accomplish the data collection and post-collection phases of fossil recovery will be provided to ECM and the SFPUC Environmental Construction Compliance Manager for review and approval prior to initiation of recovery activities described below.

Recovery methods will vary depending on the types of fossils discovered (e.g., invertebrate macrofossils, invertebrate microfossils, vertebrate macrofossils, vertebrate microfossils, or plant fossils). Many fossil specimens discovered during excavation monitoring are readily visible to the naked eye and large enough to be easily recognized and removed. Upon discovery of macrofossils, the Paleontological Monitor will temporarily flag the discovery site for avoidance and evaluation as described above under Monitoring Activities. Recovery of unearthed macrofossils can involve techniques including immediate collection, hand quarrying, and/or plaster-jacketing pending the size and nature of the significant paleontological discovery.

- *Immediate Collection* will be used when equipment activity in the vicinity of the discovery area is heavy and immediate action is required to remove an isolated specimen so as not to slow the progress of grading operations. This salvage method involves exploratory probing around a partially exposed fossil specimen to determine its dimensions, the application of consolidants (e.g., Acryloid, Butvar, or Vinac) to stabilize any damaged or weakened areas of the fossil, and removal of the specimen in a block of matrix.
- *Hand Quarrying* typically consists of site specific “mining” of fossil-rich sedimentary rock layers without establishment of a geographic grid framework. Fragile fossils are stabilized as described under the immediate collection technique.
- *Plaster-Jacketing* is used when large vertebrate fossils are discovered that require special handling because of their size and/or fragility. This process begins by isolating a partially exposed specimen from the temporary exposure in a matrix-supported sedimentary

pedestal. The pedestal is then slightly undercut at its base to form an overhanging lip and a layer of damp newsprint or tissue paper is placed on the upper surface of the block. Strips of burlap fabric are then soaked in a mixture of Plaster-of-Paris and laid across the matrix block to dry. Depending upon the volume of the block, one, two, or more layers of plaster-soaked burlap strips are formed on the block. Especially large blocks (over two feet in length) are reinforced with wooden or metal splints. Once the plaster hardens, the supporting pedestal is undercut and the block turned over. Hand tools are used to remove any excess matrix from the bottom of the block and a plaster and burlap cap constructed on the inverted bottom of the block. When all layers of plaster are dry and hard, the completed plaster "jacket" is then labeled with a field number and north arrow and removed from the field. The discovery of a concentration of large vertebrate fossils would require more time for recovery

Many significant vertebrate fossils (e.g., small mammal, bird, reptile, amphibian, or fish remains) often are too small to be readily visible in the field, but are nonetheless important and worthy of attention. The potential discovery of microvertebrate sites is associated with this project and can include sites that produce remains of large vertebrate fossils from fine-grained deposits, sites with an obvious concentration of small vertebrate fossil remains, and sites that based on lithology alone (e.g., paleosols) appear to have a potential for producing small vertebrate fossil remains. Microvertebrate sites will be sampled by collecting an adequate quantities of sedimentary matrix. To avoid construction delays, these samples will be transported to an offsite location for processing as described below.

The discovery of fossil plants is possible along the proposed Project alignment. Paleobotanical specimens typically occur in fine-grained, laminated strata (e.g., claystone) and will require special recovery techniques. Blocks of sedimentary rock are hand quarried from the temporary outcrop and then split along bedding planes to reveal compressed fossil plant material (e.g., leaves, stems, and flowers). Individual slabs are then wrapped in newsprint to minimize destructive dessication of the fossils. Specimens that are delaminating or flaking badly may need to be coated with special consolidants (e.g., Vinac or Butvar).

Oriented matrix samples may be collected for paleomagnetic analysis. Such sampling will likely only be necessary in instances where long, continuous sections of stratified rocks are producing fossils from several different stratigraphic horizons or where vertebrate fossils are being collected in stratigraphic sections lacking in biochronologically useful microfossils. Likewise, it may be necessary to collect stratigraphically positioned samples of fine matrices pollen analysis to aid in addressing questions of geologic age, depositional environment, or paleoecology.

All fossil discoveries will also include the collection of stratigraphic data to delimit the nature of the fossil-bearing sedimentary rock unit, determine its areal distribution and depositional contacts, record any evidence of structural deformation, generate lithologic descriptions of fossil-bearing strata, determine stratigraphic relationships (bedding type, thickness, and contacts), and topographic position, measure stratigraphic sections, and describe taphonomic details.

4 PHASE 2 – POST- CONSTRUCTION FOSSIL PREPARATION AND CONSERVATION

4.1 Timing

Following the six months or up to a year, depending on the extent of discoveries, the Project Paleontologist will assess the size and preparation requirements for the assemblage of fossils collected to date and that could reasonably be expected to be added during the remainder of the project. The Project Paleontologist will prepare a proposal for submittal to the ECM and review and approval by the SFPUC in pursuit of a new contract to cover the anticipated costs of fossil preparation, curation, and permanent storage at a qualified paleontological repository.

4.2 Fossil Preparation

Prior to proceeding with fossil preparation activities, the Project Paleontologist will prepare an itemized scope of work and budget to accomplish the fossil preparation activities for submittal to the ECM and the SFPUC Environmental Construction Compliance Manager for review and approval prior to initiation of fossil preparation activities described below.

4.2.1 Cleaning, Repairing and Hardening

Fossil remains collected during monitoring and salvage activities will be cleaned, repaired, and/or screenwashed as described below. All fossil preparation will meet the standards of the repository institution. Preparation of fossil specimens will involve removal of extraneous and concealing sedimentary matrix from specimens using mechanical methods including pneumatic air scribes, micro sandblasters, and simple hand tools (hammers, chisels, X-acto knives, brushes, dental picks, and pin vises). Fossil preparation will also involve consolidation of weak or porous specimens by the application of specialized media including polyvinyl acetate resins (e.g., Vinac), acrylic resins (e.g., Acryloid), or polyvinyl butyral resins (e.g., Butvar). Repair of broken/damaged specimens will require the use of various adhesives including cyanoacrylate glues (e.g., Zap) polyvinyl acetate emulsions (e.g., Elmer's glue), and polyvinyl butyral resins (e.g., Butvar).

4.2.2 Microfossil Screening and Separation

Recovery of microvertebrate fossils will be accomplished by screenwashing bulk samples of fossil-bearing sedimentary matrix. The process begins by breaking large blocks into 2-3

centimeter cubes to facilitate air-drying of the matrix. Once dry, the matrix is placed into water-filled five gallon plastic buckets to soak for no less than 15 minutes with stirring. The slurry is then poured onto nested 20 (0.84 mm openings) and 30 (0.59 mm) mesh stainless steel screens placed in water-filled troughs. Manual agitation of the screens forces the fine clays and silts through the mesh and concentrates the coarser sand and fossil material on the screens. The screens are then placed at a tilt facing the sun to dry. Once dry, the coarse concentrate is transferred into plastic sample bags and labeled with all pertinent site locality data. Screenwashed concentrates can be further concentrated by the use of heavy liquids (e.g., zinc bromide and/or tetrabromoethane) to concentrate particles of equal density. Generally, fossil bones and teeth sink along with heavy mineral grains (e.g., magnetite) while lighter quartz and feldspar mineral grains float. This separation process produces a very rich concentration of fossil remains, typically isolated teeth of small mammals (e.g., rodents).

4.2.3 Construction of support structures

Larger vertebrate fossils may additionally require construction of rigid supporting structures to prevent breakage during subsequent storage and handling. These structures are typically fashioned from fiberglass and very hard plaster and, as needed, embedded pre-shaped metal reinforcing rods or tubes.

4.3 Museum Curation and Storage

4.3.1 Institutional Agreement

At such time as the number, size, and nature of significant fossils salvaged or likely to be salvaged become apparent, the Project Paleontologist will initiate discussions with a paleontological repository concerning conditions of acceptance of the collection for permanent storage and curation. The SVP Guidelines (SVP 1995) define a qualified paleontological repository as "a publicly supported, not-for-profit museum or university employing a permanent curator responsible for paleontological records and materials." The repository institution may accept or reject all or part of the collection as appropriate to their research and display goals and policies. The repository institution may also require that the repositor "bear the cost for completing preparation and stabilization, completing inventory, and completing cataloging" (SVP, 1996) as well as providing a one-time fee for curation and permanent storage.

4.3.2 Cataloguing

The repository institution may require that the Project Paleontologist catalog or assist in cataloging (including taxonomic identification) of individual specimens in preparation for including the specimens in the permanent collections. The following steps would be involved in cataloguing the specimens:

- *Sorting/picking* – Fossils require sorting/picking to group together specimens of the same taxon (e.g., species and/or genus).
- *Identification* – Once sorted, individual taxon lots will be identified to the lowest taxonomic level practical (e.g., family, genus, and/or species).
- *Cataloguing* – Sorted and identified specimens will be assigned unique specimen catalogue numbers and entered into an electronic catalogue database. A specimen number may represent a single fossil specimen or a batch of specimens belonging to a single species. Catalogue numbers are written on individual specimens using India ink on a patch of white acrylic paint. Curation also involves placement of taxon lots into archival specimen trays with labels containing relevant curatorial information.
- *Locality data* – Formal descriptions of fossil collecting locality records, including geographic, geologic, taphonomic, and collecting data, will be written and stored electronically with the specimen catalogue data.

Where appropriate, specimens shall be analyzed by stratigraphic occurrence, and by size, taxa, or taphonomic conditions. The results shall be presented in a faunal list, a stratigraphic distribution of taxa, or evolutionary, ecological, or depositional deductions.

4.3.3 Records

A complete set of all field notes, geologic maps, stratigraphic sections, and photographs which document the location(s), nature, and geologic setting of salvaged specimens will be clearly labelled and turned over to the repository institution to be permanently filed, in formats acceptable to that institution.

4.3.4 Physical Storage

The repository institution may require that the repositor provide adequate storage cabinets, in the design and manufacture consistent with their specifications, to permanently accommodate the salvaged and prepared collection.

4.3.5 Final Report

The SVP Guidelines (SVP, 1995) require that:

“A report is prepared by the Project Paleontologist including a summary of the field and laboratory methods, site geology and stratigraphy, faunal list, and a brief statement of the significance and relationship of the site to similar fossil localities. A complete set of field notes, geological maps, stratigraphic sections, and a list of identified specimens accompany the report. The report is finalized only after all aspects of the program are completed. The Final Report together with its accompanying documents constitute the goals of a mitigation project. Full copies of the Final Report are deposited with the Lead Agency and the repository institution.”

Per the SVP Guidelines, the Project Paleontologist will prepare a Final Report and will provide to the repository institution and the SFPUC Environmental Construction Compliance Manager (ECCM). The ECCM will provide the Final Report to the San Francisco Planning Department.

Prior to proceeding with preparation of the Final Report, the Project Paleontologist will prepare an itemized scope of work and budget to prepare a for submittal to the ECM and the SFPUC Environmental Construction Compliance Manager for review and approval prior to initiation of fossil preparation activities described below.

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APPENDIX A: Summary of Site Reconnaissance

On June 24th, 29th and July 12th, 2011, James P. Walker, PG of ATS visited the Calaveras Dam Project Site (Site) in order to verify the existence of geologic units as mapped by Graymer et al. (1996) and to assess the formations potential for paleontological resources, i.e. fossils, and possible impacts proposed excavation and construction activities would pose on these units. Mr. Walker was accompanied on all site visits by Dr. Emma Jack who directed him to the various proposed construction and bedrock locations at the site.

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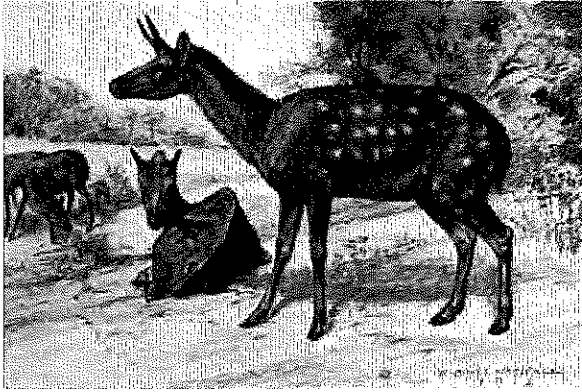
Wagner, J. R., 1978, Late Cenozoic history of the Coast Ranges east of San Francisco Bay, University of California, Berkeley: Ph.D. dissertation. 161 p.

APPENDIX B: Summary of Noteworthy Fossil Localities within Briones Dam and Mission Peak Areas

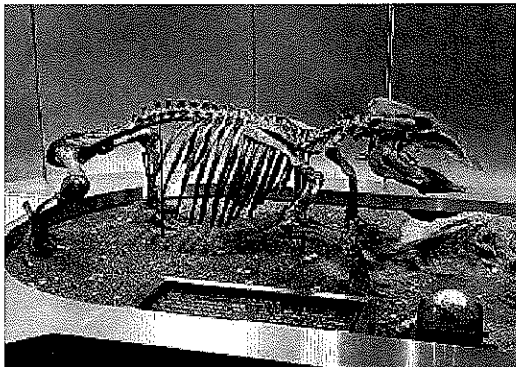
Some noteworthy fossil localities within the area of the Briones Dam and Mission Peak area include, but are not limited to:

Briones Formation:

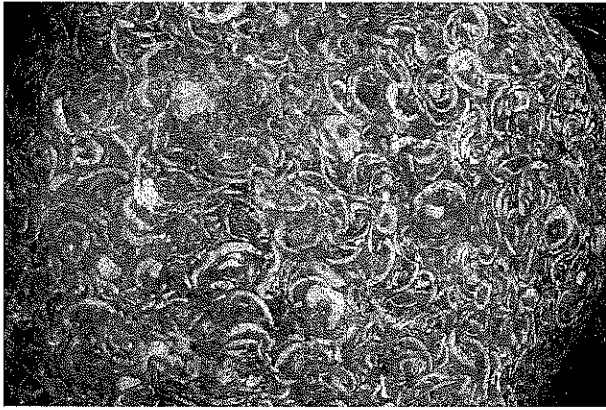
Paleomerycidae (Miocene- Barstovian Stage – 16.3 to 13.6 Million years ago): extinct form of deer and was horned, long-legged, heavy, and massive.



Source: Scott, W.B., 1913, A history of land mammal in the Western Hemisphere, the Macmillian Company, New York, 693 p.



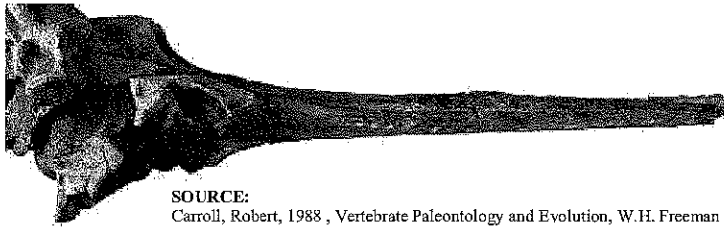
Desmostylus fossil similar what was collected in the Briones Formation in the Mission Peak area (Left). Artist rendition of *Desmostylus* during the Miocene.



Typical near-shore, marine, fossil shell-rich sandstone of the Briones Formation.

Monterey Formation or Temblor Formation:

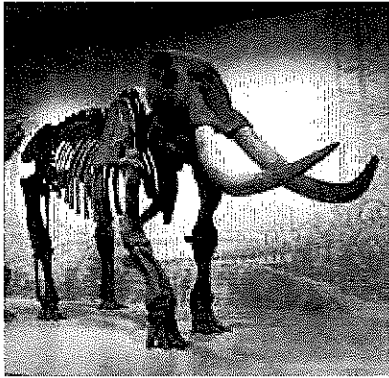
Delphinidae (Miocene – Hemingfordian Stage – 20.69 to 16.3 Million years ago): Dolphin



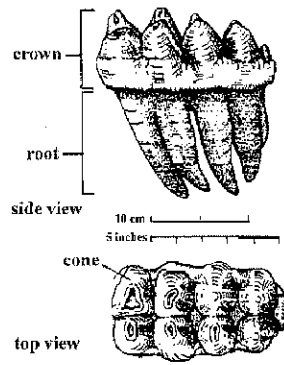
SOURCE:

Carroll, Robert, 1988 , *Vertebrate Paleontology and Evolution*, W.H. Freeman and Company, New York.
Lambert et al., 2005, A new kentriodontine dolphin from the middle Miocene of Portugal, *Acta Palaeontol. Pol.* 50 (2): 239-248.

Fossils from Quaternary – Pleistocene deposits include, but are not limited to, significant paleontological resources of Ice Age fossils such as plants (pines, sycamore, willow, oak, cattail), invertebrates (fresh water mussel, clam, snail), and vertebrates (sunfish, sucker, minnow, stickleback, salamander, bull frog, mallard, turkey, peeper frog, toad, turtle, lizard, snake, goose, owls, shrew, mole, woodrat, ground squirrel, gopher, cottontail, sabercat, jaguar, wolf, coyote, fox, bear, badger; camel, antelope, deer, ox, peccary, mammoth, mastodon, giant ground sloth and horse (Savage, 1951; <http://www.msncucleus.org/gordon/gordonhall.htm>).



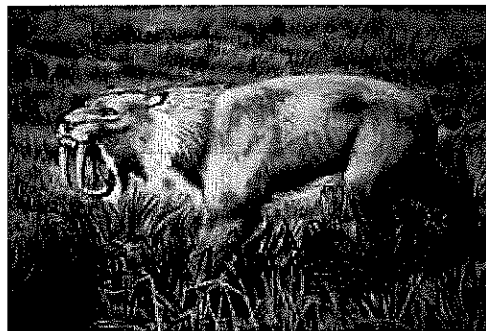
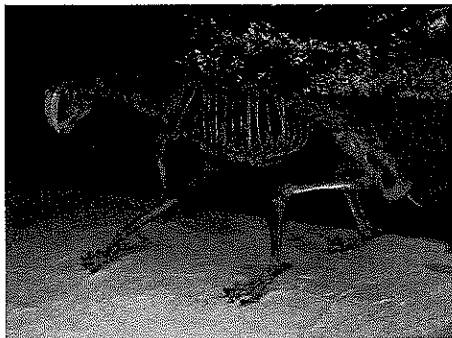
Pleistocene Mastodon fossil
(*Mammut americanum*)



Drawing shows a side view and a top view of a typical upper third molar of an American mastodon.



Geologists and Paleontologists recovering Pleistocene fossil mammoth (Left) and Dr. Savage recovering a mammoth tusk (Right) from the Irvington Formation, Bell Quarry, near Saber Cat road in Fremont, CA.



Pleistocene fossil *Smilodon californicus* (saber tooth tiger) on left. Artist rendition on right.

Residences in Vicinity of Calaveras Dam Replacement Project



Wilkerson, Cullen

From: Ryan_Olah@fws.gov
Sent: Tuesday, December 20, 2011 10:30 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: Calaveras Dam - Survey Monuments

The Service concurs that the monument installation can occur under the existing biological opinion. The monument installation will not result in additional effects than were covered in the biological opinion. Please let me know if you have any other questions.

Ryan

Ryan Olah
Coast Bay/Forest Foothill Division Chief U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office
2800 Cottage Way
Sacramento, CA 95825
(916) 414-6623

"O'Neill, Kerry"
<KONeill@sfgwater.org>
To
<Ryan_olah@fws.gov>
12/14/2011 07:43 AM cc
"Wilkerson, Cullen"
<CWilkerson@sfgwater.org>
Subject
RE: Calaveras Dam - Survey
Monuments

Ryan, can we proceed with the installation of these survey monuments that will have a permanent impact of 0.0004 acre as described below? If your concern is including this activity/impact in a permit amendment, we can include it in a permit amendment that Steve Leach is developing. It may be some time before the amendment is actually finalized so I'm hoping that you can concur that we can proceed with the monument installation at this time.
tx

From: O'Neill, Kerry
Sent: Wednesday, December 07, 2011 9:05 AM
To: Craig Weightman (CWeightman@dfg.ca.gov); Ryan Olah (Ryan_olah@fws.gov)
Cc: Wilkerson, Cullen

Subject: Calaveras Dam - Survey Monuments

Subject: Calaveras Dam Replacement Project - Installation of Survey Monuments

USFWS BO: 81420-2009-F-1339

CDFG ITP: 2081-2010-033-03

This email is to request concurrence for SFPUC to install two small survey monuments outside the construction work limits on the Calaveras Dam Replacement Project. These survey monuments will serve as control points to monitor for ground settlement issues during and following construction. We are planning to install these monuments as soon as I hear back from you both regarding this work. Construction equipment used to install survey monuments will consist of a rubber tracked skidsteer, auger, water buffalo, trailer, and mixer. Approximately three construction personnel will perform the installation of the survey monument points. Pre-construction surveys will be consistent with the CEQA MMRP and permit requirements.

USFWS/CDFG approved biologist will be on-site during survey monument installation. The area of permanent impact will be 0.00004 acre. Below is detailed information on the location of these two survey monument locations and maps/photos of these two locations is attached to this email:

Survey monument 110 - Site 110 is located atop Observation Hill and is approximately 200 feet outside of the construction work limits. The site consists of non native grassland. A few scattered rock outcroppings are located along the ridge top in and adjacent to the site. Habitat immediately adjacent to this site consists of non native grassland and oak woodland. The proposed access route to this location is an area approximately 200 feet long along the ridge top from an existing fire road.

This area is potential foraging, dispersal and refugia habitat for the federal and state-listed Alameda whipsnake (*Masticophis lateralis* euryxanthus) and the federal listed California red-legged frog (*Rana draytonii*). No other special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by installation of the survey monument. Preconstruction surveys for sensitive herpetofauna and nesting birds (dependent upon the timing of the proposed work) will be conducted at the survey monument location and along the access route.

Survey monument 112 - Site 112 is located adjacent to a fire road and consists of nonnative grassland. The site is currently grazed. This area is potential foraging and dispersal habitat for the Alameda whipsnake, California red-legged frog and California tiger salamander. No other special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by installation of the survey monument. Preconstruction surveys for sensitive herpetofauna and nesting birds (dependent upon the timing of the proposed work) will be conducted at the survey monument location and along the access route.

Kerry O'Neill
Environmental Construction Compliance Manager Bureau of Environmental Management San Francisco Public Utilities
Commission Cra
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750



Memorandum

Date: May 10, 2011

To: Kerry O'Neill, SFPUC

From: Maureen Kick and Gilda Barboza, URS Corporation

Subject: *Calaveras Dam Replacement Project, Minor Project Modification-Environmental review for additional air quality monitoring station locations*

The San Francisco Public Utilities Commission (SFPUC) has retained URS Corporation (URS) to provide professional engineering and related environmental services for the Final Design phase of the Calaveras Dam Replacement Project (SFPUC Contract No. CS-716). Consistent with the established scope of work, URS evaluated the environmental considerations for 13 new air quality monitoring station locations that would be used during construction. Figure 1 depicts the locations of the proposed monitoring stations and the project vicinity. The UTM coordinates for the proposed air quality monitoring stations are presented in Table 1.

This memorandum summarizes the proposed project modification and environmental information to support an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054. This environmental review memorandum is organized into the following sections:

- 1) Project Description
- 2) Biological Resources, and
- 3) Cultural Resources

PROJECT DESCRIPTION

SFPUC proposes to install 13 temporary air quality monitoring stations at new locations. The proposed locations of these stations and access routes are shown on Figure 1. All of the proposed stations would be accessed using existing roads. The location for each new station is described as follows:

Ambient Air Quality Monitoring Station 2 (Station A2)

The proposed location for the Ambient Air Quality Monitoring Station 2 is on a residential property (Garcia residence), adjacent to an active construction zone.

Ambient Air Quality Monitoring Station 3 (Station A3)

The proposed location for the Ambient Air Quality Monitoring Station 3 is on East Bay Regional Park District property, next to the Interpretive Center building. The proposed station location is 220 feet to the southeast of the existing Baseline Air Quality Monitoring Station 28.

Ambient Air Quality Monitoring Station 5 (Station A5)

The proposed Perimeter Air Quality Monitoring Station 5 is located at the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol, CA.

Perimeter Air Quality Monitoring Station 2 (Station P2)

The proposed location for the Perimeter Air Quality Monitoring station 2 is approximately 0.4 mile south of the Calaveras Dam access road gate, adjacent to Calaveras Road.

Perimeter Air Quality Monitoring Station 3 (Station P3)

The proposed location for the Perimeter Air Quality Monitoring Station 3 is approximately 420 feet south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road.

Perimeter Air Quality Monitoring Station 4 (Station P4)

The proposed location for the Perimeter Air Quality Monitoring Station 4 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a.

Perimeter Air Quality Monitoring Station 5 (Station P5)

The proposed location for Perimeter Air Quality Monitoring Station 5 is adjacent to the Parcel E Trail (Camp Ohlone Road), approximately 0.86 mile north of Calaveras Reservoir in the vicinity of Alameda Creek.

Perimeter Air Quality Monitoring Station 6 (Station P6)

The proposed location for the Perimeter Air Quality Monitoring Station 6 is approximately 0.31 mile to the northeast of Calaveras Dam adjacent to an existing dirt access road.

Perimeter Air Quality Monitoring Station 7 (Station P7)

The proposed location for the Perimeter Air Quality Monitoring Station 7 is in the vicinity of Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence.

Perimeter Air Quality Monitoring Station 8 (Station P8)

The proposed location for the Perimeter Air Quality Monitoring Station 8 is in the vicinity of Calaveras Dam near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7.

Perimeter Air Quality Monitoring Station 9 (Station P9)

The proposed Perimeter Air Quality Monitoring Station 9 is located at the south end of the reservoir near the proposed Borrow Area E.

Perimeter Air Quality Monitoring Station 10 (Station P10)

The proposed location for the Perimeter Air Quality Monitoring Station 10 is at the south end of the reservoir near the proposed Borrow Area E.

Perimeter Air Quality Monitoring Station 11 (Station P11)

The proposed location for Perimeter Air Quality Monitoring Station 11 is near the confluence of Calaveras Creek and Alameda Creek, approximately 0.81 mile north of Calaveras Reservoir.

Other Stations Not Evaluated

Three additional air quality monitoring stations would be located at sites that have been previously evaluated and are therefore not considered in this review:

Ambient Air Quality Monitoring Station 1 (Station A1)

This monitoring station is proposed in the same location as existing Ambient Air Quality Monitoring Station 27.

Ambient Air Quality Monitoring Station 4 (Station A4)

This monitoring station is proposed in the same location as existing Baseline Air Quality Monitoring Station 3.

Perimeter Air Quality Monitoring Station 1 (Station P1)

This monitoring station is proposed in the same location as existing Baseline Air Quality Monitoring Station 16.

Description of Air Quality Monitoring Stations

The proposed air quality monitoring stations would be identical to the 17 air quality monitoring stations previously installed for this investigation. The proposed stations will reuse/relocate the station structures used in the baseline monitoring, which consist of a 4-foot by 4-foot dog kennel enclosed by a chain link fence placed on concrete pavers and secured by 36" metal stakes for each leg of the cage as shown in Figure 2. The air quality monitoring stations are temporary facilities that would be removed following completion of the Calaveras Dam Replacement Project.

The proposed structures will provide secure locations for pumps and/or meters that will be used to collect air samples for the analyses of asbestos and/or metals. The concrete pavers for the outdoor monitoring station will be approximately 4-feet by 4-feet and the chain link enclosure will be approximately 6-feet tall so that air monitoring equipment can be suspended 5 feet above the ground surface. Four, 4-inch diameter steel posts will support the chain link enclosure.

Each of the proposed air quality monitoring sites is located on level ground that would require only minimal site preparation. Anticipated site preparation would include clearing rocks for the concrete pad and installation of four steel posts that will support the chain link enclosure. These components would be removed after completion of the monitoring program.

The proposed air quality monitoring stations will be used to collect air samples for the analyses of asbestos and/or metals. The pumps and meters will be battery powered with motors that are less than 1/20 horsepower. The noise generated by the units will be comparable to a quiet conversation (below 60 decibels) at a distance of 5 feet. The proposed pumps and meters each measure approximately 6 x 6 x 5 inches. The pumps would be connected to the sampling media (clean plastic cassettes that measure approximately 1½ x 1½ x 1½ inches) with a piece of clear tubing that is approximately 2 feet in length and ½ inch in diameter. The cassettes contain a filter that collects the ambient dust for analysis.

BIOLOGICAL RESOURCES

Potential adverse effects to sensitive biological resources were evaluated based upon a review of background information and a field reconnaissance survey. The background research included records from (1) the California Department of Fish and Game's Natural Diversity Database, (2) the California Native Plant Society's On-line Electronic Inventory, (3) the U.S. Fish and Wildlife Service Sacramento Field Office's list of species that may occur within the Calaveras Reservoir and La Costa Valley 7.5 minute USGS quadrangles, (4) the Biological Assessment for the Calaveras Dam Replacement Project (EDAW 2009), (5) the Wetland Delineation for the Calaveras Dam Replacement Project (May and Associates 2006) and the Draft EIR for the Calaveras Dam Replacement Project (SF Planning Department 2009).

Based on the above background research, four federally listed species have the potential to occur in the vicinity of the proposed air monitoring stations:

- Alameda whipsnake (*Masticophis lateralis euryxanthus*) – Federal and State threatened
- California red-legged frog (*Rana draytonii*) – Federal threatened
- California tiger salamander (*Ambystoma californiense*) – Federal and State threatened
- Callippe silverspot butterfly (*Speyeria callippe callippe*) – Federal endangered

URS biologist, Gilda Barboza, conducted a biological field reconnaissance of the proposed air quality monitoring station locations on March 10, April 22, and April 27, 2011. Each of the monitoring station locations was visually inspected. The purpose of the field reconnaissance was to identify potential habitat for the listed and/or sensitive species and sensitive resources (i.e., active nests of migratory birds, wetlands, and other waters) identified during the background research, and to identify locations that would avoid any potential impacts from installation of the proposed stations.

Based on the observations from the field visit, as described below, installation of the monitoring stations at the proposed sites would not affect habitats that are likely to be occupied or utilized by the special status species listed above. In addition, no waters of the U.S. or other wetland resources were identified at the proposed monitoring station locations or in the immediate vicinity of these sites during the field reconnaissance.

Station A2 is located in a heavily disturbed area at a residential property, adjacent to active construction activities. The station would be placed in an open landscaped area, dominated by non-native moss pygmy weed (*Crassula trillaea*). Furthermore, the open area is surrounded by an asphalt and graveled driveway and residential buildings. No sensitive biological resources were observed at this station location.

Station A3 is located within disturbed habitat, in the parking lot of the Sunol Wilderness visitor center and picnic area. The station would be placed within the recreational lawn area designated for the public. Because their location is within previously disturbed habitat, the proposed station would not affect sensitive biological resources.

Station A5 is located within the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol. The proposed station would be placed on the existing gravel surface within the maintenance yard. Adjacent vegetation outside the maintenance yard includes coast live oak, valley oak, non-native grasses,

noxious weeds, and elderberry. Acorn woodpeckers, barn swallows, and European starlings were observed on the adjacent property but no sensitive biological resources were observed at the proposed station location.

Station P2 is in an open grassland area adjacent to Calaveras Road above a ravine. Adjacent vegetation is potentially suitable nesting habitat for migratory birds, however, no bird nests were observed. The proposed location is approximately 100 feet from the margins of the nearest tree canopies. Several ground squirrel burrows were noted nearby, however, no ground squirrel burrows were observed within the proposed station location or the immediate vicinity. No other biological resources were observed at this location.

Station P3 would be located approximately 420 feet to the south of the gate to the Calaveras dam area, on the shoulder of Calaveras Road. The area is previously disturbed from road construction. No burrows or other potential refugia, for California tiger salamander are present. The proposed station location is not habitat for Alameda whipsnake or California red-legged frog. No nesting birds or other sensitive biological resources were observed at this location.

Stations P4 and P5 are located within or adjacent to existing access roads. Station P4 would be located on a flat, grassy area that is heavily used by cattle and is near a feeding/watering station. The ground surface has been significantly disturbed from cattle use. Neither of the proposed locations would disturb burrows or other potential refugia for California tiger salamander. The proposed station locations are not habitat for Alameda whipsnake or California red-legged frog. No nesting birds or other sensitive biological resources were observed at these locations.

Stations P6 and P7 are located adjacent to dirt and graveled roads adjacent to serpentine grasslands and in proximity to serpentine outcrops, suitable for the callippe silverspot butterfly. The proposed locations for both stations were modified to avoid impacts to outcrops of serpentine that potentially support special status plant species. Station P6 is located in an area that is disturbed by cattle activity associated with a nearby feeding/watering station. Station P7 is located immediately adjacent to a gravel road, within an area previously disturbed by road maintenance.

Station P8 would be located adjacent to a dirt access road. No sensitive biological resources were observed at this location. The proposed location is within grasslands near serpentine outcrops but outside the limits of the special status plant populations documented by May and Associates in 2006 that are documented in the DEIR. The proposed location would not affect johnny jump-up (*Viola pedunculata*) that are the host plant of the callippe silverspot butterfly.

Stations P9 and P10 are located near the south shore of Calaveras Reservoir. Both stations are located within open grasslands that are intensively grazed and disturbed. No burrows or other habitats potentially utilized by sensitive biological resources are present at these locations.

Station P11 is located near the confluence of Alameda Creek and Calaveras Creek in a disturbed grassland area adjacent to a service road. The open grassland is comprised of non-native grasses and forbs. The grassland is surrounded by coast live oaks, blue oaks, western sycamores, California buckeye, and bay laurel. An inactive stick nest was observed in one of the sycamore trees. Aside from the inactive nest, no other sensitive biological resources were observed at the proposed monitoring station location.

CULTURAL RESOURCES

The proposed air quality monitoring station locations were subject to an intensive pedestrian archaeological survey on March 10, 2011 by Maureen Kick, a Registered Professional Archaeologist who also meets the Secretary of the Interior's Standards for Archaeology and on April 22 and April 27, 2011 by Alexandra Greenwald under Ms. Kick's supervision.

Prior to the field survey, records obtained from previously conducted records searches at the Northwest Information Center of the California Historical Resources Information System were reviewed. Survey and geoarchaeological reports produced for the Calaveras Dam Replacement Project were also reviewed. No previously recorded resources are located in the vicinity of any of the proposed monitoring station locations.

The proposed monitoring station locations are all in previously disturbed areas, primarily adjacent to roads and other facilities. Cattle grazing has also caused ground disturbance at several of the locations. Ground disturbance from installation of the stations is expected to be limited to four 36-inch stakes used to secure the stations.

No prehistoric or historic-era artifacts or evidence of an archaeological deposit, such as dark soils, shell or charcoal were observed at any of the locations. Whenever possible, rodent burrows and burrow spoils were inspected for signs of archaeological midden or artifacts. None were observed.

Ambient Air Quality Monitoring Station 2 (Station A2)

The proposed location for the Ambient Air Quality Monitoring Station 2 is within the Garcia property, south of Sunol and west of Calaveras Road. The proposed location is in the unpaved center of a roundabout driveway. The area has been heavily disturbed by long term residential and landscaping activity, and is currently planted with a variety of fruit trees. Ground visibility was excellent. No cultural resources were observed during the survey.

Ambient Air Quality Monitoring Station 3 (Station A3)

The proposed location for the Ambient Air Quality Monitoring Station 3 is in the Sunol Regional Wilderness, in the vicinity of the park offices and the public restrooms. The proposed station would be located in the visitor center parking lot and picnic area. No cultural resources were observed during the survey.

Ambient Air Quality Monitoring Station 5 (Station A5)

The proposed location for the Ambient Air Quality Monitoring Station 5 is within the San Francisco Public Utility Commission's Hetch Hetchy Yard in Sunol. The area, on the western perimeter of the yard and equidistant between the Main Street entry gate and Niles Canyon Road, has been previously disturbed by nearby road and building construction and ground visibility is partially obscured by pipes currently being stored there and imported gravels. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 2 (Station P2)

The proposed location for the Perimeter Air Quality Monitoring station 2 is approximately 0.4 mile south of the Calaveras Dam access road gate, on the shoulder of Calaveras Road. This location is on a gently

sloping alluvial terrace at the confluence of two seasonal creeks and is grazed by cattle. Ground visibility was low due to dense annual grasses; however exposed backdirt from rodent burrows and ground disturbance caused by cattle were inspected. Rock outcroppings present in the area were closely examined. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 3 (Station P3)

The proposed location for the Perimeter Air Quality Monitoring Station 3 is approximately 420 feet to the south of the gate to the Calaveras dam area, on the shoulder of Calaveras Road. The area is previously disturbed from road construction. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 4 (Station P4)

The proposed location for the Perimeter Air Quality Monitoring Station 4 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 10a. This flat, grassy area is heavily used by cattle and is near a feeding/watering station. The ground surface has been significantly disturbed from cattle use. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 5 (Station P5)

The proposed location for the Perimeter Air Monitoring Station 5 is along Parcel E Trail, north of Calaveras Reservoir. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 6 (Station P6)

The proposed location for the Perimeter Air Quality Monitoring Station 6 is in the vicinity of Calaveras Dam, 0.31 mile to the northeast of the dam. The proposed location is in an open grassy area previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 7 (Station P7)

The proposed location for the Perimeter Air Quality Monitoring Station 7 is in the vicinity of the Calaveras Dam, 0.14 mile to the southeast of the Dam Watershed Keeper Residence. This proposed location is adjacent to an existing road within a previously disturbed zone impacted by road construction and ongoing road maintenance. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 8 (Station P8)

The proposed location for the Perimeter Air Quality Monitoring Station 8 is in the vicinity of Calaveras Dam, near the Baseline Air Quality Monitoring Station 21, south of the proposed Disposal Site 7. This proposed location is adjacent to an existing road within a previously disturbed zone impacted by road construction and ongoing road maintenance. No cultural resources were observed during the survey.

Perimeter Air Quality Monitoring Station 9 (Station P9)

The proposed location for the Perimeter Air Quality Monitoring Station 9 is located on the south end of the reservoir. This proposed location has been previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 10 (Station P10)

The proposed location for the Perimeter Air Quality Monitoring Station 10 is located near the south end of the reservoir. This proposed location has been previously disturbed by cattle grazing. No cultural resources were identified during the survey.

Perimeter Air Quality Monitoring Station 11 (Station P11)

The proposed location for the Perimeter Air Quality Monitoring Station 11 is located on a terrace above the confluence of Alameda Creek and Calaveras Creek on gravelly deposits. No cultural resources were observed during the survey.

Should cultural resources be encountered, work in the immediate vicinity of the discovery will be redirected until a qualified archeologist can assess the nature and significance of the finds. In the event human remains are discovered, consistent with State law, the County Coroner will be contacted. If the Coroner determines the remains are Native American, the California Native American Heritage Commission will be contacted and they will appoint a Most Likely Descendant to work with the landowner to make recommendations for the treatment or disposition of the remains and associated grave goods.

Please contact Steve Leach at (510) 874-3205 or Maureen Kick at (510) 874-3107 if you have any questions regarding this memorandum.

REFERENCES

- EDAW. 2006. Preliminary Draft Biological Assessment for the Calaveras Dam Replacement Project. Prepared for the U.S. Army Corps of Engineers on behalf of the San Francisco Public Utilities Commission, 1155 Market Street, San Francisco, CA. Contract No. CS-732. Prepared by EDAW, Inc., San Francisco, CA. 21 December.
- May and Associates. 2006. Final Delineation of Waters of the United States. Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California.
- San Francisco Planning Department. 2009. Draft Environmental Impact Report for the San Francisco Public Utilities Commission (SFPUC) Calaveras Dam Replacement Project. File No. 2005.0161E
- U.S. Fish and Wildlife Service (USFWS). 2005. Critical Habitat – What is it? Fact sheet prepared by the U.S. Fish and Wildlife Service. Online document accessed on 4-18-08:
http://www.fws.gov/endangered/factsheets/Critical_Habitat_12_05.pdf

Table 1. UTM Coordinates for the Proposed Air Quality Monitoring Stations

Station	UTM Coordinates	
	Meters East	Meters North
A1	601209.67531	4152812.91928
A2	600112.94473	4157148.35977
A3	603310.66819	4152707.35815
A4	601328.01145	4154474.18098
A5	598360.06837	4161249.81182
P1	603499.27224	4149887.75112
P2	603228.18429	4150740.07168
P3	603230.66065	4151286.37674
P4	604199.55688	4150921.00769
P5	603979.14031	4151417.64771
P6	604773.83262	4150304.82189
P7	604367.00000	4149421.99993
P8	604335.26883	4148992.55095
P9	605387.00000	4145736.99993
P10	604604.23448	4145952.14387
P11	604237.96130	4151409.70211

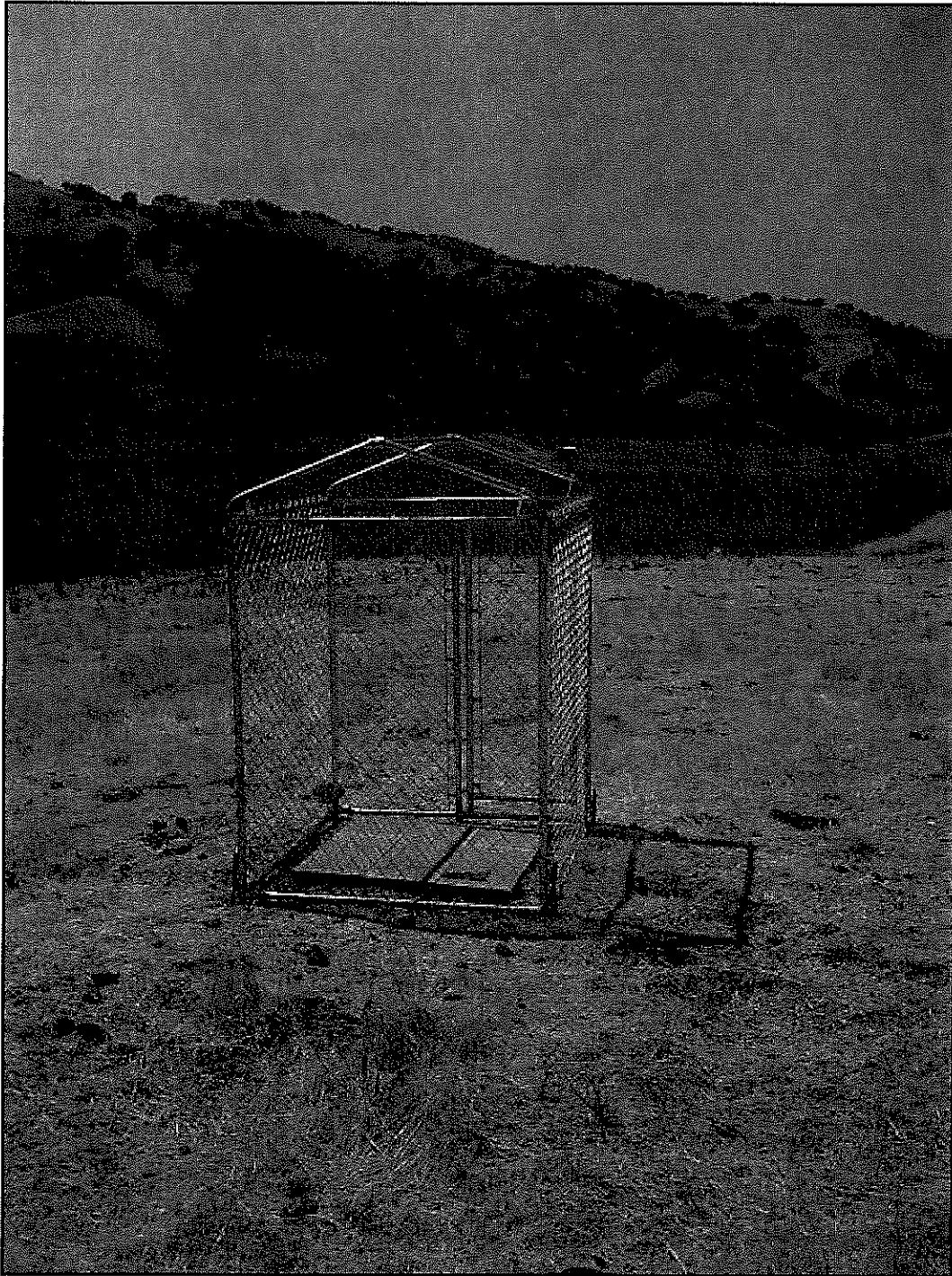


Figure 2. Example of Monitoring Station

Wilkerson, Cullen

From: King, Terry
Sent: Thursday, October 27, 2011 7:30 AM
To: Wilkerson, Cullen
Subject: RE: Calaveras MPM 5 - Night Time Work

Thanks Cullen!!

From: Wilkerson, Cullen
Sent: Wednesday, October 26, 2011 6:53 PM
To: King, Terry
Subject: FW: Calaveras MPM 5 - Night Time Work

FYI.

From: O'Neill, Kerry
Sent: Wednesday, October 26, 2011 3:48 PM
To: Wilkerson, Cullen
Cc: Jack, Emma
Subject: RE: Calaveras MPM 5 - Night Time Work

Cullen attached is a .pdf of the approved MPM 5 with attachment and MEA email approval for your files.

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Wednesday, October 26, 2011 3:28 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: Calaveras MPM 5 - Night Time Work

Approved and attached.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfwater.org>

10/26/2011 11:44 AM

To "Smith, Steve" <Steve.Smith@sfgov.org>
cc "Wilkerson, Cullen" <CWilkerson@sfwater.org>
Subject RE: Calaveras MPM 5 - Night Time Work

Your addition looks fine. tx

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Wednesday, October 26, 2011 11:01 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: Re: Calaveras MPM 5 - Night Time Work

Hi Kerry - I've added a sentence under Visual Resources to explicitly note no nighttime lighting issue would result. If you are OK with this, let me know and I should be able to sign/approve today.

Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

10/20/2011 04:57 PM

To <Steve.Smith@sfgov.org>

cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>

Subject Calaveras MPM 5 - Night Time Work

As we discussed attached in MPM 5 for night time work at Disposal Site 3 (see attached Word and .pdf version). Please call or email with any questions.

Kerry O'Neill

Environmental Construction Compliance Manager

Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103

Voice: 415-554-2474; Fax: 415-934-5750

[attachment "MPM-005 Night time work at DS-3.doc" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "MPM-005 Night time work at DS-3.pdf" deleted by Steve Smith/CTYPLN/SFGOV]

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 010		Date: 2/03/12	
Project Title: Calaveras Dam Replacement Project			
MEA Case No./Project No.: 2005.0161E/CUW37401			
MPM Prepared By: Cullen Wilkerson, ECM			
MPM Triggered By:		<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
		<input checked="" type="checkbox"/> Other: Contractor	
Landowner: SFPUC			
Vegetative Cover/Land Use: Non native grassland		Net Acreage Affected: 0.35 acres	
Modification to:		<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
		<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 2081-2010-033-03

Detailed Description of Minor Project Modification:

The contractor is requesting a minor road at the Calaveras Dam Replacement Project (CDRP) along the dam access road to accommodate a project-required vehicle wheel wash and maintain two-way traffic lane for large construction vehicles entering and exiting the site (Attachment A-Figure 5). Installing a wheel wash in this location will allow the contractor to wash exiting and entering construction vehicles per the project Asbestos Dust Mitigation Plan, per the contractor's Storm Water Pollution Prevention Plan, and per invasive species eradication measures for restoration.

The proposed area of expansion is not identified in the project FEIR Table 3.5 to be widened for construction. Section 3.5.1.7 of the FEIR states "...haul roads that would be used for two-way traffic would require a width of between 30 and 40 feet depending on the type of hauling equipment used on that road". The contractor requires additional spacing beyond the 30 to 40 feet (previously stated in the FEIR) along this section of roadway. Mitigation Measure 5.4.1a states

"Except for those areas specifically identified in Table 4.4.9, Impacts of Construction on Wetlands and Other Waters of the State and United States, where impacts cannot be practicably avoided, a minimum 100-foot buffer surrounding all wetlands, ponds, streams, drainages, and other aquatic habitats located on or within 100 feet of the project site shall be clearly designated on the final project construction plans and marked on the site with orange construction fencing or silt fence. If the area is on a slope, silt fencing or other comparable management measures will be installed to prevent polluted runoff, as well as equipment, from entering the buffer area. Signs shall be installed every 100 feet on or adjacent to the buffer fence that read, Environmentally Sensitive Area - Keep Out." Fencing and management measures shall be installed and inspected prior to initial project construction and maintained through the construction period. No equipment mobilization, grading, clearing, storage of equipment or machinery, vehicle or equipment washing, or similar activity, may occur until a representative of the SFPUC has inspected and approved the

fencing and/or management measures installed around these features”.

FEIR Section 4.10.5 states “there is a high probability of encountering unknown paleontological resources during ground-disturbing construction activities such as excavation for the spillway excavation of borrow areas, and construction of haul roads”. This expansion is occurring adjacent to the Dam Access road. There is a low probability for paleontological resources in the proposed expansion area along the dam access road way (see FEIR Section 4.10.1). Also, per the approved Paleontological Evaluation Report and Paleontological Monitoring Plan prepared by ATS (August 11, 2011), no paleontological monitoring is required for this area of the project.

Archaeological resources were not considered to be present, per the FEIR section 4.10.1.4 where it is stated that there is a “low likelihood of encountering historical resources” due to the steepness of the slopes in the proposed expansion area (see Figure 4.10.1 in the FEIR). In addition, the cultural resources technical memorandum (Attachment B) states, “It is unlikely this expansion will disturb archaeological resources”. No archaeological monitoring is recommended for this expansion (Attachment B).

Per the FEIR Section 4.4, there exists a potential for special status species (e.g., Alameda whipsnake, California tiger salamander, and California red-legged frog) to be impacted by the expansion (Attachment C). Implementing Mitigation Measures 5.4.1a and 5.4.1b will reduce the potential impacts to less than significant.

USFWS and CDFG concurrence for the road widening was received (Attachment D). Note that the CDFG approval is for vegetative clearing at this time as CDFG processes the paperwork for the permit amendment.

ENVIRONMENTAL IMPACTS

The addition of 0.35 acres in this area would not result in new impacts. It would result in additional biological impacts beyond those analyzed in the Calaveras Dam Replacement FEIR.

Biological Yes No **Cultural** Yes No **Photos** Yes No **Other** Yes No

Attachments:

- Attachment A: Figure 5. Changes to Dam Access Road at CDRP
- Attachment B: Archaeological Tech Memo - Minor Project Modification: Cultural Resources Surveys for the Calaveras Dam Replacement Project, December 5, 2011.
- Attachment C: Biological Tech Memo - Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project, December 2, 2011.
- Attachment D: USFWS/CDFG approval

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

Calaveras Dam Replacement Project FEIR and updated field surveys conducted by SFPUC consultant Shaw, March 10, April 22, and April 27, 2011. Pre-construction surveys conducted by SFPUC consultant Shaw: June, July, August, September, and October 2011.

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Previous Cultural Survey Report Reference:

FEIR Section 4.10 – Archaeological Survey Report (ASR) (ETJV 2008) and Historic Resources Inventory Evaluation Report (HRIER) (JRP 2007).
 Calaveras Dam Replacement Project FEIR

Conditions of Approval or Reasons for Denial: Approval subject to any additional stipulations provided in the pending permit amendment from CDFG.

SFPUC Required Signatures for Environmental Approval:

ECCM: Kerry O'Neill Date: 02/06/12

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

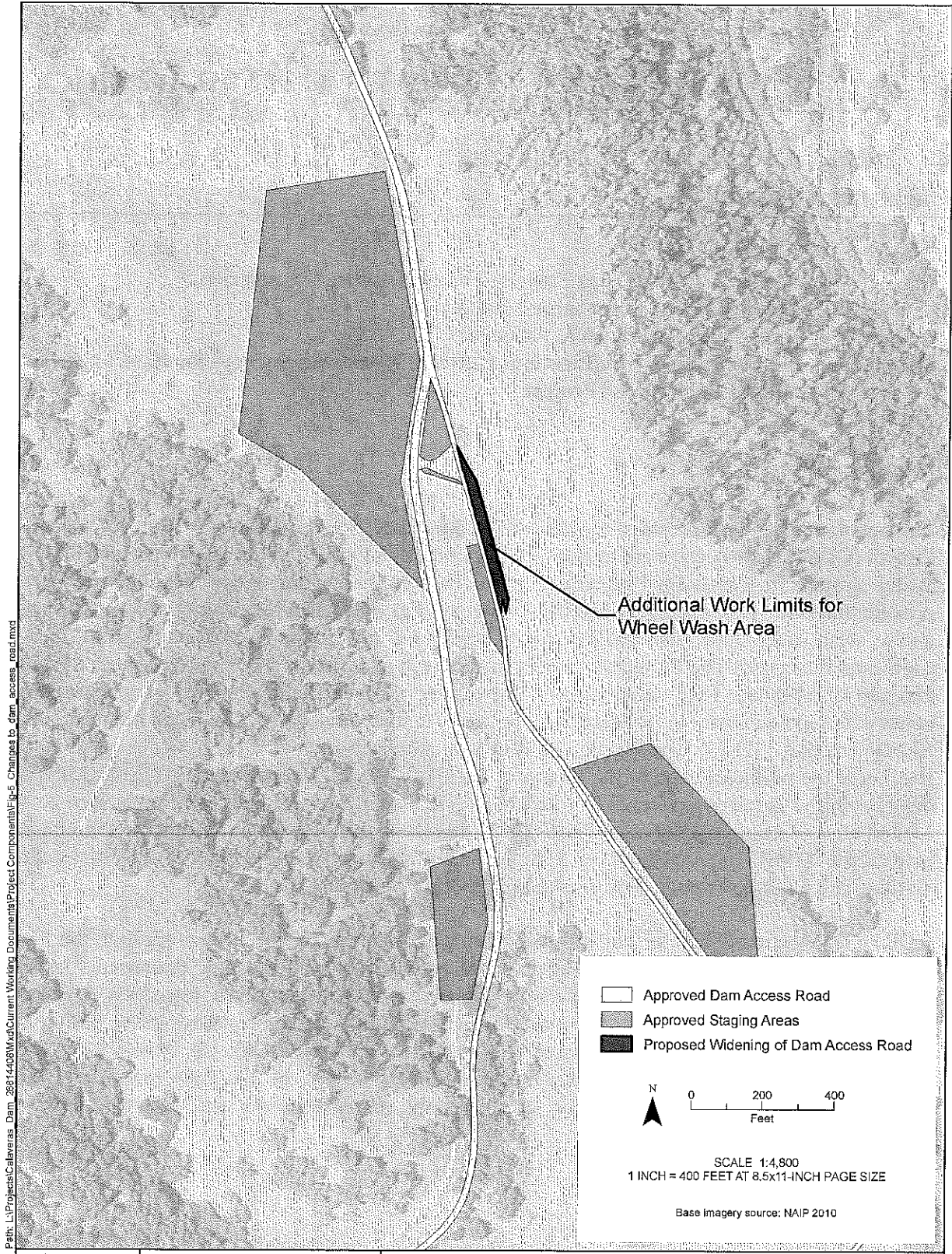
MEA Required Signatures for Approval:

Signee: Steve Smith Date: 2/8/12

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	Based on a pedestrian survey of the location there would be no new significant cultural resource impacts beyond those analyzed in the FEIR. If cultural resources are discovered the project will implement accidental discovery measures in Mitigation Measure 5.10.1 and 5.10.2 including measures related to human remains an associated or unassociated funerary objects and Mitigation measure 5.10.5 for paleontological discoveries. Dam Access road Expansion Cultural - No prehistoric or historic-era archaeological materials were previously located within the survey area, and none were observed during the MPM survey. It is unlikely that construction activities within the MPM survey area will disturb cultural resources. (see Attachments B) Dam Access road expansion Paleontological - The expansion the Dam Access roadway will not require paleontological monitoring per the approved Paleontological Evaluation Report and Paleontological Monitoring Plan prepared by ATS (August 11, 2011).
	<input type="checkbox"/> N	

Traffic and Circulation	<input type="checkbox"/> Y	There would be no new significant traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There will be no new visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	<p>There would be an additional 0.35 acres of impact to vegetation or wildlife (i.e., wildlife habitat). Applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant (see Attachment C and below summary of memo).</p> <p>Dam Access Road Widening – The extra workspace is in grassland dispersal habitat for Alameda whipsnake, aestivation habitat for California tiger salamander, and dispersal habitat that is potentially utilized by California red-legged frog. The road widening may also impact potential breeding bird habitat if work is done during the breeding season. The proposed project will avoid impacts to wetlands.</p>
	<input type="checkbox"/> N	



Path: L:\Projects\Calaveras_Dam_2014\00Mxd\Current Working Documents\Project Components\Eigs - Changes to dam_access_road.mxd



Figure 5
Changes to Dam Access Road



holman & ASSOCIATES

Archaeological Consultants
"SINCE THE BEGINNING"

3615 FOLSOM ST. SAN FRANCISCO, CALIFORNIA 94110 415/550-7286

Memorandum

DATE: December 5, 2011
TO: Cullen Wilkerson, San Francisco Public Utilities Commission
Environmental Compliance Manager
FROM: Eric Strother, Holman & Associates
SUBJECT: **Minor Project Modification: Cultural Resources Surveys for the Calaveras Dam Replacement Project**

INTRODUCTION

This memorandum was prepared by Holman & Associates for the Calaveras Dam Replacement Project (CDRP or Project), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memo presents the results of archaeological survey of four proposed construction deviations: (1) Installation of Survey Monument No. 110; (2) Installation of Survey Monument No. 112; (3) Construction of four vehicular turn-outs along a shoulder of an access road, near the northeast edge of the reservoir; and (4) Widening of the main gate leading into the dam facility. The proposed locations of all four CDRP supplemental facilities can be seen on the United States Geological Survey (USGS) Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 [photorevised in 1980]), and a portion of the USGS La Costa Valley, California 7.5 minute topographic quadrangle (1996) (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the *Final Environmental Impact Report* [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey of the proposed construction deviations was requested by the SFPUC. The proposed construction deviations are located within the previously delineated cultural resources APE (ART and EDAW 2008). On December 1, 2011 Holman & Associates completed a cultural resources survey of the four proposed CDRP supplemental facilities. No evidence of prehistoric or historic-era cultural materials was observed.

LITERATURE REVIEW

Multiple cultural resources studies have been conducted in conjunction with the CDRP. URS completed a literature review and two pedestrian surveys of portions of the C-APE during initial

design phases of the Project (URS 2003, 2005). As part of the environmental review process for the Project, Archaeological Resources Technology (ART) conducted additional research and an intensive pedestrian survey of the Project C-APE in 2006, documented in the Calaveras Dam Replacement Project Archaeological Survey Report (ART and EDAW 2008). Historic-era built environment resources identified within the C-APE were addressed in the Calaveras Dam Replacement Project Historic Resources Inventory and Evaluation Report (JRP 2008). Since 2008, additional CDRP cultural resource investigations have included URS (2009a; 2009b; 2009c; and 2010), Kaijankoski and Meyer (2009), Wiberg (2011), and Wiberg and Psota (2011a and 2011b). As a result of these studies, eight cultural resources have been identified within the vicinity of the proposed CDRP supplemental facilities (described below).

Review of the literature indicates that there are no previously recorded cultural resources in or within the immediate vicinity of the proposed CDRP supplemental facilities.

Survey Monument No. 110

Seven previously recorded cultural resources are located within ½-mile of the proposed location of Survey Monument No.110: P-43-010674, -010675, -010676, CD-H&A-1, and three recently discovered isolated historic-era cultural resources in the upper False Cut Area (Wiberg and Psota 2011b). All seven sites were determined to be historic-era resources, likely associated with dam construction and/or early geotechnical exploration in the area. Site P-43-010674, a historic-era mine adit, is located over 2,000 feet to the east, above Calaveras Creek to the north of the dam. P-43-010675, located approximately 850 feet east/southeast, is a debris scatter measuring 20 feet by 20 feet. P-43-010676 is the structural remains of a stone wall located on Observation Hill, approximately 750 feet to the south/southeast. CD-H&A-1, recorded by Holman & Associates in 2011, is a spread footing foundation associated with a sparse surface scatter of structural remains and possible stock pond, located on the south slope of Observation Hill. CD-H&A-1 is located approximately 950 feet to the south/southeast. Lastly, in November 2011, Holman & Associates recorded an historic-era artifact scatter, a culvert, and exposed pipe within approximately 900 feet east of Survey Monument No. 110. These resources were encountered in the upper False Cut area during power screen excavations.

All seven of these known historic-era sites are a considerable distance from the proposed location of Survey Monument No. 110 and are not expected to be affected by construction.

Survey Monument No. 112

Sites P-43-010674 and CD-H&A-2 are located within 1,600 feet of the proposed location of Survey Monument No. 112 and will not be affected by construction. P-43-010674 is a mine adit located 1,500 feet to the northwest. CD-H&A-2 is a discrete refuse dump consisting primarily of rusted cans and bottles. It is located just over 1,000 feet to the west of Survey Monument No. 112.

Road Turn-Out Construction

There are no known sites in the locations or within the vicinity of where the road turn-outs will be constructed. Site CD-H&A-2, a historic-era refuse dump, is located approximately 900 feet north and will not be affected by construction.

Main Gate Extension (Road Widening)

No previously recorded cultural resources are located in or within 1/2-mile of the location of the main gate.

PROJECT LOCATIONS AND DESCRIPTIONS

Survey Monument No. 110

Proposed Survey Monument No. 110 is located on a knoll in an open grassy area, approximately 1,870 feet northwest of the west end of the dam (Figure 2). This area of the Project has been used primarily for cattle grazing. Gopher burrows are located throughout the vicinity. In order to install the monument, a mechanical auger will be used to bore six feet below surface. A threaded rod will be centered in the hole and concrete and grout will be injected into the hole to stabilize the rod. Equipment used in the process will include a rubber-tracked Bobcat tractor equipped with a mechanical auger, a pick-up truck, and hand tools. Surface and sub-surface disturbance is expected to be minimal as it will occur only within the immediate vicinity of the auger hole. Survey Monument No. 110 will be located between two existing access roads; no new roads will be constructed (graded) for access to the location. T-posts with plastic fencing may be installed to deter cattle from entering the area.

Survey Monument No. 112

Proposed Survey Monument No. 112 is located approximately 1,325 feet northeast of the northeast corner of the dam (Figure 2). An existing graded dirt road is located within 50 feet west of the proposed monument. The surrounding grassy area is used for cattle grazing (a cattle feeding trough sits approximately 100 feet to the south), and has a westerly exposure. A mechanical auger will be used to bore six feet below surface for monument installation. A threaded rod will be centered in the hole and concrete and grout will be injected into the hole to stabilize the rod. Equipment used in the process will include a rubber-tracked Bobcat tractor equipped with a mechanical auger, a pick-up truck, and hand tools. Surface and sub-surface disturbance is expected to be minimal as it will occur only within the immediate vicinity (approximately 10-15 ft. diameter) of the auger hole. As Survey Monument No. 112 is located near an existing graded dirt road, no new roads will be constructed for access to the location. T-posts with plastic fencing may be installed to deter cattle from entering the area.

Road Turn-out Construction

Four shoulder vehicular turn-outs will be constructed along an approximately 1,200 foot section of paved road near the northeast portion of the reservoir (Figure 2). Currently, the road is paved and very narrow in some sections, making it difficult for opposing traffic to pass. Construction of the turnouts will be limited to 20 feet east and west from the centerline of the existing road. The shoulders along the road where the turnouts will be constructed have been graded (during original grading of the road), and impacts to the area are expected to be minimal due to previous disturbance. Heavy equipment such as graders and bulldozers will be used to construct the turnouts.

Main Gate Extension (Road Widening)

The existing main gate and road into the dam facility will be widened to allow passage for larger vehicles in and out of the facility. Currently, the gate and one-lane road accommodate only one vehicle at a time. The gate will be widened and an additional lane will be constructed to the east of the existing road. Cutting and grading will be required within approximately 50 feet east and extend approximately 50 feet in each direction to the north and south of the existing gate (for a total of ~100 feet) (Figure 2). This area has been previously disturbed by the placement and continuous use of the existing gravel road leading in and out of the facility. The vicinity east of the gate slopes uphill to the east and has a westerly exposure. The area has been heavily grazed by cattle. At the time of the survey surface vegetation was very low, consisting primarily of grasses and forbs. Heavy construction equipment, including graders, bulldozers, and excavators will be used to construct the additional lane, as approximately 50 feet of the sloping hillside will need to be cut back to accommodate the new lane and widened gate.

SURVEY RESULTS

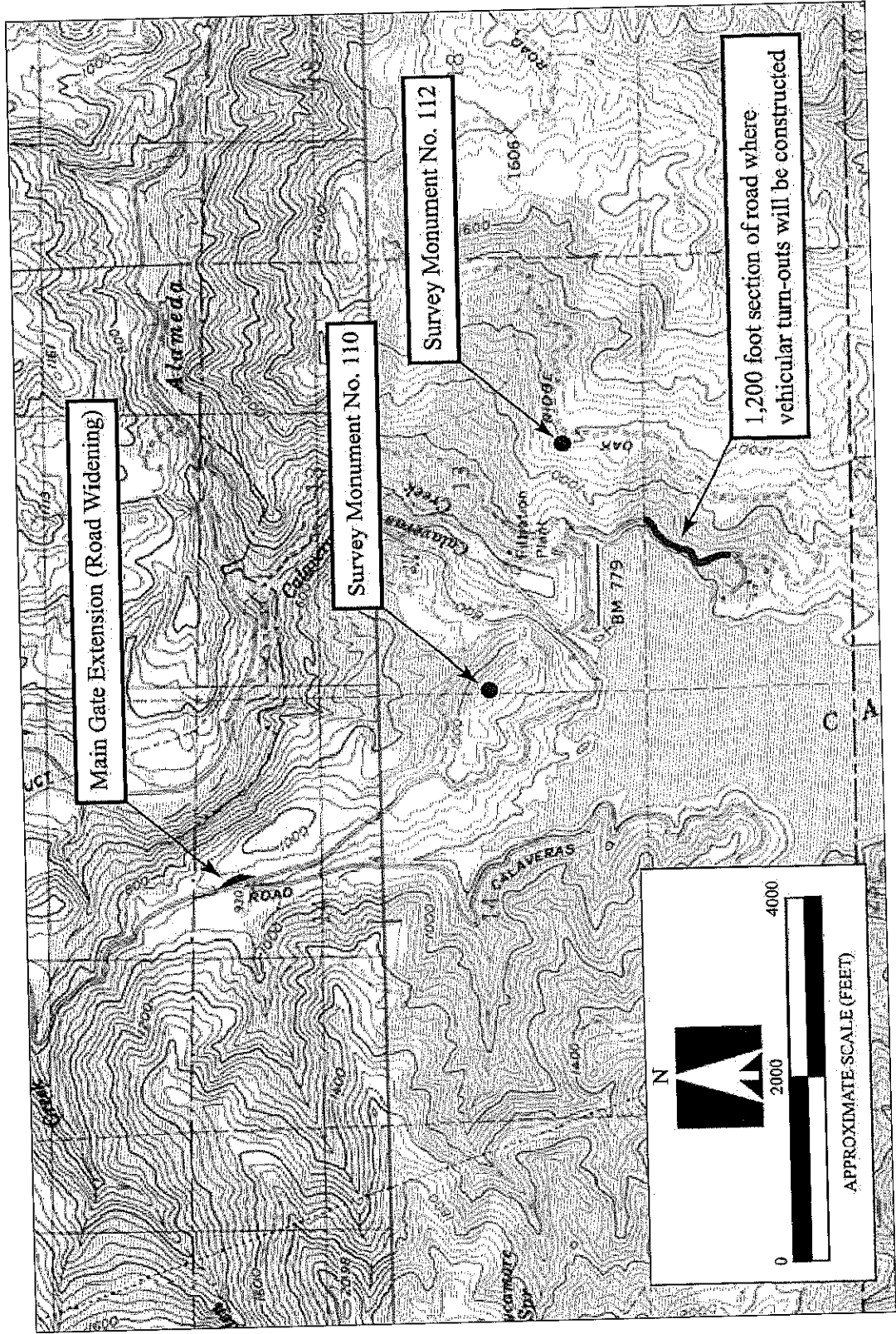
On December 2, 2011, Eric Strother of Holman & Associates, accompanied by Emma Jack, Environmental Coordinator for the SFPUC, completed a pedestrian survey of the four construction deviation C-APEs. In general, surface visibility was good to excellent (~80% - 90%) at the proposed Survey Monument locations (No.110 and No. 112). Surface soils were inspected by using a hand trowel to scrape back vegetation. Soils at both locations were silty, containing small angular gravels, and were brownish-yellow in color. Rodent burrows were inspected for cultural materials. The four proposed turn-out locations along the paved road near the northeast portion of the reservoir were also inspected. It was noted that these areas had been graded in the past, likely during the original construction of the road. Soils along the shoulder of the 1,200 foot section of road consisted of light yellow brown silty clays with angular gravels. Lastly, soil visibility in the vicinity of the main gate area was good to excellent (~80% - 90%) due to low-lying surface vegetation. Soils were brownish-yellow in color and consisted of silty clays with small angular gravels.

No previously recorded prehistoric or historic-era archaeological materials were located within the four construction deviation C-APEs and none were observed during the field survey. It is unlikely any of the four construction deviations will disturb archaeological resources. Although no evidence of archaeological materials was observed at the four construction deviation sites, the

possibility remains that archaeological features and materials could be located in the proposed C-APEs. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the *Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project* (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) should be implemented.

References

- ART and EDAW
2008 *Calaveras Dam Replacement Project Archaeological Survey Report*. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).
- City and County of San Francisco Planning Department [C&CSFPD]
2008 *MEA WSIP Projects Archaeological Guidance*.
2011 *Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project*.
- JRP Historical [JRP]
2008 *Calaveras Dam Replacement Project, Historic Resources Inventory and Evaluation Report*. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).
- Kaijankoski, P. and J. Meyer
2009 *Geoarchaeological Assessment and Subsurface Explorations for the Calaveras Dam Replacement Project, Santa Clara and Alameda Counties, California*. Report prepared for URS Corporation, Oakland, CA.
- URS Corporation [URS]
2003 *Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA*. Prepared for San Francisco Water Department.
2005 *Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures*. Prepared for San Francisco Public Utilities Commission.
2009a *Calaveras Dam Replacement Project Archaeological Evaluation Report Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2009b *Calaveras Dam Replacement Project Archaeological Survey Report, Addendum I Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2009c *Calaveras Dam Replacement Project Archaeological Survey Report, Addendum II Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2010 *Technical Memorandum. Archaeological Survey Report/Historic Resources Inventory and Evaluation Report Addendum, PG&E Power Line Upgrade Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, CA*. Prepared for San Francisco Public Utilities Commission.
- U.S. Geological Survey (USGS)
1961 *Calaveras Reservoir, California 7.5 minute topographic quadrangle (photorevised 1980)*.
1996 *La Costa Valley, California 7.5 minute topographic quadrangle*.
- Wiberg, R.
2011 *Final Archaeological Monitoring Plan Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California*. Prepared for the San Francisco Public Utilities Commission and City and County of San Francisco Planning Department, Case No. 2005.0161E.
- Wiberg, R. and S. Psota
2011a *Technical Memorandum: Calaveras Dam Replacement Project: Previously Unidentified Historic-era Cultural Resources near Right and Left Dam Abutments*. Prepared for the San Francisco Public Utilities Commission.
- Wiberg, R. and S. Psota
2011b *Technical Memorandum: Calaveras Dam Replacement Project: Additional Historic-era Cultural Resources Discovered in the Upper False Cut Area*. Prepared for the San Francisco Public Utilities Commission.

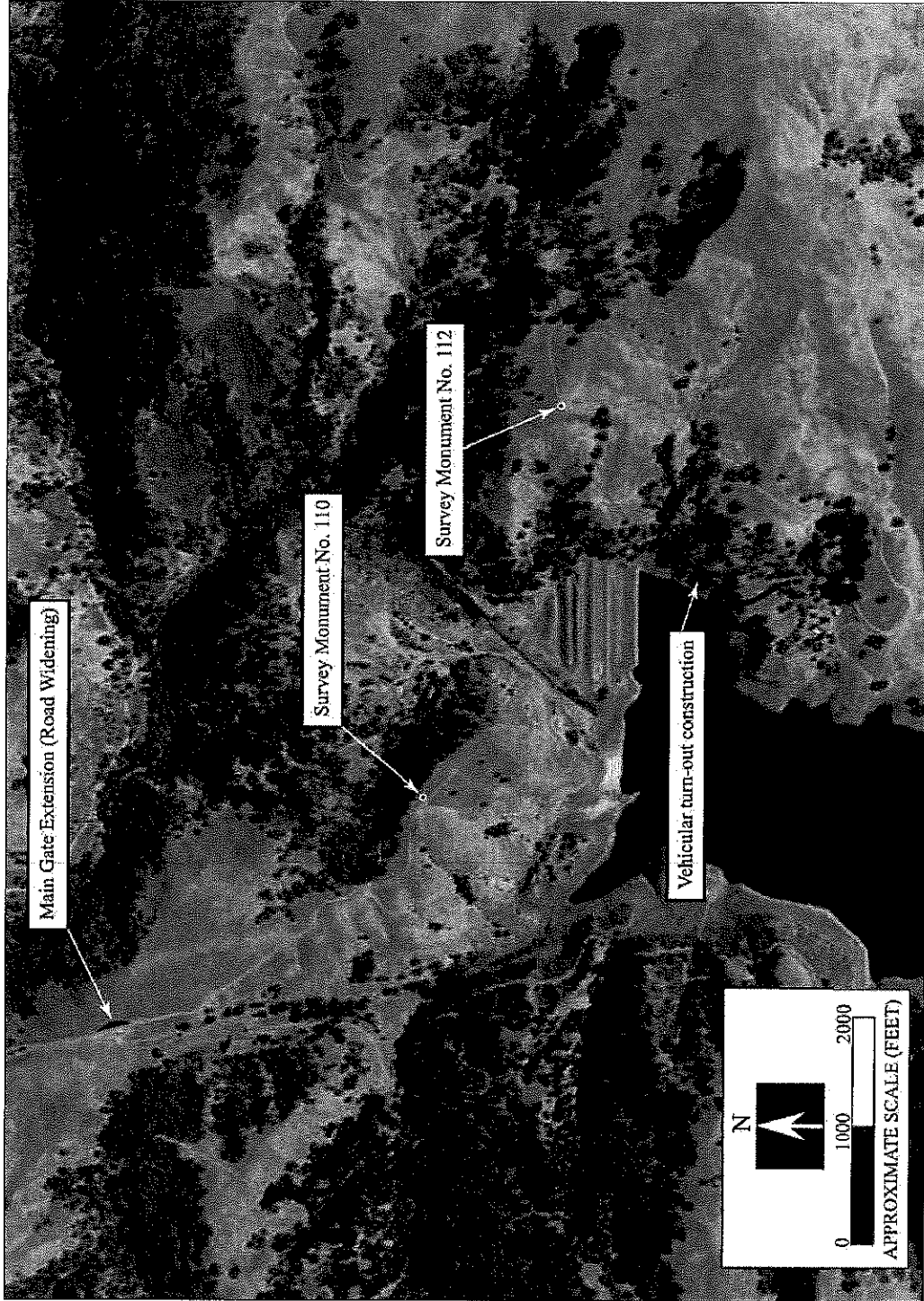


CDRP Cultural Resources Survey (Construction Deviations)

Figure 1

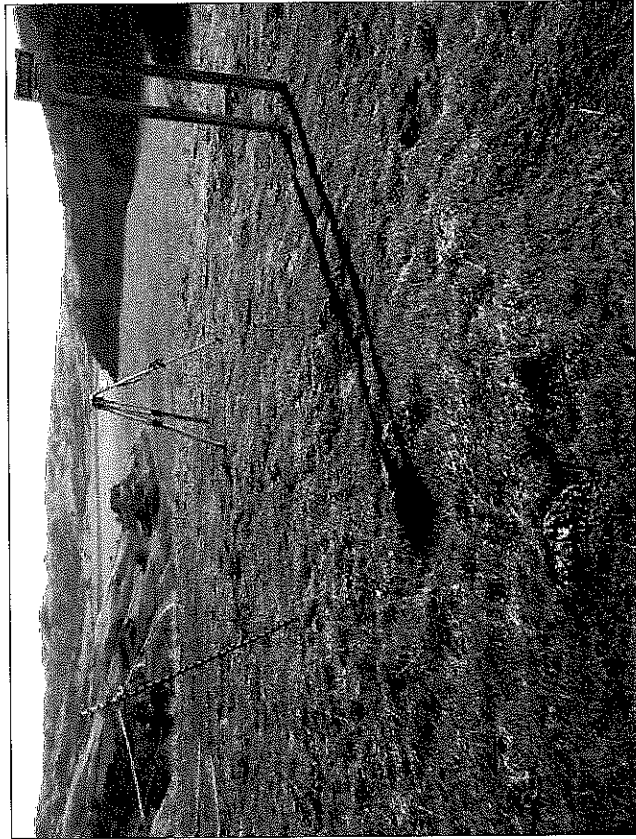
Project Location Map

SOURCE: USGS 7.5' Calaveras Reservoir and La Costa Valley



SOURCE: Google Earth

CDRP Cultural Resources Survey (Construction Deviations)
Figure 2
Area of Potential Effects



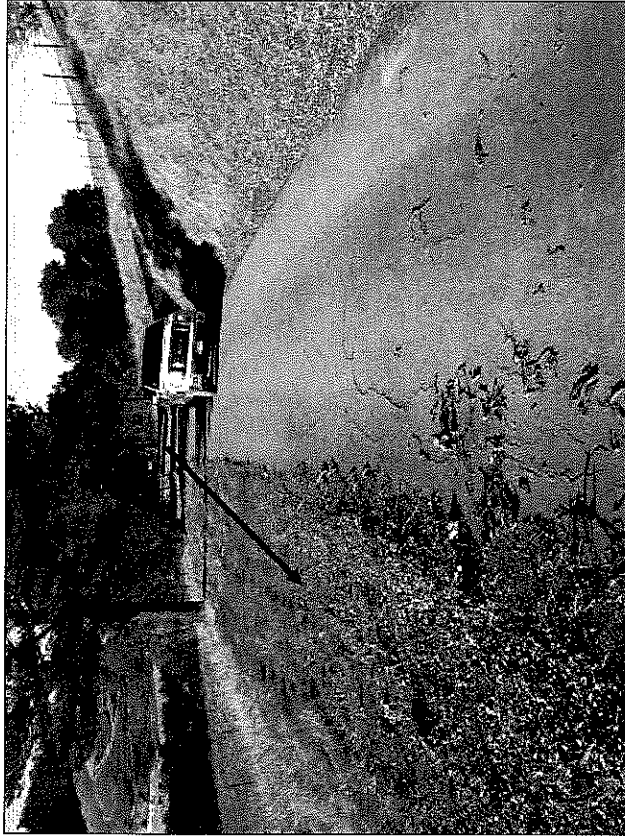
**Proposed Location of Survey Monument No. 110.
View to the South.**



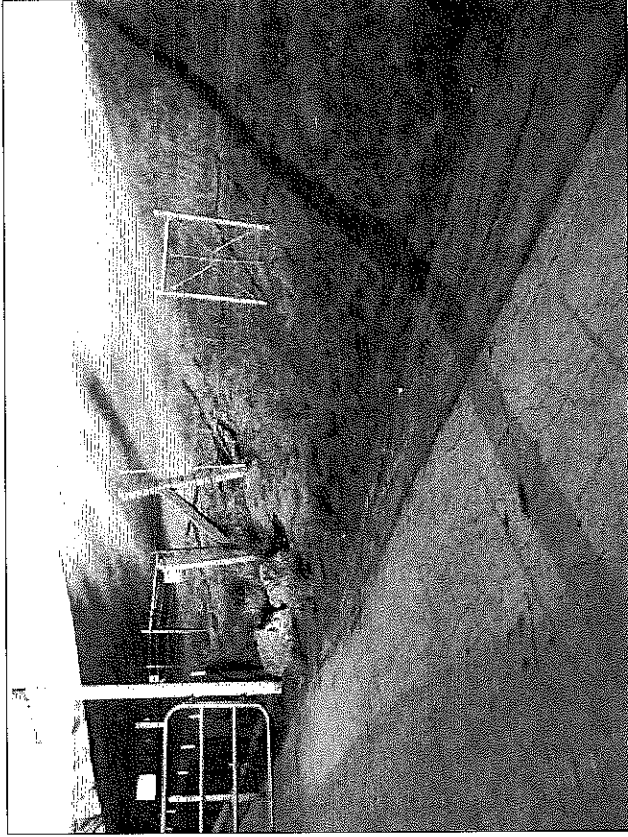
**Proposed Location of Survey Monument No. 112.
View to the North.**



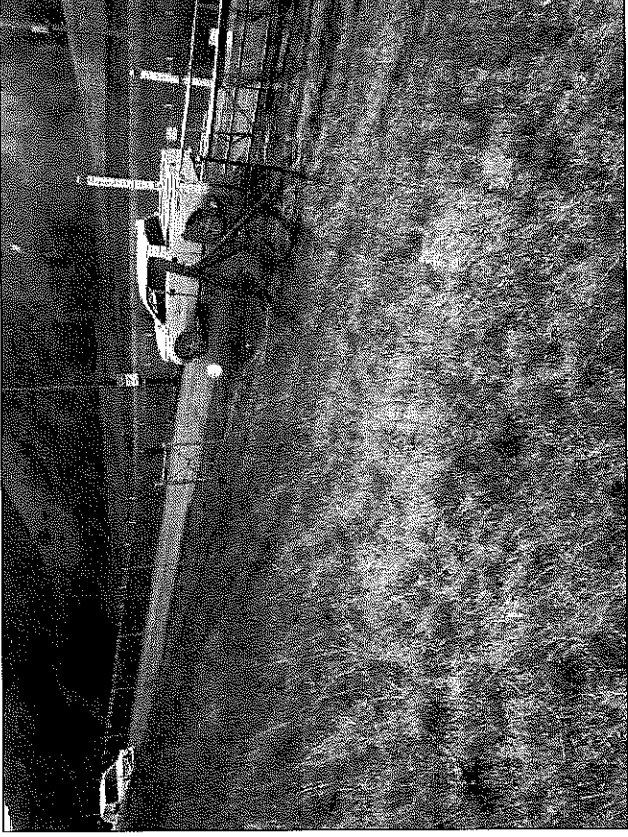
**Proposed Location of a Turn-out along paved road.
View to the South.**



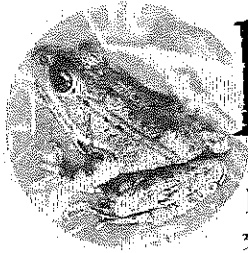
**Proposed Location of a Turn-out along paved road.
View to the North.**



**Proposed Location of the Main Gate and Road Expansion.
View to the Northeast.**



**Proposed Location of the Main Gate and Road Expansion.
View to the Southwest.**



BioMaAS

Biological Monitoring and Assessment Specialists, Inc.
333 Valencia Street, Suite #324, San Francisco, CA 94103
Phone (415)255-8077 Fax (925)887-4702 www.BioMaAS.com

Date: December 2, 2011
To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental Management
From: Bill Stagnaro, BioMaAS
Subject: **Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project (CUW 37401)**

This memo presents an evaluation of the biological resources for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The contractor is requesting, per the contract specifications, to widen the main entrance of the Dam Access road to the Calaveras Dam Replacement Project (CDRP) job site. The proposed road widening consists of increasing the existing road width to the west by 15 feet and to the east by 20 feet for a length of approximately 500 feet to accommodate a large vehicle wheel wash and large vehicle two-way traffic. Habitat within the Project Area consists of non-native grassland (Attachment A). The habitat has been previously grazed and contains numerous fossorial mammal burrows.

POTENTIAL BIOLOGICAL RESOURCES

A BioMaAS biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion (81420-2009-F-1339). In addition, the biologist reviewed the Contract Drawing (EC-5) for the proposed Project Area and investigated the Project Area for the presence of and potential for sensitive biological resources.

Two wetland features (ETJV 2006b) are located adjacent to the Project Area and will be avoided during ground disturbing activities for the proposed project. It is not the blooming period for most special status plant species with potential to occur in the Project Area, however, no special status plant species were observed in this location, per the FEIR Figure 4.4.4 and the Botanical Survey Technical Report (ETJV 2006a).

The potential for special status wildlife species to occur in the Project Area may be summarized by the following:

- Special status species may migrate through the Project Area or use the Project Area as a corridor for dispersal.
- Common and special status avian species may use the Project Area as breeding habitat. California ground squirrel burrows may also provide habitat for Western Burrowing Owl (*Athene cunicularia hypugaea*; BUOW). No owl or owl sign was observed during field investigations and no BUOW would be expected to occupy the Project Area due to its proximity to chronic disturbance from Staging Area 2 and the main entrance road and gate.
- Suitable subterranean refugia habitat for the California tiger salamander (*Ambystoma californiense*; CTS) is present in the Project Area. The potential habitat was created by California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*) activity. This refugia may also be used, to a lesser degree, by California red-legged frog (*Rana draytonii*) and Alameda whipsnake (*Masticophis lateralis euryxanthus*).

RECOMMENDATIONS

The proposed project modifications could negatively impact adjacent wetland features. In addition, the proposed project could affect habitat that is potentially utilized by California tiger salamander, and to a lesser degree, California red-legged frog and Alameda whipsnake. The proposed project may also impact potential breeding bird habitat. The following measures are recommended to avoid impacts to special status wildlife species.

Wetland Features

The proposed project will avoid direct impacts to adjacent wetland features, however, these features may be negatively impacted by runoff both during and after project completion. In order to avoid hydrological impacts to the wetland features adjacent to the Project Area, appropriate Best Management practices (BMPs) and/or appropriate topographic alterations (drainages, swales, berms, etc.) should be incorporated into the proposed project in order to avoid discharge into these sensitive features.

Breeding Birds

It is recommended that construction activities occur between August 31 and January 15 in order to avoid the breeding bird season. The road widening project is currently scheduled to occur in December, which will avoid potential breeding bird impacts. In addition, no impacts would be expected to overwintering BUOW. Burrow entrances should be investigated for owl and owl sign during preconstruction surveys, however, prior to disturbance.

Special Status Herpetofauna

A preconstruction survey should be performed by a qualified biologist prior to ground disturbance in the Project Area in order to determine the presence of special status herpetofauna. In addition, all ground squirrel and gopher holes should be inspected by a qualified biologist prior to disturbance. If the burrows appear to be suitable estivation habitat for sensitive herpetofauna (per Mitigation Measure 5.4.1a, CTS estivation habitat is defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites...) the burrow should be excavated under the direct supervision of a Service and CDFG-approved biologist. At the time of the site visit on December 1, 2011, approximately 80 burrows (50 on the east side of the road and 30 on the west side) appeared to be suitable upland refugia habitat, however, many of these features may be interconnected. If sensitive herpetofauna are unearthed during burrow investigations or ground disturbance activities, they should be relocated to suitable habitat that has been pre-approved by agency staff.

Please contact Bill Stagnaro at (415) 440-4267 if you have any questions.

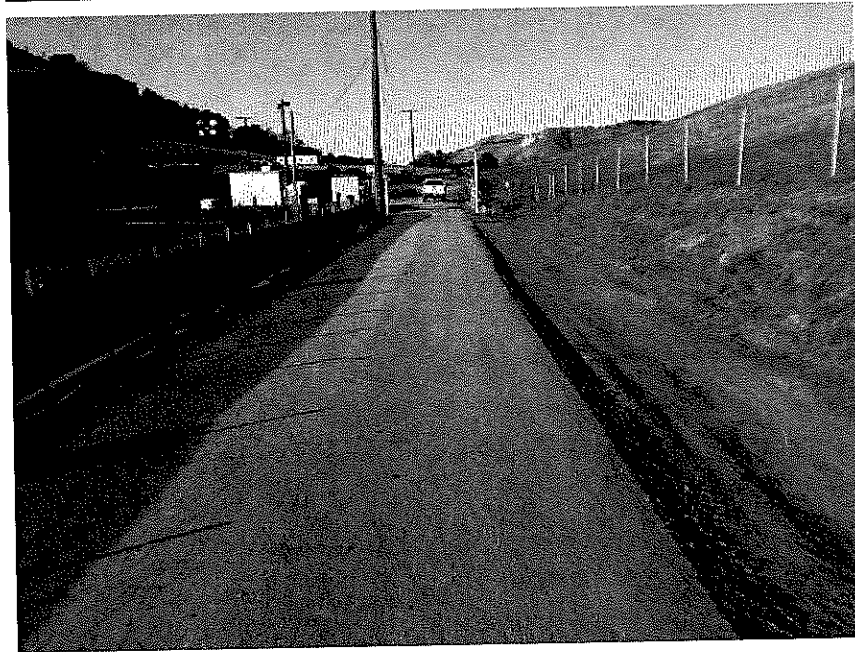
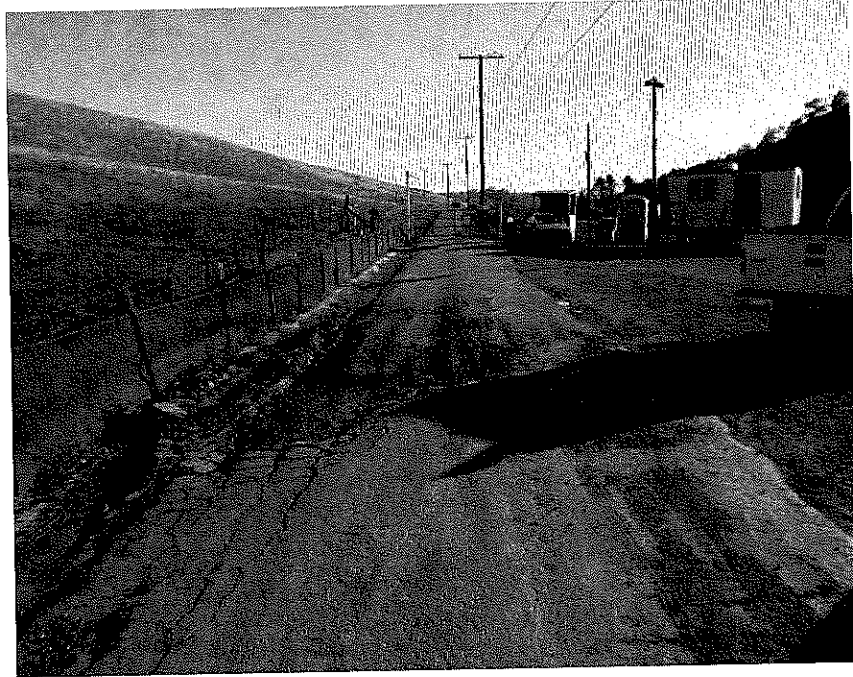
REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.

ATTACHMENT A

Project Photographs



View looking southeast across Project Area and main gate (top photo).

View looking northwest along the Project area and the main gate (bottom photo).



Many ground squirrel burrows and gopher burrows exists on the west (above) and east (below) side of the entrance road.

O'Neill, Kerry

From: Ryan_Olah@fws.gov
Sent: Thursday, January 26, 2012 2:02 PM
To: Leach, Steve
Cc: O'Neill, Kerry
Subject: Re: FW: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)
Attachments: USFWS_Amend_Request_2011-01-19(FINAL).pdf

Steve,

The Service agrees to include the additional work areas outlined in your email below into the Calaveras Dam Replacement Project biological opinion (Service file # 81420-2009-F-1339). No additional effects will result from the inclusion of these work areas beyond those described in the biological opinion. The existing take statement in the biological opinion will cover incidental take for these additional work areas.

If you have additional work areas that need to be added in the future, please provide a similar request which provides the details that were included in the current request.

Ryan

Ryan Olah
Coast Bay/Forest Foothill Division Chief U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office
2800 Cottage Way
Sacramento, CA 95825
(916) 414-6623

"Leach, Steve"
<steve.leach@urs.com>
To
"Ryan Olah (Ryan_Olah@fws.gov)"
01/25/2012 10:03 AM <Ryan_Olah@fws.gov>
cc
"Kerry O'Neill
(KONeill@swater.org)"
<KONeill@swater.org>
Subject
FW: CDRP - Biological Opinion
amendment request (Complete Text
and Figures - Part 2)

USFWS approval for following extra workspaces:
1.) Disposal site 7 haul route
2.) Borrow Area B
3.) Dam access road

Hi Ryan. Please let me know if you have any questions regarding the request that we submitted last week (attached with this e-mail). The SFPUC urgently needs to provide direction to the contractor regarding removal of vegetation that could be utilized by nesting migratory birds.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

Please note new e-mail address...

From: Leach, Steve
Sent: Thursday, January 19, 2012 9:59 PM
To: Ryan Olah (Ryan_Olah@fws.gov)
Cc: Kerry O'Neill (KONeill@sflower.org); Deborah Craven-Green (DCravenGreen@sflower.org); "Cullen Wilkerson" <CWilkerson@sflower.org>; Jack, Emma (EJack@sflower.org)
Subject: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)

Ryan, the attached file contains the complete text and figures for the amendment request described in my previous e-mail.

Please contact me if you have any questions. Thank you for your attention to this request.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

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(See attached file: USFWS_Amend_Request_2011-01-19(FINAL).pdf)

O'Neill, Kerry

From: Craig Weightman <CWEIGHTMAN@dfg.ca.gov>
Sent: Friday, February 03, 2012 2:42 PM
To: O'Neill, Kerry
Cc: Jeanne Chinn; Wilkerson, Cullen; Wade, Dan; Steve Leach
Subject: RE: CDRP - Request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03
Attachments: Modification of Disposal Site 3 work limits LSAA 1600-2010-0322-03, ITP 2081-2010-033-03; CDFG_Amendment_Request_2011-01-10.pdf

Kerry and Steve,

On Thursday February 2 of this year we spoke on the phone and the two of you indicated that the modifications to work areas proposed in the amendment application require that vegetation clearing be conducted in advance of any migratory and nesting bird restrictions.

I have reviewed the disturbance calculations and make my decision based on the information provided in the amendment request which indicates that impacts beyond those currently permitted in ITP 2081-2010-033-03 have not occurred and are unlikely to occur prior to the amendment request being processed.

I am approving the trimming of vegetation and the removal of trees in the following areas as requested in the amendment request:

- Disposal Site 7 Haul Route
- Borrow Area B
- Right Abutment Access Road
- Dam Access Road Widening For Wheel Wash Facility
- Survey Control Monuments

I have reviewed the disturbance calculations for LSAA 1600-2010-0322-R3 and make by decision based on Measure 2.3 allowing work at the Calaveras Dam Replacement Project to occur year round and on the information provided in the amendment request which indicates that impacts beyond those currently permitted in the LSAA have not occurred and are unlikely to occur prior to the amendment request being processed.

I approve the trimming of vegetation and the removal of trees at the following location covered under 1600-2010-0322-R3:

- Disposal Site 7 Haul Route

Disposal Site 3 was the subject of an earlier approval (attached) so is not included in this approval. Based on the amendment request the impacts to the category "Central Coast Live Oak Riparian Forest" have been reached and additional disturbance to this habitat type is not authorized.

Please note that some of the disturbance authorized through this request will result temporary impacts becoming permanent. As we finalize the amendment we will sort through the specific acreage that is affected.

Thank You
Craig

Craig J. Weightman
Senior Environmental Scientist
Calif. Department of Fish and Game
7329 Silverado Trail
Napa, CA 94558

(707) 944-5577 voice
(707) 944-5563 fax

>>> "O'Neill, Kerry" <KONeill@sfgwater.org> 1/24/2012 3:54 PM >>>

Craig, I wanted to follow up with you on the status of our request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03 (see email below). We want to proceed with clearing of the additional workspace areas, especially the Disposal Site 7 haul route and Borrow Area B, to prevent nesting of migratory birds within the construction work limits of these areas which could have significant impacts on the project schedule. When should we expect to see a response to this request? As always, we are available to answer any questions you may have regarding the amendment request.

From: Leach, Steve [mailto:steve.leach@urs.com]
Sent: Tuesday, January 10, 2012 10:55 PM
To: Craig Weightman (cweightman@dfg.ca.gov)
Cc: O'Neill, Kerry; Wilkerson, Cullen; Jack, Emma; Wade, Dan; Forrest, Michael; Wong, Noel
Subject: CDRP - Request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03

Craig, as previously discussed, the attached amendment request is submitted on behalf of SFPUC for several minor modifications of the Calaveras Dam Replacement Project. The proposed modifications include the following:

1. Disposal Site 3: changes to work limits (previously submitted)
2. Disposal Site 7 Haul Route: changes to work limits (safety modification)
3. Borrow Site B: changes to work limits (design refinement required by site conditions)
4. Right Abutment Access Road: changes to work limits (design refinement)
5. Dam Access Road widening for Wheel Wash Facility: changes to work limits (health and safety requirement)
6. Boat Ramp access road: paving (design refinement)
7. Survey Control Monuments: installation outside of work limits (very minor addition required to verify construction implementation)

Per your request, the attached letter includes a proposed process for addressing future minor project modifications.

Please review and contact me or Kerry O'Neill if you have any questions or comments.

Regards,

Steve

Steve Leach

URS Corporation

1333 Broadway, Suite 800

Oakland, CA 94612

phone: 510-874-3205

fax: 510-874-3268

steve.leach@urs.com

Please note new e-mail address...

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O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Wednesday, February 08, 2012 9:45 AM
To: O'Neill, Kerry
Subject: RE: MPM 11 - Access Road DS-7
Attachments: MPM 011 - DS-7 Access Road (final)+SHS.pdf

Attached MPM 11 for CDRP is approved.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

02/08/2012 07:53 AM

Subject RE: MPM 11 - Access Road DS-7

From: O'Neill, Kerry
Sent: Monday, February 06, 2012 11:27 AM
To: Steve Smith (Steve.Smith@sfgov.org)
Cc: Wilkerson, Cullen
Subject: MPM 11 - Access Road DS-7

Attached is Minor Project Modification (MPM) 11 for the Calaveras Dam Replacement Project. This MPM is for an additional 2.55 acres of extra workspace along the Disposal Site 7 access road. We have also coordinated with CDFG and USFWS regarding this additional extra workspace (agency approvals attached). Please call or email me with questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 011		Date: 02/06/12	
Project Title:		Calaveras Dam Replacement Project	
MEA Case No./Project No.		2005.0161E/CUW37401	
MPM Prepared By:		Cullen Wilkerson	
MPM Triggered By:		<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
		<input checked="" type="checkbox"/> Other: SFPUC	
Landowner:		SFPUC	
Vegetative Cover/Land Use:		Diablan scrub, non-native grassland, oak woodland	Net Acreage Affected: 2.55 acres
Modification to:		<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: CEQA Project Design/Limits
		<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 1600-2010-0322-R3, 2081-2010-033-03

Detailed Description of Minor Project Modification:

The SFPUC requests a minor site expansion at the Calaveras Dam Replacement Project (CDRP). Due to safety concerns and the size of the vehicles that will be used to place material in Disposal Site 7 (DS7), the haul route will need to be widened (Figure 3). The approximately 1 mile long approved haul route will utilize an existing dirt and gravel road on the northeast side of the reservoir, which crosses three minor drainages. The original design restricts work limits to the existing road width. However, portions of the road show signs of tension cracking, which indicate a safety hazard: the haul trucks would be forced to drive near the outside curb in the cracked areas and could initiate slope failure due to overload. Road widening and cutting will remove this hazard. The required cut and fill will impact 2.55 acres of diablan scrub, oak woodland and non-native grassland for construction access. Road widening would require temporary extension of existing culverts where the haul route crosses three drainages and along the entire length of the DS7 haul road.

Per the FEIR Section 4.10.1.2 of the FEIR, there is a high probability of encountering unknown paleontological resources during ground-disturbing construction activities such as excavation for the spillway, excavation of borrow areas, and construction of haul roads. The eastern shore and adjacent hillsides Calaveras reservoir are situated in the "Jurassic-Cretaceous Franciscan Complex" which is a rock unit "with a low sensitivity paleontological ranking" therefore monitoring is not required for the DS7 road widening per the Paleontological Evaluation Report and Paleontological Monitoring Plan prepared by ATS (8/11/11).

Archaeological resources were not considered to be present, per the FEIR section 4.10.1.4 where it is stated that there is a "low likelihood of encountering historical resources" due to the steepness of the slopes in the proposed expansion area (see Figure 4.10.1 in the FEIR). No archaeological monitoring is recommended for this expansion (Attachments B & C).

Per the FEIR Section 4.4, there exists a potential for special status species (e.g., Alameda whipsnake, California tiger salamander, and California red-legged frog) to be impacted by the expansion (Attachment C). Implementing Mitigation Measures 5.4.1a and 5.4.1b will reduce the potential impacts to less than significant.

USFWS and CDFG concurrence for the expansion of DS-7 haul route was received (Attachment D). Note that the CDFG approval is for vegetative clearing at this time as the process the paperwork for the permit amendment.

ENVIRONMENTAL IMPACTS

The addition of 2.55 acres of construction activity would not result in new impacts. It would result in additional biological impacts beyond those analyzed in the Calaveras Dam Replacement FEIR; however the increase in severity of impacts would not be substantial.

Biological <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cultural <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Photos <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---	---	--

Attachments:

- Attachment A: Figure 3. Changes to Disposal Site 7 Haul Route
- Attachment B (cultural): Archaeological Tech Memo - Minor Project Modification: Cultural Resources Surveys for the Calaveras Dam Replacement Project, December 5, 2011.
- Attachment C (cultural & Biological): Environmental Review of Proposed Project Modifications Calaveras Dam Replacement Project (CUW 37401), URS, October 31, 2011.
- Attachment D: USFWS/CDFG approval

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS on October 23, 2011 (Attachment C).

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Cultural Survey Report Reference:

Historical Resources Inventory and Evaluation Report (JRP 2008), Archaeological Survey Report (ART and EDAW 2008), and Archaeological Survey Report Addendum I and II (URS 2009a).

Minor Project Modification: Cultural Resources Surveys for the Calaveras Dam Replacement Project, Holman and Associates (December 5, 2011) (see Attachment B).

Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS on October 31, 2011 (Attachment C).

Conditions of Approval or Reasons for Denial

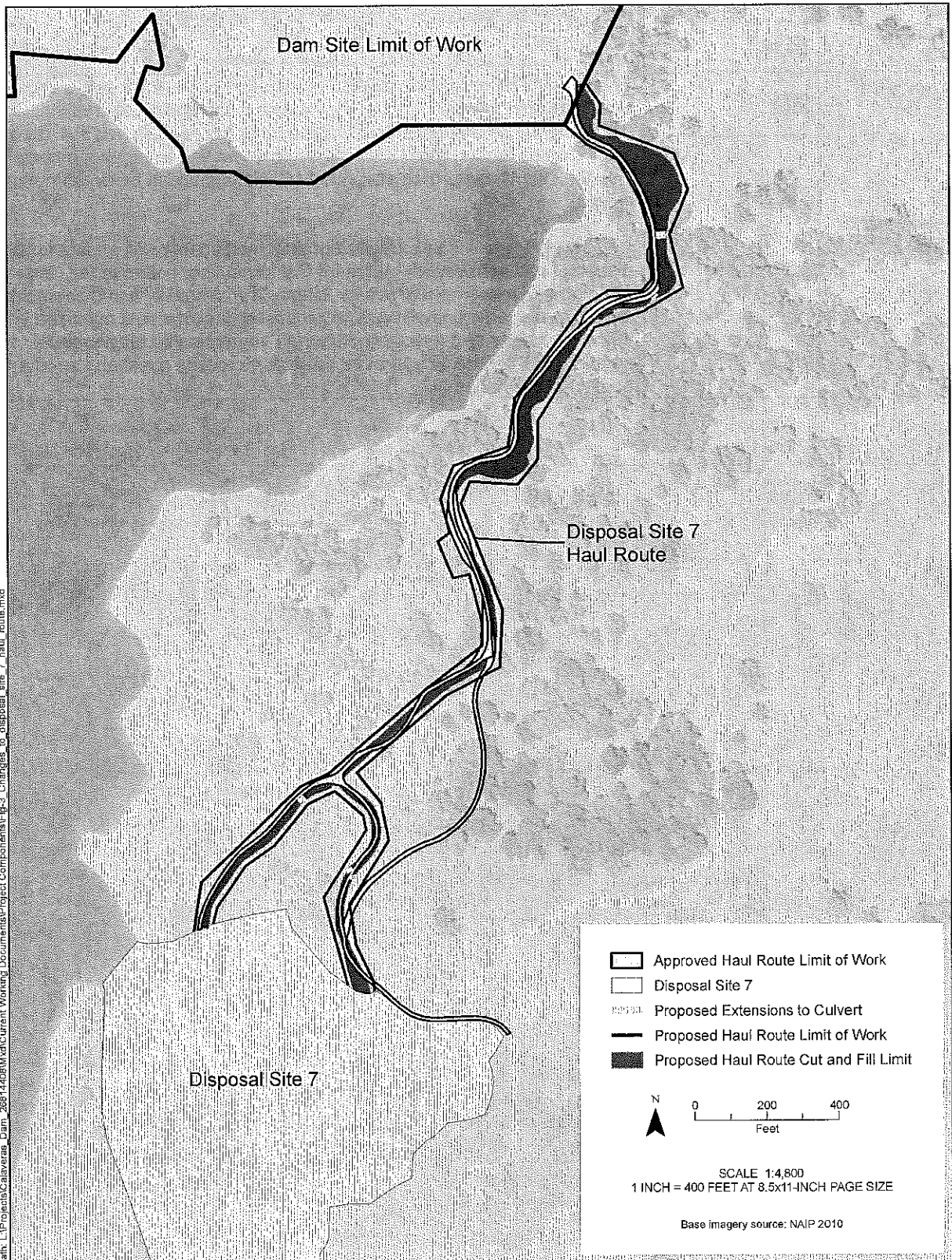
Approval subject to any additional stipulations provided in the pending permit amendment from CDFG.

SFPUC Required Signatures for Environmental Approval:		
ECCM: <u>Kerry O'Neill</u>	Date: <u>02/06/12</u>	
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved with Conditions (see conditions above)	<input type="checkbox"/> Denied
SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.		
Charge Code: CUW37401		

MEA Required Signatures for Approval:		
Signee: <u>Steve Smith</u>	Date: <u>2/8/12</u>	
<input type="checkbox"/> Approved	<input checked="" type="checkbox"/> Approved with Conditions (see conditions above)	<input type="checkbox"/> Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact
		or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no new hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	Based on a pedestrian survey of the location there would be no new significant cultural resource impacts beyond those analyzed in the FEIR. If cultural or paleontological resources are discovered the project will implement accidental discovery measures in Mitigation Measure 5.10.1 and 5.10.2 including measures related to human remains an associated or unassociated funerary objects and Mitigation measure 5.10.5b for paleontological discoveries. (See Attachments B & C Cultural)
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new significant traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	

Visual Resources	<input type="checkbox"/> Y	There will be no new visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	There would be an additional 2.55 acres of permanent impact to vegetation or wildlife (i.e., wildlife habitat). Applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant. (see attachment C Biological and below summary of memo).
	<input type="checkbox"/> N	DS7 Haul Route – The proposed project modification will impact upland dispersal and aestivation habitat for California tiger salamander, impact foraging and movement areas for Alameda whipsnake, and dispersal habitat for California red-legged frog. The proposed design would minimize impacts to the drainages and associated riparian vegetation by eliminating a segment of the original approved route that crosses a wetland seep and two additional drainages.



Path: L:\Projects\Calaveras_Dam_2007-1408\Map\Current Working Documents\Project Components\Ep-3_Changes_to_disposal_site_7_haul_routes.mxd



San Francisco Public Utilities Commission
Calaveras Dam Replacement Project

Figure 3
Changes to Disposal Site 7 Haul Route



holman & ASSOCIATES
Archaeological Consultants
"SINCE THE BEGINNING"

ATTACHMENT B - Cultural

3615 FOLSOM ST. SAN FRANCISCO,
CALIFORNIA 94110 415/550-7286

Memorandum

DATE: December 5, 2011
TO: Cullen Wilkerson, San Francisco Public Utilities Commission
Environmental Compliance Manager
FROM: Eric Strother, Holman & Associates
SUBJECT: **Minor Project Modification: Cultural Resources Surveys for the Calaveras Dam Replacement Project**

INTRODUCTION

This memorandum was prepared by Holman & Associates for the Calaveras Dam Replacement Project (CDRP or Project), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memo presents the results of archaeological survey of four proposed construction deviations: (1) Installation of Survey Monument No. 110; (2) Installation of Survey Monument No. 112; (3) Construction of four vehicular turn-outs along a shoulder of an access road, near the northeast edge of the reservoir; and (4) Widening of the main gate leading into the dam facility. The proposed locations of all four CDRP supplemental facilities can be seen on the United States Geological Survey (USGS) Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 [photorevised in 1980]), and a portion of the USGS La Costa Valley, California 7.5 minute topographic quadrangle (1996) (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the *Final Environmental Impact Report* [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey of the proposed construction deviations was requested by the SFPUC. The proposed construction deviations are located within the previously delineated cultural resources APE (ART and EDAW 2008). On December 1, 2011 Holman & Associates completed a cultural resources survey of the four proposed CDRP supplemental facilities. No evidence of prehistoric or historic-era cultural materials was observed.

LITERATURE REVIEW

Multiple cultural resources studies have been conducted in conjunction with the CDRP. URS completed a literature review and two pedestrian surveys of portions of the C-APE during initial

design phases of the Project (URS 2003, 2005). As part of the environmental review process for the Project, Archaeological Resources Technology (ART) conducted additional research and an intensive pedestrian survey of the Project C-APE in 2006, documented in the Calaveras Dam Replacement Project Archaeological Survey Report (ART and EDAW 2008). Historic-era built environment resources identified within the C-APE were addressed in the Calaveras Dam Replacement Project Historic Resources Inventory and Evaluation Report (JRP 2008). Since 2008, additional CDRP cultural resource investigations have included URS (2009a; 2009b; 2009c; and 2010), Kaijankoski and Meyer (2009), Wiberg (2011), and Wiberg and Psota (2011a and 2011b). As a result of these studies, eight cultural resources have been identified within the vicinity of the proposed CDRP supplemental facilities (described below).

Review of the literature indicates that there are no previously recorded cultural resources in or within the immediate vicinity of the proposed CDRP supplemental facilities.

Survey Monument No. 110

Seven previously recorded cultural resources are located within ½-mile of the proposed location of Survey Monument No.110: P-43-010674, -010675, -010676, CD-H&A-1, and three recently discovered isolated historic-era cultural resources in the upper False Cut Area (Wiberg and Psota 2011b). All seven sites were determined to be historic-era resources, likely associated with dam construction and/or early geotechnical exploration in the area. Site P-43-010674, a historic-era mine adit, is located over 2,000 feet to the east, above Calaveras Creek to the north of the dam. P-43-010675, located approximately 850 feet east/southeast, is a debris scatter measuring 20 feet by 20 feet. P-43-010676 is the structural remains of a stone wall located on Observation Hill, approximately 750 feet to the south/southeast. CD-H&A-1, recorded by Holman & Associates in 2011, is a spread footing foundation associated with a sparse surface scatter of structural remains and possible stock pond, located on the south slope of Observation Hill. CD-H&A-1 is located approximately 950 feet to the south/southeast. Lastly, in November 2011, Holman & Associates recorded an historic-era artifact scatter, a culvert, and exposed pipe within approximately 900 feet east of Survey Monument No. 110. These resources were encountered in the upper False Cut area during power screen excavations.

All seven of these known historic-era sites are a considerable distance from the proposed location of Survey Monument No. 110 and are not expected to be affected by construction.

Survey Monument No. 112

Sites P-43-010674 and CD-H&A-2 are located within 1,600 feet of the proposed location of Survey Monument No. 112 and will not be affected by construction. P-43-010674 is a mine adit located 1,500 feet to the northwest. CD-H&A-2 is a discrete refuse dump consisting primarily of rusted cans and bottles. It is located just over 1,000 feet to the west of Survey Monument No. 112.

Road Turn-Out Construction

There are no known sites in the locations or within the vicinity of where the road turn-outs will be constructed. Site CD-H&A-2, a historic-era refuse dump, is located approximately 900 feet north and will not be affected by construction.

Main Gate Extension (Road Widening)

No previously recorded cultural resources are located in or within ½-mile of the location of the main gate.

PROJECT LOCATIONS AND DESCRIPTIONS

Survey Monument No. 110

Proposed Survey Monument No. 110 is located on a knoll in an open grassy area, approximately 1,870 feet northwest of the west end of the dam (Figure 2). This area of the Project has been used primarily for cattle grazing. Gopher burrows are located throughout the vicinity. In order to install the monument, a mechanical auger will be used to bore six feet below surface. A threaded rod will be centered in the hole and concrete and grout will be injected into the hole to stabilize the rod. Equipment used in the process will include a rubber-tracked Bobcat tractor equipped with a mechanical auger, a pick-up truck, and hand tools. Surface and sub-surface disturbance is expected to be minimal as it will occur only within the immediate vicinity of the auger hole. Survey Monument No. 110 will be located between two existing access roads; no new roads will be constructed (graded) for access to the location. T-posts with plastic fencing may be installed to deter cattle from entering the area.

Survey Monument No. 112

Proposed Survey Monument No. 112 is located approximately 1,325 feet northeast of the northeast corner of the dam (Figure 2). An existing graded dirt road is located within 50 feet west of the proposed monument. The surrounding grassy area is used for cattle grazing (a cattle feeding trough sits approximately 100 feet to the south), and has a westerly exposure. A mechanical auger will be used to bore six feet below surface for monument installation. A threaded rod will be centered in the hole and concrete and grout will be injected into the hole to stabilize the rod. Equipment used in the process will include a rubber-tracked Bobcat tractor equipped with a mechanical auger, a pick-up truck, and hand tools. Surface and sub-surface disturbance is expected to be minimal as it will occur only within the immediate vicinity (approximately 10-15 ft. diameter) of the auger hole. As Survey Monument No. 112 is located near an existing graded dirt road, no new roads will be constructed for access to the location. T-posts with plastic fencing may be installed to deter cattle from entering the area.

Road Turn-out Construction

Four shoulder vehicular turn-outs will be constructed along an approximately 1,200-foot section of paved road near the northeast portion of the reservoir (Figure 2). Currently, the road is paved and very narrow in some sections, making it difficult for opposing traffic to pass. Construction of the turnouts will be limited to 20 feet east and west from the centerline of the existing road. The shoulders along the road where the turnouts will be constructed have been graded (during original grading of the road), and impacts to the area are expected to be minimal due to previous disturbance. Heavy equipment such as graders and bulldozers will be used to construct the turnouts.

Main Gate Extension (Road Widening)

The existing main gate and road into the dam facility will be widened to allow passage for larger vehicles in and out of the facility. Currently, the gate and one-lane road accommodate only one vehicle at a time. The gate will be widened and an additional lane will be constructed to the east of the existing road. Cutting and grading will be required within approximately 50 feet east and extend approximately 50 feet in each direction to the north and south of the existing gate (for a total of ~100 feet) (Figure 2). This area has been previously disturbed by the placement and continuous use of the existing gravel road leading in and out of the facility. The vicinity east of the gate slopes uphill to the east and has a westerly exposure. The area has been heavily grazed by cattle. At the time of the survey surface vegetation was very low, consisting primarily of grasses and forbs. Heavy construction equipment, including graders, bulldozers, and excavators will be used to construct the additional lane, as approximately 50 feet of the sloping hillside will need to be cut back to accommodate the new lane and widened gate.

SURVEY RESULTS

On December 2, 2011, Eric Strother of Holman & Associates, accompanied by Emma Jack, Environmental Coordinator for the SFPUC, completed a pedestrian survey of the four construction deviation C-APEs. In general, surface visibility was good to excellent (~80% - 90%) at the proposed Survey Monument locations (No.110 and No. 112). Surface soils were inspected by using a hand trowel to scrape back vegetation. Soils at both locations were silty, containing small angular gravels, and were brownish-yellow in color. Rodent burrows were inspected for cultural materials. The four proposed turn-out locations along the paved road near the northeast portion of the reservoir were also inspected. It was noted that these areas had been graded in the past, likely during the original construction of the road. Soils along the shoulder of the 1,200 foot section of road consisted of light yellow brown silty clays with angular gravels. Lastly, soil visibility in the vicinity of the main gate area was good to excellent (~80% - 90%) due to low-lying surface vegetation. Soils were brownish-yellow in color and consisted of silty clays with small angular gravels.

No previously recorded prehistoric or historic-era archaeological materials were located within the four construction deviation C-APEs and none were observed during the field survey. It is unlikely any of the four construction deviations will disturb archaeological resources. Although no evidence of archaeological materials was observed at the four construction deviation sites, the

possibility remains that archaeological features and materials could be located in the proposed C-APEs. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the *Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project* (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) should be implemented.

References

ART and EDAW

- 2008 *Calaveras Dam Replacement Project Archaeological Survey Report*. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

City and County of San Francisco Planning Department [C&CSFPD]

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2011 *Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project*.

JRP Historical [JRP]

- 2008 *Calaveras Dam Replacement Project, Historic Resources Inventory and Evaluation Report*. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

Kajjankoski, P. and J. Meyer

- 2009 *Geoarchaeological Assessment and Subsurface Explorations for the Calaveras Dam Replacement Project, Santa Clara and Alameda Counties, California*. Report prepared for URS Corporation, Oakland, CA.

URS Corporation [URS]

- 2003 *Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA*. Prepared for San Francisco Water Department.
2005 *Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures*. Prepared for San Francisco Public Utilities Commission.
2009a *Calaveras Dam Replacement Project Archaeological Evaluation Report Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2009b *Calaveras Dam Replacement Project Archaeological Survey Report, Addendum I Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2009c *Calaveras Dam Replacement Project Archaeological Survey Report, Addendum II Alameda and Santa Clara Counties, California*. Prepared for San Francisco Public Utilities Commission.
2010 *Technical Memorandum, Archaeological Survey Report/Historic Resources Inventory and Evaluation Report Addendum, PG&E Power Line Upgrade Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, CA*. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

- 1961 *Calaveras Reservoir, California 7.5 minute topographic quadrangle (photorevised 1980)*.
1996 *La Costa Valley, California 7.5 minute topographic quadrangle*.

Wiberg, R.

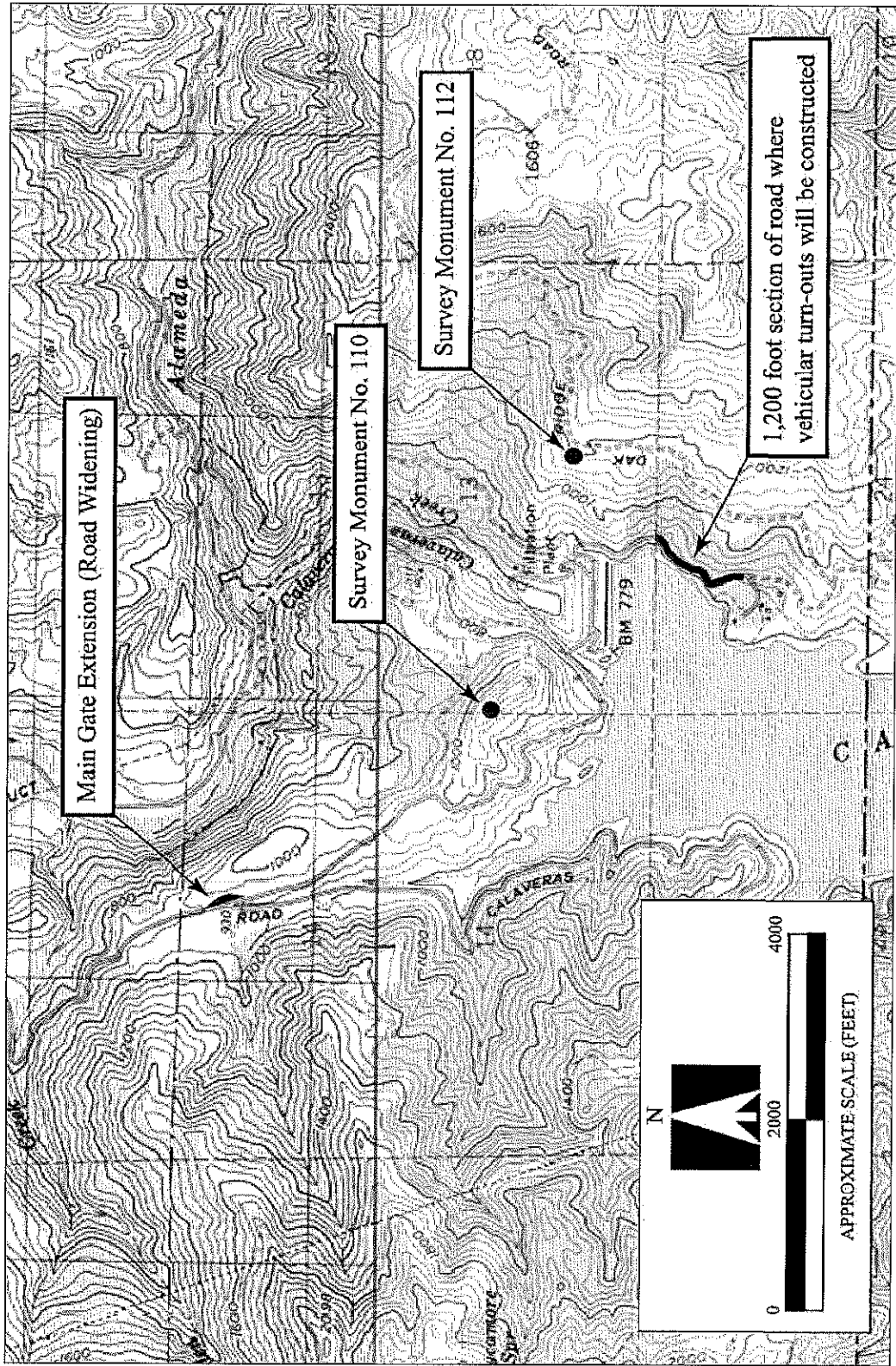
- 2011 *Final Archaeological Monitoring Plan Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California*. Prepared for the San Francisco Public Utilities Commission and City and County of San Francisco Planning Department, Case No. 2005.0161E.

Wiberg, R. and S. Psota

- 2011a *Technical Memorandum: Calaveras Dam Replacement Project: Previously Unidentified Historic-era Cultural Resources near Right and Left Dam Abutments*. Prepared for the San Francisco Public Utilities Commission.

Wiberg, R. and S. Psota

- 2011b *Technical Memorandum: Calaveras Dam Replacement Project: Additional Historic-era Cultural Resources Discovered in the Upper False Cut Area*. Prepared for the San Francisco Public Utilities Commission.



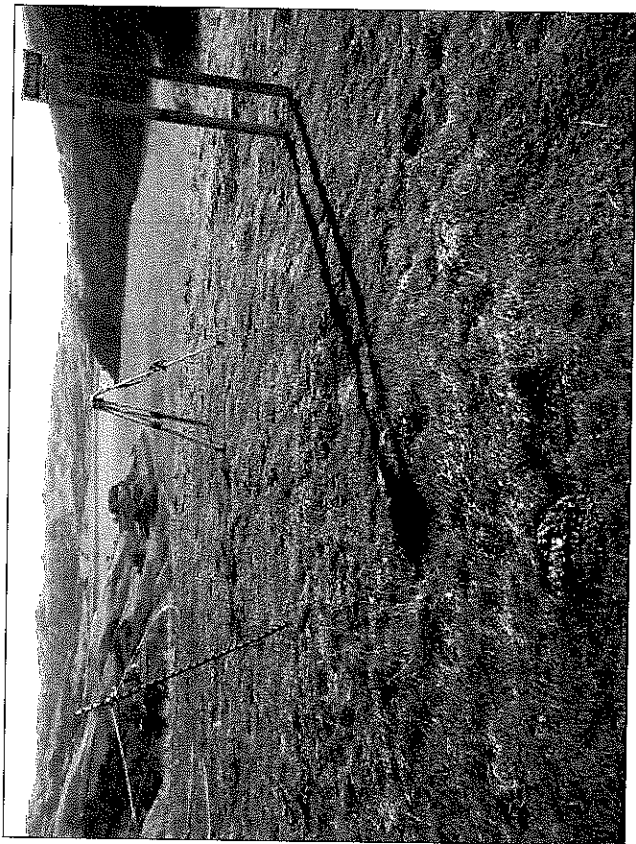
CDRP Cultural Resources Survey (Construction Deviations)
Figure 1
 Project Location Map

SOURCE: USGS 7.5" Calaveras Reservoir and La Costa Valley

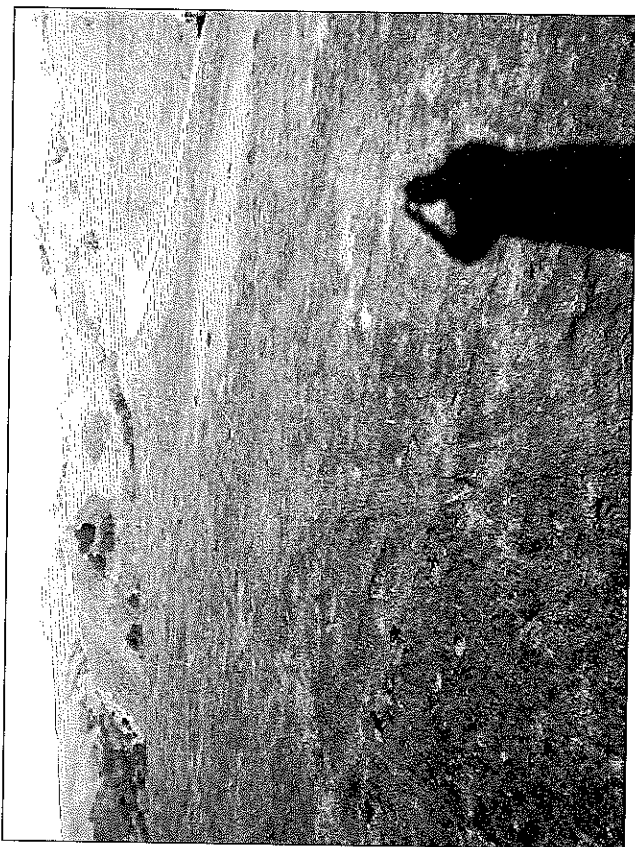


CDRP Cultural Resources Survey (Construction Deviations)
Figure 2
Area of Potential Effects

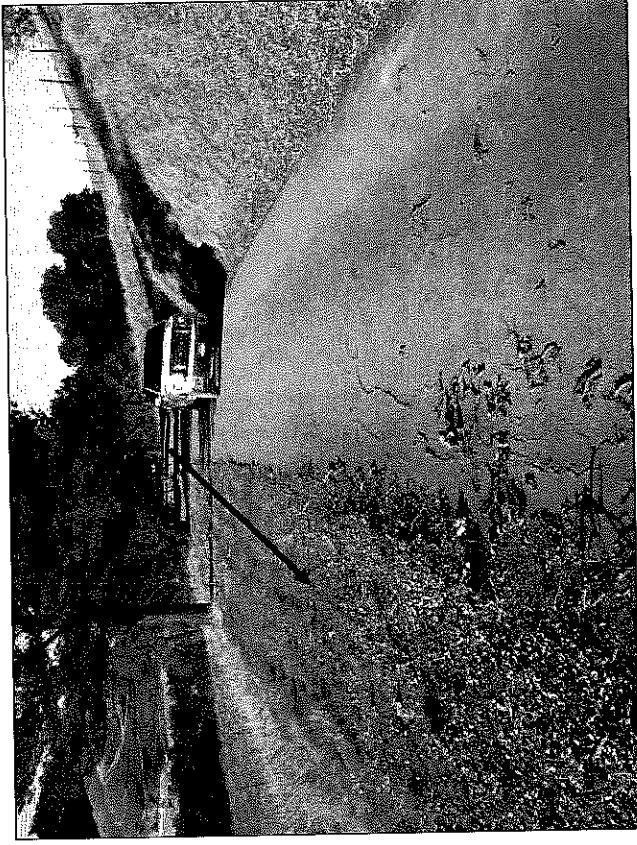
SOURCE: Google Earth



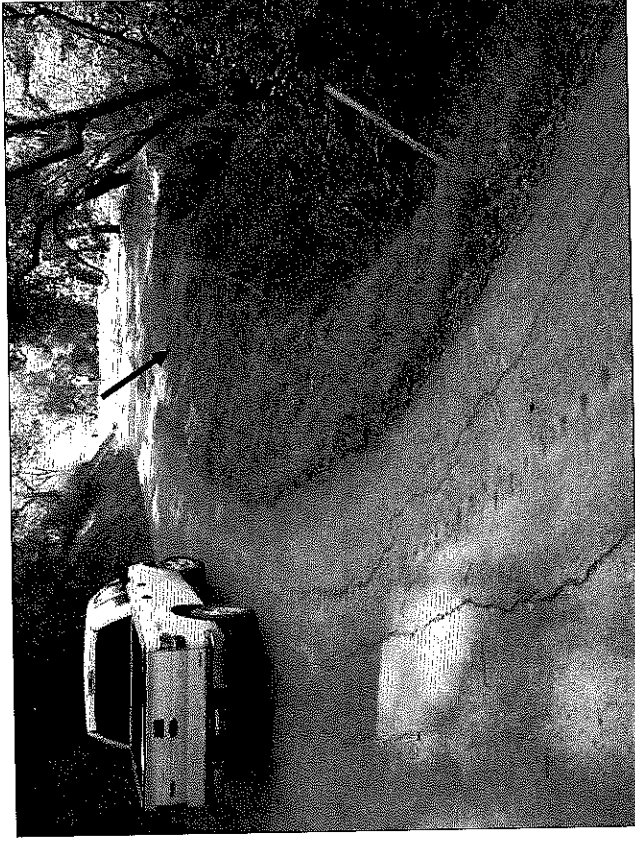
Proposed Location of Survey Monument No. 110.
View to the South.



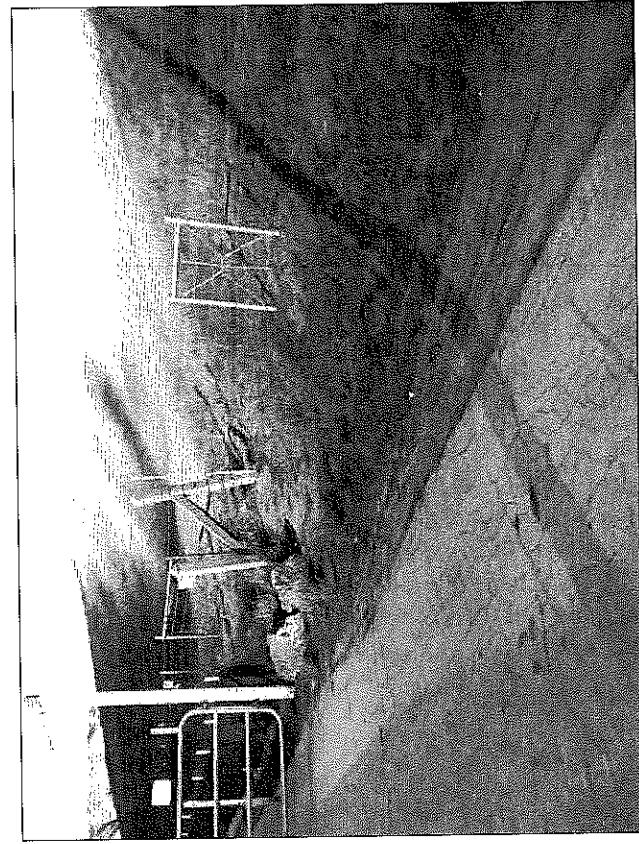
Proposed Location of Survey Monument No. 112.
View to the North.



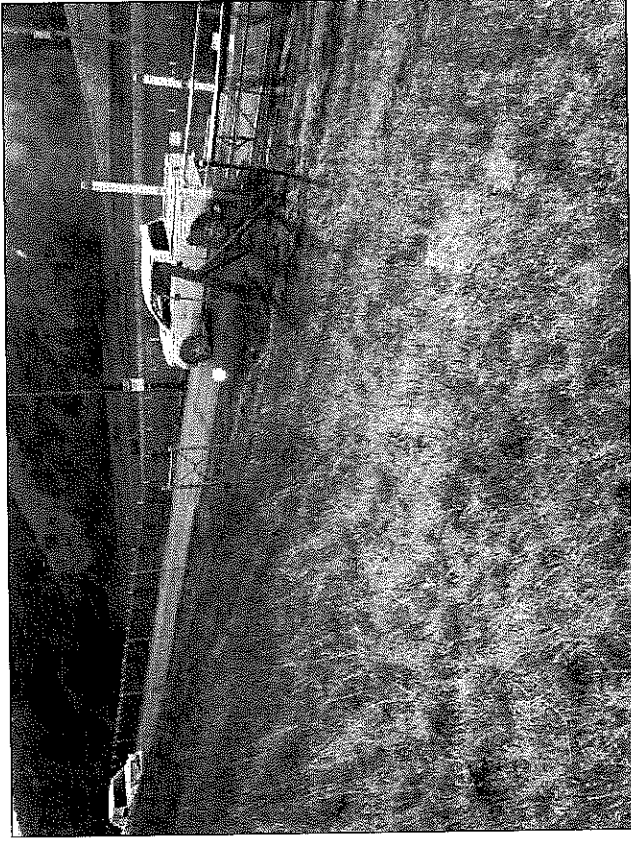
**Proposed Location of a Turn-out along paved road.
View to the North.**



**Proposed Location of a Turn-out along paved road.
View to the South.**



**Proposed Location of the Main Gate and Road Expansion.
View to the Northeast.**



**Proposed Location of the Main Gate and Road Expansion.
View to the Southwest.**



Memorandum

Date: October 31, 2011

To: Brett Becker, San Francisco Public Utilities Commission

From: Maureen Kick, URS Corporation

Subject: *Environmental Review of Proposed Project Modifications
Calaveras Dam Replacement Project (CUW 37401)*

This memo presents an evaluation of the biological and cultural resource considerations for three proposed modifications to the Calaveras Dam Replacement Project (CDRP). The evaluation presented in this memo supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

The memorandum is organized into the following sections:

- 1) Description of proposed project modifications
- 2) Biological resources
- 3) Cultural resources
- 4) Conclusions

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

SFPUC proposes to implement three minor project modifications. The proposed modifications are described below.

- 1) Boat ramp project area addition – improve access to the boat ramp area by paving the existing dirt access road from Calaveras Road.
- 2) Right abutment to project area addition – increase the limits of work by approximately 0.52 acre to accommodate a road connection from the crest of the new dam to an existing watershed access road.
- 3) Access road to Disposal Site 7 – widen and improve road that would be utilized to access Disposal Site 7.

These proposed project modifications are located within the biological resource study area for the CDRP (e.g. ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007). However, the affected areas may not have been reviewed during previous cultural resources surveys, including the Historical Resources Inventory and Evaluation Report (JRP 2008), Archaeological Survey Report (ART and EDAW 2008), and Archaeological Survey Report Addendum I and II (URS 2009a).

BIOLOGICAL RESOURCES

A URS biologist reviewed the biological resource data summarized by ETJV (2006a, 2006b, 2006c, and 2007), additional data summarized in the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and the CDRP California tiger salamander impact evaluation that was submitted to CDFG in June 2011 (SFPUC 2011). The results of this review are summarized below.

Boat Ramp Project Area Addition

No special status species, jurisdictional wetlands or other sensitive biological resources are present in the area that will be affected by this project modification. Preconstruction surveys for nesting birds should be conducted consistent with the CEQA MMRP.

Right Abutment to Project Area Addition

The affected area is vegetated with coast live oak and moderate to dense understory vegetation on a steep slope. The existing habitat is unlikely to be utilized by California tiger salamander based on data included in the CDRP California tiger salamander supplement to the CDFG Incidental Take Permit application (SFPUC 2011). However, the affected area is potential foraging and dispersal habitat for the federal and state-listed Alameda whipsnake (SFPUC 2011). No jurisdictional wetlands or other waters are present in the additional area that would be affected by this modification (ETJV 2006b).

Access Road to Disposal Site 7

Widening and improving existing dirt roads from Calaveras Dam to Disposal Site 7 would occur within the existing road corridor that was evaluated in the CDRP EIR and the permit applications reviewed by the resource agencies and addressed in the final permits and agreements. The potential of the proposed modifications to affect the California tiger salamander or the Alameda whipsnake is discountable due to the small area that would be disturbed by this modification. No wetlands or other jurisdictional waters would be affected based on the verified delineation (ETJV 2006b).

CULTURAL RESOURCES

Existing records search information and previously prepared reports were reviewed by URS to identify any potential archaeological or built environment cultural resources that could be impacted by the minor change in the limits of excavation and limits of work for the CDRP (ART and EDAW 2008, JRP Historical 2008, Kajankoski and Meyer 2009, URS 2008, URS 2009a, URS 2009b). No significant historical resources area located within the footprint or adjacent to the project modifications.

The areas that would be affected by the three project modifications were reviewed during an intensive pedestrian archaeological survey on August 24, 2011. The survey was conducted by URS archeologist Maureen Kick, a Registered Professional Archaeologist who meets the Secretary of the Interior's Standards for Archaeology, and Meredith Pecora, a URS staff archaeologist. Existing conditions and observations during the survey are described below by project modification.

Boat Ramp Project Area Addition

This proposed modification includes paving approximately 800 feet of an existing dirt access road from Calaveras Road to the existing paved boat ramp. The road and adjacent areas were surveyed; no cultural resources were identified. This project modification is within the boundaries of site P-01-10870, Desmond Camp; however, this site has been evaluated and is not a historical resource or unique

archaeological resource as defined by CEQA (URS 2009b). Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little chance of buried archaeological deposits in
this area (Kajankoski and Meyer 2009).

Right Abutment to Project Area Addition

This proposed project modification would affect an additional 0.52 acre located on a moderate to steep
slope. The affected area has an overstory of coast live oak and moderate to dense understory vegetation.
The area was surveyed using 10-15 meter transects. The steepest areas were not subject to survey due to
safety concerns and the low probability of archaeological materials being present. Ground visibility was
low due to grasses and ground cover; however, occasional rodent burrows, cattle trails and nearby road
cuts provided good visibility and were subject to intensive inspection. No cultural materials or evidence
of archaeological deposition were identified, and no rock outcrops were noted within the area of impact.
Geologically, the area is mapped as pre-
quaternary deposits and bedrock, indicating that there is little
chance of buried archaeological deposits in this area (Kajankoski and Meyer 2009).

Access Road to Disposal Site 7

This project modification consists of widening and improving existing dirt roads from Calaveras Dam to
Disposal Site 7. One built-environment resource, the watershed keeper residence, is adjacent to the
project modification. However, this resource has been evaluated, and is not a historical resource as
defined by CEQA (JRP Historical 2008). All roads and adjacent areas were subject to survey. No new
cultural resources were identified. Geologically, the area is mapped as pre-
quaternary deposits and
bedrock, indicating that there is little chance of buried archaeological deposits in this area (Kajankoski
and Meyer 2009).

CONCLUSIONS

The proposed project modifications at the right abutment and the Disposal Site 7 access road could affect
additional habitats that are potentially utilized by the federal and State-listed California tiger salamander
and Alameda whipsnake. However, the potential habitat modifications of the Disposal Site 7 access road
are likely to be minimal. Coordination with CDFG and USFWS is recommended to confirm that the
project modifications can be approved under the CDFG Incidental Take Permit and the USFWS
Biological Opinion. No additional wetlands, other waters or other sensitive habitats would be affected by
the proposed project modifications.

The proposed project modifications would not impact known archaeological resources. Should
unidentified surface or subsurface archaeological deposits be encountered during construction of the
CDRP, appropriate mitigation measures identified in the EIR would apply and all work in the immediate
vicinity of the discovery should be redirected until a qualified archeologist could assess the nature and
significance of the discovery. In the event human remains are discovered, consistent with State law, the
County Coroner should be contacted. If the Coroner determines the remains are Native American the
California Native American Heritage Commission should be contacted and they will appoint a Most
Likely Descendant to work with SFPUC to make recommendations for the treatment or disposition of the
remains and associated grave goods.

Please contact Maureen Kick at (510) 874-3107 or Steve Leach at (510) 874-3205 if you have any
questions.



Memorandum

REFERENCES

- ART and EDAW 2008. Calaveras Dam Replacement Project: Archaeological Survey Report. Prepared for EDAW Turnstone, San Francisco. On file at URS-Oakland.
- EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.
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- EDAW & Turnstone Joint Venture (ETJV). 2006c. California Red-legged Frog and California Tiger Salamander Habitat Assessment for the Calaveras Dam Replacement Project. Field work from April-May 2006, unpublished. EDAW, Sacramento, CA.
- EDAW & Turnstone Joint Venture (ETJV). 2007. California tiger salamander and California red-legged frog habitat assessment field notes by Stephanie Coppeto, 21 March 2007, unpublished.
- EDAW, Sacramento, CA. JRP Historical 2008. Calaveras Dam Replacement Project: Historic Resources Inventory and Evaluation Report. Prepared for EDAW Turnstone, San Francisco. On file at URS-Oakland.
- Kajankoski, P. and J. Meyer 2009. Geoarchaeological Assessment and Subsurface Explorations for the Calaveras Dam Replacement Project, Santa Clara and Alameda Counties, California. Prepared for Jay Rehor, URS Corporation. On file at URS - Oakland.
- San Francisco Planning Department 2009. Draft Environmental Impact Report for the San Francisco Public Utilities Commission (SFPUC) Calaveras Dam Replacement Project. File No. 2005.0161E
- San Francisco Public Utilities Commission (SFPUC) 2010. Application for Incidental Take Permit. Prepared for the California Department of Fish and Game. Submitted November 2010.
- San Francisco Public Utilities Commission (SFPUC) 2011. Calaveras Dam Replacement Project California Tiger Salamander Impact Evaluation. Prepared for the California Department of Fish and Game. Submitted June 2011.
- URS 2008. Draft Archaeological Survey Plan, Calaveras Dam Replacement Project. Prepared for San Francisco Public Utilities Commission. On File at URS-Oakland.
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URS 2009b. Archaeological Testing and Evaluation Report, Desmond Camp, P-01-10870, Alameda County, California. Prepared for San Francisco Public Utilities Commission. On file at URS-Oakland.

USACE. Calaveras Dam Replacement Project, Finding of No Adverse Effects. On file at URS-Oakland.

O'Neill, Kerry

From: Ryan_Olah@fws.gov
Sent: Thursday, January 26, 2012 2:02 PM
To: Leach, Steve
Cc: O'Neill, Kerry
Subject: Re: FW: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)
Attachments: USFWS_Amend_Request_2011-01-19(FINAL).pdf

Steve,

The Service agrees to include the additional work areas outlined in your email below into the Calaveras Dam Replacement Project biological opinion (Service file # 81420-2009-F-1339). No additional effects will result from the inclusion of these work areas beyond those described in the biological opinion. The existing take statement in the biological opinion will cover incidental take for these additional work areas.

If you have additional work areas that need to be added in the future, please provide a similar request which provides the details that were included in the current request.

Ryan

Ryan Olah
Coast Bay/Forest Foothill Division Chief U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office
2800 Cottage Way
Sacramento, CA 95825
(916) 414-6623

USFWS approval for the following extra workspaces:
1.) Disposal site 7 haul route
2.) Borrow area B
3.) Dam access road

"Leach, Steve"
<steve.leach@urs.com>
To
"Ryan Olah (Ryan_Olah@fws.gov)"
01/25/2012 10:03 AM <Ryan_Olah@fws.gov>
cc
"Kerry O'Neill
(KONeill@swater.org)"
<KONeill@swater.org>
Subject
FW: CDRP - Biological Opinion
amendment request (Complete Text
and Figures - Part 2)

Hi Ryan. Please let me know if you have any questions regarding the request that we submitted last week (attached with this e-mail). The SFPUC urgently needs to provide direction to the contractor regarding removal of vegetation that could be utilized by nesting migratory birds.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

Please note new e-mail address...

From: Leach, Steve
Sent: Thursday, January 19, 2012 9:59 PM
To: Ryan Olah (Ryan_Olah@fws.gov)
Cc: Kerry O'Neill (KONeill@swater.org); Deborah Craven-Green (DCravenGreen@swater.org); "Cullen Wilkerson" <CWilkerson@swater.org>; Jack, Emma (EJack@swater.org)
Subject: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)

Ryan, the attached file contains the complete text and figures for the amendment request described in my previous e-mail.

Please contact me if you have any questions. Thank you for your attention to this request.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

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the e-mail and any attachments or copies.

(See attached file: USFWS_Amend_Request_2011-01-19(FINAL).pdf)

O'Neill, Kerry

From: Craig Weightman <CWEIGHTMAN@dfg.ca.gov>
Sent: Friday, February 03, 2012 2:42 PM
To: O'Neill, Kerry
Cc: Jeanne Chinn; Wilkerson, Cullen; Wade, Dan; Steve Leach
Subject: RE: CDRP - Request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03
Attachments: Modification of Disposal Site 3 work limits LSAA 1600-2010-0322-03, ITP 2081-2010-033-03; CDFG_Amendment_Request_2011-01-10.pdf

Kerry and Steve,

On Thursday February 2 of this year we spoke on the phone and the two of you indicated that the modifications to work areas proposed in the amendment application require that vegetation clearing be conducted in advance of any migratory and nesting bird restrictions.

I have reviewed the disturbance calculations and make my decision based on the information provided in the amendment request which indicates that impacts beyond those currently permitted in ITP 2081-2010-033-03 have not occurred and are unlikely to occur prior to the amendment request being processed.

I am approving the trimming of vegetation and the removal of trees in the following areas as requested in the amendment request:

- Disposal Site 7 Haul Route
- Borrow Area B
- Right Abutment Access Road
- Dam Access Road Widening For Wheel Wash Facility
- Survey Control Monuments

I have reviewed the disturbance calculations for LSAA 1600-2010-0322-R3 and make by decision based on Measure 2.3 allowing work at the Calaveras Dam Replacement Project to occur year round and on the information provided in the amendment request which indicates that impacts beyond those currently permitted in the LSAA have not occurred and are unlikely to occur prior to the amendment request being processed.

I approve the trimming of vegetation and the removal of trees at the following location covered under 1600-2010-0322-R3:

- Disposal Site 7 Haul Route

Disposal Site 3 was the subject of an earlier approval (attached) so is not included in this approval. Based on the amendment request the impacts to the category "Central Coast Live Oak Riparian Forest" have been reached and additional disturbance to this habitat type is not authorized.

Please note that some of the disturbance authorized through this request will result temporary impacts becoming permanent. As we finalize the amendment we will sort through the specific acreage that is affected.

Thank You
Craig

Craig J. Weightman
Senior Environmental Scientist
Calif. Department of Fish and Game
7329 Silverado Trail
Napa, CA 94558

(707) 944-5577 voice
(707) 944-5563 fax

>>> "O'Neill, Kerry" <KONeill@sfgwater.org> 1/24/2012 3:54 PM >>>

Craig, I wanted to follow up with you on the status of our request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03 (see email below). We want to proceed with clearing of the additional workspace areas, especially the Disposal Site 7 haul route and Borrow Area B, to prevent nesting of migratory birds within the construction work limits of these areas which could have significant impacts on the project schedule. When should we expect to see a response to this request? As always, we are available to answer any questions you may have regarding the amendment request.

From: Leach, Steve [mailto:steve.leach@urs.com]
Sent: Tuesday, January 10, 2012 10:55 PM
To: Craig Weightman (cweightman@dfg.ca.gov)
Cc: O'Neill, Kerry; Wilkerson, Cullen; Jack, Emma; Wade, Dan; Forrest, Michael; Wong, Noel
Subject: CDRP - Request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03

Craig, as previously discussed, the attached amendment request is submitted on behalf of SFPUC for several minor modifications of the Calaveras Dam Replacement Project. The proposed modifications include the following:

1. Disposal Site 3: changes to work limits (previously submitted)
2. Disposal Site 7 Haul Route: changes to work limits (safety modification)
3. Borrow Site B: changes to work limits (design refinement required by site conditions)
4. Right Abutment Access Road: changes to work limits (design refinement)
5. Dam Access Road widening for Wheel Wash Facility: changes to work limits (health and safety requirement)
6. Boat Ramp access road: paving (design refinement)
7. Survey Control Monuments: installation outside of work limits (very minor addition required to verify construction implementation)

Per your request, the attached letter includes a proposed process for addressing future minor project modifications.

Please review and contact me or Kerry O'Neill if you have any questions or comments.

Regards,

Steve

Steve Leach

URS Corporation

1333 Broadway, Suite 800

Oakland, CA 94612

phone: 510-874-3205

fax: 510-874-3268

steve.leach@urs.com

Please note new e-mail address...

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O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Wednesday, February 08, 2012 9:45 AM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 12-Borrow Area B extra workspace
Attachments: MPM 012 - Borrow Area B (final)+SHS.pdf

Attached MPM 12 for CDRP is approved.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

02/08/2012 07:54 AM

Subject RE: Calaveras - MPM 13-Borrow Area B extra workspace

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Monday, February 06, 2012 10:56 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: Re: Calaveras - MPM 13-Borrow Area B extra workspace

I'll call you later today if I have any questions/clarifications.

One question: the last MPM for CDRP I have on file was numbered MPM No. 8. Is there a No. 9 and No. 11 forthcoming?

Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

To <Steve.Smith@sfgov.org>

cc "Wilkerson, Cullen" <CWilkerson@sfgwater.org>

02/03/2012 06:18 PM

Subject Calaveras - MPM 13-Borrow Area B extra workspace

Attached is Minor Project Modification (MPM) 12 for the Calaveras Dam Replacement Project. This MPM is for an additional 0.82 acre of extra workspace at Borrow Area B. We have also coordinated with CDFG and USFWS regarding this additional extra workspace (agency approvals attached). Please call or email me with questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Wednesday, February 08, 2012 9:45 AM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 12-Borrow Area B extra workspace
Attachments: MPM 012 - Borrow Area B (final)+SHS.pdf

Attached MPM 12 for CDRP is approved.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgwater.org>

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

02/08/2012 07:54 AM

Subject RE: Calaveras - MPM 13-Borrow Area B extra workspace

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Monday, February 06, 2012 10:56 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: Re: Calaveras - MPM 13-Borrow Area B extra workspace

I'll call you later today if I have any questions/clarifications.

One question: the last MPM for CDRP I have on file was numbered MPM No. 8. Is there a No. 9 and No. 11 forthcoming?

Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373
"O'Neill, Kerry" <KONeill@sfgwater.org>

To <Steve.Smith@sfgov.org>

cc "Wilkerson, Cullen" <CWilkerson@sfgwater.org>

02/03/2012 06:18 PM

Subject Calaveras - MPM 13-Borrow Area B extra workspace

Attached is Minor Project Modification (MPM) 12 for the Calaveras Dam Replacement Project. This MPM is for an additional 0.82 acre of extra workspace at Borrow Area B. We have also coordinated with CDFG and USFWS regarding this additional extra workspace (agency approvals attached). Please call or email me with questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 012		Date: 02/02/12	
Project Title:	Calaveras Dam Replacement Project		
MEA Case No./Project No.	2005.0161E/CUW37401		
MPM Prepared By:	Cullen Wilkerson		
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO	<input checked="" type="checkbox"/> Other: SFPUC
Landowner:	SFPUC		
Vegetative Cover/Land Use:	Rock outcrop, upland woodland, scrub	Net Acreage Affected: 1.4 acres	
Modification to:	<input type="checkbox"/> Mitigation Measure:		<input checked="" type="checkbox"/> Other: CEQA Project Limits
	<input checked="" type="checkbox"/> Permit: CDFG ITP 2081 and USFWS B.O.		

Detailed Description of Minor Project Modification:

The Contractor is requesting a minor site expansion at the Calaveras Dam Replacement Project (CDRP) in order to facilitate a safe, stable and successful slope restoration effort. The expansion area, which is located adjacent to Borrow Area B (BA-B), would be used to "lay-back the slope" for stability reasons while mining for the rock material for Dam construction begins. The proposed minor expansion would undergo final grading and contouring prior to the 2012 winter season. Figure 1 depicts the proposed grading plan for BA-B and the expansion area.

Per the FEIR Section 4.10.1.2, there exists high potential for paleontological resources in the proposed expansion area of Borrow Area B. A paleontological monitor is recommended for the proposed expansion area (see Attachment A).

Archaeological resources were not considered to be present, per the FEIR section 4.10.1.4 where it is stated that there is a "low likelihood of encountering historical resources" due to the steepness of the slopes in the proposed expansion area (see Figure 4.10.1 in the FEIR). No archaeological monitoring is recommended for this expansion (Attachment B).

Per the FEIR Section 4.4, there exists a potential for special status species (e.g., Alameda whipsnake, California tiger salamander, California red-legged frog, and Diablo Helianthella) to be impacted by the expansion (Attachment C). Implementing Mitigation Measures 5.4.1a and 5.4.1b will reduce the potential impacts to less than significant.

USFWS and CDFG concurrence for the expansion of Borrow Area B was received (Attachment D). Note that the CDFG approval is for vegetative clearing at this time as the process the paperwork for the permit amendment.

ENVIRONMENTAL IMPACTS

The addition of 1.4 acres in this area would not result in new impacts. It would result in additional biological impacts beyond those analyzed in the Calaveras Dam Replacement FEIR.

Attachments:

- Figure 4. Map of Borrow Area B proposed expansion
- Attachment A: Paleontological Report
- Attachment B: Archaeological Report
- Attachment C: Biological Report
- Attachment D: USFWS/CDFG approval
-

Biological <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cultural <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Photos <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other <input type="checkbox"/> Yes <input type="checkbox"/> No
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Resources:

Biological Tech Memo - Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project, January 3, 2012.
Paleontological Tech Memo – Expansion of Borrow Area B, January 17, 2012.
Archaeological Tech Memo - Minor Project Modification: Cultural Resources Survey Adjacent to Borrow Area B, Calaveras Dam Replacement Project, January 10, 2012.

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

Calaveras Dam Replacement Project FEIR and updated field surveys conducted by SFPUC consultant Shaw, March 10, April 22, and April 27, 2011. Pre-construction surveys conducted by SFPUC consultant Shaw: June, July, August, September, and October 2011.

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Cultural Survey Report Reference:

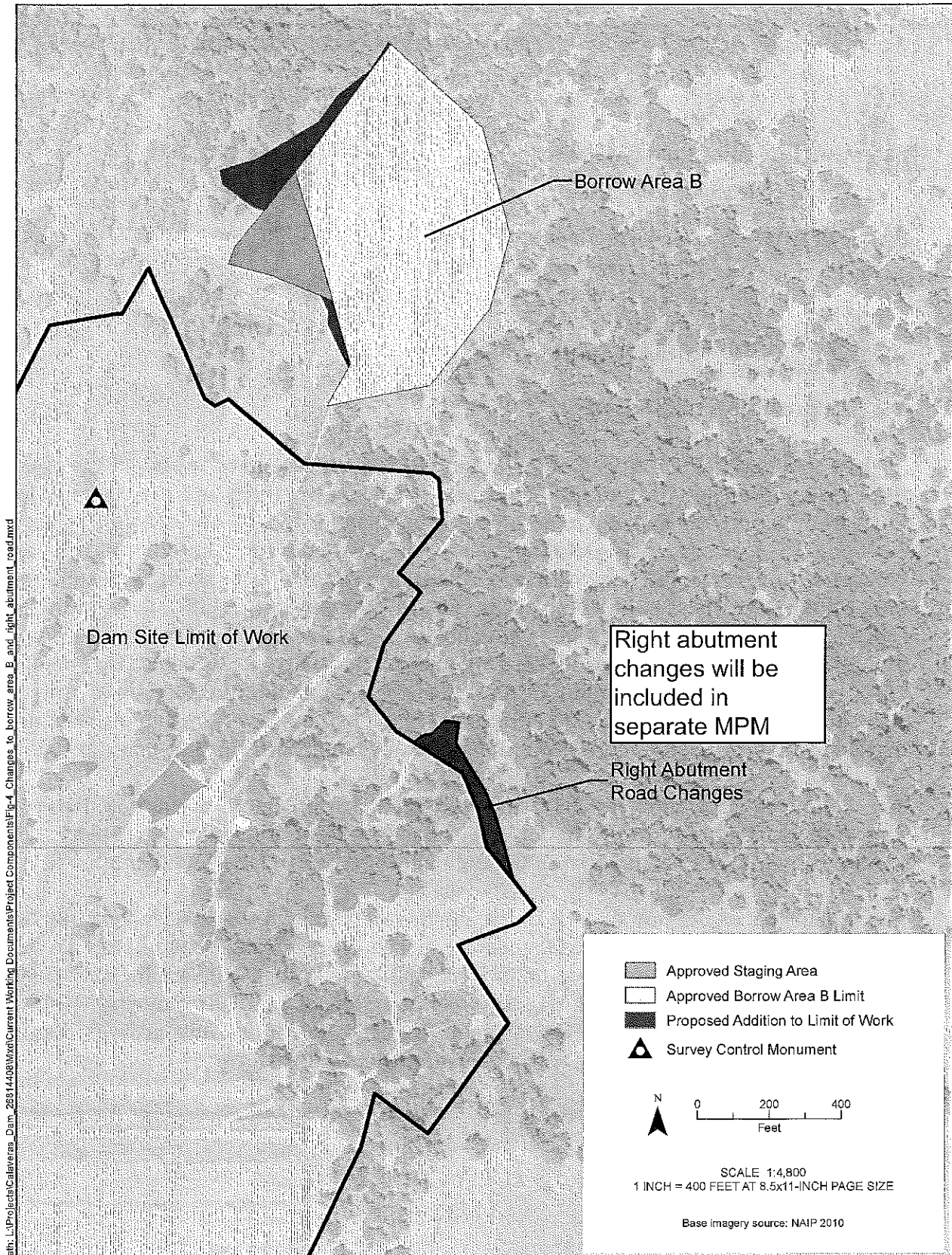
Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS, March 10, April 22, and April 27, 2011 (see Attachment A).

Conditions of Approval or Reasons for Denial		
Approval subject to any additional stipulations provided in the pending permit amendment from CDFG.		
SFPUC Required Signatures for Environmental Approval:		
ECCM:	Kerry O'Neill	Date: 2/3/12
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved with Conditions (see conditions above) <input type="checkbox"/> Denied		
SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.		
Charge Code: CUW37401		

MEA Required Signatures for Approval:		
Signee:	Steve Smith	Date: 2/8/12
<input type="checkbox"/> Approved <input checked="" type="checkbox"/> Approved with Conditions (see conditions above) <input type="checkbox"/> Denied		

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no new hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	Based on a pedestrian survey of the location there would be no new significant cultural resource impacts beyond those analyzed in the FEIR. If cultural or paleontological resources are discovered the project will implement accidental discovery measures in Mitigation Measure 5.10.1 and 5.10.2 including measures related to human remains an associated or unassociated funerary objects and Mitigation measure 5.10.5b for paleontological discoveries. (see attachment A & B Paleontological and Cultural Memos and below summary of memo).
	<input type="checkbox"/> N	<p>Borrow Area B Cultural - No prehistoric or historic-era archaeological materials were previously located within the survey area, and none were observed during the MPM survey. It is unlikely that construction activities within the MPM survey area will disturb cultural resources.</p> <p>Borrow Area B Paleontological - the expansion of Borrow Area B will require paleontological monitoring. Part-time paleontological construction excavation</p>

		monitoring is strongly recommended due to the fact these formations have yielded important, significant paleontological resources in the past and yield paleontological resources collected thus far via field monitoring during our current monitoring and mitigation phase to date. This monitoring will occur during initial ground disturbing activities. If after inspection of the newly exposed formation reveals clues (environment of deposition, fossils, rock type, lithology) as to the formation's fossiliferous nature, adjustments to monitoring can be made at that time.
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new significant traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There will be no new visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	<p>There would be an additional 1.4 acres of permanent impact to vegetation or wildlife (i.e., wildlife habitat). Applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant. (see attachment C Cultural and Biological Memo and below summary of memo).</p> <p>Borrow Area B – The extra workspace in in woodland/grassland habitat for Alameda whipsnake and habitat that is potentially utilized by California red-legged frog. The proposed project may also impact potential breeding bird habitat if work is done during the breeding season.</p>
	<input type="checkbox"/> N	



Path: L:\Projects\Calaveras Dam_26814408\Working Documents\Project Components\Fig-4_Changes to borrow area B and right abutment road.mxd



San Francisco Public Utilities Commission
Calaveras Dam Replacement Project

Figure 4
Changes to Borrow Area B and Right Abutment Road



Prepared for: Cullen Wilkerson

January 17, 2012

Prepared By: James R. Allen
M.Sci. Geology, PG #8335
5300 Iron Horse Parkway # 369
Dublin, CA 94568
Cell (925)413-0054

Re: The expansion of Borrow Area B.

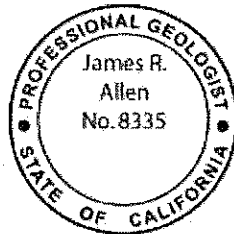
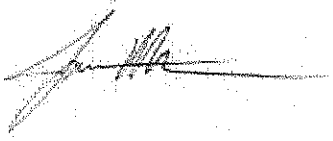
At the request of Cullen Wilkerson on January 4th, 2012, we have reviewed the plans for the expansion of Borrow Area B. Based on the maps provided and the Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project (2011) the expansion of Borrow Area B will require paleontological monitoring. Part-time paleontological construction excavation monitoring is strongly recommended due to the fact these formations have yielded important, significant paleontological resources in the past and yield paleontological resources collected thus far via field monitoring during our current monitoring and mitigation phase to date. This monitoring will occur during initial ground disturbing activities. If after inspection of the newly exposed formation reveals clues (environment of deposition, fossils, rock type, lithology) as to the formation's fossiliferous nature, adjustments to monitoring can be made at that time.

The Following recommendations are based on Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project (2011), mapping by Graymer and others (1996) and field visits by Mr. James Walker MS, PG.

The expansion of Borrow Area B on its northwest side will expand its footprint in the Miocene Temblor Formation. It may also encroach on the Miocene Monterey Group and Pliestocene gravels. These three units were all assigned high paleontological sensitivity rankings in the attached Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project. Therefore any ground disturbing activities will require the presence of a paleontological monitor.

If there are any questions about the units involved or the rankings assigned, please feel free to contact us.

Sincerely,



James R. Allen, RPG
5300 Iron Horse Parkway #369
Dublin, CA 94568
Cell: 925-413-0054

References

Allen, J R., 2011, Paleontological Evaluation Report and Paleontological Monitoring Plan for the Calaveras Dam Replacement Project (CDRP).

Graymer, R.W, Jones, D.L., and Brabb, E.E., 1996, Preliminary geologic map emphasizing bedrock formations in Alameda County, California: A digital database: U.S. Geological Survey Open-File Report 96-252.



holman & ASSOCIATES

Archaeological Consultants

"SINCE THE BEGINNING"

3615 FOLSOM ST. SAN FRANCISCO,
CALIFORNIA 94110 415/550-7286

Memorandum

DATE: January 10, 2012
TO: Cullen Wilkerson, San Francisco Public Utilities Commission
Environmental Compliance Coordinator
FROM: Randy Wiberg and Lily Roberts
SUBJECT: **Minor Project Modification: Cultural Resources Survey Adjacent to Borrow Area B, Calaveras Dam Replacement Project**

INTRODUCTION

This memorandum was prepared by Holman & Associates for the Calaveras Dam Replacement Project (CDRP or Project), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memo presents results of additional archaeological survey of land adjacent to Borrow Area B that would be lay-backed during mining for the rockfill materials for construction of the replacement dam. The location of the supplemental survey area is contained on the United States Geological Survey (USGS) Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 [photorevised in 1980]) in the northwest quadrant of Section 13, Range 1E and Township 5S (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the *Final Environmental Impact Report* [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey for a Minor Project Modification (MPM) was requested by the SFPUC. The proposed MPM is located within the previously delineated archaeological APE (ART and EDAW 2008). On December 30, 2011 Holman & Associates completed a cultural resources survey of the MPM area. No evidence of prehistoric or historic-era cultural materials was observed.

LITERATURE REVIEW

Multiple cultural resources studies have been conducted in conjunction with the CDRP. URS completed a literature review and two pedestrian surveys of portions of the C-APE during initial design phases for the CDRP (URS 2003, 2005). As part of the environmental review process for the project, Archaeological Resources Technology (ART) conducted another intensive pedestrian survey of the C-APE in 2006 (ART and EDAW 2008). The two investigations identified four

historic-era cultural resources near the proposed MPM, all likely associated with dam construction and/or early geotechnical exploration: P-43-010674, -010675, -010676 and CD#4. Site P-43-010674 is a possible mining adit or exploratory boring located on the east bank of Calaveras Creek, opposite Borrow Area B. P-43-010675 is a debris scatter (mostly boards, posts, water pipe and flu pipe) just below (southeast) the top of Observation Hill. P-43-010676 is the remains of a stone wall or structure on the crest of Observation Hill, just above P-43-010675. CD#4 is two separate historic debris scatters, a possible borrow pit, and an isolated prehistoric chert flake located west of Hill 1000.

Additional historic-era cultural resources were recently identified during installation of wildlife exclusion fencing adjacent to the existing Calaveras Dam earthfill embankment, CD-H&A-1 immediately west of the dam on the left abutment and CD-H&A-2 east of the dam on the right abutment (Wiberg and Posta 2011a). CD-H&A-1 is a spread footing foundation associated with a sparse surface scatter of structural remains and a possible stock pond, located on the south slope of Observation Hill. CD-H&A-2 is an unsealed refuse dump east of the dam on the right abutment. The deposit consists of at least 250 ferrous cans, more than 100 glass bottles, and a few other items.

Previously unidentified cultural materials were also discovered in the upper False Cut area during recent power screen excavations (Wiberg and Posta 2011b). The discovery consisted of two locations containing 5 ½-inch diameter ferrous pipe—constructed from sheet metal that had been hot riveted—and a light-density scatter of historic artifacts (mostly glass fragments) on a mid-slope terrace.

PROJECT LOCATIONS AND DESCRIPTIONS

The project contractor is requesting a minor expansion of the work area adjacent to Borrow Area B in order to facilitate restoration and stabilization of the slope adjacent to the borrow pit. Borrow Area B is situated on hillside west of Calaveras Creek, north of a hilltop known as “Hill 1000”, and downstream of the existing dam. The area would be excavated to a depth of approximately 200 to 280 feet to obtain blueschist/greywacke for the dam. The expansion area would be used to lay-back the slope and stabilize the borrow pit during mining. The MPM survey area is about 32,000 square feet of hillside and hilltop adjacent to Borrow Area B that drains east towards Calaveras Creek, and portions of an access road to the borrow pit (Figures 2 and 3). The property is grassy oak woodland dotted with Interior Live Oak and occasional California Bay Laurel trees. Overall, the ground surface is nearly entirely covered by thick grass, forbs, and leaf duff from the trees. The Borrow Area B location has obviously been previously quarried for rock, and numerous dirt roads wind through the general area. Heavy construction equipment, including graders, bulldozers, and excavators could be used in the proposed expansion area during mining operations.

SURVEY RESULTS

On December 30, 2011, Lily Roberts of Holman & Associates completed a pedestrian survey of the proposed MPM location. Overall, ground surface visibility was fair to poor. All accessible areas were walked, though some areas were too steep to safely survey. The survey area was

mostly transected by contouring the hillside. The ground surface was inspected by using a hand trowel to scrape back vegetation and by inspecting rodent burrows for cultural materials. Soils were brownish-yellow silt containing small angular gravels.

No prehistoric or historic-era archaeological materials were previously located within the survey area, and none were observed during the MPM survey. It is unlikely that construction activities within the MPM survey area will disturb cultural resources. Although no evidence of archaeological materials was observed, the possibility remains that archaeological features and materials could be located during ground-disturbing activities. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the *Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project* (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) and guidelines contained in the *MEA WSIP Archaeological Guidance No. 9* (CCSF 2008, Mitigation Measures I and II) should be implemented.

References Cited

ART and EDAW

2008 *Calaveras Dam Replacement Project Archaeological Survey Report*. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

City and County of San Francisco Planning Department [C&CSFPD]

2008 *MEA WSIP Projects Archaeological Guidance*.

2011 *Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project*.

URS Corporation [URS]

2003 *Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA*. Prepared for San Francisco Water Department.

2005 *Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures*. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

1961 Calaveras Reservoir, California 7.5 minute topographic quadrangle (photorevised 1980).

Wiberg, R. and S. Psota

2011a *Technical Memorandum: Calaveras Dam Replacement Project: Previously Unidentified Historic-era Cultural Resources near Right and Left Dam Abutments*. Prepared for the San Francisco Public Utilities Commission.

Wiberg, R. and S. Psota

2011b *Technical Memorandum: Calaveras Dam Replacement Project: Additional Historic-era Cultural Resources Discovered in the Upper False Cut Area*. Prepared for the San Francisco Public Utilities Commission.

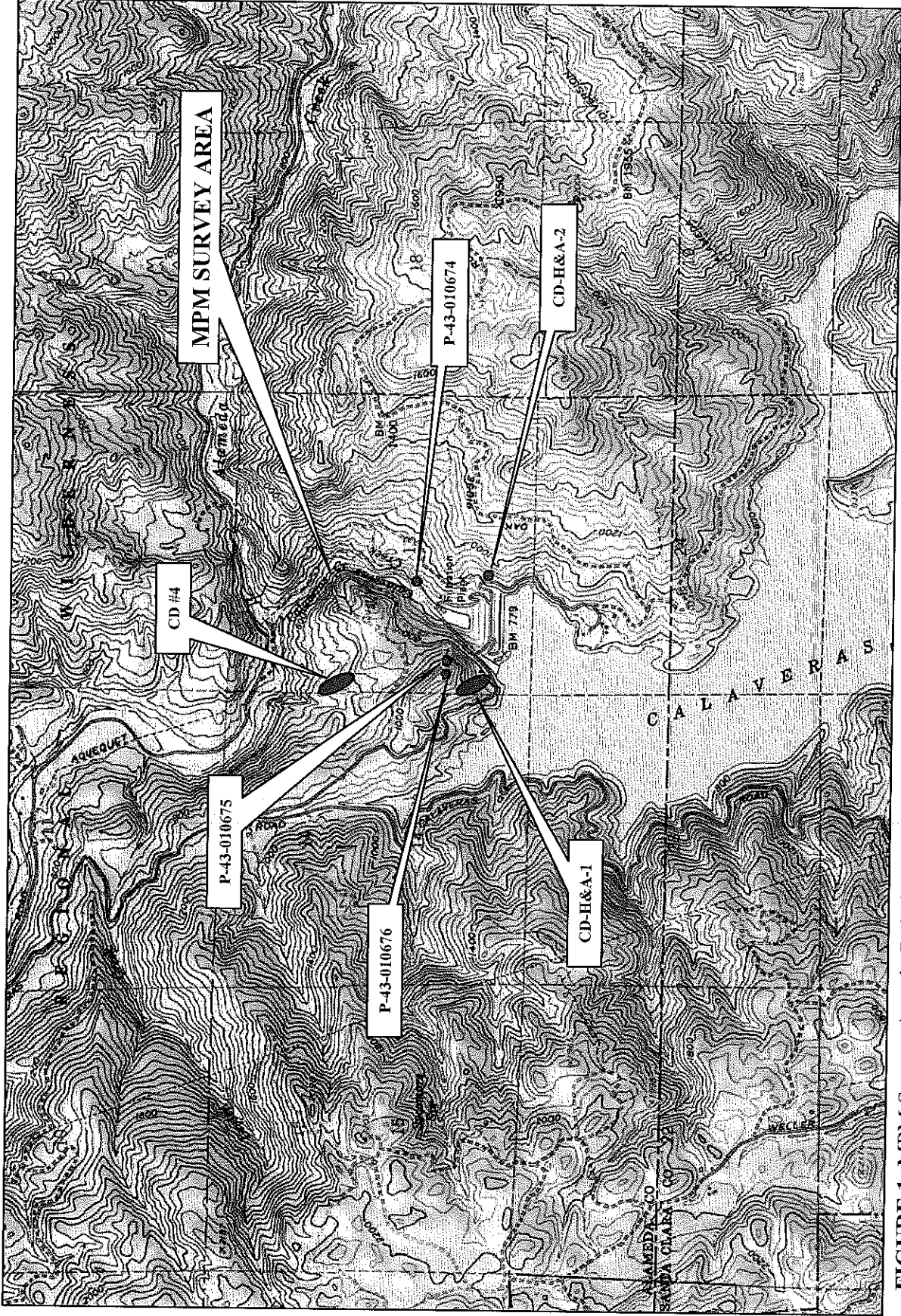


FIGURE 1. MPM Survey Area in Relation to Previously Identified Cultural Resources (Source: USGS Calaveras Reservoir 7.5' Quad., Photorevised 1980).

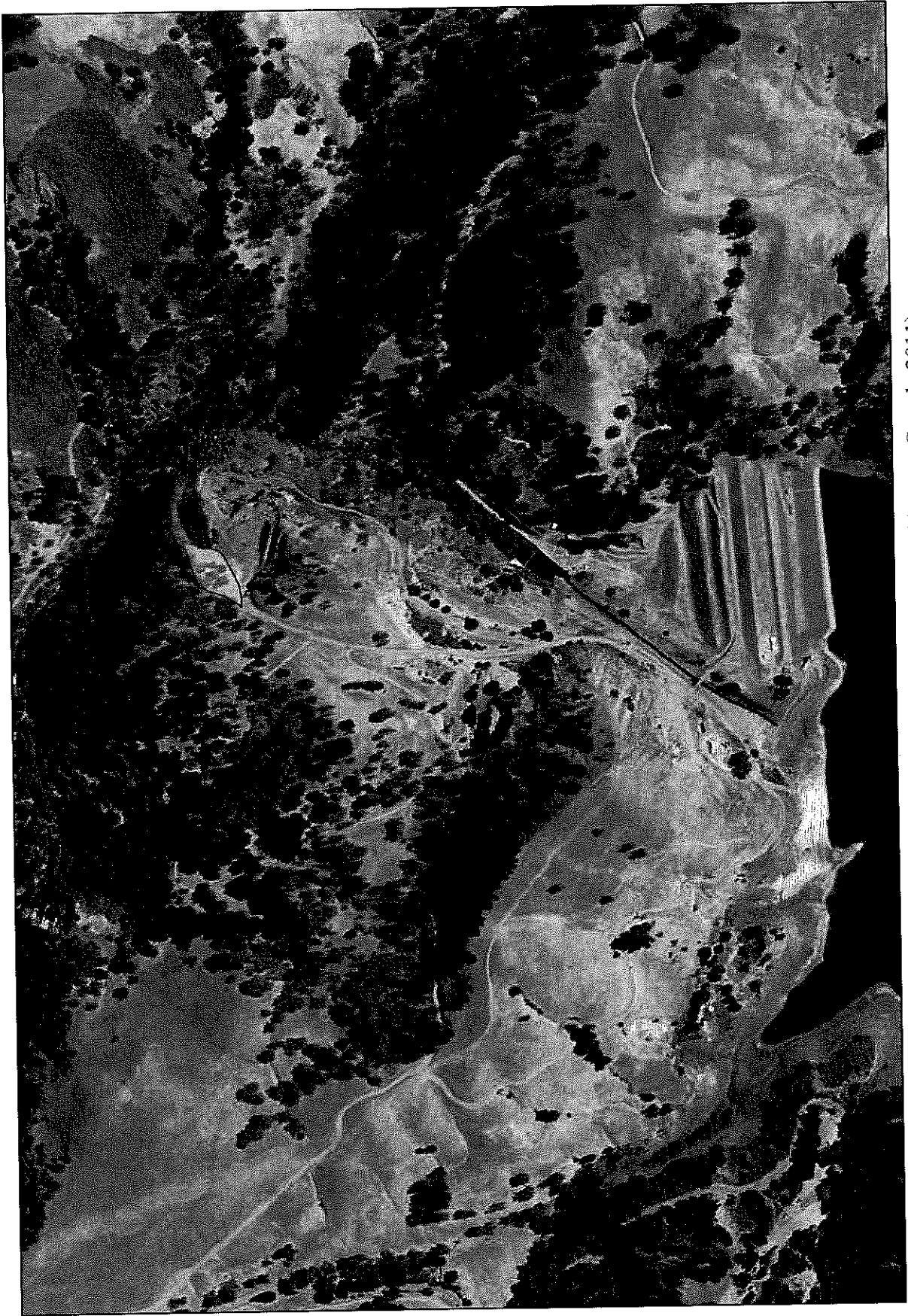
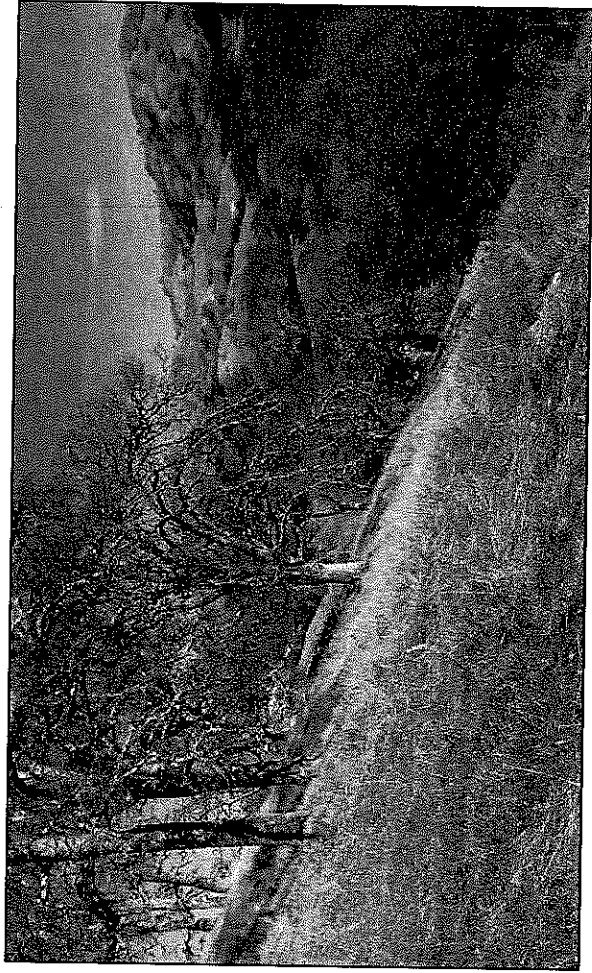
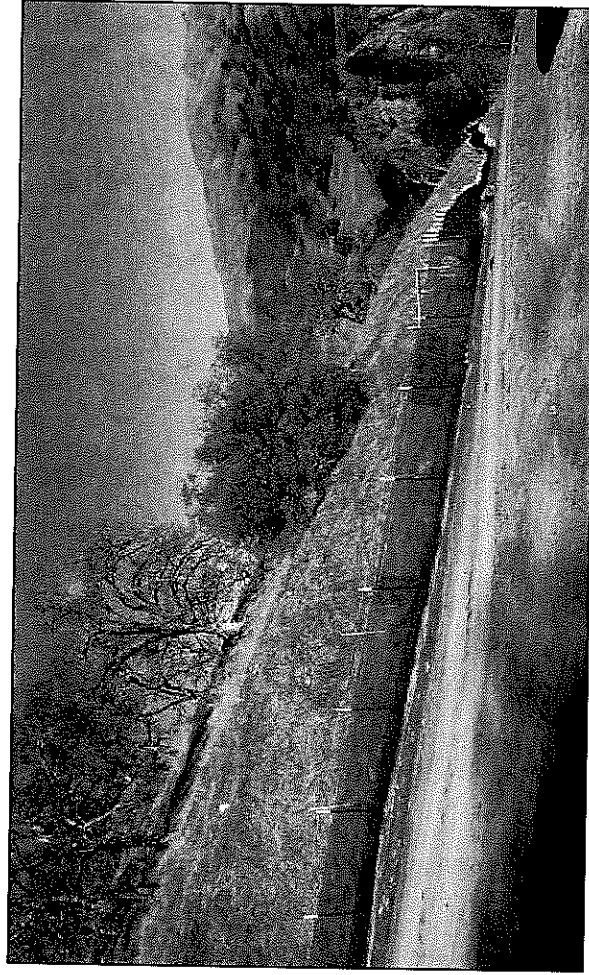


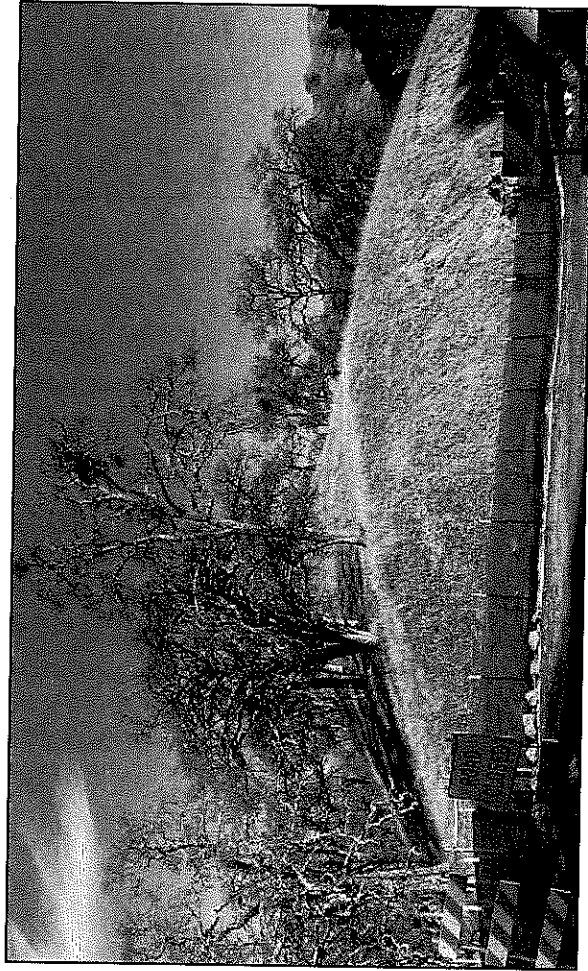
FIGURE 2. Aerial View of MPM Survey Area (Source: Google 2011).



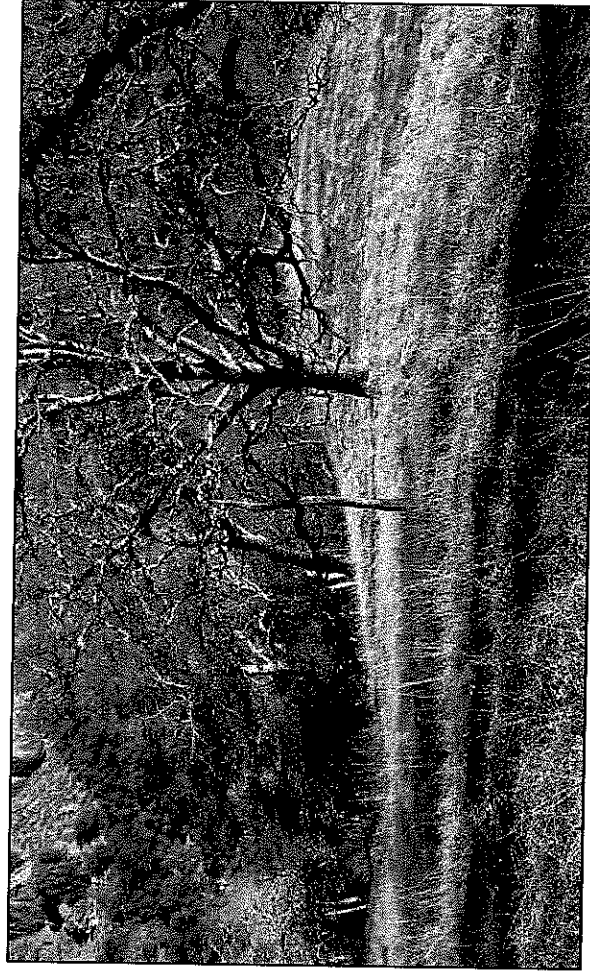
Hillside on east side of survey area; looking east



South side of hill in survey area and access road to Borrow Area B; looking north



Back side of survey area; looking east



Top of hill in survey area sloping towards Calaveras Creek; looking northeast

FIGURE 3. Photographs of MPM Survey Area.



BioMaAS

Biological Monitoring and Assessment Specialists, Inc.
333 Valencia Street, Suite #324, San Francisco, CA 94103
Phone (415)255-8077 Fax (925)887-4702 www.BioMaAS.com

Date: January 3, 2012
To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental Management
From: Bill Stagnaro, BioMaAS
Subject: **Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project (CUW 37401)**

This memo presents an evaluation of the biological resources for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The Contractor is requesting a minor site expansion at the Calaveras Dam Replacement Project (CDRP) in order to facilitate a safe, stable and successful slope restoration effort. The expansion area, which is located adjacent to Borrow Area B, would be used to "lay-back the slope" for stability reasons while mining for the rock material for Dam construction.

The habitat within the Project Area consists of nonnative grassland, blue oak woodland and a small patch of Diablan sage scrub with rock outcroppings .

POTENTIAL BIOLOGICAL RESOURCES

A BioMaAS biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion (81420-2009-F-1339). In addition, the biologist reviewed the Contract Drawing (EC-5) for the proposed Project Area and investigated the Project Area for the presence of and potential for sensitive biological resources. No wetland features have been documented within the footprint of the proposed Project Area expansion (ETJV, 2006b).

The potential for special status wildlife species to occur in the Project Area may be summarized by the following:

- Common and special status bird species may use the Project Area for breeding habitat.
- Suitable foraging and refugia habitat for the Alameda Whipsnake (*Masticophis lateralis euryxanthus*) is present in the Project Area. The area contains a small patch of Diablan sage scrub as well as rock outcroppings. In addition, one Alameda Whipsnake was relocated to the proposed Project Area during project activities. This refugia may also be used, to a lesser degree, by California red-legged frog (*Rana draytonii*) though there are no known sightings in the immediate vicinity.
- Diablo Helianthella (*Helianthella castanea*) is known to occur in the immediate vicinity of the Project Area (May and Assoc., 2006). The current project footprint abuts a known occurrence of this plant, immediately west of the Project Area (Figure 1).
- Special status species may migrate through the Project Area or use the Project Area as a corridor for dispersal.

RECOMMENDATIONS

The proposed project modifications could negatively impact Alameda whipsnake. The proposed project could also affect habitat that is potentially utilized by California red-legged frog. The proposed project may also impact potential breeding bird habitat if work is done during the breeding season. In addition, special status plant species may be impacted if it is determined they occur in the Project Area. The following measures are recommended to avoid impacts to special status species.

Breeding Birds

It is recommended that construction activities occur between August 31 and January 15 in order to avoid the breeding bird season. If this work window is not feasible, a qualified biologist should conduct a breeding bird survey in the Project Area and within suitable habitat within 100 feet, 300 feet and one quarter mile of the Project Area to determine common and special status avian species use.

Special Status Herpetofauna

A preconstruction survey should be performed by a qualified biologist prior to ground disturbance in the Project Area in order to determine the presence of special status herpetofauna. In addition, all ground disturbing activities should be carefully monitored by biological staff. If sensitive herpetofauna are unearthed during ground disturbance activities, they should be relocated to suitable habitat that has been pre-approved by agency staff.

Special Status Plant Species

Diablo Helianthella is known to occur immediately adjacent to the Project Area. In order to determine presence of this species in the Project Area, a preconstruction rare plant survey should be performed prior to ground disturbance activities.

Please contact Bill Stagnaro at (415) 440-4267 if you have any questions.

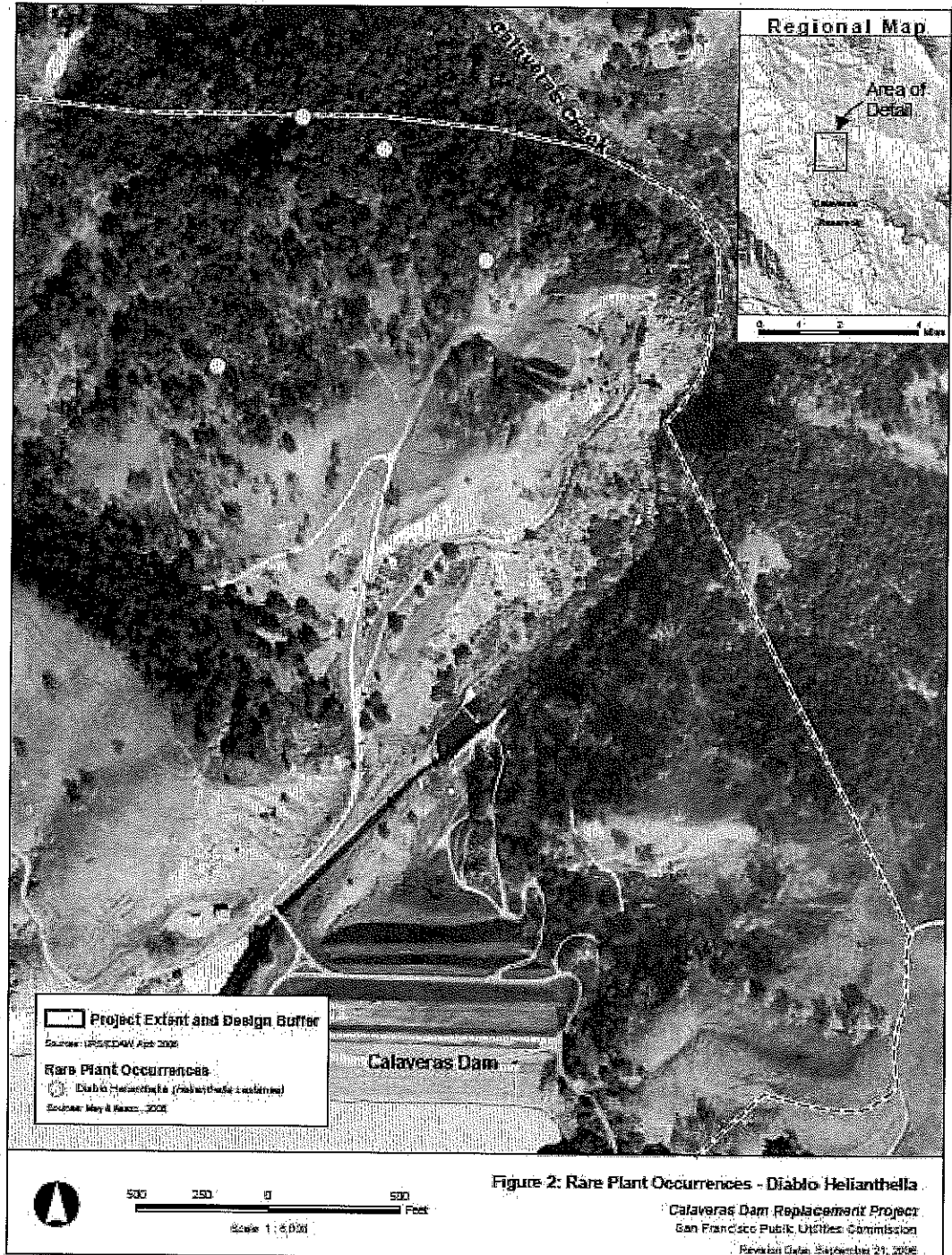
REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.

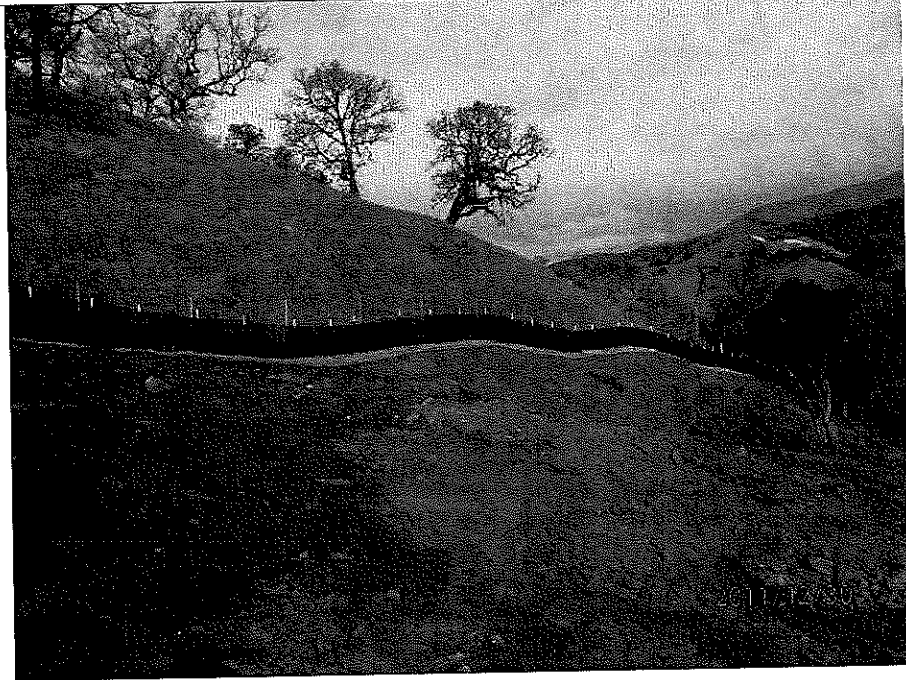
May and Associates. November 10, 2006. Calaveras Dam Replacement Project Botanical Survey Technical Report.

Figure 1. Special status plant species near the Project Area.



ATTACHMENT A

Project Photographs



View looking north across the Project Area (top photo).

View looking south at the Project Area and the small patch of scrub and rock outcroppings (bottom photo).

O'Neill, Kerry

From: Craig Weightman <CWEIGHTMAN@dfg.ca.gov>
Sent: Friday, February 03, 2012 2:42 PM
To: O'Neill, Kerry
Cc: Jeanne Chinn; Wilkerson, Cullen; Wade, Dan; Steve Leach
Subject: RE: CDRP - Request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03
Attachments: Modification of Disposal Site 3 work limits LSAA 1600-2010-0322-03, ITP 2081-2010-033-03; CDFG_Amendment_Request_2011-01-10.pdf

Kerry and Steve,

On Thursday February 2 of this year we spoke on the phone and the two of you indicated that the modifications to work areas proposed in the amendment application require that vegetation clearing be conducted in advance of any migratory and nesting bird restrictions.

I have reviewed the disturbance calculations and make my decision based on the information provided in the amendment request which indicates that impacts beyond those currently permitted in ITP 2081-2010-033-03 have not occurred and are unlikely to occur prior to the amendment request being processed.

I am approving the trimming of vegetation and the removal of trees in the following areas as requested in the amendment request:

- Disposal Site 7 Haul Route
- Borrow Area B
- Right Abutment Access Road
- Dam Access Road Widening For Wheel Wash Facility
- Survey Control Monuments

I have reviewed the disturbance calculations for LSAA 1600-2010-0322-R3 and make by decision based on Measure 2.3 allowing work at the Calaveras Dam Replacement Project to occur year round and on the information provided in the amendment request which indicates that impacts beyond those currently permitted in the LSAA have not occurred and are unlikely to occur prior to the amendment request being processed.

I approve the trimming of vegetation and the removal of trees at the following location covered under 1600-2010-0322-R3:

- Disposal Site 7 Haul Route

Disposal Site 3 was the subject of an earlier approval (attached) so is not included in this approval. Based on the amendment request the impacts to the category "Central Coast Live Oak Riparian Forest" have been reached and additional disturbance to this habitat type is not authorized.

Please note that some of the disturbance authorized through this request will result temporary impacts becoming permanent. As we finalize the amendment we will sort through the specific acreage that is affected.

Thank You
Craig

Craig J. Weightman
Senior Environmental Scientist
Calif. Department of Fish and Game
7329 Silverado Trail
Napa, CA 94558

(707) 944-5577 voice
(707) 944-5563 fax

>>> "O'Neill, Kerry" <KONeill@sfgwater.org> 1/24/2012 3:54 PM >>>

Craig, I wanted to follow up with you on the status of our request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03 (see email below). We want to proceed with clearing of the additional workspace areas, especially the Disposal Site 7 haul route and Borrow Area B, to prevent nesting of migratory birds within the construction work limits of these areas which could have significant impacts on the project schedule. When should we expect to see a response to this request? As always, we are available to answer any questions you may have regarding the amendment request.

From: Leach, Steve [mailto:steve.leach@urs.com]
Sent: Tuesday, January 10, 2012 10:55 PM
To: Craig Weightman (cweightman@dfg.ca.gov)
Cc: O'Neill, Kerry; Wilkerson, Cullen; Jack, Emma; Wade, Dan; Forrest, Michael; Wong, Noel
Subject: CDRP - Request to amend LSAA No. 1600-2010-0322-R3 and ITP No. 2081-2010-033-03

Craig, as previously discussed, the attached amendment request is submitted on behalf of SFPUC for several minor modifications of the Calaveras Dam Replacement Project. The proposed modifications include the following:

1. Disposal Site 3: changes to work limits (previously submitted)
2. Disposal Site 7 Haul Route: changes to work limits (safety modification)
3. Borrow Site B: changes to work limits (design refinement required by site conditions)
4. Right Abutment Access Road: changes to work limits (design refinement)
5. Dam Access Road widening for Wheel Wash Facility: changes to work limits (health and safety requirement)
6. Boat Ramp access road: paving (design refinement)
7. Survey Control Monuments: installation outside of work limits (very minor addition required to verify construction implementation)

Per your request, the attached letter includes a proposed process for addressing future minor project modifications.

Please review and contact me or Kerry O'Neill if you have any questions or comments.

Regards,

Steve

Steve Leach

URS Corporation

1333 Broadway, Suite 800

Oakland, CA 94612

phone: 510-874-3205

fax: 510-874-3268

steve.leach@urs.com

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O'Neill, Kerry

From: Ryan_Olah@fws.gov
Sent: Thursday, January 26, 2012 2:02 PM
To: Leach, Steve
Cc: O'Neill, Kerry
Subject: Re: FW: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)
Attachments: USFWS_Amend_Request_2011-01-19(FINAL).pdf

Steve,

The Service agrees to include the additional work areas outlined in your email below into the Calaveras Dam Replacement Project biological opinion (Service file # 81420-2009-F-1339). No additional effects will result from the inclusion of these work areas beyond those described in the biological opinion. The existing take statement in the biological opinion will cover incidental take for these additional work areas.

If you have additional work areas that need to be added in the future, please provide a similar request which provides the details that were included in the current request.

Ryan

Ryan Olah
Coast Bay/Forest Foothill Division Chief U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office
2800 Cottage Way
Sacramento, CA 95825
(916) 414-6623

USFWS approval for following extra workspaces:
1.) Disposal site 7 haul route
2.) Borrow Area B
3.) Dam access road

"Leach, Steve"
<steve.leach@urs.com>

To
"Ryan Olah (Ryan_Olah@fws.gov)"
01/25/2012 10:03 AM <Ryan_Olah@fws.gov>
cc

"Kerry O'Neill
(KONeill@swater.org)"
<KONeill@swater.org>

Subject
FW: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)

Hi Ryan. Please let me know if you have any questions regarding the request that we submitted last week (attached with this e-mail). The SFPUC urgently needs to provide direction to the contractor regarding removal of vegetation that could be utilized by nesting migratory birds.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

Please note new e-mail address...

From: Leach, Steve
Sent: Thursday, January 19, 2012 9:59 PM
To: Ryan Olah (Ryan_Olah@fws.gov)
Cc: Kerry O'Neill (KONeill@swater.org); Deborah Craven-Green (DCravenGreen@swater.org); "Cullen Wilkerson" <CWilkerson@swater.org>; Jack, Emma (EJack@swater.org)
Subject: CDRP - Biological Opinion amendment request (Complete Text and Figures - Part 2)

Ryan, the attached file contains the complete text and figures for the amendment request described in my previous e-mail.

Please contact me if you have any questions. Thank you for your attention to this request.

Regards,

Steve

Steve Leach
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
phone: 510-874-3205
fax: 510-874-3268
steve.leach@urs.com

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the e-mail and any attachments or copies.

(See attached file: USFWS_Amend_Request_2011-01-19(FINAL).pdf)

O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Thursday, March 29, 2012 3:45 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: Calaveras-MPM 13 D11 Emissions
Attachments: MPM-013-CDRP Air Quality_D11-signed.doc

Signed approval attached...

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfwater.org>

03/26/2012 01:58 PM

To "Smith, Steve" <Steve.Smith@sfgov.org>
cc "Wilkerson, Cullen" <CWilkerson@sfwater.org>
Subject RE: Calaveras-MPM 13 D11 Emissions

Mid-week will be fine. Tx.

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Monday, March 26, 2012 1:44 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: Re: Calaveras-MPM 13 D11 Emissions

Hi Kerry - No questions. I'm shooting for getting the signed MPM back to you by mid-week. Let me know if you need sooner.

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfwater.org>

03/21/2012 09:14 AM

To <Steve.Smith@sfgov.org>
cc "Wilkerson, Cullen" <CWilkerson@sfwater.org>
Subject Calaveras-MPM 13 D11 Emissions

The attached Minor Project Modification is for the use of two Tier 2 diesel engine Dozers (D11) on the Calaveras Dam Replacement Project (CDRP) that do not have the California Air Resources Board (CARB) Level 3 Diesel Emission Control Strategies per mitigation measure 5.13.3a. This MPM proposes to allow the use of two D11s that cannot be retrofitted to meet CARB Level 3 Diesel Emission Control Strategies specified in the CDRP FEIR due to current CalOSHA requirements.

The contractor has included documentation that their fleet (including the D11s) meets the requirements of the APCP and the State requirements for emissions reduction by utilizing the Sacramento Metropolitan Air Quality Mitigation Calculator. All inputs to the calculator and outputs have been included with this MPM.

Please let me know if you have any questions related to this submittal.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750[attachment "MPM-013-CDRP Air Quality_D11(final).doc" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "MPM 13 Attachments (Final).pdf" deleted by Steve Smith/CTYPLN/SFGOV]

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 013		Date: 3/21/12	
Project Title:		Calaveras Dam Replacement Project	
MEA Case No./Project No.		2005.0161E/CUW37401	
MPM Prepared By:		Cullen Wilkerson, ECM	
MPM Triggered By:		<input checked="" type="checkbox"/> RFD	<input type="checkbox"/> PCO
		<input type="checkbox"/> Other:	
Landowner:		SFPUC	
Vegetative Cover/Land Use:		N/A	Net Acreage Affected: N/A
Modification to:		<input checked="" type="checkbox"/> Mitigation Measure: 5.13.3a Diesel Particulate Matter Reduction	
		<input checked="" type="checkbox"/> Other: Project Design	
		<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

The contractor requests to use two Tier 2 diesel engine Dozers (D11) on the Calaveras Dam Replacement Project (CDRP) that do not have the California Air Resources Board (CARB) Level 3 Diesel Emission Control Strategies. Mitigation Measure 5.13.3a in the project Final Environmental Impact Report (FEIR) states,

"The SFPUC shall ensure that construction-contract specifications include a requirement that all off-road diesel construction equipment is equipped with U.S. Environmental Protection Agency Tier 2 diesel engines as defined in U.S. Code of Federal Regulations, Title 40, Part 89 and are equipped with California Air Resources Board Level 3 Diesel Emission Control Strategies as defined in Title 13, California Code of Regulations, §§2700 through 2710 and meet the California Air Resources Board's most recent certification standards for off-road heavy duty diesel engines. The construction-contract specifications will require the contractor to submit a comprehensive inventory of all off-road construction equipment that will be used during any portion of the construction project. The inventory shall include each piece of equipment's license plate number, horsepower rating, engine production year, confirmation that the equipment contains a Level 3 abatement device verified by the California Air Resources Board, and projected hours of use or fuel throughput for each piece of equipment. The contractor shall update the inventory and submit it monthly to the SFPUC throughout the duration of the project."

This MPM proposes to allow the use of two D11s that cannot be retrofitted to meet CARB Level 3 Diesel Emission Control Strategies specified in the CDRP FEIR due to current CalOSHA requirements. (see attached letter from Johnson/Caterpillar (dated 3/9/12) stating "Caterpillar has no level 3 after treatment device that is currently approved by California Air Resources Board (CARB)".)

Per California Occupational Safety and Health Administration (CalOSHA) standard (Title 8 Chapter 4, section 1591) the visibility testing requirements for the vehicle retrofits do not meet the standards for vehicle retrofit installation.

The D11 Tier 2 diesel engine level 3 diesel emission strategy retrofit will impede the visibility of the operator therefore the D11 cannot be operated safely on the construction site and meet the specified CARB Level 3 diesel emission control strategy. Currently Caterpillar is working on development of a CARB Level 3 diesel particulate filter product (see attached letter from Caterpillar dated 2/2/12).

ENVIRONMENTAL IMPACTS

No environmental impacts beyond those previously analyzed in the FEIR.

Attachments: The contractor has provided supporting documentation that shows how the project is meeting its diesel particulate matter reduction goals despite the use of the D11s. The contractor has submitted the following supporting documents:

- Contractor Letter dated 3/20/12 with attachments:
 - Summary of DFSJV Emissions (Calculated Output)
 - Current Total Equipment Usage for CDRP Work (1- D11)
 - DFSJV Emissions Analysis with 2- D11s
 - CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PROPOSED STATETANDARD, TITLE 8, CHAPTER 4 OSHSB-98(2/98) §1591. Haulage Vehicles, Equipment- Construction and Maintenance.
 - Letters from CAT Regarding Updating Equipment with Tier 3 Diesel Emissions Control

Biological Yes No **Cultural** Yes No **Photos** Yes No **Other** Yes No

Resources:

N/A

Biological No Resources Present Resources Present NA

Previous Biological Survey Report Reference:

N/A

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Cultural Survey Report Reference:

N/A

Conditions of Approval or Reasons for Denial

SFPUC Required Signatures for Environmental Approval:

ECCM: Kerry O'Neill

Date: 3/21/12

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code:

MEA Required Signatures for Approval:

Signee: Steven H. Smith

Date: 3/28/2012

Approved

Approved with Conditions (see conditions above)

Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input checked="" type="checkbox"/> Y	The D11 emissions would not result in exhaust emissions that would be beyond what was analyzed in the CDRP FEIR. The diesel emissions reduction goals will be met despite the use of two D11s. There would be no new air quality impacts. The contractor will continue to submit a monthly comprehensive inventory of all off-road construction equipment. See attached documentation.
	<input type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	



DRAGADOS USA, INC. / FLATIRON WEST, INC. / SUKUT CONSTRUCTION, INC. JOINT VENTURE
 1111 L STREET, SACRAMENTO, CA 95814 PHONE: 855-284-1723 FAX: 855-284-1724 EMAIL: CALAVERASDAM@DRAGADOS-USA.COM

March 20, 2012

Transmittal: DFSJV Equipment Emissions

This transmittal is regarding DFSJV's emissions from equipment being used for the Calaveras Dam Replacement Project. DFSJV proposes to operate two D11s on the Project. Although DFSJV's overall fleet exceeds the State targets and achieves emissions standards determined for the project in the Air Pollution Control Plan (APCP), the D11s (Tier 2) can't be fitted with California Air Resources Board Level 3 Diesel Emission Control Strategy. California Occupational Safety and Health Standards limit placing exhaust retrofit equipment that would limit the operator's visibility. Retrofitting the D11s would decrease visibility and result in unsafe operation of this piece of equipment. We have included with this transmittal, documentation from the manufacturer demonstrating this restriction.

DFSJV verified that our fleet (including the D11s) meets the requirements of the APCP and the State requirements for emissions reduction by utilizing the Sacramento Metropolitan Air Quality Mitigation Calculator. All inputs to the calculator and outputs have been included with this transmittal.

The APCP states the DFSJV will achieve approximate reductions below the State wide average in the range of values bellow:

- Reduction NOx: 40%-60%
- Reduction PM10: 50%-70%
- Reduction PM2.5: 50%-70%

DFSJV's fleet emissions (g/bhp-hr) are 66% for NOx, 65% for PM10, and 64% for PM2.5 below the State wide average for construction equipment. Based on the equipment modifications made and DFSJV's calculations, DFSJV's fleet is in compliance and operating two D11s without Tier 3 equipment would not significantly increase DFSJV's emissions.

Targets AND Calculated Reductions in Emissions			
	NOx	PM 10	PM 2.5
State Targets from SMAQD Mitigation Calculator	>20%	>46%	>46%
DFSJV's Targets from the Air Pollution Control Plan	40%-60%	50%-70%	50%-70%
DFSJV's Fleet Emissions (Calculated with 2- D11s)	66%	65%	64%



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1111 L STREET, SACRAMENTO, CA 95814 PHONE: 855-284-1723 FAX: 855-284-1724 EMAIL: CALAVERASDAM@DRAGADOS-USA.COM

Documentation Included:

- Summary of DFSJV Emissions (Calculated Output)
- Current Total Equipment Usage for CDRP Work (1- D11)
- DFSJV Emissions Analysis with 2- D11s
- CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PROPOSED STATE STANDARD, TITLE 8, CHAPTER 4 OSHSB-98(2/98) §1591. Haulage Vehicles, Equipment-Construction and Maintenance.
- Letters from CAT Regarding Updating Equipment with Tier 3 Diesel Emissions Control



DRAGADOS USA, INC. / FLATIRON WEST, INC. / SUKUT CONSTRUCTION, INC. JOINT VENTURE

MONTHLY OFFROAD EQUIPMENT INVENTORY

DATE OF REPORT:		3/2/2012		PROJECTED 2/01/12 THROUGH: 2/29/12							
	EQUIPMENT #	CARB ID#	HORSE POWER	ENGINE YR	ENGINE TIER / ABATEMENT DEVICE	PROJECTED HOURS OF USAGE	GPH	FUEL CONSUMED	NOTES		
1	1043	RP4T79	580	2006	TIER 3	125	22	1,985	(SEI) D10 DOZER		
2	5126	DR7W98	600	2007	TIER 3	40	12	332	(SEI) 651 SCRAPER		
3	5128	XC3E66	600	2006	TIER 3	80	12	599	(SEI) 651 SCRAPER		
4	9033	HV5D73	410	2006	TIER 3	120	16	1,675	(SEI) D9 DOZER		
5	10054	HT3W84	110	2000	TIER 3	100	1.5	110	(POWERPLUS) FORKLIFT		
6	34505	DK3S48	400	2007	TIER 3	125	12	1,386	(SEI) 345 EXCAVATOR		
7	74003	SF9C64	469	2007	TIER 3	32	13	351	(SEI) 740 ARTICULATED TRUCK		
8	74004	LL5X65	469	2006	TIER 3	40	13	413	(SEI) 740 ARTICULATED TRUCK		
9	77303	RW7H45	740	2007	TIER 3	8	15	8	(SEI) 773 ROCK TRUCK		
10	77305	EX9B68	740	2007	TIER 3	8	15	273	(SEI) 773 ROCK TRUCK		
11	77308	JU5H84	740	2007	TIER 3	40	15	60	(SEI) 773 ROCK TRUCK		
12	77309	SD9K46	705	2009	TIER 3	40	15	210	(SEI) 773 ROCK TRUCK		
13	77310	PK4J77	705	2009	TIER 3	32	15	117	(SEI) 773 ROCK TRUCK		
14	99001	NP8A37	687	2007	TIER 3	40	18	324	(SEI) 990 LOADER		
15	HOLD6	FV5E73	200	2008	TIER 3	40	18	43	Rental D6 Dozer		
16	4810057	SH9L46	122	2008	TIER 3	8	15	97	(FWI) FORKLIFT		
17	210LE	LT6L45	150	2007	TIER 3	40	6	69	DEERE 210 LE SKIPLOADER		
18	328DLGR	CS7M39	202	2008	TIER 3	24	7	69	DEERE 210 LE SKIPLOADER		
19	349E	EH9H45	425	2011	TIER 4	60	10	545	(FWI) 328 EXCAVATOR		
20	430 E	FW9L59	180	2007	TIER 3	24	12	107	(CRESCO) 349 EXCAVATOR		
21	D4KXL	NW4B87	100	2008	TIER 3	24	12	107	(CRESCO) 349 EXCAVATOR		
22	CAT 16G	KY7H67	300	2006	TIER 3	32	7	47	(Cal Comp) 430 BACKHOE		
23	CAT 450E	VF5X67	124	2011	TIER 3	32	7	47	(Cal Comp) 430 BACKHOE		
24	5121	EE7L38	600	2006	TIER 3	32	8	86	(FWI) SMALL D4 DOZER		
25	5123	MG8L96	600	2006	TIER 3	32	8	86	(FWI) SMALL D4 DOZER		
26	GTN00524	XK9S99	204	2009	TIER 3	40	15	180	(SEI) 16G BLADE		
27	1102	AR9X97	875	2009	TIER 2	40	15	180	(SEI) 16G BLADE		
28	5125	YX5Y39	600	2006	TIER 3	40	10	122	(FWI) 450E BACKHOE		
29	5127	PF6J56	600	2006	TIER 3	40	10	122	(FWI) 450E BACKHOE		
30	5129	GY9N97	600	2006	TIER 3	40	12	354	(SEI) 651 SCRAPER		
31	5160	KH5P86	540	2006	TIER 3	40	12	205	(SEI) 651 SCRAPER		
32	5174	RM3G94	540	2006	TIER 3	40	12	205	(SEI) 651 SCRAPER		
33	82502	BV5P86	354	2006	TIER 3	40	10	523	(CAL COMP) 328 EXCAVATOR		
34	3406	NC3Y56	498	2006	TIER 3	80	10	523	(CAL COMP) 328 EXCAVATOR		
35	9604	WW3P43	286	2006	TIER 3	60	35	670	(SEI) D11 Dozer		
36	1023	AB6J53	580	2006	TIER 3	60	12	436	(SEI) 651 SCRAPER		
37	1024	KC3R76	580	2006	TIER 3	80	12	517	(SEI) 651 SCRAPER		
38	1042	SR3H45	580	2006	TIER 3	60	12	343	(SEI) 651 SCRAPER		
								129	(SEI) 651 SCRAPER		
								122	(SEI) 651 SCRAPER		
								122	(SEI) 651 SCRAPER		
								257	(SEI) 825 COMPACTOR		
								359	(SEI) 834B RUBBER TIRE DOZER		
								23	(SEI) 966 LOADER		
								375	(SEI) D10 DOZER		
								323	(SEI) D10 DOZER		
								524	(SEI) D10 DOZER		
								14,299	FUEL USAGE		

SMAQMD Construction Mitigation Calculator Outputs
 Version 6.0.5 updated by TIAX LLC for SMAQMD, 4 May 2010

CDRP, Chuck Charpentier, 925.493.4577

Comparison of your project fleet's emissions with the statewide average for construction equipment

Your fleet's emission factors based on what you have entered so far >>
 Statewide average emission factors as determined by this calculator >>

#N/A or #Value! indicates that you must return to the input page and correct engine data.
 Be sure to press the Record Data button after each entry.

Fleet average emissions reductions for this project relative to California state average (g/bhp-hr)**	
Compare your fleet-wide g/bhp-hr average with the statewide g/bhp-hr average for construction equipment	
Fleet NOx: 1.79	Fleet ROG: 0.18
ARB Average NOx: 5.34	ARB Average ROG: 0.69
NOx Reduced: 3.55	ROG Reduced: 0.51
Reduction NOx: 66%	Reduction ROG: 74%
NOx Passes: >20%	ROG Passes: >20%
Compare your fleet-wide average daily emissions with statewide average fleet of same size (lbs/day)	
Fleet NOx: 330.98	Fleet ROG: 33.76
ARB Average NOx: 848.65	ARB Average ROG: 109.89
Your overall project emissions (lbs):	ARB Average PM10: 14.71
Total NOx: 284782	ARB Average PM2.5: 13.84
Total ROG: 26959	ARB Average PM2.5 Passes: >45%
Total Lbs PM10: 11771	ARB Average PM2.5: 33.05
**Only emissions rates from construction equipment considered in statewide average. All state average calculations use emission factors provided in ARB MO99-32.5 (diesel engines >25hp) and MO98-23 (gasoline engines >25hp). U.S.D use is assumed in state average.	

Input Characteristics

Output Data Sheet
(don't modify any
cells above Row 4)

Equipment Type	Qty. equipment	Equipment Model Year	Current Year	Years Since Last Rebuild	Equipment Horsepower	Hours Operated during project	Hours Operated per vehicle	Total Engine Hours Operated (for this piece of equipment)	Fuel	Load Factor	Zero Hour Emission Factor NOx w/out DECS	Deterioration Factor NOx
Graders	1	2006	2012		473.63462	121733	2000	3900 ULS	0.61	2.45	0.000032	
Graders	1	2006	2012		300		2000	3900 ULS	0.61	2.45	0.000032	
Rollers	2	2009	2012		160		2000	1500 ULS	0.56	2.45	0.000032	
Scrapers	10	2006	2012		600		4000	7500 ULS	0.72	2.45	0.000032	
Off-Highway	2	2007	2012		725		4000	8500 ULS	0.57	2.45	0.000032	
Crawler Traci	2	2009	2012		600		4000	10500 ULS	0.64	2.45	0.000032	
Crawler Traci	1	2009	2012		875		4000	11442 ULS	0.64	4.29	0.000058	
Crawler Traci	1	2009	2012		875		2000	1524 ULS	0.64	4.29	0.000058	
Excavators	1	2004	2012		114		720	9772 ULS	0.57	5.64	0.000103	
Rubber Tired	1	2008	2012		125		720	2871 ULS	0.54	2.45	0.000032	
Bore/Drill Rig	1	2009	2012		717		720	1622 ULS	0.75	2.45	0.000032	
Cranes	1	2000	2012		215		12	13772 ULS	0.43	6.25	0.000145	
Other Constr	1	2011	2012		80		540	0 ULS	0.62	2.89	0.000038	
Other Constr	1	2008	2012		315		720	2070 ULS	0.62	2.45	0.000032	
Other Constr	1	2002	2012		110		56	6210 ULS	0.62	6.9	0.000160	
Graders	1	2005	2012		250		2000	2541 ULS	0.61	4.38	0.000063	
Scrapers	5	2007	2012		600		2000	4256 ULS	0.72	2.45	0.000032	
Crawler Traci	1	2006	2012		410		2000	4256 ULS	0.64	2.45	0.000032	
Crawler Traci	1	2008	2012		200		2000	3970 ULS	0.64	2.45	0.000032	
Rubber Tired	1	2007	2012		687		2000	14131 ULS	0.54	2.45	0.000032	
Scrapers	2	2007	2012		600		4000	10500 ULS	0.72	2.45	0.000032	
Off-Highway	2	2006	2012		469		2000	3650 ULS	0.57	2.45	0.000032	
Off-Highway	4	2008	2012		725		2000	2500 ULS	0.57	2.45	0.000032	
Crawler Traci	2	2008	2012		203		2000	1981 ULS	0.64	2.45	0.000032	
Rubber Tired	1	2007	2012		180		1000	960 ULS	0.54	2.45	0.000032	
Rough Terral	1	2006	2012		122		1000	1023 ULS	0.6	4.44	0.000065	
Crawler Traci	1	2006	2012		410		1000	8701.9 ULS	0.64	2.45	0.000032	
Skid Steer Lc	1	2007	2012		150		1245	1000 ULS	0.55	2.45	0.000032	
Crawler Traci	1	2008	2012		100		1000	1000 ULS	0.64	2.89	0.000038	
Crawler Traci	1	2006	2012		580		2000	6351.4 ULS	0.64	2.45	0.000032	
Excavators	1	2007	2012		400		1000	2287 ULS	0.57	2.45	0.000032	

Emission factor lookups and effective daily emissions before DECS												
Equipment Type	Qty. equipment	Model Year	Effective Emission Factor NOx (g/bhp-hr) w/out DECS	Effective Daily Emissions NOx (lbs/day)	Zero Hour Emission Factor ROG w/out DECS	Deterioration Factor ROG	Effective Emission Factor ROG w/out DECS	Zero Hour Emission Factor PM2.5 w/out DECS	Deterioration Factor PM2.5	Effective Emission Factor PM2.5 w/out DECS	Zero Hour Emission Factor PM10 w/out DECS	Effective Emission Factor PM10 w/out DECS
Graders	1	2006	1.49	2.46	0.1	0.00	0.12	0.20	0.1012	0.00	0.10	0.11
Graders	1	2006	1.49	2.46	0.1	0.00	0.12	0.20	0.1012	0.00	0.10	0.11
Rollers	2	2009	1.33	2.34	0.1	0.00	0.08	0.14	0.1288	0.00	0.06	0.14
Scrapers	10	2006	1.84	121.37	0.1	0.00	0.21	13.69	0.1012	0.00	0.08	0.11
Off-Highway	2	2007	1.47	23.49	0.1	0.00	0.18	2.85	0.1012	0.00	0.07	0.11
Crawler Traci	2	2009	1.69	22.34	0.1	0.00	0.23	3.07	0.1012	0.00	0.08	0.11
Crawler Traci	1	2009	3.01	28.99	0.12	0.00	0.25	2.41	0.1012	0.00	0.09	0.11
Crawler Traci	1	2009	2.66	12.81	0.12	0.00	0.10	0.48	0.1012	0.00	0.06	0.11
Excavators	1	2004	3.59	0.81	0.46	0.00	0.45	0.10	0.3588	0.00	0.29	0.39
Rubber Tired	1	2008	1.30	0.32	0.1	0.00	0.09	0.02	0.1288	0.00	0.07	0.14
Bore/Drill Rig	1	2009	1.78	2.53	0.1	0.00	0.11	0.15	0.1012	0.00	0.09	0.11
Cranes	1	2000	3.26	0.02	0.32	0.00	0.21	0.00	0.138	0.00	0.08	0.15
Other Constr	1	2011	1.70	0.20	0.1	0.00	0.06	0.01	0.184	0.00	0.10	0.2
Other Constr	1	2008	1.48	0.92	0.1	0.00	0.09	0.06	0.1012	0.00	0.06	0.11
Other Constr	1	2002	4.64	0.08	0.99	0.00	0.79	0.01	0.6348	0.00	0.47	0.69
Graders	1	2005	2.63	3.62	0.12	0.00	0.11	0.15	0.1012	0.00	0.06	0.11
Scrapers	5	2007	1.76	29.18	0.1	0.00	0.15	2.46	0.1012	0.00	0.07	0.11
Crawler Traci	1	2006	1.57	3.54	0.1	0.00	0.13	0.30	0.1012	0.00	0.06	0.11
Crawler Traci	1	2008	1.56	1.72	0.1	0.00	0.13	0.14	0.1012	0.00	0.06	0.11
Rubber Tired	1	2007	1.45	5.49	0.1	0.00	0.22	0.82	0.1012	0.00	0.07	0.11
Scrapers	2	2007	1.90	25.13	0.1	0.00	0.26	3.45	0.1012	0.00	0.09	0.11
Off-Highway	2	2006	1.39	7.17	0.1	0.00	0.11	0.56	0.1012	0.00	0.06	0.11
Off-Highway	4	2008	1.37	21.85	0.1	0.00	0.09	1.48	0.1012	0.00	0.05	0.11
Crawler Traci	2	2008	1.52	3.41	0.1	0.00	0.10	0.21	0.1012	0.00	0.06	0.11
Rubber Tired	1	2007	1.27	0.63	0.1	0.00	0.07	0.03	0.1012	0.00	0.05	0.11
Rough Terrai	1	2006	2.56	0.86	0.16	0.00	0.11	0.04	0.1472	0.00	0.08	0.16
Crawler Traci	1	2006	1.65	1.87	0.1	0.00	0.20	0.23	0.1012	0.00	0.08	0.11
Skid Steer Lc	1	2007	1.29	0.67	0.1	0.00	0.07	0.04	0.1288	0.00	0.06	0.14
Crawler Traci	1	2008	1.78	0.49	0.1	0.00	0.08	0.02	0.184	0.00	0.10	0.2
Crawler Traci	1	2006	1.61	5.14	0.1	0.00	0.17	0.53	0.1012	0.00	0.07	0.11
Excavators	1	2007	1.36	1.50	0.1	0.00	0.09	0.10	0.1012	0.00	0.05	0.11

Impacts due to equipment retrofits (orig)

Equipment Type	Qty. equipment	Equipment Model Year	Deterioration Factor	Effective Emission Factor PM10 w/out DECS	Effective Daily Emissions PM10 w/out DECS	Retrofitted Equipment	Any Change in equipment? emissions				Retrofitted Equipment Horsepower
							in NOx	in ROG	Difference in PM2.5	Difference in PM10	
Graders	1	2006	0.00	0.064	0.11	No	0.00	0.00	0.00	0.00	300
Graders	1	2006	0.00	0.064	0.11	No	0.00	0.00	0.00	0.00	300
Rollers	2	2009	0.00	0.069	0.12	No	0.00	0.00	0.00	0.00	160
Scrapers	10	2006	0.00	0.087	5.78	No	0.00	0.00	0.00	0.00	600
Off-Highway	2	2007	0.00	0.072	1.15	No	0.00	0.00	0.00	0.00	725
Crawler Traci	2	2009	0.00	0.086	1.14	No	0.00	0.00	0.00	0.00	600
Crawler Traci	1	2009	0.00	0.090	0.87	No	0.00	0.00	0.00	0.00	875
Crawler Traci	1	2009	0.00	0.061	0.29	No	0.00	0.00	0.00	0.00	875
Excavators	1	2004	0.00	0.305	0.07	No	0.00	0.00	0.00	0.00	114
Rubber Tired	1	2008	0.00	0.073	0.02	No	0.00	0.00	0.00	0.00	125
Bore/Drill Rig	1	2009	0.00	0.071	0.10	No	0.00	0.00	0.00	0.00	717
Cranes	1	2000	0.00	0.084	0.00	No	0.00	0.00	0.00	0.00	215
Other Constr	1	2011	0.00	0.106	0.01	No	0.00	0.00	0.00	0.00	80
Other Constr	1	2008	0.00	0.060	0.04	No	0.00	0.00	0.00	0.00	315
Other Constr	1	2002	0.00	0.497	0.01	No	0.00	0.00	0.00	0.00	110
Graders	1	2005	0.00	0.061	0.08	No	0.00	0.00	0.00	0.00	250
Scrapers	5	2007	0.00	0.077	1.27	No	0.00	0.00	0.00	0.00	600
Crawler Traci	1	2006	0.00	0.068	0.15	No	0.00	0.00	0.00	0.00	410
Crawler Traci	1	2008	0.00	0.068	0.07	No	0.00	0.00	0.00	0.00	200
Rubber Tired	1	2007	0.00	0.076	0.29	No	0.00	0.00	0.00	0.00	687
Scrapers	2	2007	0.00	0.097	1.28	No	0.00	0.00	0.00	0.00	600
Off-Highway	2	2006	0.00	0.059	0.31	No	0.00	0.00	0.00	0.00	469
Off-Highway	4	2008	0.00	0.056	0.90	No	0.00	0.00	0.00	0.00	725
Crawler Traci	2	2008	0.00	0.062	0.14	No	0.00	0.00	0.00	0.00	203
Rubber Tired	1	2007	0.00	0.050	0.02	No	0.00	0.00	0.00	0.00	180
Rough Terrai	1	2006	0.00	0.083	0.03	No	0.00	0.00	0.00	0.00	122
Crawler Traci	1	2006	0.00	0.081	0.09	No	0.00	0.00	0.00	0.00	410
Skid Steer Lc	1	2007	0.00	0.066	0.03	No	0.00	0.00	0.00	0.00	150
Crawler Traci	1	2008	0.00	0.107	0.03	No	0.00	0.00	0.00	0.00	100
Crawler Traci	1	2006	0.00	0.074	0.24	No	0.00	0.00	0.00	0.00	580
Excavators	1	2007	0.00	0.056	0.06	No	0.00	0.00	0.00	0.00	400

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daily changes to equipment but now just existing retrofitted equipment)

Equipment Type	Qty. equipment	Equipment Model Year	Retrofitted Estimated Hours Operated during Project	Total Engine Hours Operated (for this retrofitted piece of equipment)	Number of pieces of equipment with the above characteristics	Retrofit?	Retrofit NOx reduction		Retrofit ROG reduction		Retrofit PM2.5 reduction		Retrofit PM10 reduction		Zero Hour Emission Factor NOx w/o DECS
							percent	percent	percent	percent	percent	percent	percent	percent	
Graders	1	2006	2000	3900	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Graders	1	2006	2000	3900	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Rollers	2	2009	2000	1500	2	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Scrapers	10	2006	4000	7500	10	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Off-Highway	2	2007	4000	8500	2	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Crawler Traci	2	2009	4000	10500	2	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Crawler Traci	1	2009	4000	11442	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	4.29
Crawler Traci	1	2009	2000	1524	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	4.29
Excavators	1	2004	720	9772	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	5.64
Rubber Tired	1	2008	720	2871	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Bore/Drill Rig	1	2009	720	1622	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Cranes	1	2000	12	13772	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	6.25
Other Constr	1	2011	540	0	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.89
Other Constr	1	2008	720	2070	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Other Constr	1	2002	56	6210	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Graders	1	2005	2000	2541	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	6.90
Scrapers	5	2007	2000	4256	5	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	4.38
Crawler Traci	1	2006	2000	4256	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Crawler Traci	1	2008	2000	3970	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Rubber Tired	1	2007	2000	14131	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Scrapers	2	2007	4000	10500	2	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Off-Highway	2	2006	2000	3650	2	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Off-Highway	4	2008	2000	2500	4	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Crawler Traci	2	2008	2000	1981	2	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Rubber Tired	1	2007	1000	960	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Rough Terrai	1	2006	1000	1023	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	4.44
Crawler Traci	1	2006	1000	8701.9	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Skid Steer Lc	1	2007	1245	1000	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Crawler Traci	1	2008	1000	1000	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.89
Crawler Traci	1	2006	2000	6351.4	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45
Excavators	1	2007	1000	2287	1	No	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	#/N/A	2.45

Emission factor lookups and effective daily emissions with DECS

Equipment Type	Qty. equipment	Equipment Model Year	Effective Emission			Effective Emission			Effective Emission			Effective Emission		
			Deterioration Factor	NOx w/ DECS	NOx (lbs/day)	Deterioration Factor	ROG w/ DECS	ROG (lbs/day)	Deterioration Factor	PM2.5 w/ DECS	PM2.5 (lbs/day)	Deterioration Factor	PM2.5 w/ DECS	PM2.5 (lbs/day)
Graders	52		1.79	330.98	0.18	33.75	0.07	13.84						
Graders	1	2006	1.49	2.46	0.00	0.00	0.12	0.20	0.10	0.10	0.06	0.10	0.11	
Graders	1	2006	1.49	2.46	0.00	0.00	0.12	0.20	0.10	0.10	0.06	0.10	0.11	
Rollers	2	2009	1.33	2.34	0.00	0.00	0.08	0.14	0.13	0.00	0.06	0.11	0.14	
Scrapers	10	2006	1.84	121.37	0.00	0.00	0.21	13.69	0.10	0.00	0.08	5.44	0.11	
Off-Highway	2	2007	1.47	23.49	0.00	0.00	0.18	2.85	0.10	0.00	0.07	1.08	0.11	
Crawler Traci	2	2009	1.69	22.34	0.00	0.00	0.23	3.07	0.10	0.00	0.08	1.08	0.11	
Crawler Traci	1	2009	3.01	28.99	0.00	0.00	0.25	2.41	0.10	0.00	0.09	0.83	0.11	
Crawler Traci	1	2009	2.66	12.81	0.00	0.00	0.10	0.48	0.10	0.00	0.06	0.27	0.11	
Excavators	1	2004	3.59	0.81	0.00	0.00	0.45	0.10	0.35	0.00	0.29	0.07	0.39	
Rubber Tired	1	2008	1.30	0.32	0.00	0.00	0.09	0.02	0.13	0.00	0.07	0.02	0.14	
Bore/Drill Rig	1	2009	1.78	2.53	0.00	0.00	0.11	0.15	0.10	0.00	0.07	0.09	0.11	
Cranes	1	2000	3.26	0.02	0.00	0.00	0.21	0.00	0.14	0.00	0.08	0.00	0.15	
Other Constr	1	2011	1.70	0.20	0.00	0.00	0.06	0.01	0.18	0.00	0.10	0.01	0.20	
Other Constr	1	2008	1.48	0.92	0.00	0.00	0.09	0.06	0.10	0.00	0.06	0.03	0.11	
Other Constr	1	2002	4.64	0.08	0.00	0.00	0.79	0.01	0.63	0.00	0.47	0.01	0.69	
Other Constr	1	2005	2.63	3.62	0.00	0.00	0.11	0.15	0.10	0.00	0.06	0.08	0.11	
Graders	5	2007	1.76	29.18	0.00	0.00	0.15	2.46	0.10	0.00	0.07	1.19	0.11	
Scrapers	1	2006	1.57	3.54	0.00	0.00	0.13	0.30	0.10	0.00	0.06	0.14	0.11	
Crawler Traci	1	2008	1.56	1.72	0.00	0.00	0.13	0.14	0.10	0.00	0.06	0.07	0.11	
Crawler Traci	1	2007	1.45	5.49	0.00	0.00	0.22	0.82	0.10	0.00	0.07	0.27	0.11	
Rubber Tired	2	2007	1.90	25.13	0.00	0.00	0.26	3.45	0.10	0.00	0.09	1.22	0.11	
Scrapers	2	2006	1.39	7.17	0.00	0.00	0.11	0.56	0.10	0.00	0.06	0.29	0.11	
Off-Highway	2	2008	1.37	21.85	0.00	0.00	0.09	1.48	0.10	0.00	0.05	0.84	0.11	
Off-Highway	4	2008	1.52	3.41	0.00	0.00	0.10	0.21	0.10	0.00	0.06	0.13	0.11	
Crawler Traci	2	2008	1.27	0.63	0.00	0.00	0.07	0.03	0.10	0.00	0.05	0.02	0.11	
Rubber Tired	1	2007	2.56	0.86	0.00	0.00	0.11	0.04	0.15	0.00	0.08	0.03	0.16	
Rough Terrai	1	2006	1.65	1.87	0.00	0.00	0.20	0.23	0.10	0.00	0.08	0.09	0.11	
Crawler Traci	1	2006	1.29	0.67	0.00	0.00	0.07	0.04	0.13	0.00	0.06	0.03	0.14	
Skid Steer Lc	1	2007	1.78	0.49	0.00	0.00	0.08	0.02	0.13	0.00	0.10	0.03	0.20	
Crawler Traci	1	2008	1.61	5.14	0.00	0.00	0.17	0.53	0.10	0.00	0.07	0.22	0.11	
Crawler Traci	1	2006	1.36	1.50	0.00	0.00	0.09	0.10	0.10	0.00	0.05	0.06	0.11	

Equipment Type	Qty. equipment	Model Year	Equipment	Deterioration Factor	Effective Emission Factor	Effective Daily Emissions	PM10 w/ DECS	PM10 DECS	14.71	NOT USED		Average hours/year (for this equipment)	ARB NOx (g/bhp-hr)	ARB ROG (g/bhp-hr)	ARB PM2.5 (g/bhp-hr)	ARB PM10 (g/bhp-hr)	Equipment Type Average	ARB equipment NOx (g/bhp-hr)	ARB equipment ROG (g/bhp-hr)
										ARB Hours	ARB								
Graders	52	1 2006		0.00	0.08	0.0642	0.11	0.11	1.49	0.12	0.06	929	1.72	0.16	0.07	0.08	3.91	0.68	
Graders	1	2006		0.00	0.0642	0.11	0.11	1.49	1.49	0.12	0.06	929	1.49	0.12	0.06	0.06	3.97	0.95	
Rollers	2	2009		0.00	0.0694	0.12	0.12	1.33	1.33	0.08	0.06	695	1.33	0.08	0.06	0.07	3.32	0.27	
Scrapers	10	2006		0.00	0.0873	5.78	5.78	1.84	1.84	0.21	0.08	1092	1.84	0.21	0.08	0.09	4.93	0.77	
Off-Highway	2	2007		0.00	0.0717	1.15	1.15	1.47	1.47	0.18	0.07	1958	1.47	0.18	0.07	0.07	2.91	0.43	
Crawler Traci	2	2009		0.00	0.0862	1.14	1.14	1.69	1.69	0.23	0.08	1013	1.69	0.23	0.08	0.09	4.54	1.19	
Crawler Traci	1	2009		0.00	0.0902	0.87	0.87	3.01	3.01	0.25	0.09	1013	3.01	0.25	0.09	0.06	4.54	1.19	
Crawler Traci	1	2009		0.00	0.0608	0.29	0.29	2.66	2.66	0.10	0.06	1013	2.66	0.10	0.06	0.06	4.54	1.19	
Excavators	1	2004		0.00	0.3048	0.07	0.07	3.59	3.59	0.45	0.29	1396	3.59	0.45	0.29	0.30	2.47	0.32	
Rubber Tired	1	2008		0.00	0.0729	0.02	0.02	1.30	1.30	0.09	0.07	957	1.30	0.09	0.07	0.07	2.34	0.31	
Bore/Drill Rig	1	2009		0.00	0.0714	0.10	0.10	1.78	1.78	0.11	0.07	811	1.78	0.11	0.07	0.07	3.11	0.37	
Cranes	1	2000		0.00	0.0845	0.00	0.00	3.26	3.26	0.21	0.08	1252	3.26	0.21	0.08	0.08	2.77	0.63	
Other Constr	1	2011		0.00	0.1056	0.01	0.01	1.70	1.70	0.06	0.10	690	1.70	0.06	0.10	0.11	2.57	0.30	
Other Constr	1	2008		0.00	0.0603	0.04	0.04	1.48	1.48	0.09	0.06	690	1.48	0.09	0.06	0.06	2.57	0.30	
Other Constr	1	2002		0.00	0.4969	0.01	0.01	4.64	4.64	0.79	0.47	690	4.64	0.79	0.47	0.50	2.57	0.30	
Graders	1	2005		0.00	0.0609	0.08	0.08	2.63	2.63	0.11	0.06	929	2.63	0.11	0.06	0.06	3.97	0.95	
Scrapers	5	2007		0.00	0.0770	1.27	1.27	1.76	1.76	0.15	0.07	1092	1.76	0.15	0.07	0.08	4.93	0.77	
Crawler Traci	1	2006		0.00	0.0684	0.15	0.15	1.57	1.57	0.13	0.06	1013	1.57	0.13	0.06	0.07	4.54	1.19	
Crawler Traci	1	2008		0.00	0.0677	0.07	0.07	1.56	1.56	0.13	0.06	1013	1.56	0.13	0.06	0.07	4.54	1.19	
Rubber Tired	1	2007		0.00	0.0763	0.29	0.29	1.45	1.45	0.22	0.07	957	1.45	0.22	0.07	0.08	2.34	0.31	
Scrapers	2	2007		0.00	0.0969	1.28	1.28	1.90	1.90	0.26	0.09	1092	1.90	0.26	0.09	0.10	4.93	0.77	
Off-Highway	2	2006		0.00	0.0594	0.31	0.31	1.39	1.39	0.11	0.06	1958	1.39	0.11	0.06	0.06	2.91	0.43	
Off-Highway	4	2008		0.00	0.0565	0.90	0.90	1.37	1.37	0.09	0.05	1958	1.37	0.09	0.05	0.06	2.91	0.43	
Crawler Traci	2	2008		0.00	0.0620	0.14	0.14	1.52	1.52	0.10	0.06	1013	1.52	0.10	0.06	0.06	4.54	1.19	
Rubber Tired	1	2007		0.00	0.0498	0.02	0.02	1.27	1.27	0.07	0.05	967	1.27	0.07	0.05	0.05	2.34	0.31	
Rough Terrai	1	2006		0.00	0.0826	0.03	0.03	2.56	2.56	0.11	0.08	1123	2.56	0.11	0.08	0.08	3.57	0.71	
Crawler Traci	1	2006		0.00	0.0810	0.09	0.09	1.65	1.65	0.20	0.08	1013	1.65	0.20	0.08	0.08	4.54	1.19	
Skid Steer Lc	1	2007		0.00	0.0660	0.03	0.03	1.29	1.29	0.07	0.06	834	1.29	0.07	0.06	0.07	2.63	0.33	
Crawler Traci	1	2008		0.00	0.1068	0.03	0.03	1.78	1.78	0.08	0.10	1013	1.78	0.08	0.10	0.11	4.54	1.19	
Crawler Traci	1	2006		0.00	0.0744	0.24	0.24	1.61	1.61	0.17	0.07	1013	1.61	0.17	0.07	0.07	4.54	1.19	
Excavators	1	2007		0.00	0.0559	0.06	0.06	1.36	1.36	0.09	0.05	1396	1.36	0.09	0.05	0.06	2.47	0.32	

DECS Designation

Equipment Type	Qty. equipment	Equipment Model Year	29	1924	344	113	121
Graders	52	1 2006	21.5	1190	284	86	92
Graders		1 2006	21.5	1190	284	86	92
Rollers		2 2009	15.6	371	44	13	14
Scrapers		10 2006	38.4	2957	461	181	195
Off-Highway		2 2007	32.3	2106	309	76	82
Crawler Traci		2 2009	26.9	2723	715	204	217
Crawler Traci		1 2009	26.9	3971	1043	297	316
Crawler Traci		1 2009	26.9	3971	1043	297	316
Excavators		1 2004	17.2	282	37	9	10
Rubber Tired		1 2008	18.7	292	38	10	11
Bore/Drill Rig		1 2009	23.1	2228	263	78	85
Cranes		1 2000	28.7	595	135	42	45
Other Constr		1 2011	12.5	205	24	7	8
Other Constr		1 2008	12.5	809	96	28	31
Other Constr		1 2002	12.5	283	33	10	11
Other Constr		1 2005	21.5	992	237	71	76
Scrapers		5 2007	38.4	2957	461	181	195
Crawler Traci		1 2006	26.9	1861	489	139	148
Crawler Traci		1 2008	26.9	908	238	68	72
Rubber Tired		1 2007	18.7	1607	211	53	58
Scrapers		2 2007	38.4	2957	461	181	195
Off-Highway		2 2006	32.3	1363	200	49	53
Off-Highway		4 2008	32.3	2106	309	76	82
Crawler Traci		2 2008	26.9	921	242	69	73
Rubber Tired		1 2007	18.7	421	55	14	15
Rough Terrai		1 2006	18.5	435	87	29	31
Crawler Traci		1 2006	26.9	1861	489	139	148
Skid Steer Lc		1 2007	8.0	394	49	19	20
Crawler Traci		1 2008	26.9	454	119	34	36
Crawler Traci		1 2006	26.9	2632	692	197	210
Excavators		1 2007	17.2	988	130	33	36

STANDARDS PRESENTATION
TO

Attachment No. 1
Page 1 of 13

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Sections 1504, 1591, 1597, 3663, and 7016; and add new Appendix A to follow Section 1591 and new Section 4925.1, as follows:

Subchapter 4. Construction Safety Orders

* * *

Article 2. Definitions

* * *

§1504. Definitions.

* * *

Excavation, Trenches, Earthwork.

* * *

(G) Shaft. An excavation under the earth's surface in which the depth, is much greater than its cross-sectional dimensions such as those formed to serve as wells, cesspools, certain foundation footings, and under streets, railroads, buildings, etc.

Exhaust Retrofit. Modifications made to a vehicle's existing exhaust system to install an air pollution control device, including the air pollution control device and all modified sections of the vehicle's exhaust pipes.

Exit. Exit is a continuous and unobstructed means of egress to a public way, and shall include intervening doors, doorways, corridors, exterior exit balconies, ramps, stairways, smoke-proof enclosures, horizontal exits, exit passageways, exit courts, and yards.

* * *

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 10. Haulage and Earth Moving

* * *

STANDARDS PRESENTATION
TO

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§1591. Haulage Vehicles, Equipment-Construction and Maintenance.

* * *

(m) Exhaust retrofits shall be installed and maintained in accordance with the following:

(1) An exhaust retrofit shall not reduce the capacity, structural integrity, or safe performance of a vehicle.

(2) An exhaust retrofit shall not reduce the operator's ability to access or egress a vehicle safely.

(3) An exhaust retrofit shall be located or effectively shielded such that it does not increase the risk of a fire due to accidental contact with hydraulic fluid or fuel spilled during transfer or sprayed from a broken hose, pipe, or container.

(4) An exhaust retrofit shall be located or effectively shielded such that it does not increase the risk of the operator, during performance of normal duties, contacting exhaust system surfaces having a temperature of 140 degrees F (60 degrees C) or higher.

(5) Before a vehicle equipped with an exhaust retrofit is placed in use, the effect of the retrofit on the operator's visibility shall be evaluated in accordance with the Visibility Testing Procedures (visibility test) in Appendix A of this Section, and the retrofit shall pass the visibility test, in accordance with Section B of Appendix A.

(6) Where subsection (m)(5) requires visibility testing be conducted on a vehicle, the employer shall maintain a written record of the visibility testing. The visibility testing record shall be readily available as long as the employer uses the vehicle. The record shall include the following information:

(A) Type of vehicle, manufacturer, and model number;

(B) Vehicle identification number;

(C) Manufacturer and model of the exhaust retrofit;

(D) If the exhaust stack is modified, diagrams and measurements showing the dimensions and location, with respect to the operator, of the modified exhaust stack and the OEM exhaust stack;

(D) The pass/fail results of the visibility test;

(E) The printed name, signature and contact information of the person conducting the visibility test; and

(F) The test date.

EXCEPTION: The employer is not required to maintain a record of the visibility testing conducted on a vehicle if all sections of the exhaust retrofit are completely inside the Original Equipment Manufacturer (OEM) engine compartment.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Add New Appendix A and New Figures 1 – 11 as follows:

Appendix A to Section 1591

Visibility Testing Procedures (Mandatory)

A. General Requirements.

1. Scope and Application. Where Sections 1591, 1597, 3663, 4925.1, or 7016 require a vehicle equipped with an exhaust retrofit to be evaluated to determine the effect of the retrofit on the operator's visibility, the evaluation shall be conducted in accordance with the Visibility Testing Procedures (visibility test) of this Appendix.

2. Definitions.

a. Exhaust Retrofit. Modifications made to a vehicle's existing exhaust system to install an air pollution control device, including the air pollution control device and all modified sections of the vehicle's exhaust pipes.

b. Masking. Masking is the area where the operator's vision is blocked, as illustrated in Figure 1, where the shaded area to the right of the retrofit represents masking created by the retrofit.

3. All line of sight measurements required by these procedures shall consider the operator's direct view without the use of mirrors or cameras.

B. Test Procedures and Performance Criteria.

1. All sections of an exhaust retrofit shall comply with one or more of the conditions listed in subsections B.3.a through B.3.d. The conditions in subsections B.3.a through B.3.c apply to all sections of a retrofit, including exhaust stacks. The conditions in subsection B.3.d apply only to retrofit exhaust stacks. Any, or all, of the test procedures referenced in subsections B.3.a through B.3.d may be used to evaluate different sections of a single retrofit, noting again that the procedures referenced in subsection B.3.d apply only to retrofit exhaust stacks. All sections of a retrofit shall be evaluated, including all sections of pollution control devices and modified sections of exhaust pipes. In addition, vehicle modifications made as part of the retrofit installation, such as expanding an engine compartment hood or adding a heat shield, shall be evaluated as a part of the retrofit.

2. A retrofit passes the visibility test, if all sections of the retrofit, except the exhaust stack, meet the performance criteria of at least one of the test procedures referenced in subsections B.3.a through B.3.c, and the retrofit exhaust stack meets the performance criteria of at least one of the test procedures referenced in subsections B.3.a through B.3.d.

3. Subsections B.3.a through B.3.d list conditions for passing the visibility test as specified in subsections B.1 and B.2.

a. The retrofit section is inside the Original Equipment Manufacturer (OEM) engine compartment, as determined by the test procedures and criteria in subsection C.1.

b. The retrofit section is out of the operator's sight or is below the operator's line of sight to the edge of the vehicle, as determined by the test procedures and criteria in subsection C.2.

c. The retrofit section does not block the operator's view of the top of a 5 foot high railing positioned around the vehicle directly above a line on the test surface located a distance of

40 inches outside of the smallest rectangle encompassing the perimeter of the vehicle, as determined by the test procedures and criteria in Section D.

d. The retrofit exhaust stack does not create more masking than the OEM exhaust stack, as determined by the test procedures and criteria in Section E.

C. Zero Masking Visibility Test Procedures.

The procedures in Section C may be used to evaluate retrofit components located, with respect to the operator's view, under, behind, or in front of parts of the vehicle to determine that the vehicle, and not the retrofit, blocks the operator's view towards the ground.

1. Retrofit components inside the OEM engine compartment. The procedures and criteria in subsections C.1.a and C.1.b apply when the conditions in subsections B.3.a must be met to comply with the provisions in Section B.

a. Determine the location of the retrofit component with respect to the OEM engine compartment.

b. The retrofit component meets the test criteria for this zero masking visibility test procedure if the component is located inside the boundary of the OEM engine compartment.

2. Retrofit components out of the operator's sight (see Figures 2 and 3) or below the operator's line of sight to the edge of the vehicle (see Figures 4 and 5). The procedures and criteria in subsections C.2.a through C.2.e apply when the conditions in subsections B.3.b must be met to comply with the provisions in Section B.

a. Position the vehicle as instructed in Section F.

b. Position the light source as instructed in Section I.

c. Stand next to the vehicle with the retrofit component between you and the light source. Move forward and backward and adjust your eye height, as necessary, so that your line of sight to the center of the light is in line with the edge of the vehicle surrounding the retrofit component.

d. While adjusting your eye height as needed to maintain the line of sight established in subsection C.2.c., move your eye position laterally so that your line of sight travels along the entire edge of the vehicle surrounding the retrofit component, from one end of the component to the other.

e. The retrofit component meets the test criteria for this zero masking visibility test procedure if it does not block your view of both lights when performing the procedure in subsection C.2.d.

D. Rectangular Boundary Visibility Test Procedures.

The procedures in Section D may be used to evaluate retrofit components that obstruct the operator's view towards the ground to determine whether a retrofit component creates masking 5 feet above a line on the test surface that is a distance of 40 inches outside of the smallest rectangle encompassing the perimeter of the vehicle. The procedures and criteria in subsections D.1 through D.8.c apply when the conditions in subsection B.3.c must be met to comply with the provisions in Section B.

1. Position the vehicle as instructed in Section F.

2. Position the light source as instructed in Section I.

3. Mark a rectangular boundary line on the test surface at a distance of 40 inches outside of the smallest rectangle encompassing the perimeter of the vehicle. It is not necessary to mark

the boundary line around the entire vehicle, provided that the length and location of the marked area is sufficient to allow the measurements required by this Section. For excavators, the front of the track shall be used for determining the boundary line. For other vehicles equipped with buckets or blades, the boundary line shall be determined using the bucket or blade in the traveling position (see Figure 6).

4. Use a straight, rigid material, such as pipe, to construct a stable, self-supporting, horizontal railing 5 feet in height at the top of the railing.

5. Position the railing directly over the rectangular boundary line such that the railing and the retrofit are directly between you and the light source (see Figure 7).

6. Adjust your eye height so that your line of sight to the center of the light source is in line with the top of the railing.

7. While adjusting your eye height as needed to maintain the line of sight established in subsection D.6, move your eye position laterally so that your line of sight travels along the entire length of railing that is above, below, or in line with the retrofit component, from one end of the component to the other (see Figure 8).

8. The retrofit component meets the test criteria for this rectangular boundary visibility test procedure if, when performing the procedure in subsection D.7, all of the following conditions are met:

- a. The retrofit component does not block your view of both lights.
- b. The retrofit component is not visible above your line of sight.
- c. The retrofit component is not above a part of the vehicle blocking your view of both lights.

E. Exhaust Stack Visibility Test Procedures.

The procedures in Section E may be used to evaluate vertical retrofit exhaust stacks to determine whether a vertical retrofit exhaust stack, due to its size and location, creates no more masking than the OEM exhaust stack. The procedures and criteria in subsections E.1 through E.3.c apply when the conditions in subsections B.3.d must be met to comply with the provisions in Section B.

1. Determine the diameter of the retrofit exhaust stack and the OEM exhaust stack.

2. Determine the location of the retrofit exhaust stack and the OEM exhaust stack in relation to the operator's position.

3. The retrofit exhaust stack meets the test criteria for this exhaust stack visibility test procedure if it meets all of the following conditions:

- a. The modification is not larger in diameter than the OEM exhaust pipe.
- b. The modification is not closer to the operator than the OEM exhaust pipe.
- c. The modification is in the same position as the OEM exhaust pipe in relation to the operator's 360 degree view towards the horizon.

F. Vehicle Position.

The procedures in subsections F.1 and F.2 shall apply when the conditions in subsections B.3.b or B.3.c must be met to comply with the provisions in Section B.

1. Park the vehicle on an area of compacted earth or paved surface with a gradient of no more than 3% in any direction. The area must be of sufficient size to ensure that the measurements required by the visibility test are conducted on a flat horizontal plane.

2. Turn off the vehicle engine, set the parking brake, and block the tires. Position attachments, such as buckets and blades, in the traveling position and block them in place. Exception: The bucket or blade may be lowered to the ground instead of being blocked in the traveling position, provided that this lowered position does not affect the visibility test results.

G. Seat Reference Point.

The procedures in subsections G.1 through G.6 apply when the conditions in subsections B.3.b or B.3.c must be met to comply with the provisions in Section B. The seat reference point is used to establish the operator's eye position, which is used to perform line of sight measurements to identify masking. The seat reference point shall be located and marked, as follows:

1. If the seat pan has a tilt feature, adjust the seat pan so that it is as level as possible.
2. If the seat can be adjusted forward and backward, adjust the seat so that it is midway between the maximum forward and maximum rearward position.
3. If the seat height can be adjusted, adjust the seat height so that it is midway between the minimum and maximum height.
4. If the compression of the seat cushion is adjustable (air suspension seats), adjust the seat compression so that it is midway between its maximum and minimum range.
5. Use a carpenter's square to locate the seat reference point, as follows (see Figure 9):
 - a. Rest the edge of one arm of the carpenter's square on the seat cushion such that it is level and bisects the seat from left to right.
 - b. Position the other arm of the carpenter's square such that it is vertical and its edge touches the most forward part of the seat backrest.
6. Mark a point on the center line of the seat 4½ inches in front of the most forward part of the backrest. This point is the seat reference point.

H. Light Filament Height.

The procedures in subsections H.1 through H.5 apply when the conditions in subsections B.3.b or B.3.c must be met to comply with the provisions in Section B. The light filament height is the vertical distance above the seat reference point that represents the eye level of the average height and weight operator when sitting. For seats with hard seat pans without cushions, the light filament height is 30½ inches, provided that, when sat on, the seat does not sink in elevation (compress) causing the seat reference point to lower. Seats that compress when sat on, such as those with air suspension or seat cushions, cause the average operator's eye level to be lower than 30½ inches above the seat reference point of the unoccupied seat. For seats that compress when sat on, the distance that the operator's seat compresses when an average weight operator sits in it (seat compression) shall be measured and used to determine the light filament height, as follows (see Figure 10):

1. Select a person weighing 165 to 215 pounds to represent the average weight operator. The operator shall sit on a hard bench or similar surface that does not compress when sat on. Measure and record the distance from the seat surface to the top of the operator's head (sitting height).
2. The operator shall sit upright in the operator's seat with the seat adjusted as described in Section G. Measure and record the distance from the top of the operator's head to an overhead reference point directly above. If an overhead reference point, such as the cab ceiling or a roll

bar, is not available, construct and use a portable reference point. Plastic pipe in the shape of a roll bar may be used for this purpose.

3. With the seat unoccupied and adjusted as provided in Section G, measure the distance from the overhead reference point to the seat reference point.

4. Calculate the seat compression as follows (D-1, D-2, and D-3 refer to Figure 10):

Seat compression = sitting height (D-1), plus the distance from the top of the operator's head to the overhead reference point (D-2), minus the distance from the seat reference point (unoccupied) to the overhead reference point (D-3).

5. Calculate the light filament height as follows:

Light filament height = $30\frac{1}{2}$ inches minus the seat compression.

I. Light Source Position.

The procedures in subsections I.1 through I.5 apply when the conditions in subsections B.3.b or B.3.c must be met to comply with the provisions in Section B. The light source position represents the position of the operator's eyes when operating the vehicle. A light spacing of 8 inches is used to simulate the operator's ability to move his or her head and torso, which increases the horizontal range of eye position. Construct and position a light bar and light bar support device as follows (see Figure 11):

1. Construct a light bar by attaching two lights to a bar such that the lights are 8 inches apart and 4 inches from the center of the light bar.

2. The lights shall be of a type and intensity such that the center of the light source can be easily identified in day light at a distance of 40 feet.

3. Construct a light bar support device such that:

a. The light bar is capable of being rotated 360 degrees on a horizontal plane with the axis of rotation centered between the two lights.

b. The light filaments, or centers, shall be $\frac{1}{2}$ to 2 inches in front of the axis of rotation of the light bar.

4. Position the light bar on the operator's seat such that:

a. It is horizontal and rotates on a horizontal plane.

b. Its axis of rotation is directly above the seat reference point.

c. The vertical center of the light sources is positioned at a height equal to the light filament height calculated in subsection H.5.

5. When measuring masking created by a retrofit, rotate the light bar such that the lights point directly towards the retrofit.

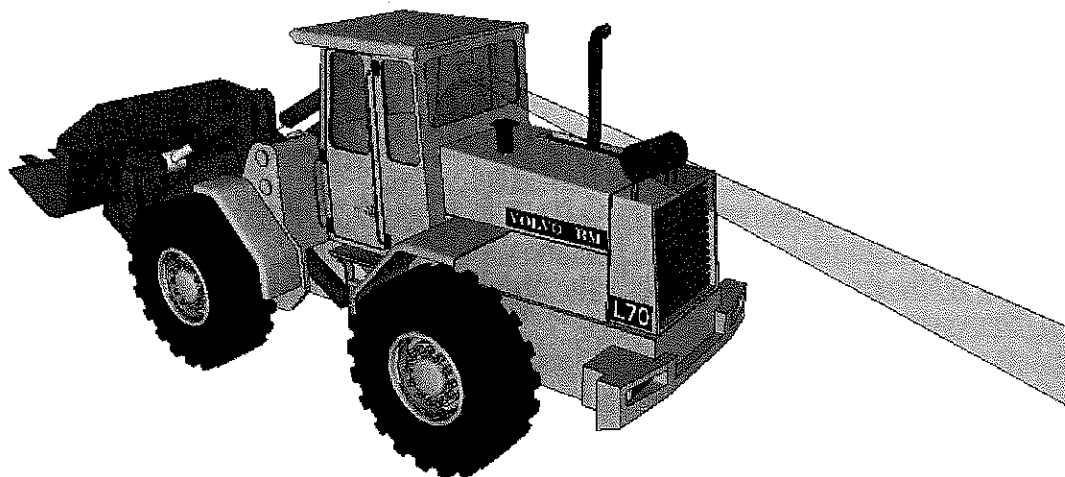


Figure 1

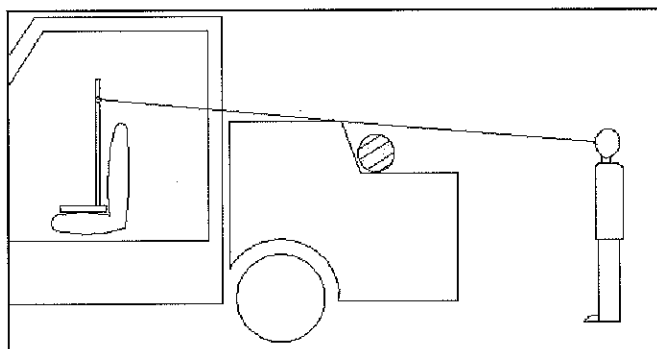


Figure 2

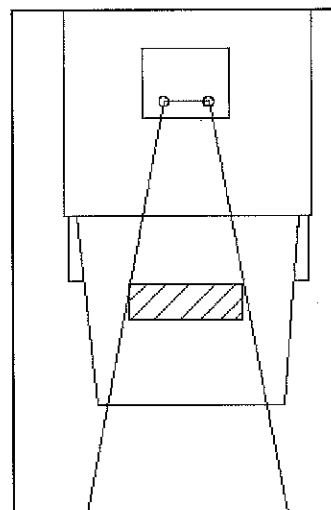


Figure 3

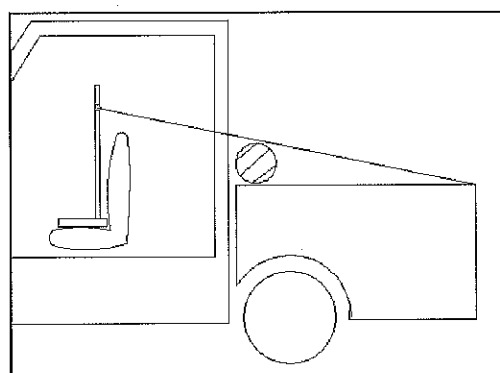


Figure 4

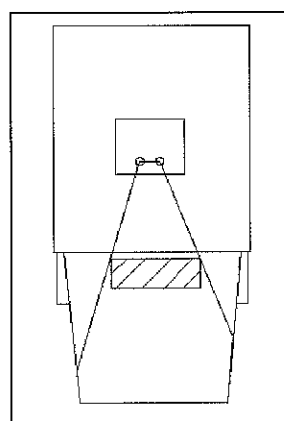


Figure 5

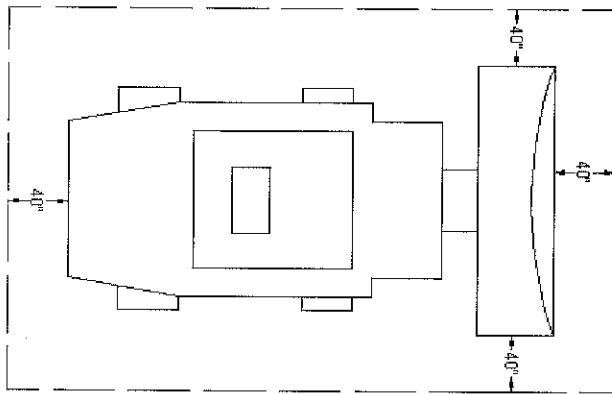


Figure 6

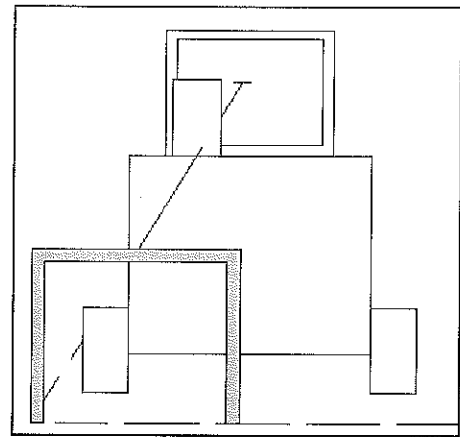


Figure 7

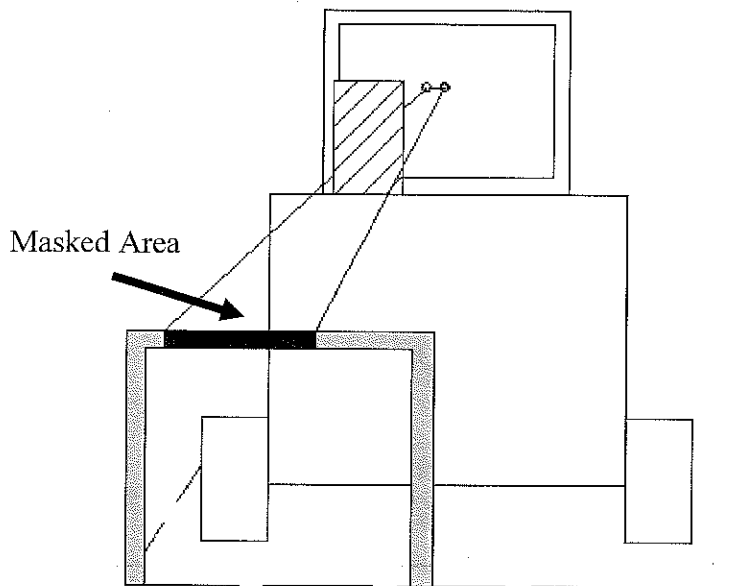


Figure 8

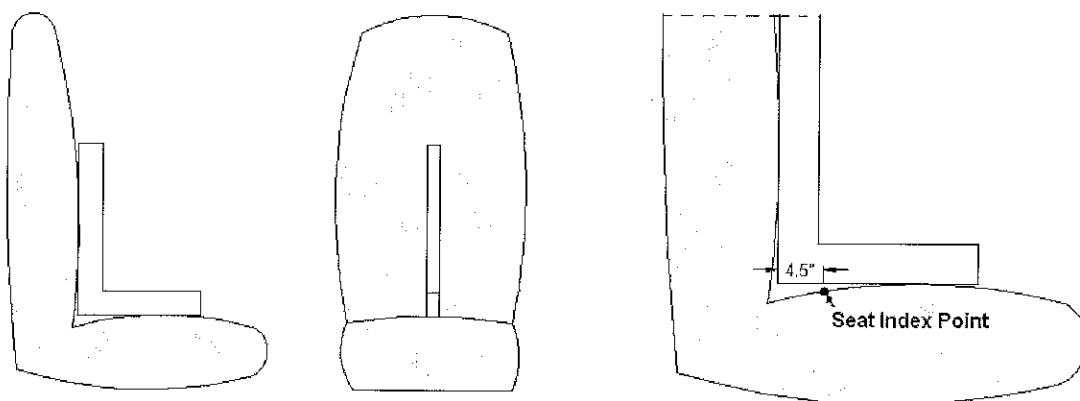


Figure 9

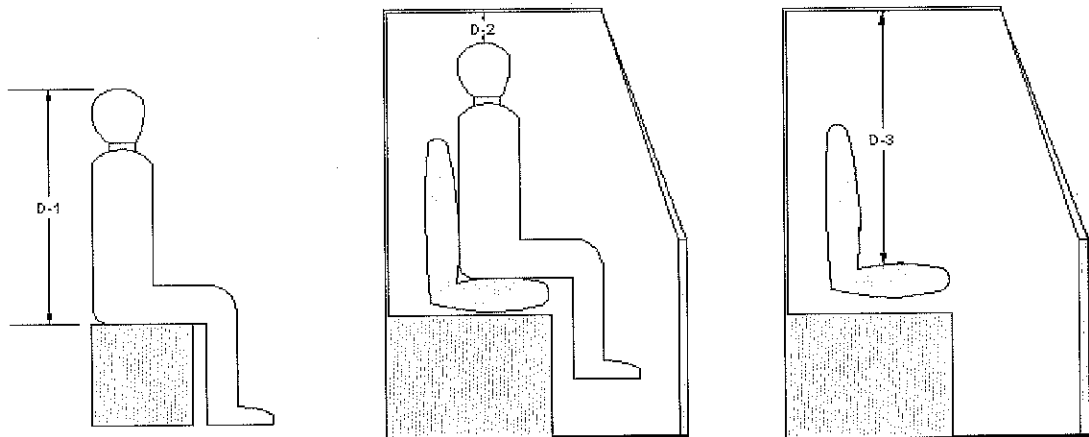


Figure 10

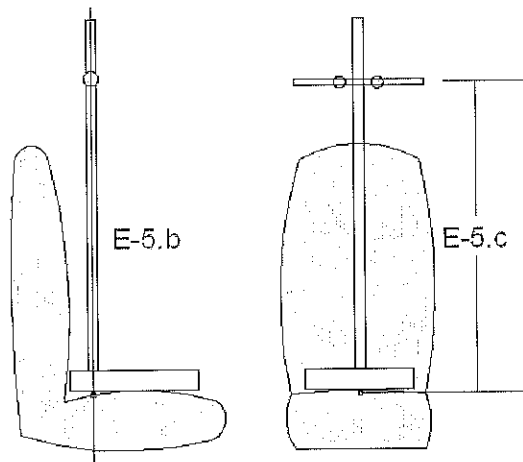


Figure 11

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Article 11. Vehicles, Traffic Control, Flaggers, Barricades, and Warning Signs

* * *

§1597. Jobsite Vehicles.

Jobsite vehicles as defined in Section 1504 of these Orders, which are utilized on jobsites exclusively and are, therefore, excluded from the provisions of applicable traffic and vehicular codes shall be equipped and operated in the following manner:

* * *

(l) Exhaust retrofits. Modifications made to a jobsite vehicle's existing exhaust system to install an air pollution control device, including the air pollution control device and all modified sections of the vehicle's exhaust pipes, shall comply with Section 1591(m).

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Subchapter 7. General Industry Safety Orders

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Group 4. General Mobile Equipment and Auxiliaries

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Article 25. Industrial Trucks, Tractors, Haulage Vehicles, and Earthmoving Equipment

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§3663. Maintenance of Industrial Trucks.

* * *

(g) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

elimination of any parts, except as provided in subsections (h) and (i) of this Section. Additional counterweighting of fork trucks shall not be done unless approved by the truck manufacturer.

* * *

(i) Exhaust retrofits. Modifications made to an industrial truck's existing exhaust system to install an air pollution control device, including the air pollution control device and all modified sections of the vehicle's exhaust pipes, shall comply with Section 1591(m).

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Group 13. Cranes and Other Hoisting Equipment

* * *

Article 93. Boom-Type Mobile Cranes

* * *

§4925.1. Exhaust Retrofits.

Modifications made to a mobile crane's existing exhaust system to install an air pollution control device, including the air pollution control device and all modified sections of the vehicle's exhaust pipes, shall comply with Section 1591(m).

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Subchapter 17. Mine Safety Orders

* * *

Article 17. Loading, Hauling, and Dumping

* * *

STANDARDS PRESENTATION
TO

Attachment No. 1
Page 13 of 13

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§7016. Haulage Vehicle, Construction and Maintenance.

* * *

(m) Exhaust retrofits. Modifications made to a vehicle's existing exhaust system to install an air pollution control device, including the air pollution control device and all modified sections of the vehicle's exhaust pipes, shall comply with Section 1591(m).

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.



Caterpillar Inc.

30211 Avenida de las Banderas
Suite 100
Rancho Santa Margarita California 92688

February 2, 2012

Dear Caterpillar Customer:

Caterpillar Emissions Solutions (CES) is committed to helping customers reduce their fleet engine exhaust emissions. The Caterpillar Dealer Network can offer several strategies to meet different customer needs to reduce PM and/or NOx: engine repowers, engine upgrade kits and diesel particulate filters (DPFs).

Caterpillar is continuously assessing our customers' requirements and as a result new product introductions are in the works. One such program is for a Level 3+ Diesel Particulate Filter for verification with California ARB. The regeneration strategy is being designed to minimize operator intervention and to work during normal machine operations. A broad coverage of machines and engines is being targeted, including Caterpillar and other equipment. An availability date has not been announced, as the system is undergoing thorough testing and validation before being placed in the field.

The product will be made available through the Caterpillar Dealer Network after completion of a rigorous testing program and CARB verification.

Sincerely,

Steve Cooksey
Product Support Manager

Caterpillar Emissions Solutions
Los Angeles District
(309) 675-0270
Facsimile: (309) 675-0275
SRC-CGH/03FEB2012

cc: D. Valantine, Johnson Machinery Co.



3/09/2012

Jason Phillips
Environmental Compliance Manager
Dragados, Flatiron, Sukut J.V.
Calaveras Dam Replacement Project

Subject: Level 3 V-Deck

Dear Mr. Phillips:

The request regarding the availability of Level 3 Diesel Emission Control Strategy for the D11 is as follows. Caterpillar has no level 3 after treatment device that is currently approved by California Air Resources Board (CARB). The technology as well as the space required to meet the level 3 after treatment requirements are currently unavailable. Attempts to retrofit these machines have not been successful and installing currently available technology would result in a violation of California Occupational Safety and Health Administration (OSHA) visibility requirements (Title 8, Chapter 4, Article 10, Section 1591), due to impairment of the operator's visibility when such devices are installed. Caterpillar is currently working on technology to address this and expect to have a solution in the future.

Sincerely,

Duane Valantine
Service Operations Manager

Johnson Machinery
800 East La Cadena Drive
P O Box 351
Riverside CA 92502-0351

Tel. (951) 686-4560
Fax (951) 276-8327
www.johnson-machinery.com



MINOR PROJECT MODIFICATION

 <p style="font-size: small;">SFPUC WATER WASTEWATER POWER</p>	<p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p>	 <p style="font-size: small;">HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM</p>
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Minor Project Modification Number:	014	Date: 4/4/12
Project Title:	Calaveras Dam Replacement Project	
MEA Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: DFSJV Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Non Native Grassland	Net Acreage Affected: 0 (temporary)
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 2081-2010-033-03

Detailed Description of Minor Project Modification:

The Contractor is requesting a minor project modification (MPM) to Staging Area 6 of the Calaveras Dam Replacement Project (Figure 1). This Staging Area is the only available location for parking vehicles within the project's main gate that will be free of naturally occurring asbestos. Staging Area 4 is being used to stage the Batch Plant and Maintenance and Fueling Facility. Logistically it is important to have workers able to enter the front gate security prior to start of the work day.

This modification would allow for an entrance on the north side of Staging Area 6 (Figure 2) and for workers to be picked up on the south side of the staging area by project transportation. This proposed new configuration would provide access to personal vehicles without having to traverse areas within the project that may contain naturally occurring asbestos, thereby reducing the potential for asbestos dust to migrate off site and impact construction workers and their families. The demarcation of naturally occurring asbestos is identified on Figure 2.

An additional 5,734 square feet would be impacted to construct this new entrance. However, at the southern end of Staging Area 3 the project footprint will be reduced within grassland habitat by 5,734 square feet (Figures 1 and 3). Therefore, there would be no net impact to grassland habitat within the project area from this MPM and the exchange of project footprint is "like-for-like" for acreage and habitat type.

O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Wednesday, April 04, 2012 12:56 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: MPM 14- Staging Area 6 Extra Workspace
Attachments: MPM 14 - Attachments.pdf; MPM-Staging Area 6 Entrance (Final Rev).doc; MPM-Staging Area 6 Entrance (Final Rev)-approved.doc

Approved...

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

04/04/2012 09:56 AM

To "Smith, Steve" <Steve.Smith@sfgov.org>
cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>
Subject RE: MPM 14- Staging Area 6 Extra Workspace

Steve, attached as we discussed is the revised MPM. Please call me if you have any questions.

From: O'Neill, Kerry
Sent: Monday, April 02, 2012 11:34 AM
To: Steve Smith (Steve.Smith@sfgov.org)
Cc: Wilkerson, Cullen
Subject: MPM 14- Staging Area 6 Extra Workspace

The attached MPM is for extra workspace on the Calaveras Dam Replacement Project at Staging Area 6. This Staging Area is the only available location for parking vehicles within the project's main gate that will be free of naturally occurring asbestos. An additional 5,734 square feet would be impacted to construct this new entrance. However, further down the Dam Access Road is an area where the project footprint was reduced within non-native grassland habitat by 23,359 square feet therefore, there would be no net impact to grassland habitat within the project area from this MPM and the exchange of project footprint is "like-for-like".

Please call or email me with any questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

The proposed area of expansion is not identified in the project FEIR Table 3.5 to be expanded for construction. Section 3.5.1.7 of the FEIR states "...haul roads that would be used for two-way traffic would require a width of between 30 and 40 feet depending on the type of hauling equipment used on that road". The contractor requires additional spacing (previously stated in the FEIR) along this section of roadway.

ENVIRONMENTAL IMPACTS

Impacts would include temporary and minimal disturbance of non-native annual grassland, which is potential California tiger salamander (*Ambystoma californiense*) upland habitat (refuge, forage, and dispersal), California red-legged frog upland/dispersal habitat, and Alameda whipsnake (*Masticophis lateralis euryxanthus*) grassland habitat.

Attachments:

Figure: 1 – Location of Minor Project Modification of Staging Area 6

Figure: 2 – Minor Project Modification of Staging Area 6

Figure: 3 – Reduction of project footprint

Paleontological Email correspondence

Archaeological Cultural Tech Memo

Biological Tech Memo

Biological No Resources Present Resources Present NA

Resources:

Biological Tech Memo - Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project, March 23, 2012.

Previous Biological Survey Report Reference:

Calaveras Dam Replacement Project FEIR, updated daily field surveys conducted by SFPUC consultant, and pre-construction survey conducted by SFPUC consultant on March 22, 2012.

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Previous Cultural Survey Report Reference:

FEIR Section 4.10 – Archaeological Survey Report (ASR) (ETJV 2008) and Historic Resources Inventory Evaluation Report (HRIER) (JRP 2007).

Archaeological Tech Memo - Minor Project Modification: Cultural Resources Survey Adjacent to Borrow Area B, Calaveras Dam Replacement Project, March 28, 2012.

Email Correspondence – Paleontological Confirmation of Minor Project Modifications – Staging Area 6 Expansion, March 23, 2012

Conditions of Approval or Reasons for Denial

SFPUC Required Signatures for Environmental Approval:

ECCM: Kerry O'Neill

Date: 04/04/12

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

MEA Required Signatures for Approval:

Signee: Steven H. Smith

Date: 4/4/12

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	Based on a pedestrian survey of the location there would be no new significant cultural resource impacts beyond those analyzed in the FEIR. If cultural resources are discovered the project will implement accidental discovery measures in Mitigation Measure 5.10.1 and 5.10.2 including measures related to human remains an associated or unassociated funerary objects and Mitigation measure 5.10.5b for paleontological discoveries. Staging Area 6 Expansion Cultural - The cultural resources technical memorandum (see attached Cultural Memo) states, "No prehistoric or historic-era archaeological materials had been previously located within or in the immediate vicinity of Staging Area 6, and none were observed during the archaeological pedestrian survey." Staging Area 6 expansion Paleontological - The expansion of SA-6 will not impact paleontological resources and will not require paleontological monitoring. (see attached Paleo Email).
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	

Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	<p>There would be a "like-for-like" exchange of non-native grassland habitat for the expansion of SA-6. Applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant (see attached Bio Memo).</p> <p>Staging Area 6 Expansion – The extra workspace is in non-native grassland and is dispersal habitat for Alameda whipsnake, aestivation habitat for California tiger salamander, and dispersal habitat that is potentially utilized by California red-legged frog. The proposed project may also impact potential breeding bird habitat if work is done during the breeding season. The proposed project will avoid impacts to adjacent wetlands by installation of BMPs per the projects Storm Water Pollution Prevention Plan. Implementation of Mitigation Measures 5.4.1a-Pre-construction Measures, 5.4.1b-Construction Measures, and 5.7.1-Storm Water Pollution Prevention Plan will reduce potential impacts to less than significant.</p>
	<input type="checkbox"/> N	

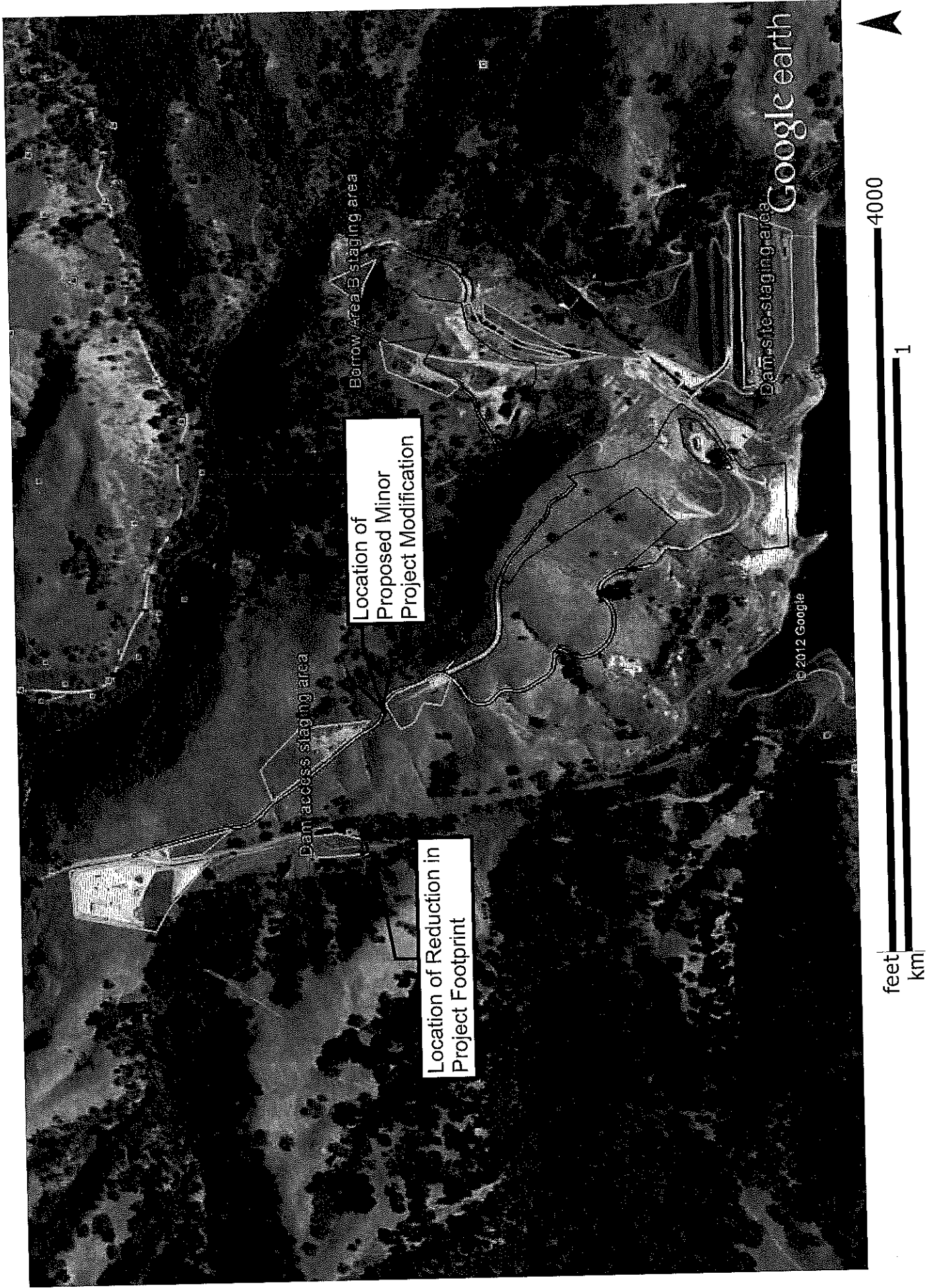


Figure 1. CDRP- Location of Minor Project Modification at Staging Area 6 and Reduction of Project Footprint in Staging Area 3

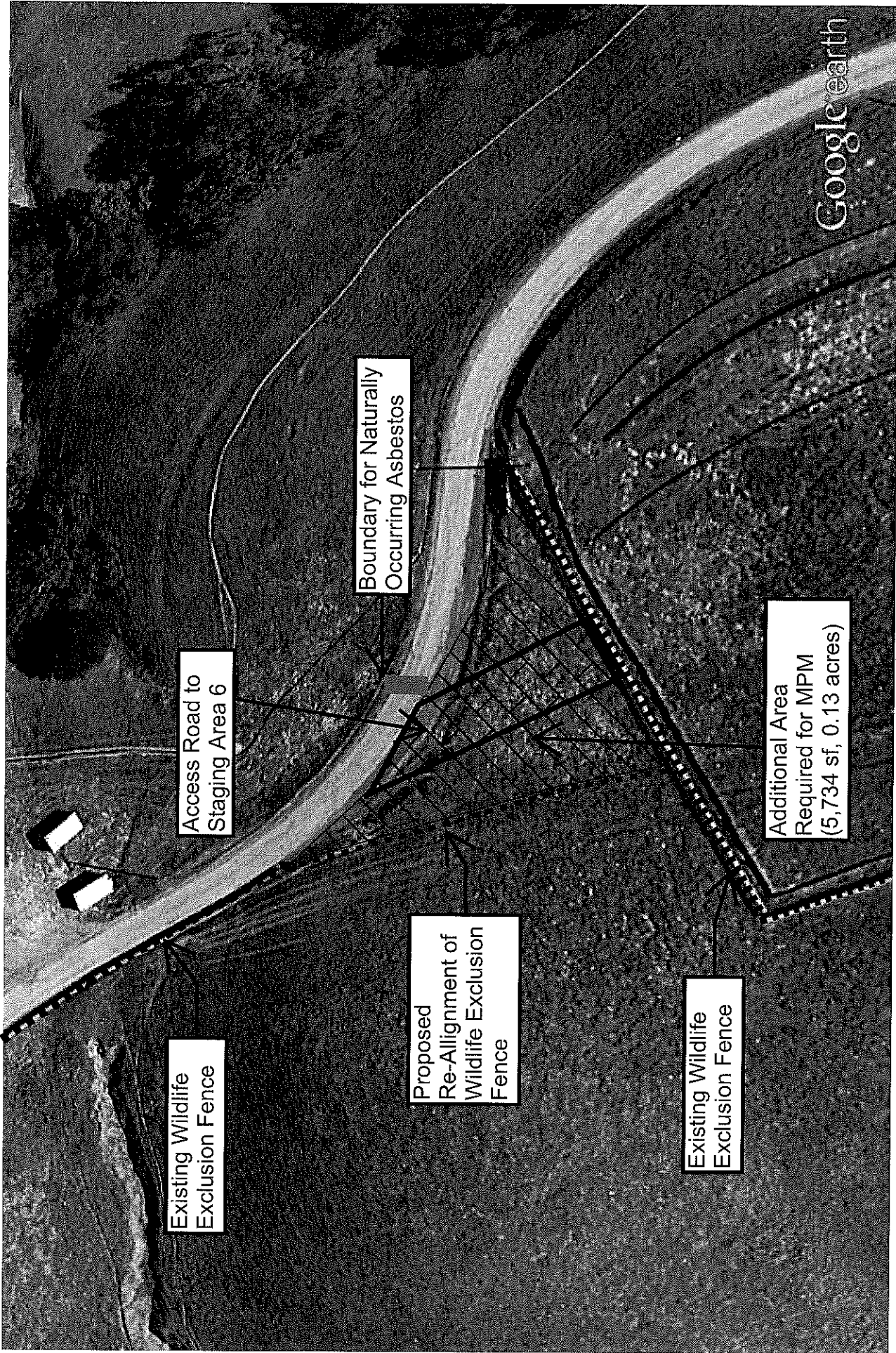
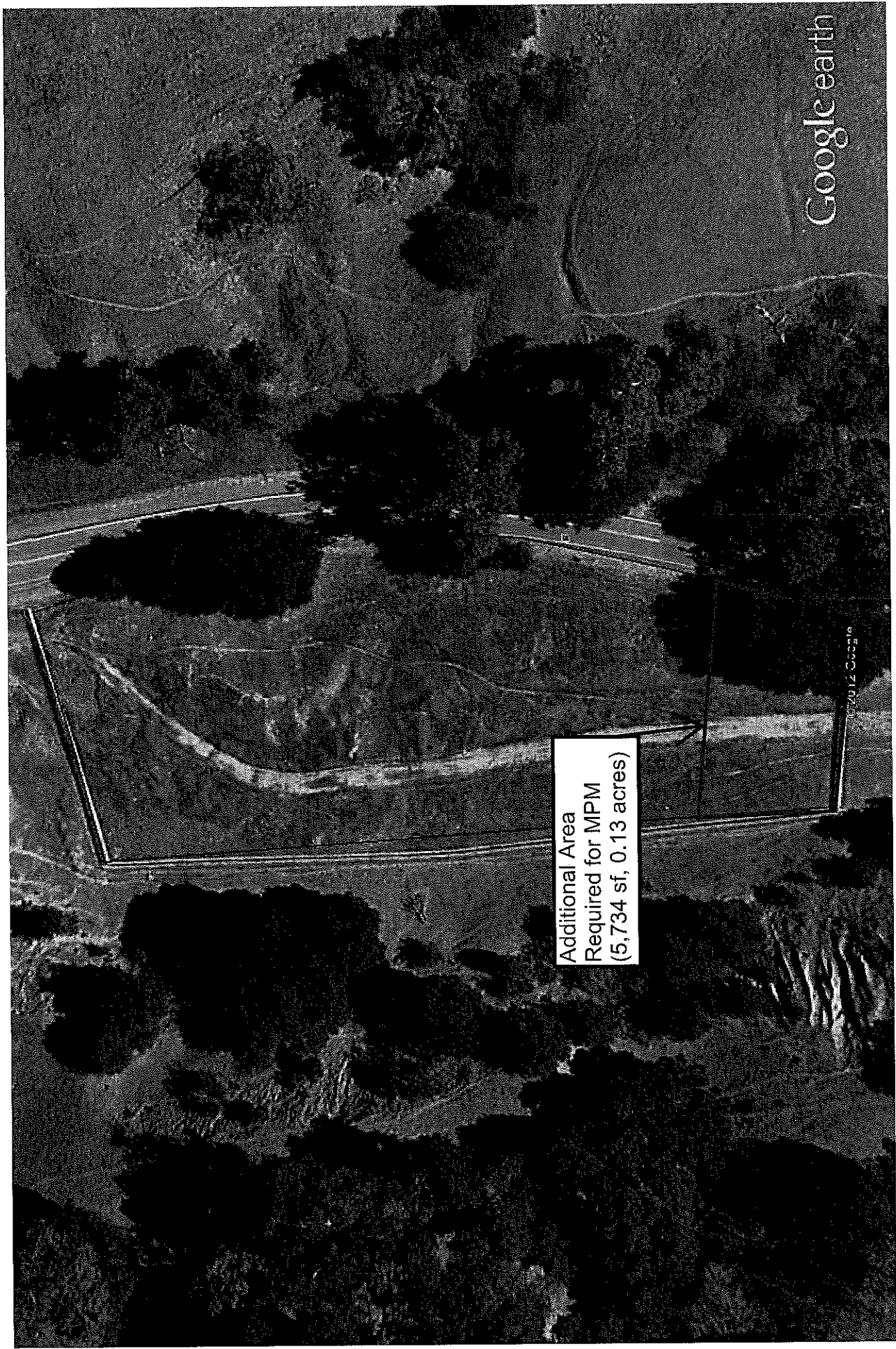


Figure 2. CDRP- Minor Project Modification of Staging Area 6



Additional Area
Required for MPM
(5,734 sf, 0.13 acres)

Google earth

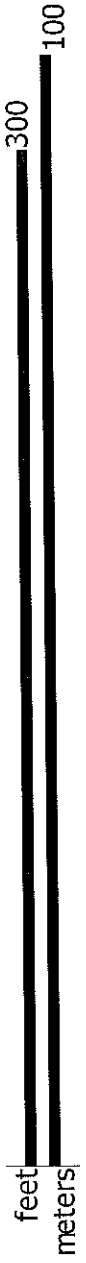
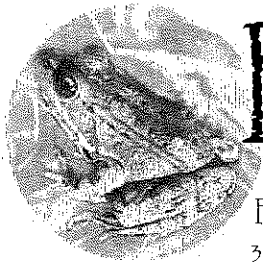


Figure 3. CDRP- Reduction of Project Footprint at Staging Area 3- Minor Project Modification of Staging Area 6



BioMaAS

Biological Monitoring and Assessment Specialists, Inc.
333 Valencia Street, Suite #324, San Francisco, CA 94103
Phone (415)255-8077 Fax (925)887-4702 www.BioMaAS.com

Date: March 23, 2012
To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental Management
From: Milton Yacelga, BioMaAS
Subject: **Environmental Review of Proposed Project Modifications, Calaveras Dam Replacement Project (CUW 37401)**

This memo presents an evaluation of the biological resources for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The contractor is requesting, per the contract specifications, to widen Staging Area 6 to the north to connect to the Dam Access road for the Calaveras Dam Replacement Project (CDRP) job site. The proposed staging area expansion consists of increasing the existing road width to the west and to the south for a total square footage of 5,734 sq ft to accommodate the development of the NOA site plan and to differentiate NOA traffic versus non NOA traffic. Habitat within the Project Area consists of non-native grassland (Attachment A). The habitat has been previously grazed and contains numerous fossorial mammal burrows.

POTENTIAL BIOLOGICAL RESOURCES

A BioMaAS biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion (81420-2009-F-1339). In addition, the biologist reviewed the Contract Drawing (EC-5) for the proposed Project Area and investigated the Project Area for the presence of and potential for sensitive biological resources.

Two wetland features (ETJV 2006b) are located adjacent to the proposed expansion area and will be avoided during ground disturbing activities for the proposed project. It is not the blooming period for most special status plant species with potential to occur in the Project Area, however, no special status plant species were observed in this location, per the FEIR Figure 4.4.4 and the Botanical Survey Technical Report (ETJV 2006a).

The potential for special status wildlife species to occur in the Project Area may be summarized by the following:

- Special status species may migrate through the Project Area or use the Project Area as a corridor for dispersal.
- Common and special status avian species may use the Project Area as breeding habitat. California ground squirrel burrows may also provide habitat for Western Burrowing Owl (*Athene cunicularia hypugaea*; BUOW). No owl or owl sign was observed during field investigations and no BUOW would be expected to occupy the Project Area due to its proximity to chronic disturbance from Staging Area 2 and the main entrance road and gate.
- Suitable subterranean refugia habitat for the California tiger salamander (*Ambystoma californiense*; CTS) is present in the Project Area. The potential habitat was created by California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*) activity. This refugia may also be used, to a lesser degree, by California red-legged frog (*Rana draytonii*) and Alameda whipsnake (*Masticophis lateralis euryxanthus*).

RECOMMENDATIONS

The proposed project modifications could negatively impact adjacent wetland features. In addition, the proposed project could affect habitat that is potentially utilized by California tiger salamander, and to a lesser degree, California red-legged frog and Alameda whipsnake. The proposed project may also impact potential breeding bird habitat. The following measures are recommended to avoid impacts to special status wildlife species.

Wetland Features

The proposed project will avoid direct impacts to two adjacent wetland features. The first feature is approximately 120 feet north of the expansion area and the second feature is approximately 65 feet to the north east. The wetland features may be negatively impacted by runoff both during and after project completion. In order to avoid hydrological impacts to the wetland features adjacent to the Project Area, appropriate Best Management practices (BMPs) and/or appropriate topographic alterations (drainages, swales, berms, etc.) should be

incorporated into the proposed project modification in order to avoid discharge into these sensitive features. Appropriate BMPs are required by the project permits.

Breeding Birds

It is recommended that construction activities occur between August 31 and January 15 in order to avoid the breeding bird season. The Staging Area 6 site expansion is currently scheduled to occur in April 2012, which will potentially impact breeding birds. Preconstruction surveys for nesting birds and raptors are required to minimize impacts. During the March 23, 2012 pedestrian transect survey, no nesting birds were observed within the proposed expansion area.

Special Status Herpetofauna

A preconstruction survey should be performed by a qualified biologist prior to ground disturbance in the Project Area in order to determine the presence of special status herpetofauna. In addition, all ground squirrel and gopher holes should be inspected by a qualified biologist prior to disturbance. If the burrows appear to be suitable estivation habitat for sensitive herpetofauna (MM 5.4.1a - *Aestivation habitat will be defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites (i.e., the presence of a single isolated gopher hole would not be considered habitat)*), the burrow should be carefully excavated under the direct supervision of a Service and CDFG-approved biologist. At the time of the site visit on March 23, 2012, approximately 7 burrow complexes consisting of ~5 burrows each (totaling 35) appeared to be suitable upland refugia habitat, however, many of these features may be interconnected. If sensitive herpetofauna are unearthed during burrow investigations or ground disturbance activities, they should be relocated to suitable habitat that has been pre-approved by agency staff.

Please contact Cullen Wilkerson at (510) 685-1497 or Milton Yacelga at (925) 493-4537 if you have any questions.

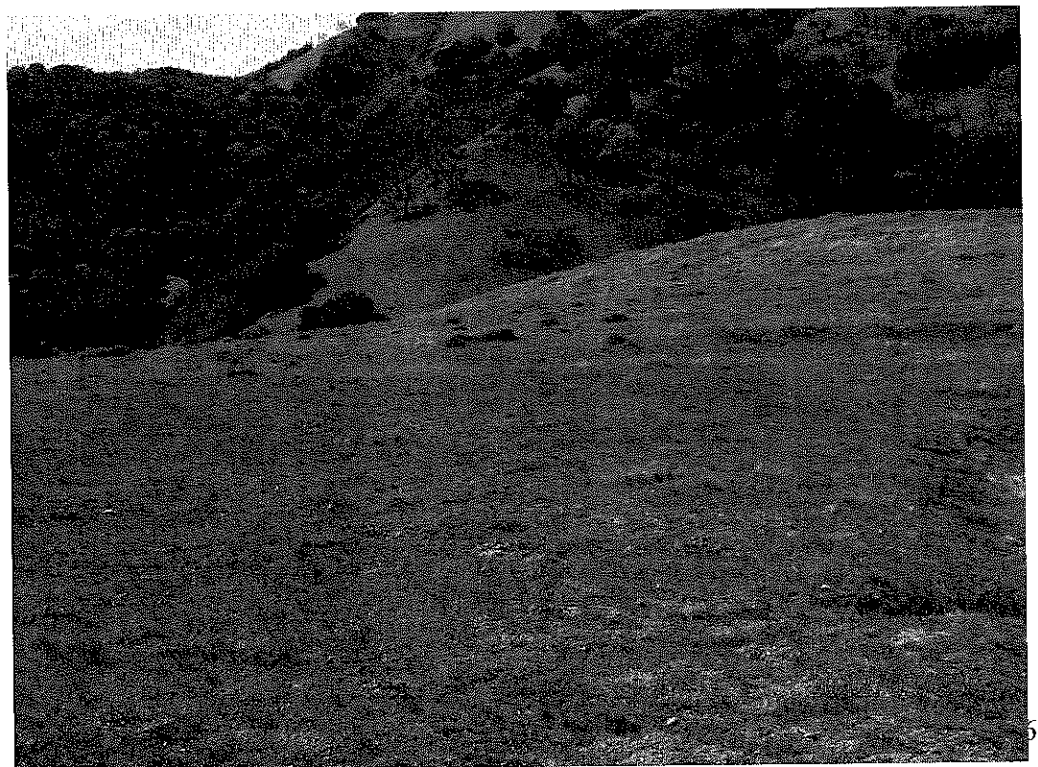
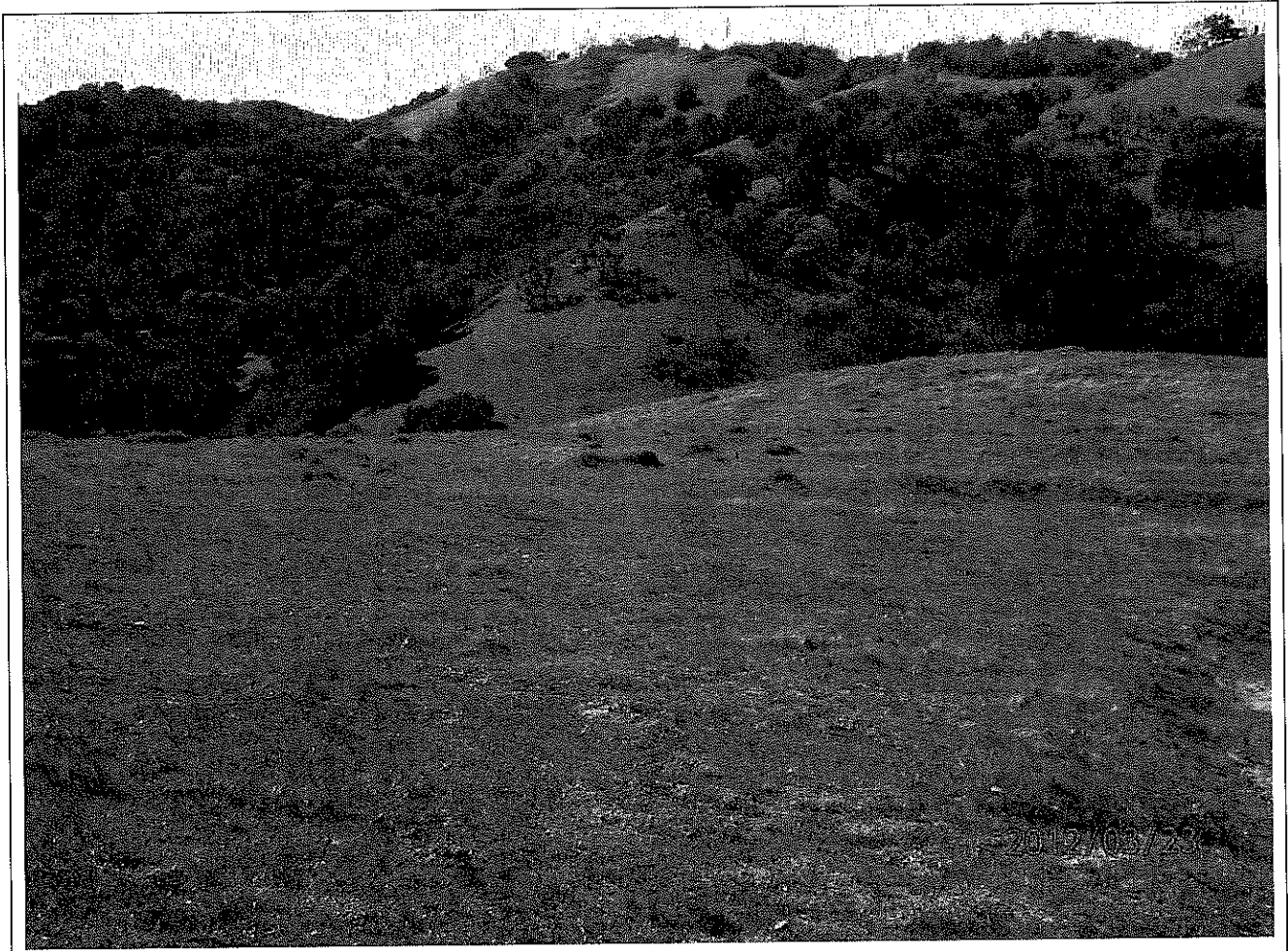
REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.

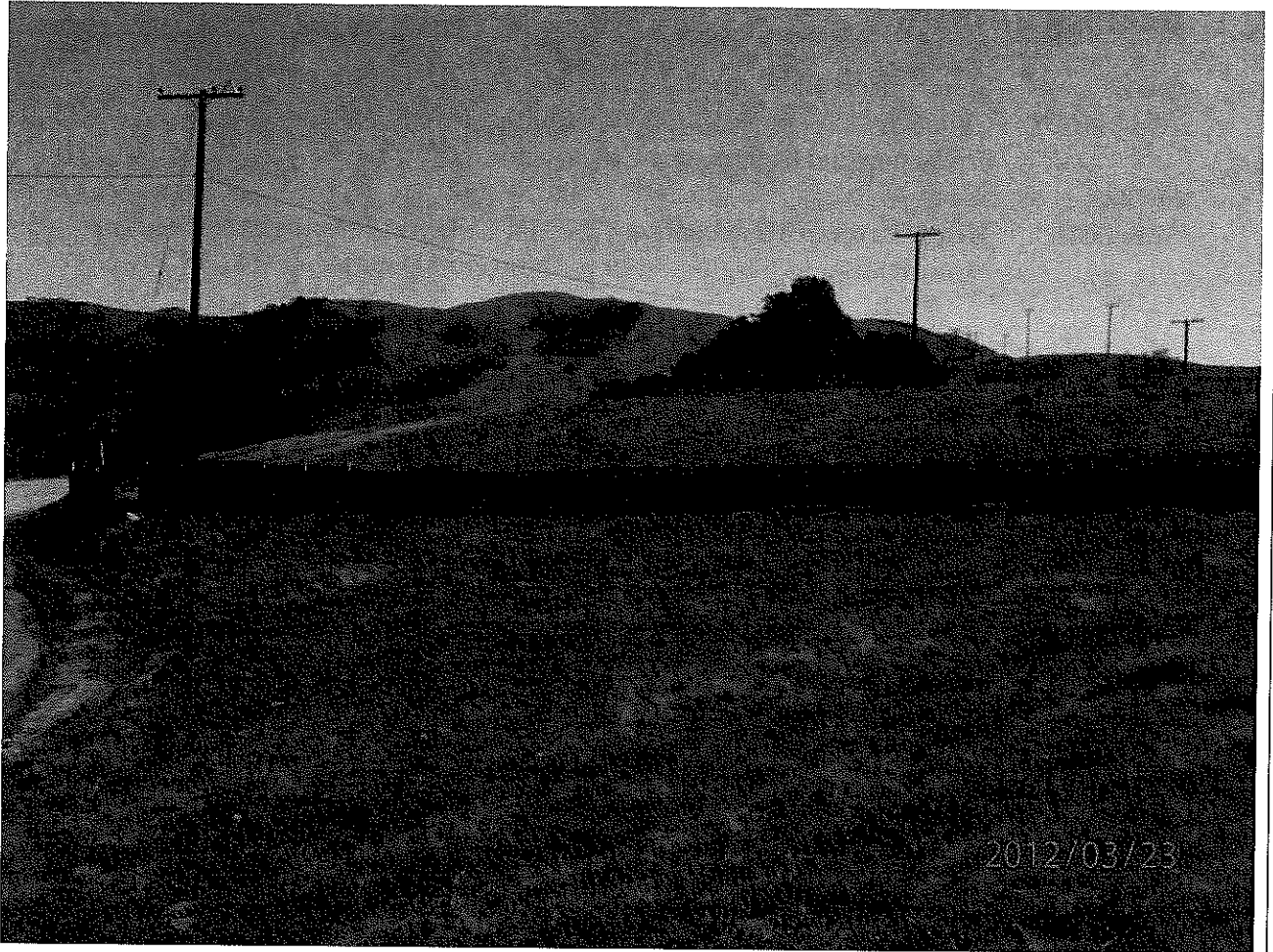
ATTACHMENT A

Project Photographs

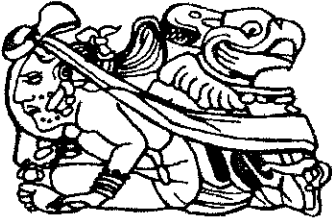


View looking west across the proposed expansion area (top photo).

View looking southwest across the proposed expansion area (bottom photo).



Southern view of the proposed expansion area. Rodent burrow complexes located to the center and left of the photo.



holman & ASSOCIATES
Archaeological Consultants
"SINCE THE BEGINNING"

3615 FOLSOM ST. SAN FRANCISCO,
CALIFORNIA 94110 415/550-7286

Memorandum

DATE: March 28, 2012
TO: Cullen Wilkerson, San Francisco Public Utilities Commission
Environmental Compliance Coordinator
FROM: Randy Wiberg
SUBJECT: **Minor Project Modification (MPM): Cultural Resources Survey for
Modification to Staging Area 6, Calaveras Dam Replacement Project**

INTRODUCTION

This memorandum was prepared by Holman & Associates for the Calaveras Dam Replacement Project (CDRP or Project), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. This memo presents results of additional archaeological survey for a Minor Project Modification (MPM) to Staging Area 6. The proposed new configuration of Staging Area 6 would provide vehicular access to the staging area for workers without having to cross areas within the CDRP that may contain naturally occurring asbestos.

CDRP CEQA compliance for cultural resources was achieved for the Project through the *Final Environmental Impact Report [FEIR]* prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey for the Staging Area 6 MPM was requested by the SFPUC because the proposed MPM is located just outside the Area of Potential Effects (APE) previously surveyed for cultural resources (ART and EDAW 2008). On March 26, 2012 Holman & Associates completed a cultural resources survey of the proposed supplemental area at Staging Area 6. No evidence of prehistoric or historic-era cultural materials was observed.

LITERATURE REVIEW

Multiple cultural resources studies have been conducted in conjunction with the CDRP. URS completed a literature review and pedestrian surveys of portions of the APE during initial design phases for the CDRP (URS 2003, 2005). As part of the environmental review process for the Project, Archaeological Resources Technology (ART) conducted another intensive pedestrian survey of the APE, including Staging Area 6 (ART and EDAW 2008). Neither study identified prehistoric archaeological resources near Staging Area 6, though numerous historic-era resources were identified in the general vicinity. The standing buildings and structures comprising the

Calaveras Dam Complex (CD #15) and the associated worker's camp (P-01-10870 or Desmond Camp) on the northwestern shoreline of the Calaveras Reservoir are located within 800 meters of Staging Area 6. Several other archaeological resources associated with dam construction and/or operations were also recorded close to the Staging Area 6 during pre-construction cultural resources studies. P-43-010675, a debris scatter (mostly boards, posts, water pipe and flu pipe), was recorded just below (southeast) Observation Hill and P-43-010676, remnants of a stone fence or structure, was identified on top of Observation Hill. Both resources are approximately 600 meters south-southeast of Staging Area 6. Another historic-era archaeological site (CD #14), a well contained high density artifact scatter consisting mostly of metal cans, glass bottles/fragments, ceramic fragments, and faunal bone, was recorded 425 meters east of Staging Area 6.

Additional historic-era cultural resources have been recorded near Staging Area 6 during recent CDRP construction. Two loci were identified during installation of wildlife exclusion fencing adjacent to the Calaveras Dam earthfill embankment, CD-H&A-1 immediately west of the dam on the left abutment and CD-H&A-2 east of the dam on the right abutment (Wiberg and Posta 2011). CD-H&A-1 is a spread footing foundation associated with a sparse surface scatter of structural remains and a possible stock pond, located on the south slope of Observation Hill. CD-H&A-2 is an unsealed refuse dump east of the dam on the right abutment. The deposit consists of at least 250 ferrous cans, more than 100 glass bottles/fragments, and a few other items. Isolated historic-era cultural materials have also recently been discovered during construction near Dump Site 3 and associated stream diversion outlet area.

PROJECT LOCATION AND DESCRIPTION

Staging Area 6 is contained on the United States Geological Survey (USGS) Calaveras Reservoir, California 7.5 minute topographic quadrangle (USGS 1961 [photorevised in 1980]), situated in the northeast quadrant of Section 14, Range 1E and Township 5S (Figure 1). The project contractor is requesting a minor expansion of the work area on the north side of Staging Area 6, providing an entrance to the staging area that workers can use without traversing areas containing naturally occurring asbestos (Figure 2). The supplemental staging area is located along gently sloping ridge top that trends southeast-northwest from Observation Hill, adjacent to Calaveras Dam Access Road (west side) immediately south of Staging Area 4. The supplemental MPM area is a triangular-shaped piece of land (5,734 square feet/0.13 acre) bordered on the east by the Dam Access Road and on the south by wildlife exclusion fencing. At the time of the survey the western border was marked by red pin flags, delineating the alignment of additional wildlife exclusion fence proposed for the west side of the expanded staging area (Figures 3 and 4).

SURVEY RESULTS

The proposed Staging Area 6 MPM was subject to an intensive pedestrian archaeological survey on March 26, 2011 by Randy Wiberg, a Registered Professional Archaeologist meeting the Secretary of the Interior's Standards for Archaeology. The MPM survey area was covered by short grasses affording generally good ground visibility and inspection of gravelly yellowish brown native soil. The presence of frequent rodent burrows and ruts—caused by heavy

equipment—along the eastern margins of the study area facilitated good archaeological visibility, and these areas were subject to intensive examination. No artifacts or evidence of archaeological deposition were identified during the survey.

No prehistoric or historic-era archaeological materials had been previously located within or in the immediate vicinity of Staging Area 6, and none were observed during the archaeological pedestrian survey. It is unlikely that construction activities associated with expanding Staging Area 6 will disturb cultural resources. Although no evidence of archaeological materials was observed, the possibility remains that archaeological materials could be exposed during ground-disturbing activities. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the *Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project* (C&CSFPD 2011, Volume 2:5-32 to 5-35) and guidelines contained in the *MEA WSIP Archaeological Guidance No. 9* (C&CSFPD 2008, Mitigation Measures I and II) should be implemented.

References Cited

ART and EDAW

2008 *Calaveras Dam Replacement Project Archaeological Survey Report*. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

City and County of San Francisco Planning Department [C&CSFPD]

2008 *MEA WSIP Projects Archaeological Guidance*.

2011 *Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project*.

URS Corporation [URS]

2003 *Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA*. Prepared for San Francisco Water Department.

2005 *Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures*. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

1961 *Calaveras Reservoir, California 7.5 minute topographic quadrangle (photorevised 1980)*.

Wiberg, R. and S. Psota

2011 *Technical Memorandum: Calaveras Dam Replacement Project: Previously Unidentified Historic-era Cultural Resources near Right and Left Dam Abutments*. Prepared for the San Francisco Public Utilities Commission.

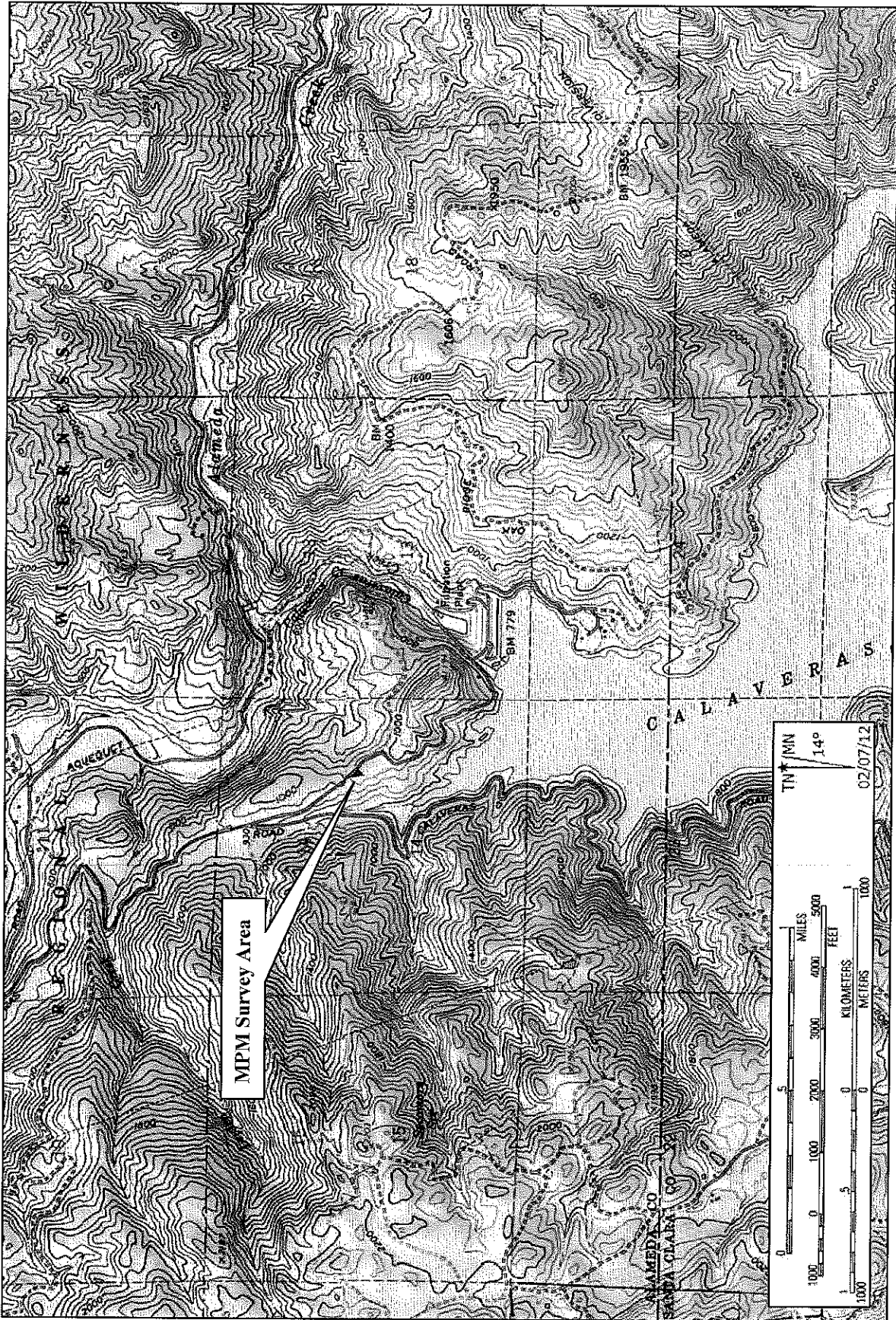


FIGURE 1. Staging Area 6 MPM Survey Area (Source: USGS Calaveras Reservoir 7.5' Quad., Photorevised 1980).

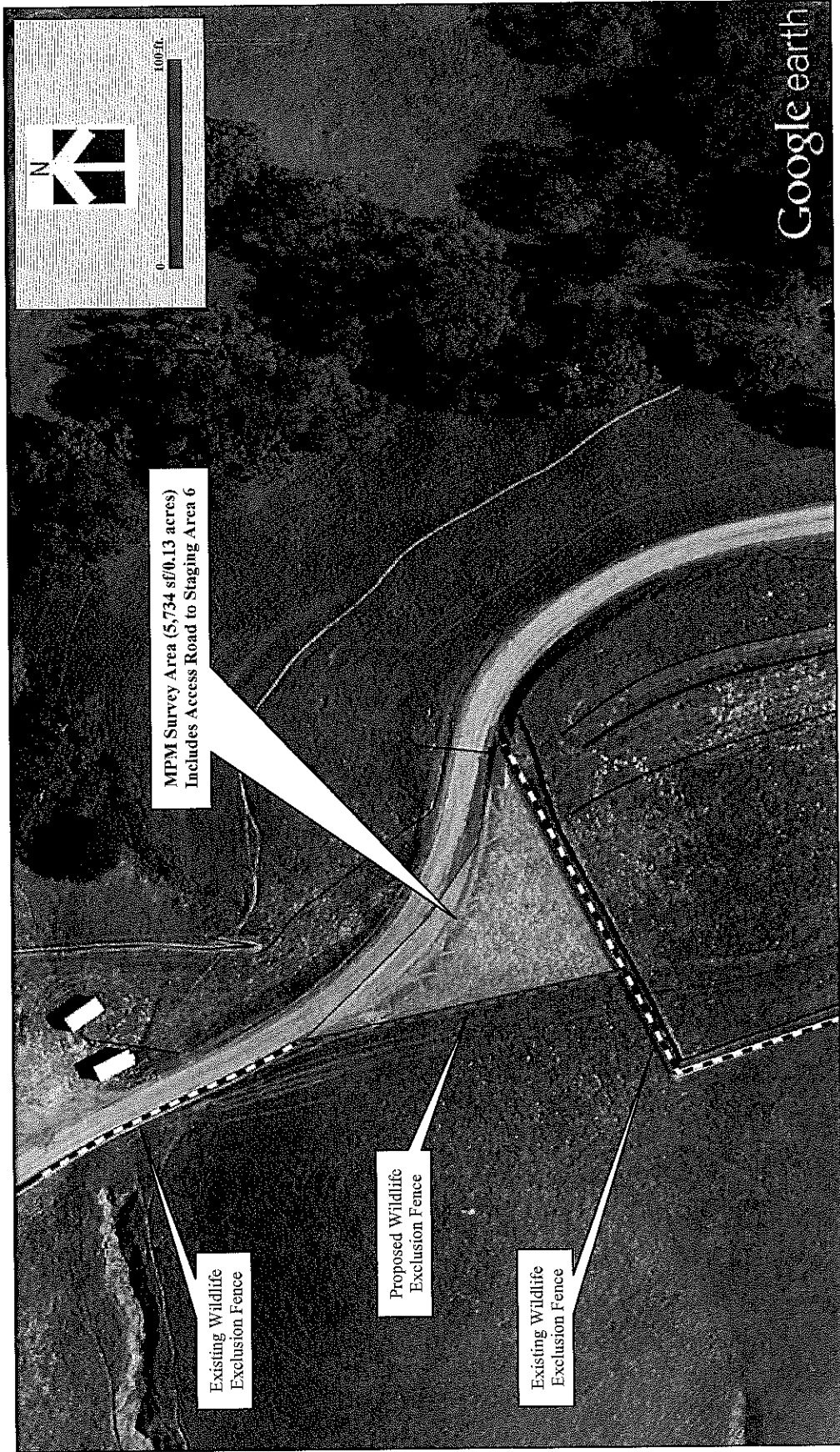


FIGURE 2. Aerial View of Staging Area 6 MPM Survey Area (Source: Google 2011).

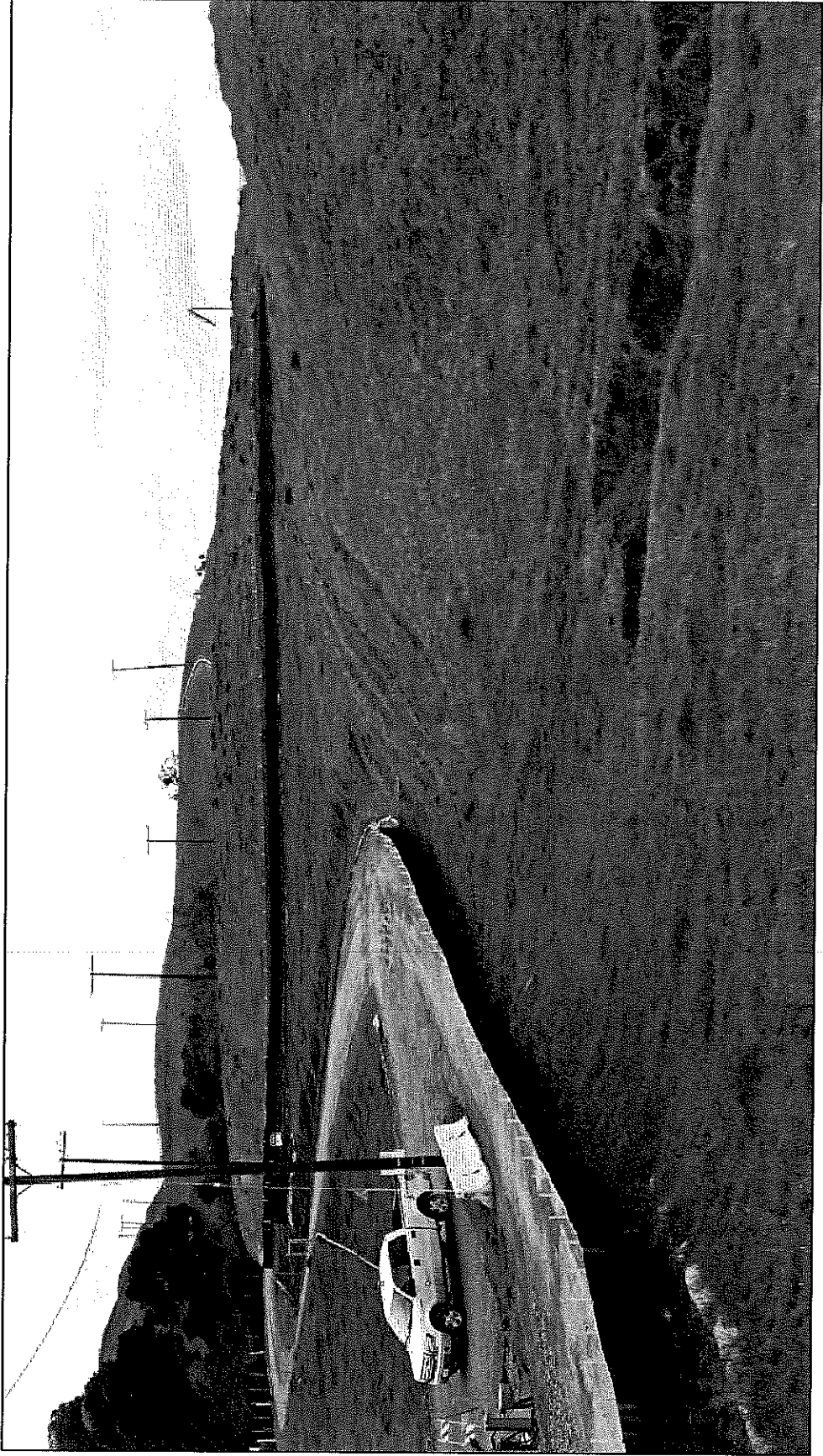


FIGURE 3. Staging Area 6 MPM (red dashed line), looking south.

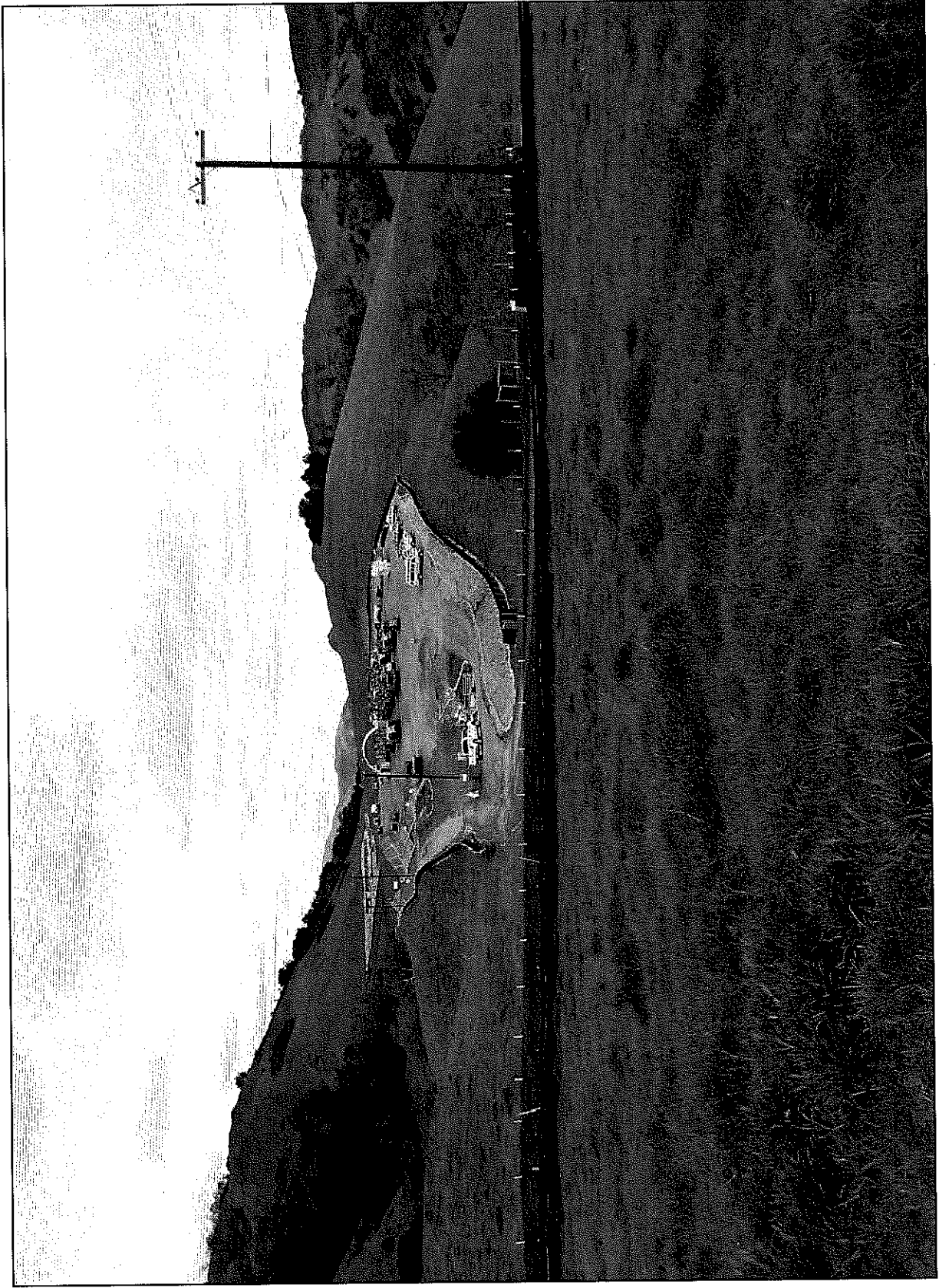


FIGURE 4. Staging Area 6 MPM (below wildlife exclusion fence), looking north towards Staging Area 4.

Wilkerson, Cullen

From: James Allen <jallenpaleo@gmail.com>
Sent: Friday, March 23, 2012 1:38 PM
To: Wilkerson, Cullen
Subject: Re: Minor Project Modification -Staging Area 6 expansion

Hi Cullen:

Thank you for sending me map locations. I reviewed the locations of the two minor expansion improvements to Staging Area 6 on the geologic map. The proposed minor project modification will not impact any paleo resources, No monitoring required.

If you need a more comprehensive report memo containing maps and figures, I can do that. However, since budget is tight, I hope this email statement will suffice.

Thanks,

Jim

On Fri, Mar 23, 2012 at 1:06 PM, Wilkerson, Cullen <CWilkerson@sfwater.org> wrote:

Hello Jim,

The contractor has requested to expand Staging Area 6 (see attached Figure). I would like to receive from you a Memo report (from a field visit or document review) or email confirmation that the proposed expansion will or will not impact paleo resources. If potential impacts are identified, explain the mitigation. If not, then a statement of "the proposed minor project modification will not impact any paleo resources, No monitoring required" will suffice. Please see two attached documents for reference.

Thank You,

Cullen Wilkerson

Environmental Compliance Manager
Calaveras Dam Replacement Project

Office: [\(925\) 493-4537](tel:9254934537) | Cell: [\(510\) 685-1497](tel:5106851497) | CWilkerson@sfwater.org

Please consider the environment before printing this email.



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--

James R. Allen
M.Sci. Geology, PG #8335
5300 Iron Horse Parkway
369
Dublin, CA 94568
Cell (925)413-0054
Research: <http://pubs.usgs.gov/of/2004/1017/>

MINOR PROJECT MODIFICATION

 <p style="font-size: small;">SFPUC WATER WASTEWATER POWER</p>	<p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p>	 <p style="font-size: small;">HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM</p>
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Minor Project Modification Number:	015	Date: 5/15/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: Construction Contractor's Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Aquatic habitat – Calaveras Reservoir	Net Acreage Affected: 0
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input checked="" type="checkbox"/> Permit:	RWQCB R2-2011-0013, CDFG 1600-2010-0322-R3, and ACOE 29979S

Detailed Description of Minor Project Modification:

The Contractor is requesting a minor project modification (MPM) to the method of construction for Adit 1 on the Calaveras Dam Replacement Project (Figure 1). Previously it was anticipated that the contractor would construct Adit 1 and possibly Adit 2 from a barge. The Final Environmental Impact Report (Volume 3, pg. 9-30) states: "Adit #1 (and Adit #2 if constructed by divers) would be installed from a diving barge." Due to the lowered reservoir levels, Adit 2 is no longer in-water and will be constructed from land. Adit 1 remains in-water and will be constructed from a trestle that is accessed via the reservoir shoreline from a rock jetty (Figure 1 and Figure 2).

The proposed temporary trestle and temporary rock jetty will disturb approximately 0.25 acre (5,000 cubic yards) of the Reservoir (Figure 3), including approximately 43 square feet (approximately 33 cubic yards) for temporary steel piles. However, the contractor will reduce the area that would have been occupied by the barge haul route option by the same amount so that there is no net change in the total impacts to the reservoir (Figure 4). Therefore, there would be no net impact to reservoir within the project area from this MPM and the exchange of project footprint is "like-for-like" for acreage and temporary fill.

The SFPUC has coordinated with Regional Water Quality Control Board regarding this modification and has obtained concurrence under the project's 401 Certification for the additional temporary fill (see Attachment A) and Turbidity Monitoring Plan (see Attachment B). The SFPUC has coordinated with Army Corps of Engineers regarding this modification and has obtained concurrence under the project's 404 Permit for the additional temporary fill (see Attachment A). California Department of Fish and Game is currently processing a 1600 Permit Amendment for this modification.

ENVIRONMENTAL IMPACTS

Impacts would include temporary fill to the reservoir (i.e., temporary trestle and temporary rock jetty including temporary steel piles) and potential for increased turbidity during placement and removal of the rock jetty and trestle.

Attachments:

Figure: 1 – Calaveras Dam Trestle Elevation View

Figure: 2 – Calaveras Dam Jetty, Turbidity Curtain, and Adit 1 Work Area Plan View

Figure: 3 – Location Map of Adit 1 with 0.25 acre of temporary fill additions

Figure 4 – Location Map of Barge Haul Route Jetty with 0.25 acre of temporary fill reduction

Figure 9.1 - Location of CDRP Variant Project Elements Differing from the Draft EIR Project

Attachment A –

- **RWQCB** – Approval for additional temporary fill for adit jetty and in-water concrete work (4/26/12). Approval for Turbidity Monitoring Plan (5/8/12). (see yellow highlights on Attachment)
- **ACOE** - Approval for additional temporary fill for adit jetty (5/9/12). (see yellow highlights on Attachment)

Attachment B – Turbidity Monitoring Plan

Biological No Resources Present Resources Present NA

Resources: Aquatic habitat, Calaveras Reservoir provides both warm-water and cold-water habitat. Bass, sunfish, and catfish constitute the primary warm-water fisheries in Calaveras Reservoir. The reservoir's cold-water species include rainbow trout. Wetland habitat doesn't exist along this section of the shoreline and this section of the shoreline is normally inundated (see Figure 9.1 Location of CDRP Variant Project Elements Differing from the Draft EIR Project – Attached)

Previous Biological Survey Report Reference:

Cultural No Resources Present Resources Present Within Project APE
 NA (paved/graveled area and no ground disturbance)

Previous Cultural Survey Report Reference:

FEIR Section 4.10 – Archaeological Survey Report (ASR) (ETJV 2008) and Historic Resources Inventory Evaluation Report (HRIER) (JRP 2007).

Conditions of Approval or Reasons for Denial

Contractor shall implement measures in Contractor's Turbidity Monitoring Plan. Contractor shall implement measures in the pending California Department of Fish and Game (CDFG) Lake or Streambed Alteration Agreement amendment (Permit Amendment) for this work (1600-2010-0322-R3). A copy of the CDFG Permit Amendment shall be forwarded to EP's CEQA Compliance Coordinator.

SFPUC Required Signatures for Environmental Approval:

ECCM: Kerry O'Neill Date: 05/15/12

Approved Approved with Conditions (see conditions above) Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code: CUW37401

EP Required Signatures for Approval:

Signee: Steven H. Smith

Date: 5/15/2012

Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input checked="" type="checkbox"/> Y	The potential impacts per impact 4.9.6 (i.e., release of fuel and other hazardous materials to the environment, including Calaveras Reservoir, during construction) will be similar to the potential impacts analyzed in the FEIR related to construction from a barge. With implementation of best management practices (BMPs) in Water Quality Mitigation Measure 5.7.1 and the Contractor's BMPs in their Spill Prevention Control and Countermeasure Plan potential impacts will be reduced to less than significant.
	<input type="checkbox"/> N	
Hydrology	<input checked="" type="checkbox"/> Y	There is increased potential for turbidity in Calaveras Reservoir due to the placement and removal of rock for the temporary rock jetty and trestle piles. Applicable mitigation measures related to impact 4.7.1 (i.e., impact on water bodies as a result of soil erosion and sediment discharge during construction) will be mitigated by implementation of Water Quality Mitigation Measure 5.7.1; measures in the contractor's Turbidity Monitoring Plan approved by the RWQCB; and BMPs the contractor's Storm Water Pollution Prevention Plan (e.g., non-stormwater management BMPs). With implementation of these measures, including on-going monitoring for turbidity, potential impacts will be reduced to less than significant.
	<input type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new cultural or paleontological resource impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new significant traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new significant air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife including Fisheries and Aquatic Habitat	<input checked="" type="checkbox"/> Y	There would be a "like-for-like" exchange of open water (i.e., reservoir) habitat for the placement of temporary fill associated with the placement of rock for the jetty and installation of the temporary piles for the trestle. Applicable mitigation measures related to impact 4.5.4 (temporary effects on fisheries resources related to increases in sediments and turbidity and to release of and exposure to contaminants) will be mitigated by implementation of Water Quality Mitigation Measure 5.7.1 and measures in
	<input type="checkbox"/> N	

		the contractor's Turbidity Monitoring Plan approved by the RWQCB. Implementation of these measures will reduce impacts to less than significant.
--	--	--

O'Neill, Kerry

From: Ben Livsey <blivsey@waterboards.ca.gov>
Sent: Tuesday, May 08, 2012 10:32 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen; Bill Hurley
Subject: RE: Calaveras - Turbidity Monitoring Plan

Kerry,

The Water Board finds the revised Calaveras Turbidity Monitoring Plan acceptable. Thank you.

Regards,
Ben

Ben Livsey
Environmental Specialist
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
blivsey@waterboards.ca.gov
(510) 622-2308

>>> "O'Neill, Kerry" <KONeill@sfwater.org> 5/8/2012 8:18 AM >>>

Ben attached is the revised Calaveras – Turbidity Monitoring Plan. This plan was revised to answer your question #1 below that states:

“On page 7 the Plan states, "The turbidity readings at the various depths will be averaged in order to give an overall average turbidity level at the 3 locations identified in Figure 1." It is inappropriate to average the turbidity readings to assess water quality. Please propose an alternate method of reporting turbidity readings and revise the procedures to meet the specified criteria (p. 8) to be consistent with the revised reporting method.”

On page 4 of the revised plan (see attached yellow highlight) the contractor included the following language:

“The turbidity readings at the various depths will be compared to the other readings from the same depths at each of the 3 sample locations identified on Figure 1; for example the ambient turbidity reading for elevation 680 will be compared to the turbidity readings both inside and outside the curtain for elevation 680.”

Please let me know if you have any further questions or if you concur with this plan. This work is scheduled to commence in mid-June/early July timeframe.

From: Ben Livsey [mailto:blivsey@waterboards.ca.gov]
Sent: Wednesday, April 25, 2012 11:25 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen; Bill Hurley
Subject: Re: Calaveras - Turbidity Monitoring Plan

Kerry,

I am rescinding comment number 2 below. Upon further review, the monitoring procedures to meet the criteria specified are more stringent than the Basin Plan turbidity water quality objective. Thank you.

Regards,
Ben

Ben Livsey
Environmental Specialist
San Francisco Bay Regional Water Quality Control Board

1515 Clay Street, Suite 1400
Oakland, CA 94612
blivsey@waterboards.ca.gov
(510) 622-2308

<<<> Ben Livsey 4/23/2012 10:14 AM >>>

Kerry,
I have the following comments on the Turbidity Monitoring Plan (Plan).

1. On page 7 the Plan states, "The turbidity readings at the various depths will be averaged in order to give an overall average turbidity level at the 3 locations identified in Figure 1." It is inappropriate to average the turbidity readings to assess water quality. Please propose an alternate method of reporting turbidity readings and revise the procedures to meet the specified criteria (p. 8) to be consistent with the revised reporting method.

2. Page 8 of the Plan identifies the monitoring procedures to meet the criteria specified. The Plan needs to specify the alternate monitoring procedures in the event that ambient turbidity is above 50 NTU. The Basin Plan turbidity water quality objective reads, "Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity related to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU." The Plan needs to incorporate a trigger for remedial actions consistent with (or more stringent than) the Basin Plan of 10% or greater of ambient turbidity if ambient is greater than 50 NTU.

Please let me know if you have any questions.

Regards,
Be

Ben Livsey
Environmental Specialist

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

blivsey@waterboards.ca.gov
(510) 622-2308 n

<<<> "O'Neill, Kerry" <KONell@sfwater.org> 4/13/2012 3:16 PM >>>

Subject: Calaveras Dam Replacement Project
Permit Order No.: R2-2011-0013

Ben, Attached is the Turbidity Monitoring Plan for the in-water work related to the Adit 1.

This plan is being submitted in accordance with Reporting Requirement 8. (pg 18) that states:

"The Discharger shall submit a turbidity monitoring plan at least 60 days prior to the anticipated start of dredging/excavation or fill placement in Calaveras Reservoir. The turbidity monitoring plan shall specify all the monitoring methods and sampling locations necessary to monitor turbidity at the dredge/excavation and fill sites in the reservoir, including at least one sampling location for determining ambient turbidity. The turbidity measurements and daily estimates of the volume of materials dredged/excavated from and placed into the reservoir shall be recorded and submitted to the Regional Water Board within 7 days of the end of any month in which dredging/excavating or fill placement occurs in Calaveras Reservoir."

The Adit 1 work is described in the project description, replacement dam section of the permit (pg 2) and states:

"As part of the replacement dam, a new intake structure will be constructed in uplands adjacent to Calaveras Reservoir. The three existing adits and the existing drain will be retained and connected to the new intake structure by lateral tunnels excavated in rock. In addition, new fish screens will be installed on Adits 1 and 2 to comply with California Department of Fish and Game (CDFG) guidelines (see Figure 7 in Attachment A). These

screens will prevent entrainment and impingement of fish during transmission of water from the reservoir to Calaveras Pipeline or Calaveras Creek. The existing screens on Adit 3 comply with CDFG guidelines and will not be replaced."

Please let me know if you have any questions/comments or if you concur with this plan. This work is scheduled to commence in mid-June/early July timeframe. As we discussed yesterday, I'll be providing you with a separate email submittal for the installation of the trestle/jetty for this work and for the pH monitoring for the in-water concrete work.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

ATTACHMENT A - RWQCB Approval

From: O'Neill, Kerry
Sent: Monday, April 23, 2012 3:44 PM
To: Ben Livsey (blivsey@waterboards.ca.gov)
Cc: Wilkerson, Cullen
Subject: Calaveras - In-water Adit Fish Screen Construction
Attachments: Figures Attachments.pdf

This email is to notify you that the contractor will be constructing the Adit 1 fish screen 1 from a trestle that will be accessed from the reservoir shoreline via a rock jetty (see attached Figure 1) in the 401 Application Supplement (dated September 2010 we stated that it would be "installed from a diving barge." The installation of the rock jetty and trestle will result in impacts to waters of the United States and State as a result of the temporary fill. The proposed trestle and rock jetty will temporarily fill approximately 0.25 acre of the Reservoir (see Figure 3), including approximately 43 square feet for temporary steel piles. However, the contractor will reduce the area that would have been occupied by the Barge Alternative (see permit, page 5, Table 1: Impacts from Calaveras Dam Replacement project) by the same amount so that there is no net change in the total impacts to the reservoir (see Figure 4). Note that the following construction the rock jetty and trestle will be removed. The installation of the rock jetty and trestle will result in impacts to waters of the United States and State as a result of the temporary fill.

Last week I provided you with the Turbidity Monitoring Plan for this work and we'll be revising/resubmitting based on your comments. Construction of the pile caps for Adit 1 will require the contractor to pour concrete in the reservoir where it will be in contact with the water. In addition to the turbidity monitoring, the contractor will perform monitoring for pH. Due to the limited amount of concrete work that will be exposed to reservoir waters as part of this work and the limited timeframe of this work, SFPUC does not anticipate adverse effects to waters of the state or fisheries. The concrete will include hexylene glycol, an antiwashout additive. As stated in the attached Material Safety Data Sheet (MSDS) (see Attachment 1):

"This material has been reported to be practically non-toxic to a variety of aquatic organisms. Freshwater fish including rainbow trout, bluegill sunfish, fathead minnow, mosquito fish, goldfish and channel catfish had LC50 values in excess of 1,000 mg/l and generally were in the range of 8,000 to 10,000 mg/l. Aquatic invertebrates such as Daphnia and crayfish had EC50 values greater than 2,800 mg/l."

The approximate volume of water behind the turbidity curtain (see attached Figure 2) is approximately 84,105,000 gallons. The surface of the exposed concrete is 256 square feet for each pile cap. It will take approximately 12 hours from when the concrete pour begins until the concrete is cured (concrete takes approximately 4 hours for initial cure). The pH will be monitored a minimum once every four hours during in-water concrete pouring/curing. The contractor will utilize a calibrated pH meter to ensure that pH in Calaveras Reservoir meets San Francisco Bay Basin Plan pH requirements between 6.5 and 8.5. If this testing indicates failure of the measures to protect water quality, the contractor will stop work until conditions improve or modifications to the approach are implemented to protect water quality.

Please call or email me with questions. If you concur with the like-for-like project modification for the temporary fill for the jetty/trestle let me know, I'm hoping that this can be accomplished without a formal permit amendment. Also let me know if you have any questions/comments related to the monitoring for the in-water concrete work.

Below are quotes from the application supplement and permit for reference only:

The Calaveras 401 Application Supplement (dated September 2010) states: "Replacement of the screens at Adit 1 would be performed by divers. The screens at Adit 2 may be installed when the reservoir surface is below the adit elevation, or by divers depending on the water level in the reservoir; the low end of the reservoir operating range is just below the level of Adit 2. If the screens on Adit 2 are constructed in the dry, construction access

would be from the gently sloping shoreline on the left abutment. Adit 1 screens (and Adit 2 screens if constructed by divers) would be installed from a diving barge. Construction is expected to take up to 8 weeks for each adit. This work would be performed during one of the two-summer outage periods allowed in the construction contract (April 15-November 15 of either construction season 1 and 2, or 2 and 3). The year of construction would be determined by the contractor.”

The project's 401 certification staes (pg. 2, A. 2. a): *“As part of the replacement dam, a new intake structure will be constructed in uplands adjacent to Calaveras Reservoir. The three existing adits and the existing drain will be retained and connected to the new intake structure by lateral tunnels excavated in rock. In addition, new fish screens will be installed on Adits 1 and 2 to comply with California Department of Fish and Game (CDFG) guidelines...”*

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

O'Neill, Kerry

From: O'Neill, Kerry
Sent: Wednesday, May 09, 2012 10:12 AM
To: 'Brown, Gregory G SPN'
Cc: Wilkerson, Cullen
Subject: RE: Calaveras - In-water Adit Work & Temporary Fill (UNCLASSIFIED)

Thanks Greg for getting back to me with your approval for the like-for-like exchange for temporary fill for the adit work. To answer your questions below:

- 1.) We may be able to totally eliminate the need for the barge jetty but won't know until early next year as use of the barge haul route is dependent on where the resident bald eagle pair nest in 2013. This year they nested in a PG&E transmission tower well away from the project work limits.
- 2.) The Figure 2 attachment that I used in the email was taken from the projects California Department of Fish and Game Streambed Alteration Agreement permit application. Numbers 84 to 88 all represent locations along the reservoir where we indicated areas in our permit application where state waters would be affected by the Calaveras Dam Replacement Project.

From: Brown, Gregory G SPN [mailto:Gregory.G.Brown@usace.army.mil]
Sent: Wednesday, May 09, 2012 8:34 AM
To: O'Neill, Kerry
Subject: RE: Calaveras - In-water Adit Work & Temporary Fill (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Kerry,

If the proposed change does not increase the total volume of temporary fill in this area, and no new areas are being impacted, then I think the proposed change is OK to do without a permit modification.

If it's possible to shave 5,000 cy off the barge jetty, could it be shortened even more?

Also, what do #'s 84-87 correspond to on Figure 2 of the attachment?

Greg Brown
U.S. Army Corps of Engineers
1455 Market St
San Francisco, CA 94103
415-503-6791

From: O'Neill, Kerry [mailto:KONeill@sfwater.org]
Sent: Tuesday, May 08, 2012 3:04 PM
To: Brown, Gregory G SPN
Cc: Wilkerson, Cullen
Subject: FW: Calaveras - In-water Adit Work & Temporary Fill

Greg, I'm resending the email below as I haven't heard back from you. Again, please call or email me with questions. If you concur with the like-for-like project modification for the temporary fill for the jetty/trestle let me know. I'm hoping that this can be accomplished without a formal permit amendment.

From: O'Neill, Kerry
Sent: Wednesday, April 25, 2012 1:28 PM
To: Greg Brown
Cc: Wilkerson, Cullen
Subject: Calaveras - In-water Adit Work & Temporary Fill

Subject: Calaveras Dam Replacement Project

Permit File No.: 29979S

This email is to notify you that the contractor will be constructing the Adit 1 fish screen from a trestle that will be accessed from the reservoir shoreline via a rock jetty (see attached Figure 1). On page 4 of the Section 404 Individual Permit Application Supplement (dated October 2010) we stated that the adit would be "installed from a diving barge". Due to the low rainfall and lowering of the reservoir level, this Adit can now be feasibly be accessed for construction via a rock jetty and trestle. The installation of the rock jetty and trestle will result in impacts to waters of the United States and State as a result of the temporary fill. The trestle and rock jetty will temporarily fill approximately 5,000 cubic yards of the Reservoir (see attached Figures 1 & 2), including approximately 33 cubic yards for temporary steel piles. However, the contractor will reduce the area that would have been occupied by the Barge Haul Route – Reservoir (north) Jetty (see permit, page 5, Table that includes "Location, Type of Material, and Volume in Cubic Yards") by the same amount so that there is **no net change in the total impacts to the reservoir** (see attached Figure 3). Note that following construction the rock jetty and trestle will be removed.

Please call or email me with questions. If you concur with the like-for-like project modification for the temporary fill for the jetty/trestle let me know. I'm hoping that this can be accomplished without a formal permit amendment.

Below is a quote from page 4 of the Section 404 Individual Permit Application Supplement (dated October 2010) for reference only:

"Divers would perform replacement of the screen at Adit 1. The screens of Adit 2 may be performed when the reservoir surface is below the adit elevation or by divers depending on the water level in the reservoir; the low end of the reservoir operating range is just below the level of Adit #2. Adit 1 (and Adit 2 if constructed by divers) would be installed from a diving barge. If Adit 2 is constructed in the dry, construction access would be from the shoreline on the left abutment (gentle slope). Adit 2 requires minor excavation to install the new fish screen manifold. All excavated material removed from the work area would be disposed in Disposal Sites 3 or 7. Construction is expected to take approximately four to six months and would be scheduled within one of the Calaveras construction drawdown periods by the contractor."

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

Classification: UNCLASSIFIED
Caveats: NONE

O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Tuesday, May 15, 2012 4:43 PM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 15 - Adit 1 Cstr. Method Mod.
Attachments: MPM 15 - Adit Construction (rev 1)-signed.doc

Signed approval attached...

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

Subject RE: Calaveras - MPM 15 - Adit 1 Cstr. Method Mod.

05/15/2012 03:41 PM

The edits look fine. The temporary fill will be obtained from on-site but if you need something more specific let me know and I can check with the contractor.

From: Steve Smith [mailto:Steve.Smith@sfgov.org]
Sent: Tuesday, May 15, 2012 2:48 PM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 15 - Adit 1 Cstr. Method Mod.

Just a couple of minor edits. Let me know if OK.

Also, via reply email, can you confirm the source of the temporary fill?

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

To "Smith, Steve" <Steve.Smith@sfgov.org>

cc

Subject RE: Calaveras - MPM 15 - Adit 1 Cstr. Method Mod.

05/15/2012 01:33 PM

Attached are revisions that we discussed in track changes. The mention of temporary rock jetty is sprinkled throughout but you'll note that I added it up front to the "Detailed Description of Minor Project Modification."

From: O'Neill, Kerry
Sent: Friday, May 11, 2012 11:14 AM
To: Steve Smith (Steve.Smith@sfgov.org)
Subject: Calaveras - MPM 15 - Adit 1 Cstr. Method Mod.

Steve, as we discussed attached is MPM 15 for modification of the construction methodology for Adit 1 construction including related figures and attachments. Please let me know if you have any follow-up questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

[attachment "MPM 15 - Adit Construction (rev 1).doc" deleted by Steve Smith/CTYPLN/SFGOV]

O'Neill, Kerry

From: Wilkerson, Cullen
Sent: Thursday, May 10, 2012 8:04 AM
To: O'Neill, Kerry
Subject: FW: Calaveras Reservoir - In-water Adit Fish Screen Construction

-----Original Message-----

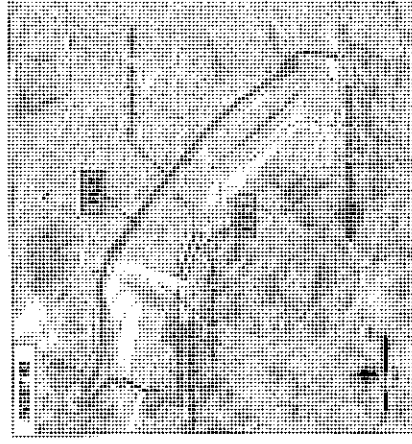
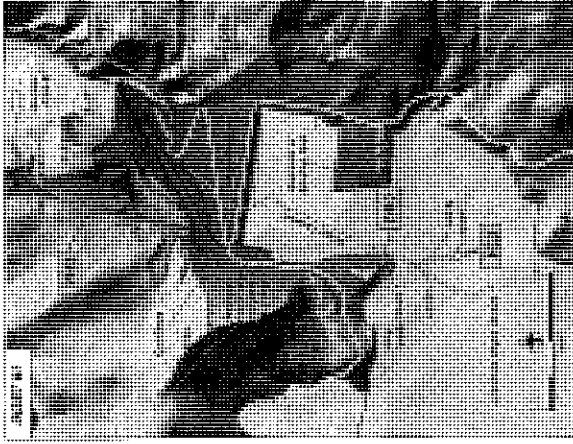
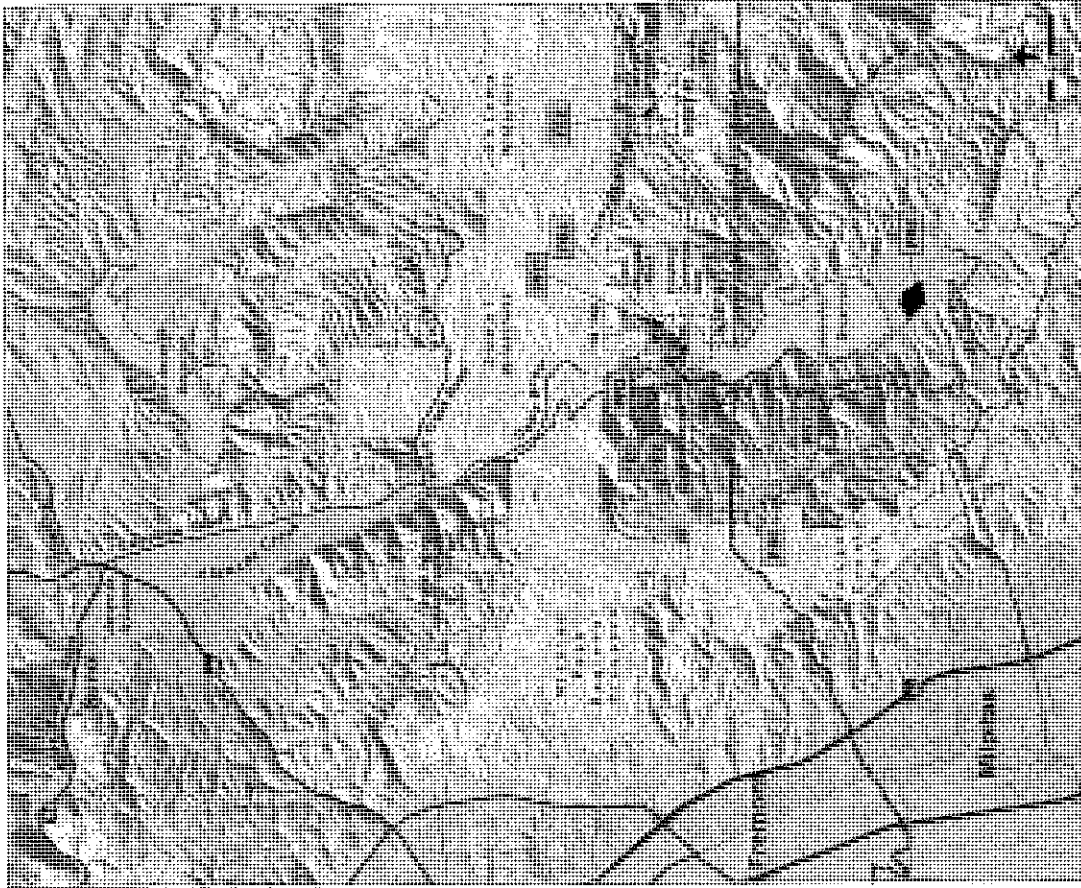
From: Bill Hurley [<mailto:whurley@waterboards.ca.gov>]
Sent: Thursday, April 26, 2012 11:13 AM
To: Wilkerson, Cullen; O'Neill, Kerry
Cc: Ben Livsey; Shin-Roei Lee
Subject: Calaveras Reservoir - In-water Adit Fish Screen Construction

Dear Mr. O'Neil,

The Regional Water Board approves of the proposed modifications re construction of the In-water Adit Fish Screen. The proposed project modifications will cause no net change in the total impacts to Calaveras Reservoir and is a safer alternative for construction personnel. If you have any questions, please contact Ben Livsey at (510) 622-2308, or via email at blivsey@waterboards.ca.gov.

Sincerely,

Bill Hurley
Senior Engineer
Leader, North Bay Watershed Section
Regional Water Quality Control Board
San Francisco Bay Region



CDRP VARIANT SUMMARY OF UPDATES

Additional Fishery Enhancements

- FE1** Fish Screen at the Alameda Creek Diversion Tunnel
- FE2** Fish Ladder around the Alameda Creek Diversion Dam
- FE3** Fish Screens at Calaveras Dam Adits #1 and #2

Project Refinements

- PR1** Spillway Discharge Channel Grade Control Structures Modification
- PR2** Intake Tower Modifications
- PR3** Additional Instrumentation
- PR4** Right Dam Abutment Excavation Modification
- PR5** Electrical Distribution Line Upgrade
- PR6** Borrow Area E Modifications
- PR7** West Haul Road Work Area Modification

• **FIGURE 9.1: LOCATION OF CDRP VARIANT PROJECT ELEMENTS DIFFERING FROM THE DRAFT EIR PROJECT**

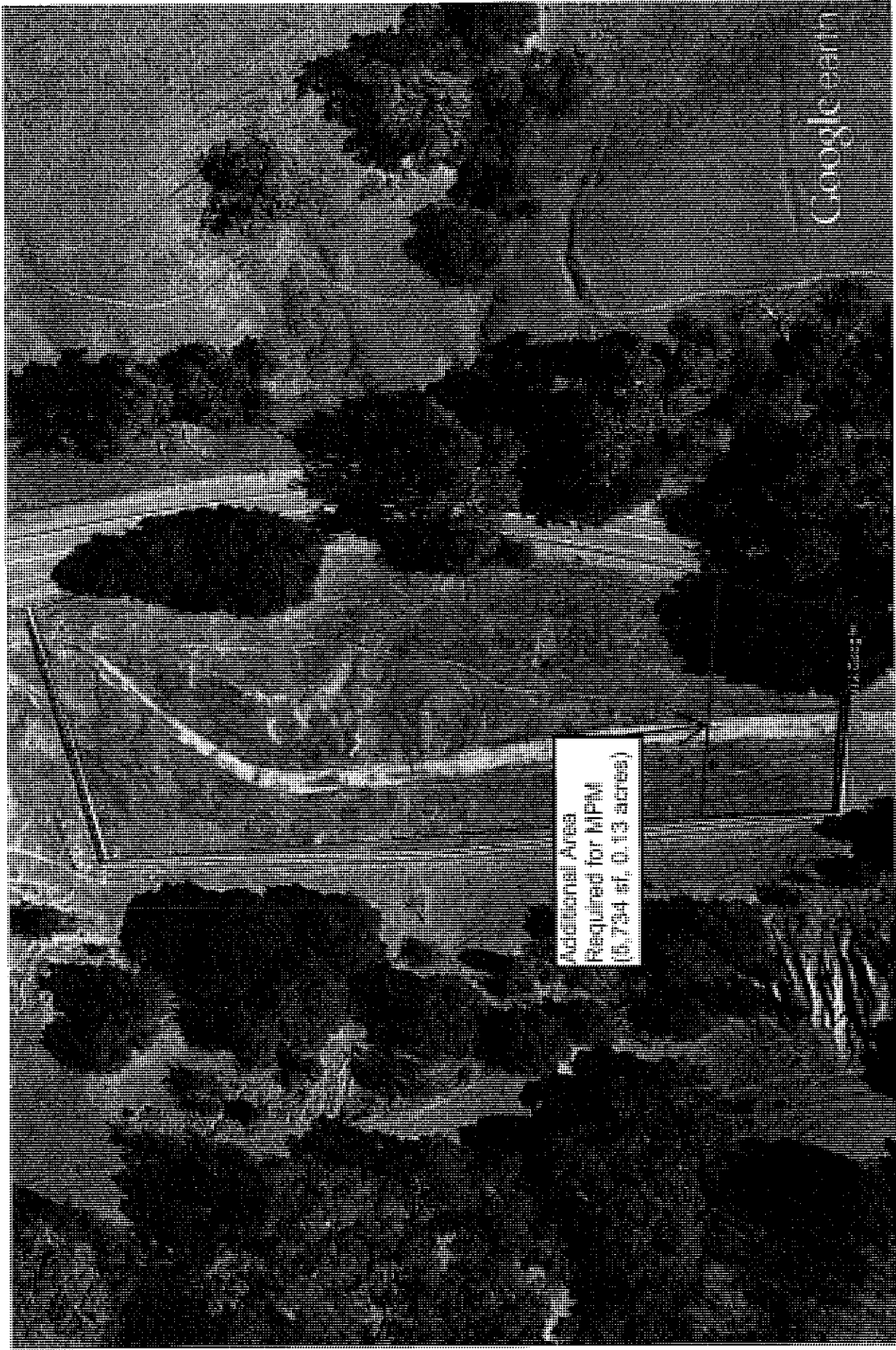


Figure 3. CDRP- Reduction of Project Footprint at Staging Area 3- Minor Project Modification of Staging Area 6

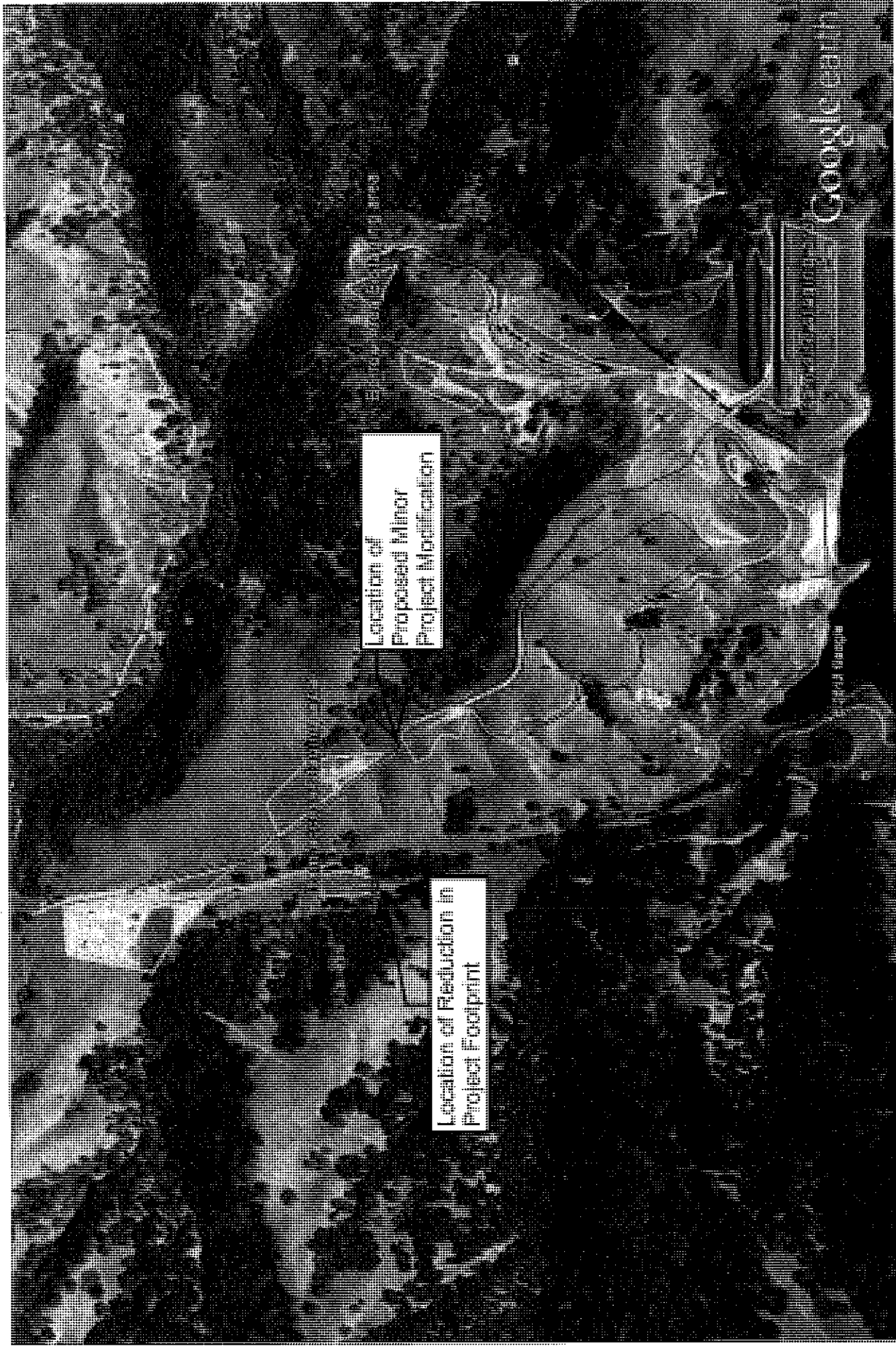


Figure 1. CDRP- Location of Minor Project Modification at Staging Area 6 and Reduction of Project Footprint in Staging Area 3

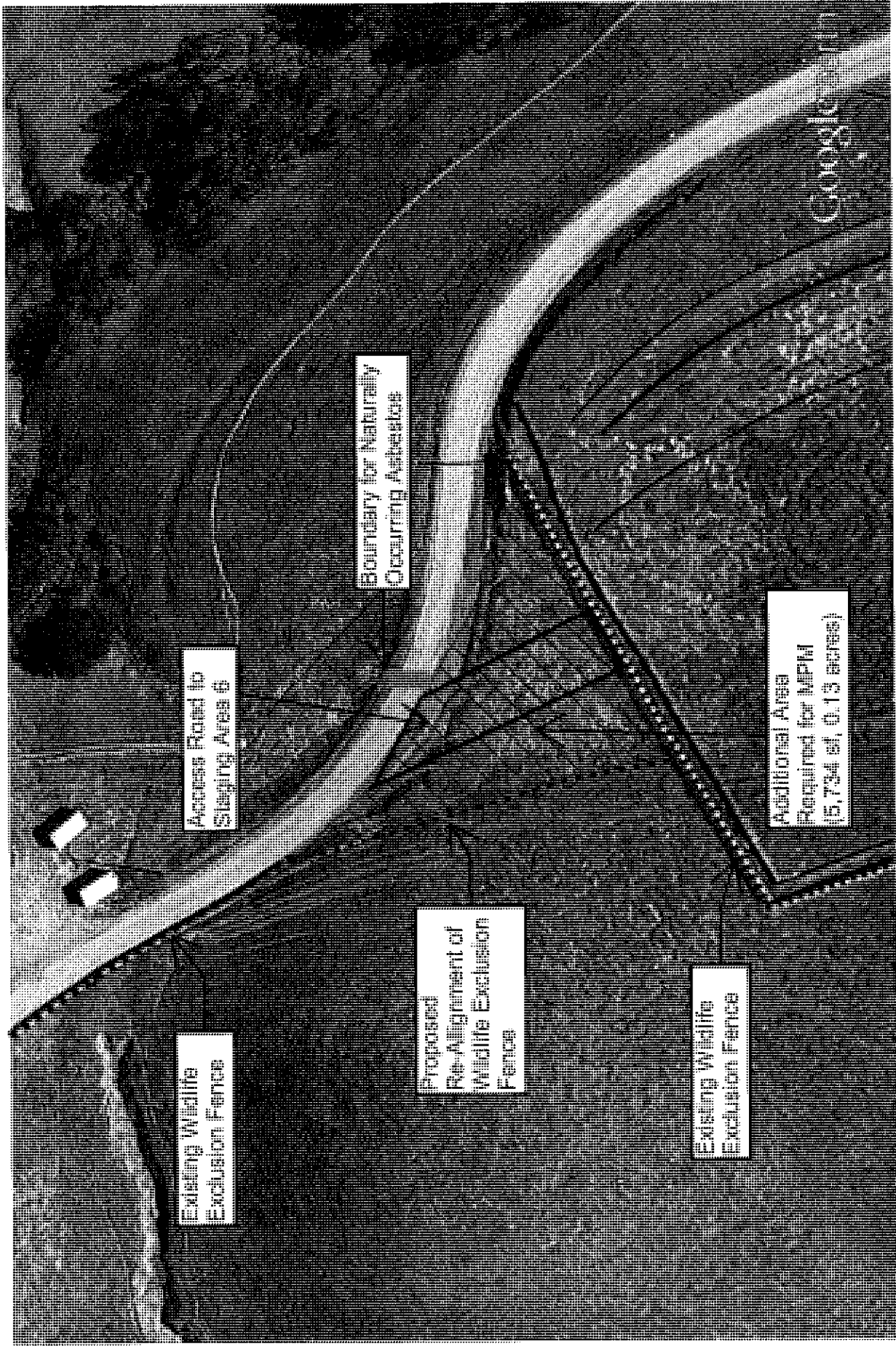
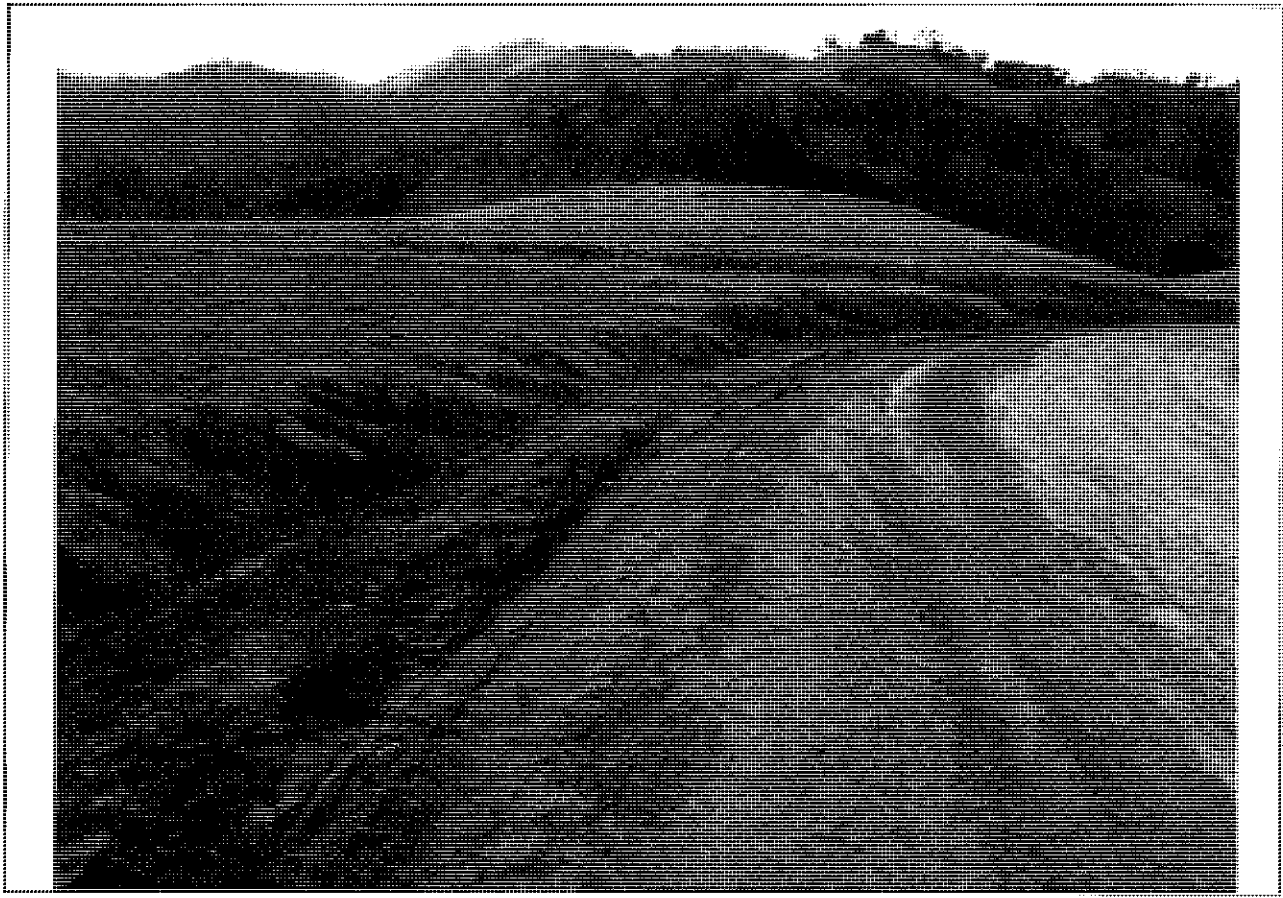


Figure 2. CDRP- Minor Project Modification of Staging Area 6

Photos of Proposed Area To Create A Northern Entrance to Staging Area 6



Photos of Proposed Area To Create A Northern Entrance to Staging Area 6

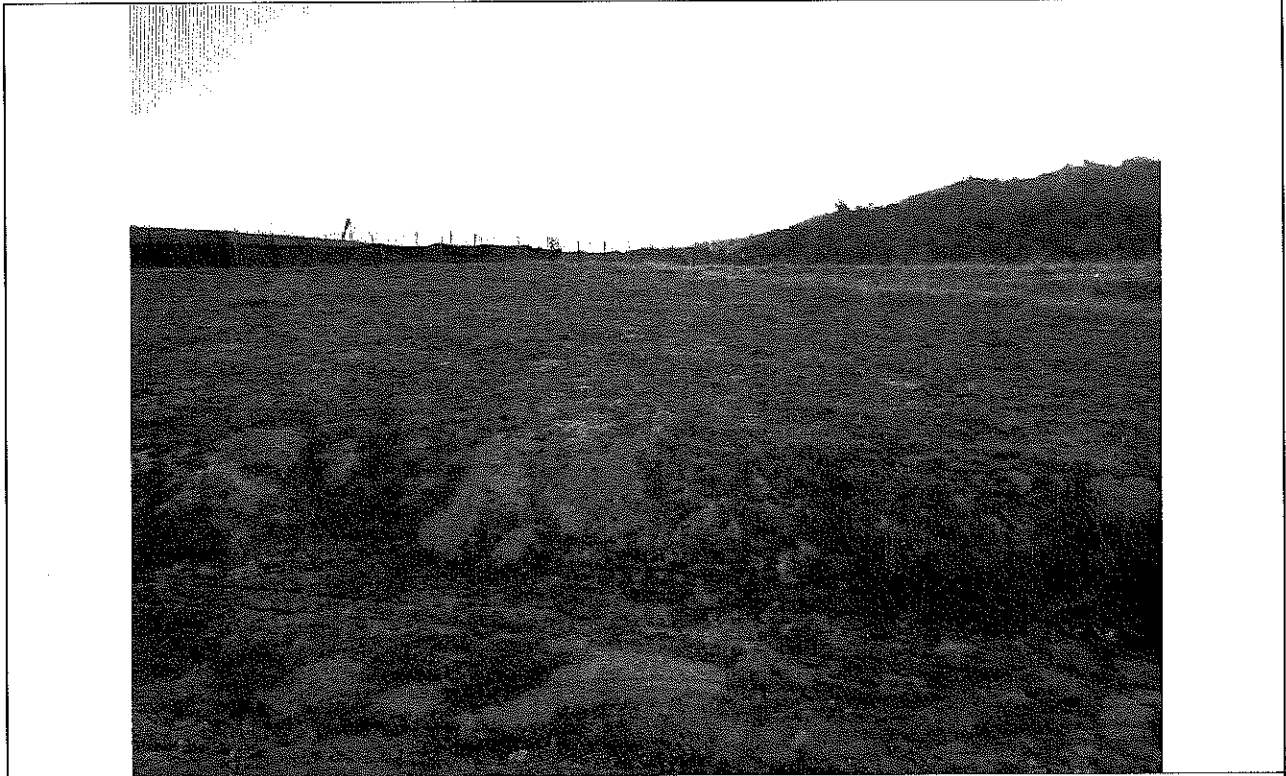
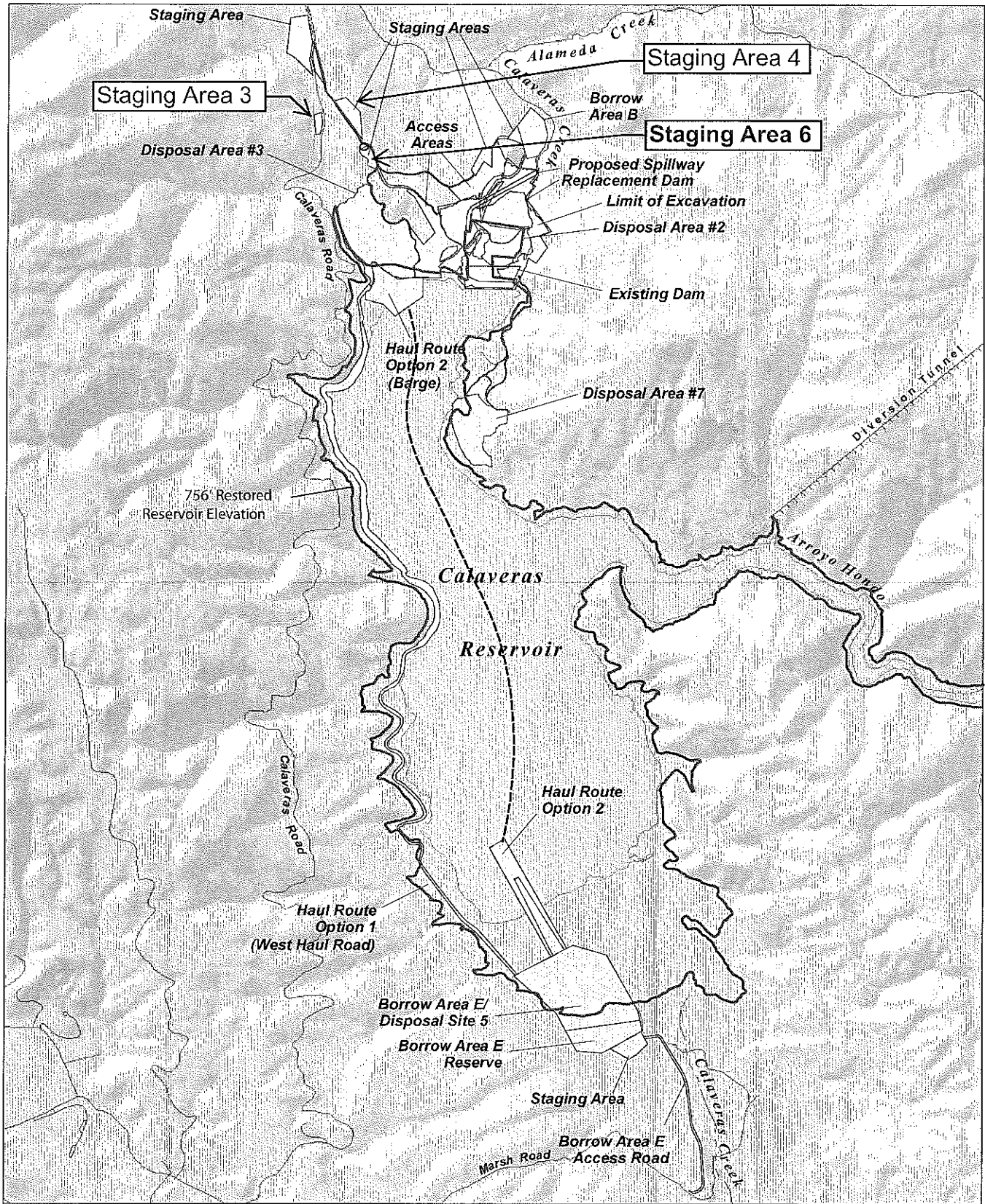
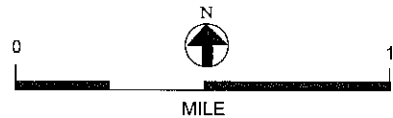


Figure 1 - Location of Staging Area 6 Expansion



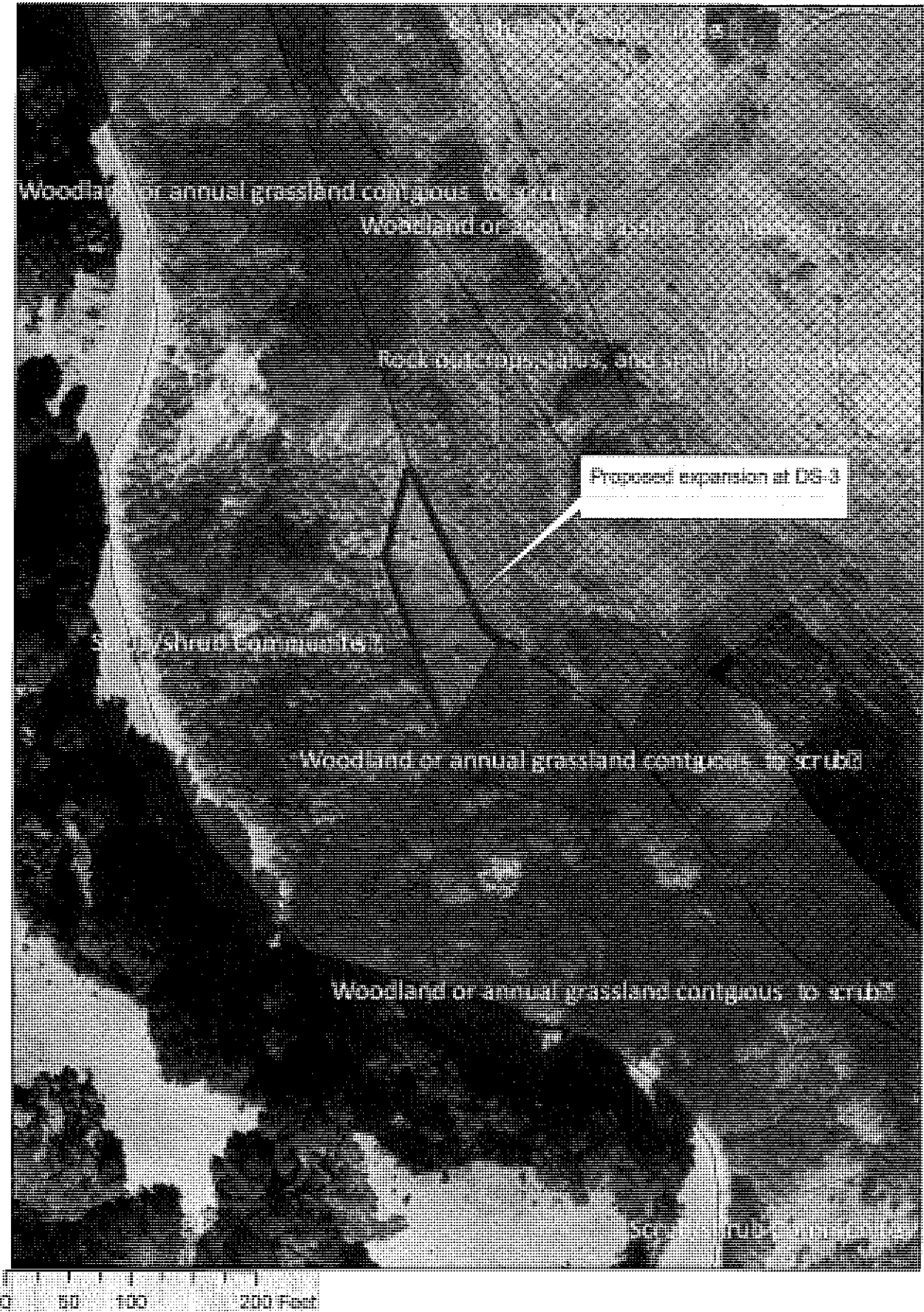
SOURCE: URS

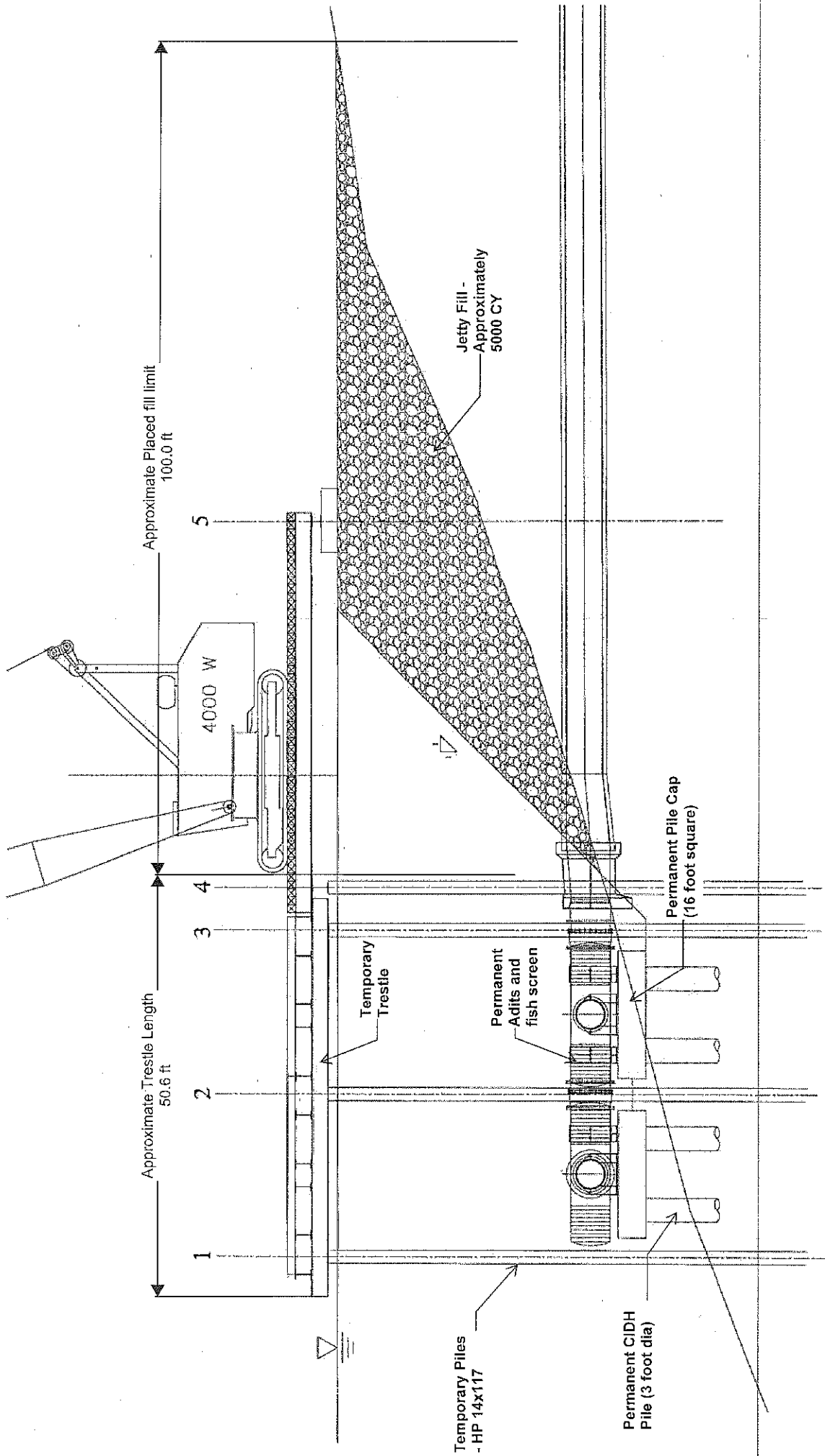


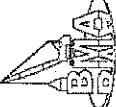
CALAVERAS DAM REPLACEMENT PROJECT

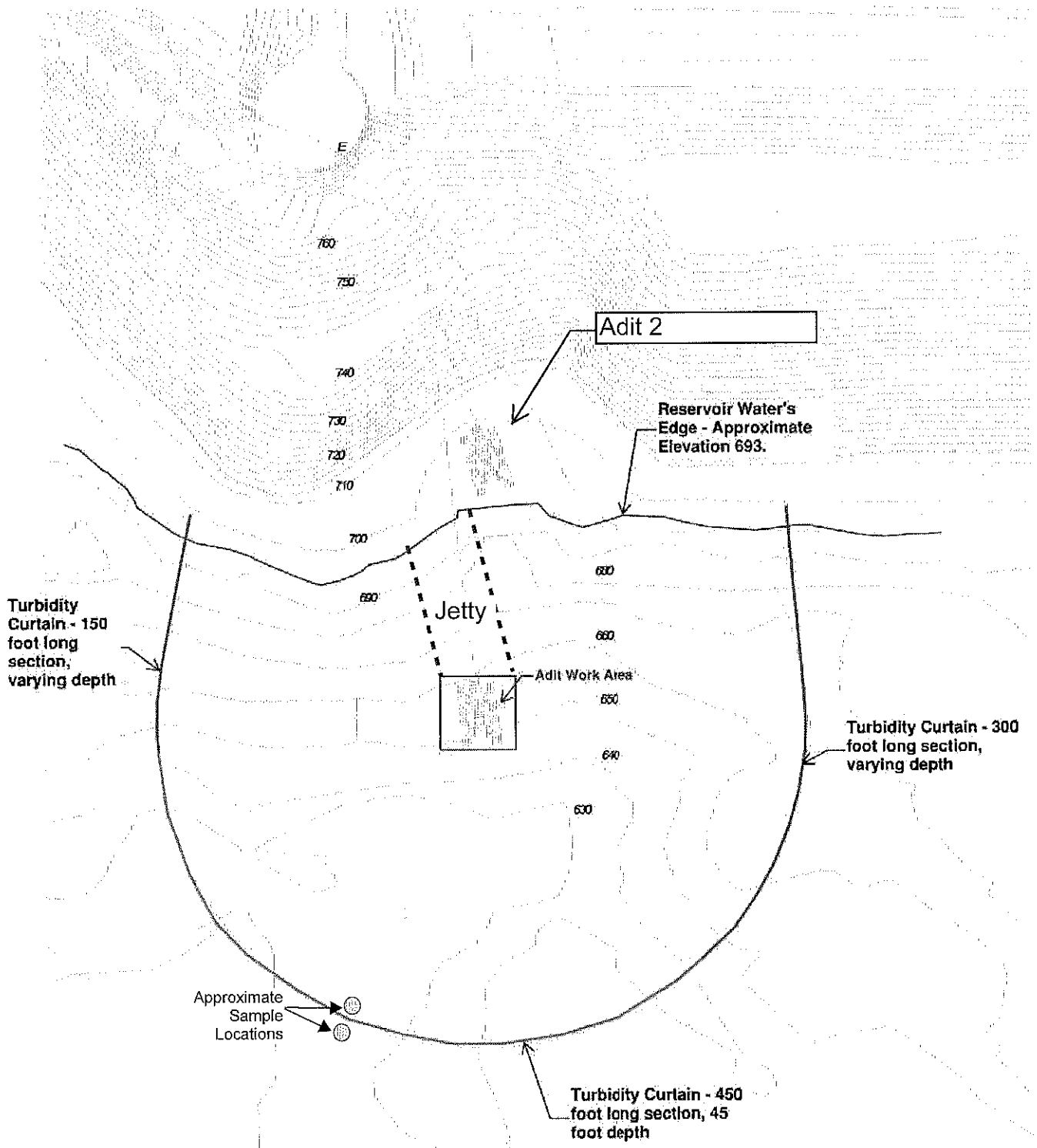
FIGURE S.4: WORK LIMIT AREA

Figure 3. Disposal Site 3 Proposed Expansion Location



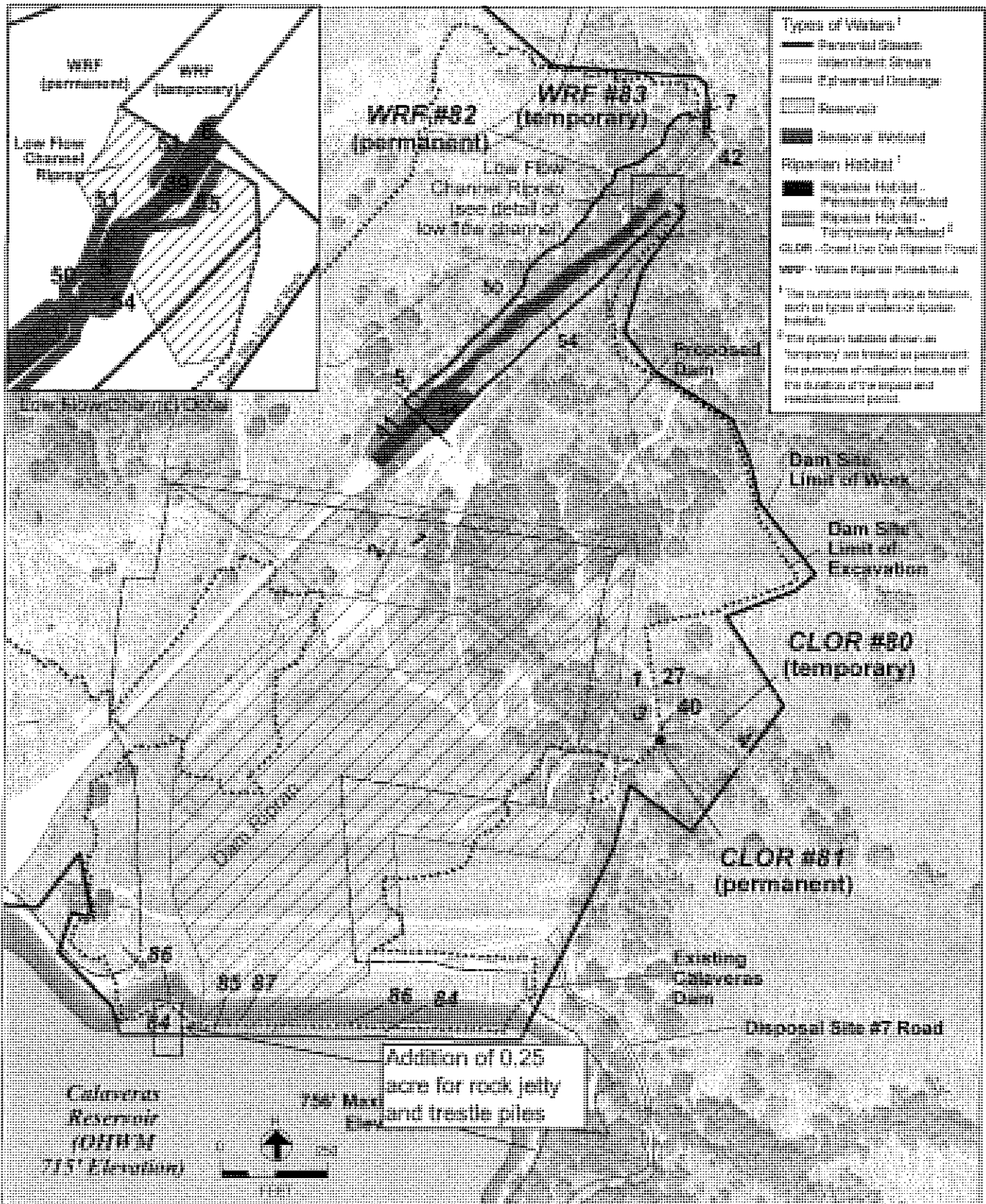


DESIGNED & DRAWN BY		CHECKED BY		DATE	
NO.		REVISIONS		DATE	
			BWA Construction Engineering Inc. 1515 Oakleaf Blvd., Suite 220 Walnut Creek, CA 94596 www.bwaengineering.com		
Calaveras Dam Access Trestle			Elevation View		
Calaveras Dam Temporary Access			Figure 1		



Approximate Monitoring point for ambient background monitoring at least 200 feet outside of curtain and at least 200 feet away from construction activity, including but not limited to haul routes, staging areas, and dam demolition or construction.

Figure 2



SOURCE: EDAW & Turnstone JV

Figure 3

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number: 016		Date: 5/17/12	
Project Title:		Calaveras Dam Replacement Project	
EP Case No./Project No.		2005.0161E/CUW37401	
MPM Prepared By:		Cullen Wilkerson, ECM	
MPM Triggered By:		<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
		<input checked="" type="checkbox"/> Other: SFPUC Request	
Landowner:		SFPUC	
Vegetative Cover/Land Use:		Non Native Grassland	Net Acreage Affected: 0.122 (permanent)
Modification to:		<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
		<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 2081-2010-033-03

Detailed Description of Minor Project Modification:

The SFPUC is requesting a minor project modification (MPM) to Disposal Site 3 of the Calaveras Dam Replacement Project (Figure 1). Figure 1 shows the project limit and the two 5,344 square foot (0.122-acres) areas to be exchanged (reduction/expansion). Once fill is placed in this location at DS3, a depression will be created. This depression will cause nuisance ponding adjacent to the fill. This has the potential to impact water quality, erosion, and realignment of the perennial stream. Figures 2 and 3 provide more detail for the expansion and reduction areas respectively. The SFPUC is requesting to expand the project limits in this location, fill the depression, and re-contour the stream as approved by the regulatory agencies in the engineering designs.

This modification would allow for the SFPUC to control water quality, ensure the long-term alignment of the perennial stream, and ensure the integrity of the dike and fill placement are stable.

An additional 5,344 (0.122 acres) square feet would be impacted to fill this nuisance depression; however, at the southern end of Staging Area 3 the project footprint will be reduced within grassland habitat by 5,344 square feet (Figures 1). Therefore, there would be no net impact to grassland habitat within the project area from this MPM and the exchange of project footprint is "like-for-like" (See Tables 1 and 2).

Table 1. Disposal Site 3 additional acreage.

Species	Habitat Type	Requested Changes by Type (in acres) – P / T
California tiger salamander	Aquatic (breeding)	0 / 0
	Dispersal only	0.12 / 0
California red-legged frog	Aquatic (breeding)	0 / 0
	Aquatic (non-breeding)	0 / 0
	Upland / Dispersal	0.12 / 0
Alameda whipsnake	Diablan Sage scrub	0 / 0
	Willow riparian (other scrub/shrub)	0 / 0
	Woodland/grassland	0.12 / 0
	Rock outcrop	0 / 0

Table 2. Staging Area 3 reduction in construction impacts.

Species	Habitat Type	Requested Changes by Type (in acres) – P / T
California tiger salamander	Aquatic (breeding)	0 / 0
	Dispersal only	(-0.12) / 0
California red-legged frog	Aquatic (breeding)	0 / 0
	Aquatic (non-breeding)	0 / 0
	Upland / Dispersal	(-0.12) / 0
Alameda whipsnake	Diablan Sage scrub	0 / 0
	Willow riparian (other scrub/shrub)	0 / 0
	Woodland/grassland	(-0.12) / 0
	Rock outcrop	0 / 0

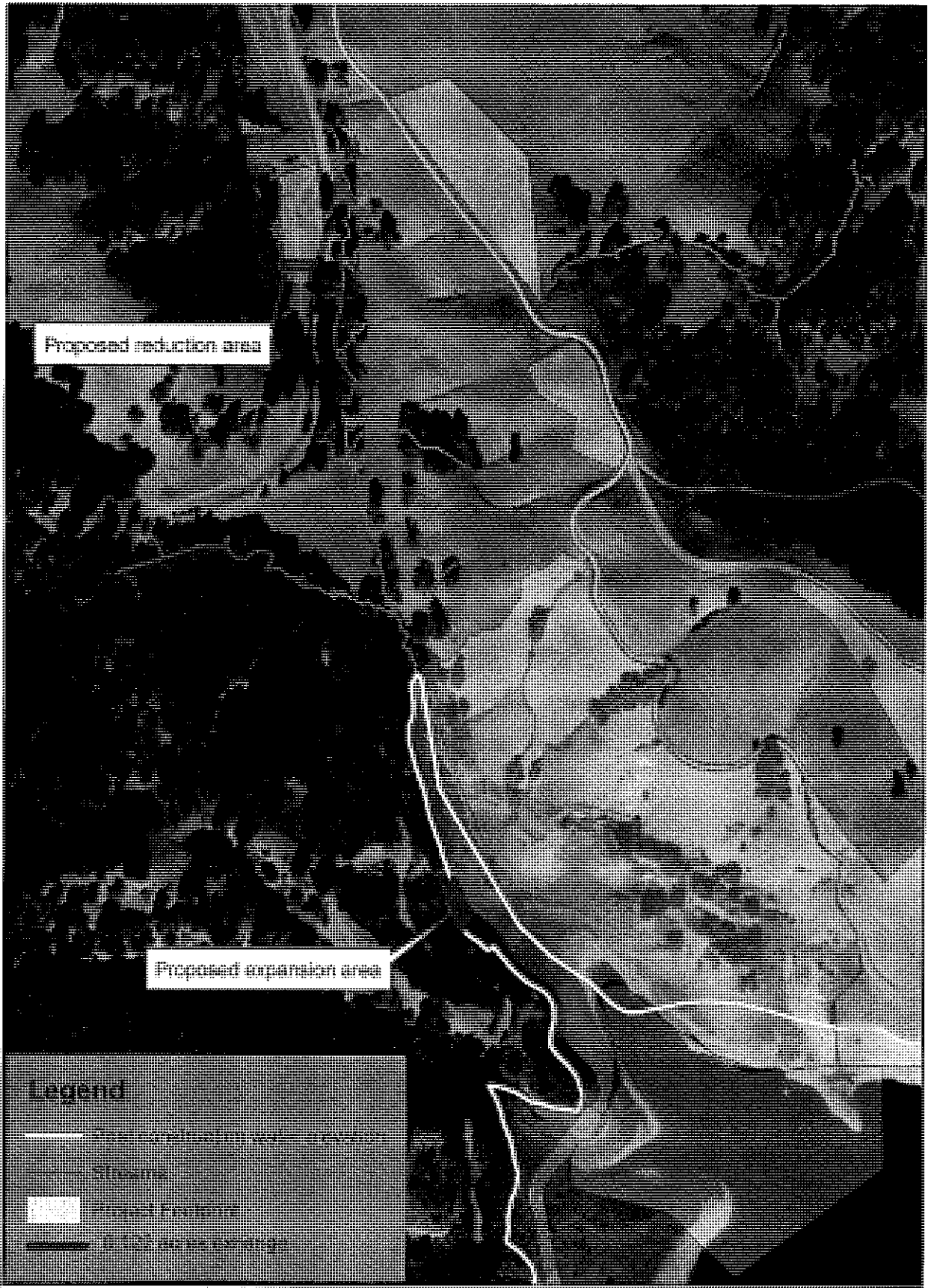
Additionally, the wildlife exclusion fence currently in this location would be relocated and extended to connect to the existing wildlife exclusion fence that runs along the western portion of DS3.

The FEIR, Section 4.10.5 states "There is a high probability of encountering unknown paleontological resources during ground-disturbing construction activities such as excavation for the spillway excavation of borrow areas, and construction of haul roads". This minor expansion is occurring adjacent to the DS3 western limit. There is a low probability for paleontological resources in the proposed expansion area along the dam access road way (see FEIR Section 4.10.1). No paleontological monitoring is required for this area of the project.

Archaeological resources were not considered to be present, as stated in the FEIR Section 4.10.1.4 there is a "low likelihood of encountering historical resources" due to the steepness of the slopes in the proposed expansion area (see Figure 4.10.1 in the FEIR). No archaeological monitoring is recommended for this expansion".

		(N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new cultural resource impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	There would be a "like-for-like" exchange of non-native grassland habitat for the expansion of DS-3. Applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant.
	<input type="checkbox"/> N	

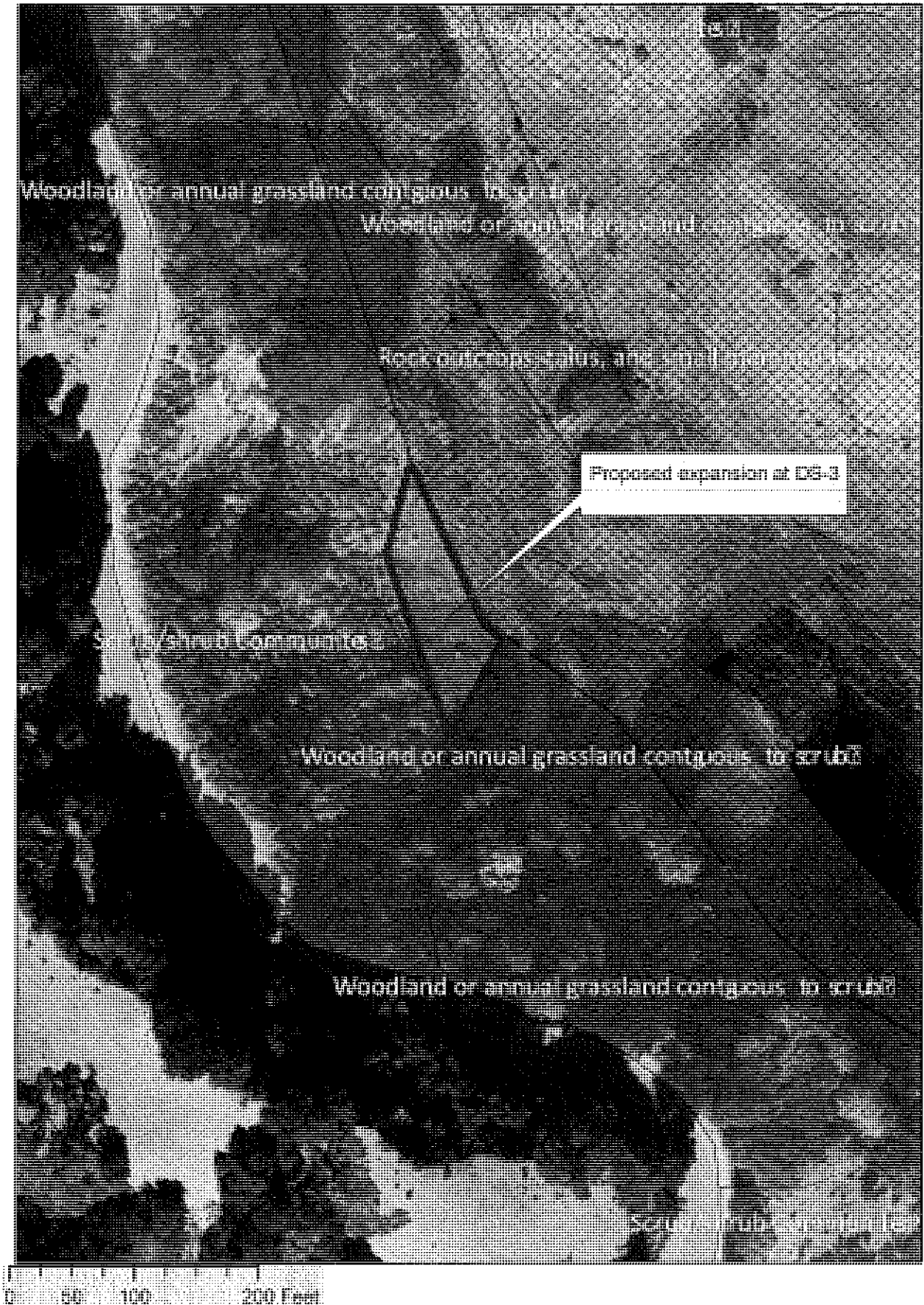
Figure 1. Like-for-Like Exchange of Project Footprint MPM 16

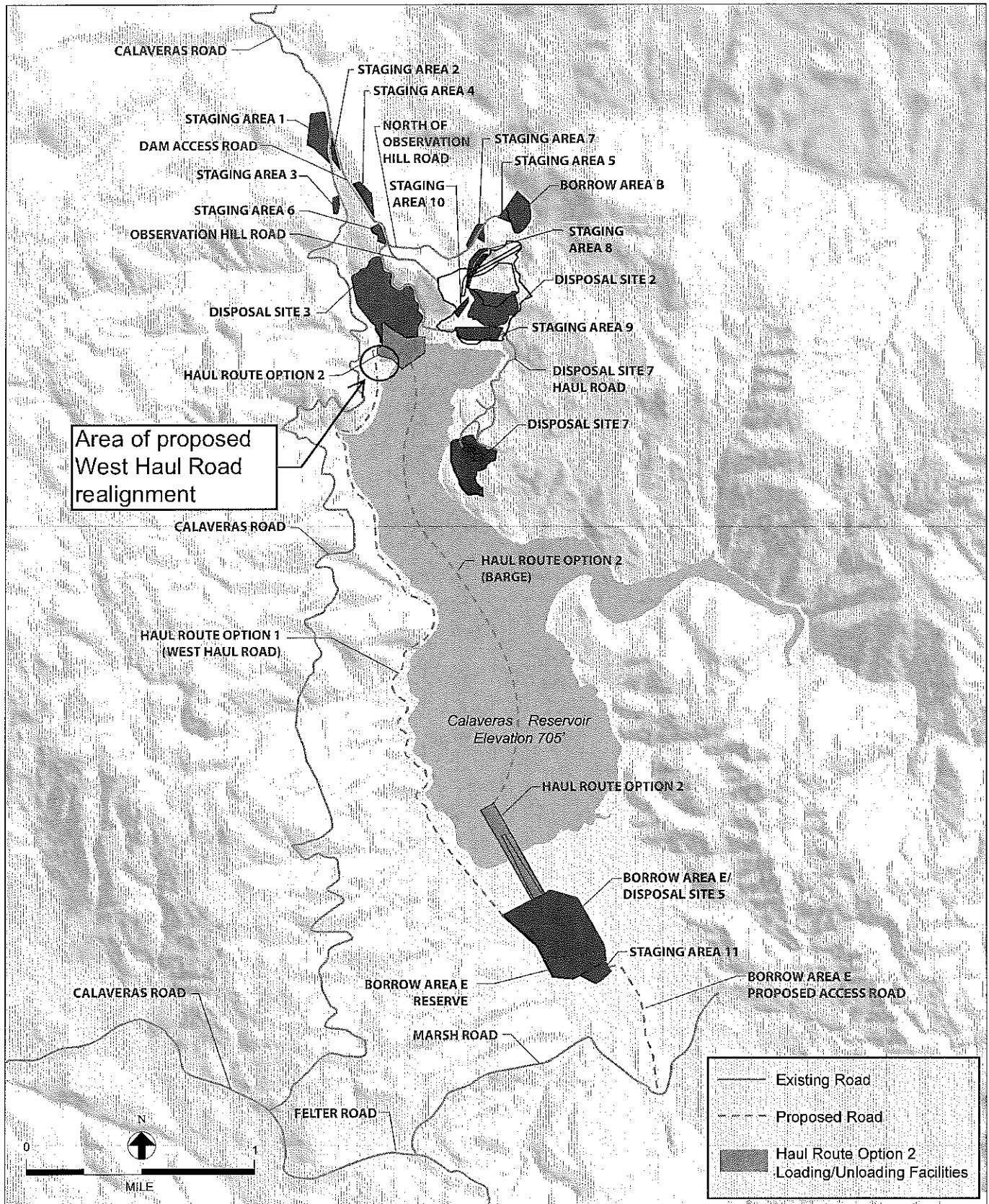


0 255 510 1,020 Feet



Figure 3. Disposal Site 3 Proposed Expansion Location







SOURCE: URS; EDAW&Turnstone JV

CALAVERAS DAM REPLACEMENT PROJECT

Figure 1

EXISTING ROADS, PROPOSED ROADS, AND HAUL ROUTE OPTIONS

MINOR PROJECT MODIFICATION

 <p style="font-size: small;">SFPUC WATER GAS POWER</p>	<p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p>	 <p style="font-size: small;">HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM</p>
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Minor Project Modification Number:	017	Date: 6/15/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Kerry O'Neill, ECCM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: SFPUC Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Open water	Net Acreage Affected: 0.00
Modification to:	<input type="checkbox"/> Mitigation Measure: <input checked="" type="checkbox"/> Other: FEIR Project Description	
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

The SFPUC is requesting a minor project modification (MPM) to realign a portion (approximately 500 feet) of the West Haul Route to eliminate a potential safety issue (Figure 1). As can be seen on the attached Figure 2 the realignment is shorter than the road as currently designed and therefore there will be no additional acreage affected. Note that the entire West Haul Route is a new road and has not yet been installed.

The existing alignment as currently designed (note that the road has not been installed at this location) is somewhat of an "S" curve. The contractor recommends changing the alignment of the road at this location so that the road will be straighter and have a smoother approach as it enters DS-3. The existing configuration would result in an abrupt change in direction as the road approaches the DS-3 dike. This could create an unsafe condition for hauling.

ENVIRONMENTAL IMPACTS

This original road alignment and the proposed road realignment area are within the zone for the 756-foot restored reservoir elevation (i.e., open water). The original road alignment and the proposed road realignment are within the cultural site boundary of Desmond Camp (P-01-10870) (see FEIR pg. 4.10-30 description of Calaveras Dam Construction Workers' Site CD-20).

Attachments:

Figure: 1 – Existing Roads, Proposed Roads, and Haul Route Options

Figure 2 - Location of existing/proposed road realignment for Minor Project Modification

Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	There would be no new cultural resource impacts beyond those identified in the FEIR as both the existing road alignment and proposed road realignment are located within the site boundary for P-01-10870. Per direction from the San Francisco Environmental Planning ERO designee, Adrian Praetzellis (see attached memo dated 6/14/12) the following measures shall be implemented to avoid unnecessarily affecting the archaeological site: 1.) PUC will mark the construction limits on the ground with lath and flagging, 2.) PUC will ensure that the construction crew is aware of the importance of staying out of this sensitive zone; 3.) this exclusion area shall not to be used to marshal equipment, as a turnaround, or for any other purpose during construction; and 4.) PUC's environmental inspector will explain these requirements to the construction team at a pre-work tailgate meeting..
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input type="checkbox"/> Y	There would be no new significant vegetation or wildlife impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	

Wilkerson, Cullen

From: O'Neill, Kerry
Sent: Tuesday, June 19, 2012 7:20 AM
To: Wilkerson, Cullen
Subject: RE: Calaveras - MPM 17 West Haul Route Realignment
Attachments: MPM 017 - West Haul Rd Realign-signed.pdf

Note the following approval condition:

"To avoid unnecessarily affecting the archaeological site (P-01-10870), construction contractar shall mark the construction limits on the ground with lath and flagging. SFPUC shall ensure that the construction crew is aware of the importance of staying out of this sensitive zone. This exclusion area is not to be used to marshal equipment, as a turnaround, or for any other purpose during construction. Without specifically disclosing that the area is an archaeological site, the SFPUC's Environmental Inspector shall explain these requirements to the construction team at a pre-work tailgate training prior to ground disturbing activities within the archaeological site."

From: Steve Smith [<mailto:Steve.Smith@sfgov.org>]
Sent: Monday, June 18, 2012 4:40 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: Calaveras - MPM 17 West Haul Route Realignment

Approval attached. I added a parenthetical reference to the segment length.

Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

"O'Neill, Kerry" <KONeill@sfgov.org>

06/18/2012 04:29 PM

To "Smith, Steve" <Steve.Smith@sfgov.org>
cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>
Subject RE: Calaveras - MPM 17 West Haul Route Realignment

Approx. 475' (see attached).

From: Steve Smith [<mailto:Steve.Smith@sfgov.org>]
Sent: Monday, June 18, 2012 10:51 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: Re: Calaveras - MPM 17 West Haul Route Realignment

Just one question Kerry: can you provided the approximate length of the realignment?

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373
"O'Neill, Kerry" <KONeill@sfgov.org>

06/15/2012 08:22 AM

To <Steve.Smith@sfgov.org>
cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>
Subject Calaveras - MPM 17 West Haul Route Realignment

Steve, attached is MPM 17 for modification of the West Haul Route. This is a new roadway that has not yet been installed, the contractor is currently performing civil survey of the alignment and installing wildlife exclusion fencing. Construction of the roadway is scheduled to begin mid- to late-next week. The modification entails realignment of a short section of the West Haul Route to straighten out a curve in the road design. As the original road alignment and the realigned road segment traverses an historical cultural resource site I coordinated with Adrian Praetzellis in advance of submitting this MPM (you were copied on this email correspondence). Please let me know if you have any follow-up questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

[attachment "MPM 017 - West Haul Rd Realign.doc" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "MPM 17-Attachments.pdf" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "Realignment Length.pdf" deleted by Steve Smith/CTYPLN/SFGOV]

O'Neill, Kerry

From: Steve Smith <Steve.Smith@sfgov.org>
Sent: Monday, June 18, 2012 4:40 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: Calaveras - MPM 17 West Haul Route Realignment
Attachments: MPM 017 - West Haul Rd Realign-signed.doc

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Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
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06/18/2012 04:29 PM

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cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>

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1650 Mission Street, Suite 400
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"O'Neill, Kerry" <KONeill@sfgov.org>

06/15/2012 08:22 AM

To <Steve.Smith@sfgov.org>

cc "Wilkerson, Cullen" <CWilkerson@sfgov.org>

Subject Calaveras - MPM 17 West Haul Route Realignment

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Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
1145 Market Street, Suite 500
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

[attachment "MPM 017 - West Haul Rd Realign.doc" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "MPM 17-Attachments.pdf" deleted by Steve Smith/CTYPLN/SFGOV] [attachment "Realignment Length.pdf" deleted by Steve Smith/CTYPLN/SFGOV]

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number:	018	Date: 6/22/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Kerry O'Neill, ECCM	
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
	<input checked="" type="checkbox"/> Other: SFPUC Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Non Native Grassland and Woodland	Net Acreage Affected: 2.05 non-native grassland and 2.05 woodland
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 2081-2010-033-03

Detailed Description of Minor Project Modification:

The SFPUC is requesting a minor project modification (MPM) to expand the left abutment excavation to address existing geological issues and to eliminate a safety issue at this location (Photo 1). During construction of the left abutment excavation (i.e., cut slope) it was determined that the slope geology (i.e., slide planes and trembler sandstone) creates a hazardous situation for the workers on and below the left abutment excavation. Modification of the slope is needed to remove the temblor sandstone and layback the slope to approximately 2:1. Correction of the geological problem will require an extra workspace increase in order to layback the slope from its current design at 1.3:1 to an approximate 2:1 design which will require an additional 4.1 acres of extra workspace (i.e., 2.05 acres each of oak woodland and grassland) (see Figure 1). An equal area of like grassland habitat and oak woodland will be reduced to produce a like-for-like exchange of acreage (i.e., expansion/reduction) for the oak woodland and grassland habitat (4.1 acres). Figure 2 shows the project limit and the 2.05-acre area to be exchanged for the grassland at Staging Area 11 (reduction). Figure 3 shows the project limit and the 2.05-acre areas to be exchanged for the oak woodland along the Disposal 7 haul route (reduction).

During construction of the left abutment excavation (i.e., cut slope) it was determined that the slope geology (i.e., slide planes) creates a hazardous situation for the workers on and below the left abutment excavation. Currently construction activities have been halted in this area due to safety concerns. This slope grade modification will remove most of the highly disturbed and highly weathered weak Temblor Sandstone. The slope modification will also minimize the elevated worker safety risk associated with the existing steeper cut slope. This modification will require additional work area at the top of the cut slope as the slope is laid back to the revised 2:1 slope.

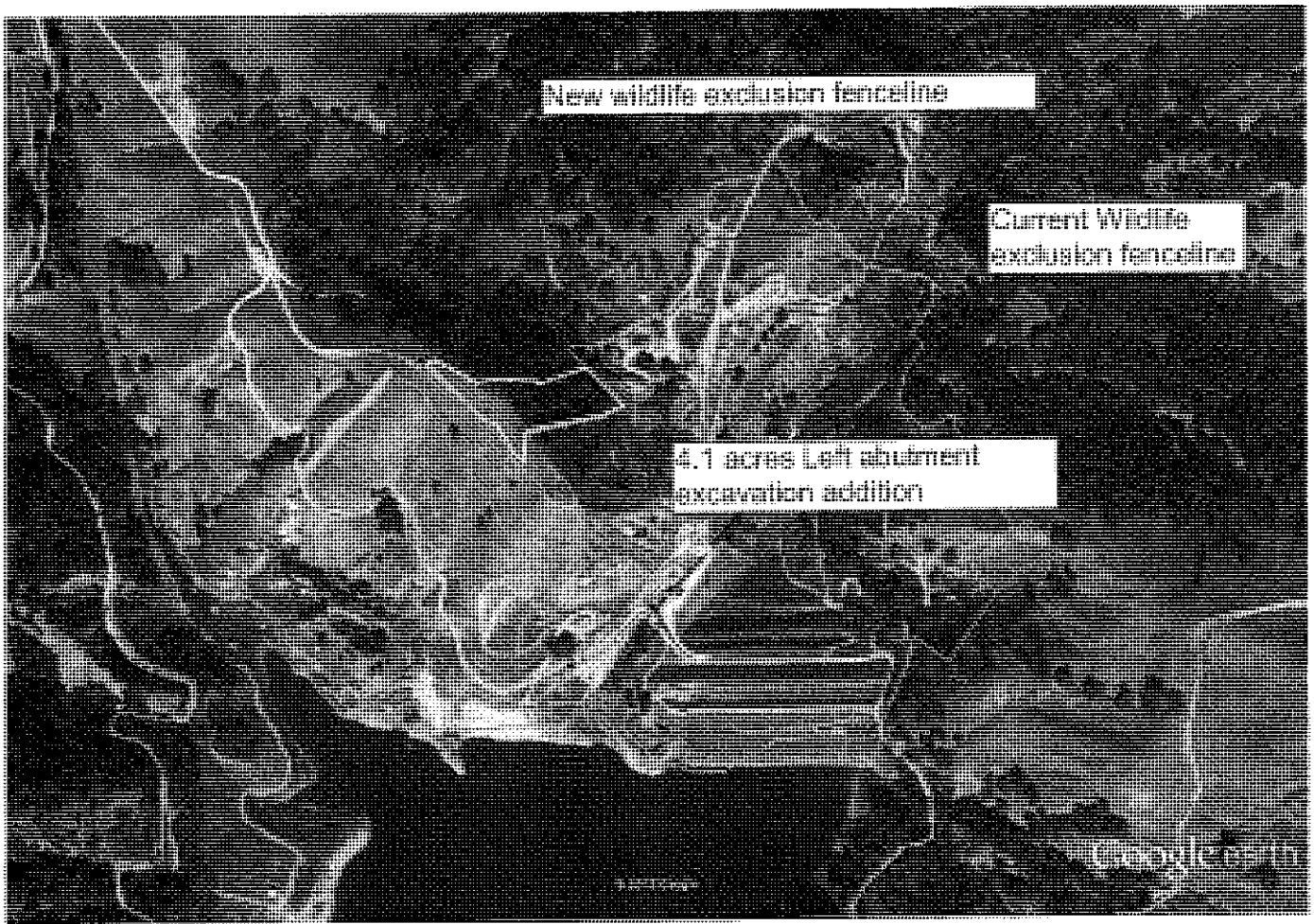
Additionally, the wildlife exclusion fence will be installed to encompass the additional workspace at the left

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input checked="" type="checkbox"/> Y	Although there would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR, this project modification will remedy unstable geologic conditions at the left abutment excavation (i.e., slide planes and Temblor Sandstone) that create a hazardous situation for the workers on and below the left abutment excavation.
	<input type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	Although there would be no new cultural resource impacts beyond those identified in the FEIR the project will implement mitigation measure 5.10.1 for discoveries of human remains and associated or unassociated funerary objects and 5.10.2 Archaeological Measure II: Accidental Discovery Measures.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Visual Resources	<input checked="" type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. Impacts of construction activities on scenic vistas, scenic resources, and visual character when viewed from the Sunol Wilderness (i.e., impact 4.11.1) were determined to be Significant and Unavoidable (temporary). Impacts of site disturbance on scenic vistas, scenic resources, and visual character when viewed from the Sunol Wilderness (i.e., impact 4.11.2) for the grading the excavated area of Observation Hill (i.e., left abutment excavation) were analyzed and per the FEIR analysis determined that it would permanently alter the profiles of these features when viewed from the Sunol Wilderness. These impacts were also determined to have a significant impact on scenic vistas from the park and on scenic resources and the visual character of the dam site and its surroundings. The incremental increased workspace for the left abutment excavation will be visible from the Sunol Wilderness and the impacts will be the same for those analyzed for grading the excavated area of Observation Hill although the incremental increase of workspace for the left abutment excavation will generally not be discernible by viewers as it is contiguous to the approved left abutment excavation.
	<input type="checkbox"/> N	

Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	<p>There would be a “like-for-like” exchange of non-native grassland habitat which is potential California red-legged frog upland/dispersal habitat (FEIR Figure 4.4.6) and Alameda whipsnake woodland or annual grassland contiguous to scrub/shrub habitat (FEIR Figure 4.4.9) for the expansion of the left abutment excavation. The reduction of workspace at Staging Area 11 would be a “like-for-like” exchange for the non-native grassland habitat. Like-for-like exchange for the oak woodland impacted will occur along the haul route for Disposal Site 7. Additionally, applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant.</p>
	<input type="checkbox"/> N	



Photo 1 – Left Abutment Excavation



Google earth



Figure 1 - Left abutment excavation addition

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number:	019	Date: 6/29/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Kerry O'Neill, ECCM	
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
	<input checked="" type="checkbox"/> Other: SFPUC Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Non Native Grassland	Net Acreage Affected: 0
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input checked="" type="checkbox"/> Permit:	USFWS B.O. 81420-2009-F-1339 and CDFG 2081-2010-033-03

Detailed Description of Minor Project Modification:

The SFPUC is requesting a minor project modification (MPM) to develop a disposal site (i.e., Disposal Site 10) (Figure 1) to store excess materials (approx. 2 million cubic yards) removed from the left abutment excavation. This material, when feasible (i.e., acceptable geologic composition), is intended to be removed from Disposal Site 10 and used for the new dam construction. This excess material is being removed from the left abutment to address existing geological issues and to reduce a safety issue at the left abutment excavation. An equal area of like grassland habitat will be reduced to produce a like-for-like exchange of acreage (i.e., expansion/reduction) for the grassland habitat (10 acres). Figure 1 shows the project limit and the 10-acre area to be exchanged for the grassland at three (3) other areas on the project as follows: 1.) Staging Area 11 will be reduced by 2.35 acres of grassland, 2.) Barge Access Area will be reduced by 4.35 acres of grassland, and 3.) Marsh Connector Road will be reduced by 3.3 acres of grassland.

Additionally, the wildlife exclusion fence will be installed at Disposal Site 10. The new wildlife exclusion fencing will be extended to connect to the existing wildlife exclusion fencing near this location as illustrated on Figure 1.

Justification:

During construction of the left abutment excavation (i.e., cut slope) it was determined that an additional approximate two million cubic yards of material would need to be removed because the slope geology (i.e., highly fractured rock) that create a hazardous situation for the workers on and below the left abutment excavation. Although there are other disposal sites they cannot accommodate the amount of storage space needed for the excess materials removed from the left abutment excavation. Additionally, Disposal Site 10 due to its close proximity to both the left abutment excavation and the new dam site will help to minimize the haul distances.

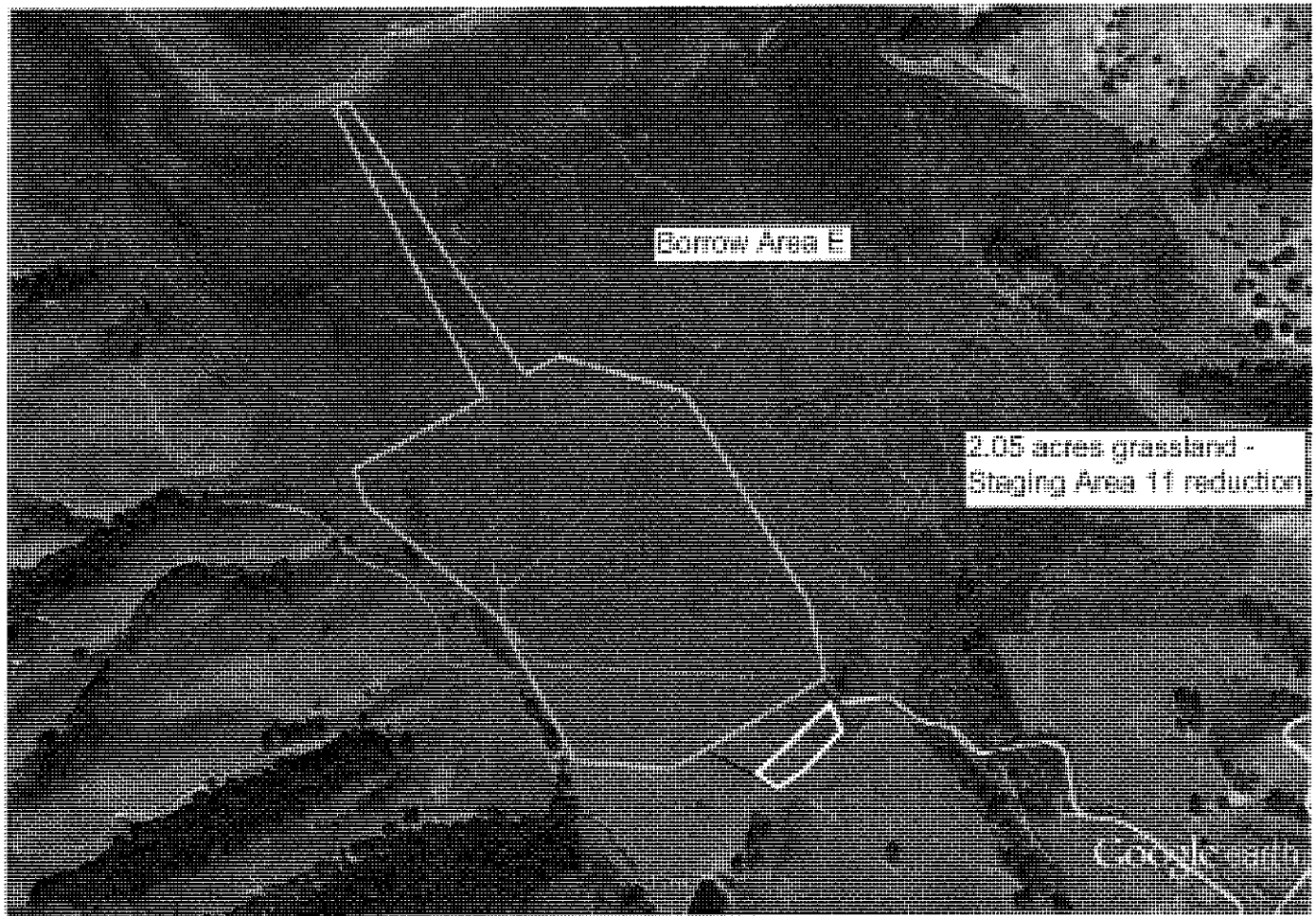
EP Required Signatures for Approval:

Signee: Steven H. Smith Date: 7/11/12
 Approved Approved with Conditions (see conditions above) Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	Although there would be no new cultural resource impacts beyond those identified in the FEIR the project will implement mitigation measure 5.10.1 for discoveries of human remains and associated or unassociated funerary objects and 5.10.2 Archaeological Measure II: Accidental Discovery Measures.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Visual Resources	<input checked="" type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. Impacts of construction activities on scenic vistas, scenic resources, and visual character when viewed from the Sunol Wilderness (i.e., impact 4.11.1) were determined to be Significant and Unavoidable (temporary) although it was also noted that " <i>The proposed construction activities in other areas (e.g., staging areas along Calaveras Road, the west haul road, Disposal Sites 3,5, and 7, and activities at the southern end of the reservoir would not be prominent, if visible at all, when viewed from Sunol Wilderness. Their visual impact would be minimized by distance and/or obscured by topography.</i> " (FEIR page 4.11-19, footnote #2). Disposal Site 10, adjacent to Disposal Site 3, would also not be prominent due to distance and intervening topography, Impacts of construction activities and site disturbance on scenic views from county roads (i.e., impact 4.11.4) for the grading of Disposal Site 3 were analyzed
	<input type="checkbox"/> N	

		<p>and per the FEIR analysis determined that impacts would be less than significant with recontouring and revegetating at the completion of the project to minimize visual evidence of disturbance and the impact on scenic views from Calaveras Road. Disposal Site 10 which is adjacent to Disposal Site 3 is also visible from Calaveras Road which in Alameda County is designated as an Alameda County Scenic Route. Views from Calaveras Road to Disposal Site 10 would be similar to views analyzed for Disposal Site 3 which is closer than Disposal Site 10 to Calaveras Road. Following construction, Disposal Site 10 will be revegetated with native grasses. As stated in the FEIR (page 4.11-25) the areas covered with grassland will recover relatively quickly (i.e., within a few years) which will minimize visual evidence of disturbance and the impact on scenic views from Calaveras Road. The impact will be similar to those analyzed and considered less than significant.</p>
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	<p>There would be a “like-for-like” exchange of non-native grassland habitat which is potential California red-legged frog upland/dispersal habitat (FEIR Figure 4.4.6) (see Figure 4) and Alameda whipsnake woodland or annual grassland contiguous to scrub/shrub habitat (FEIR Figure 4.4.9) (see Figure 2) for Disposal Site 10. The reduction of workspace at Staging Area 11, Barge Access Area, and Marsh Connector Road would be a “like-for-like” exchange for the non-native grassland habitat. There would also be an additional reduction of impacts to California tiger salamander habitat of 7.65 acres (see Figure 3). Additionally, applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant.</p>
	<input type="checkbox"/> N	

Staging Area 11 and Borrow Area E



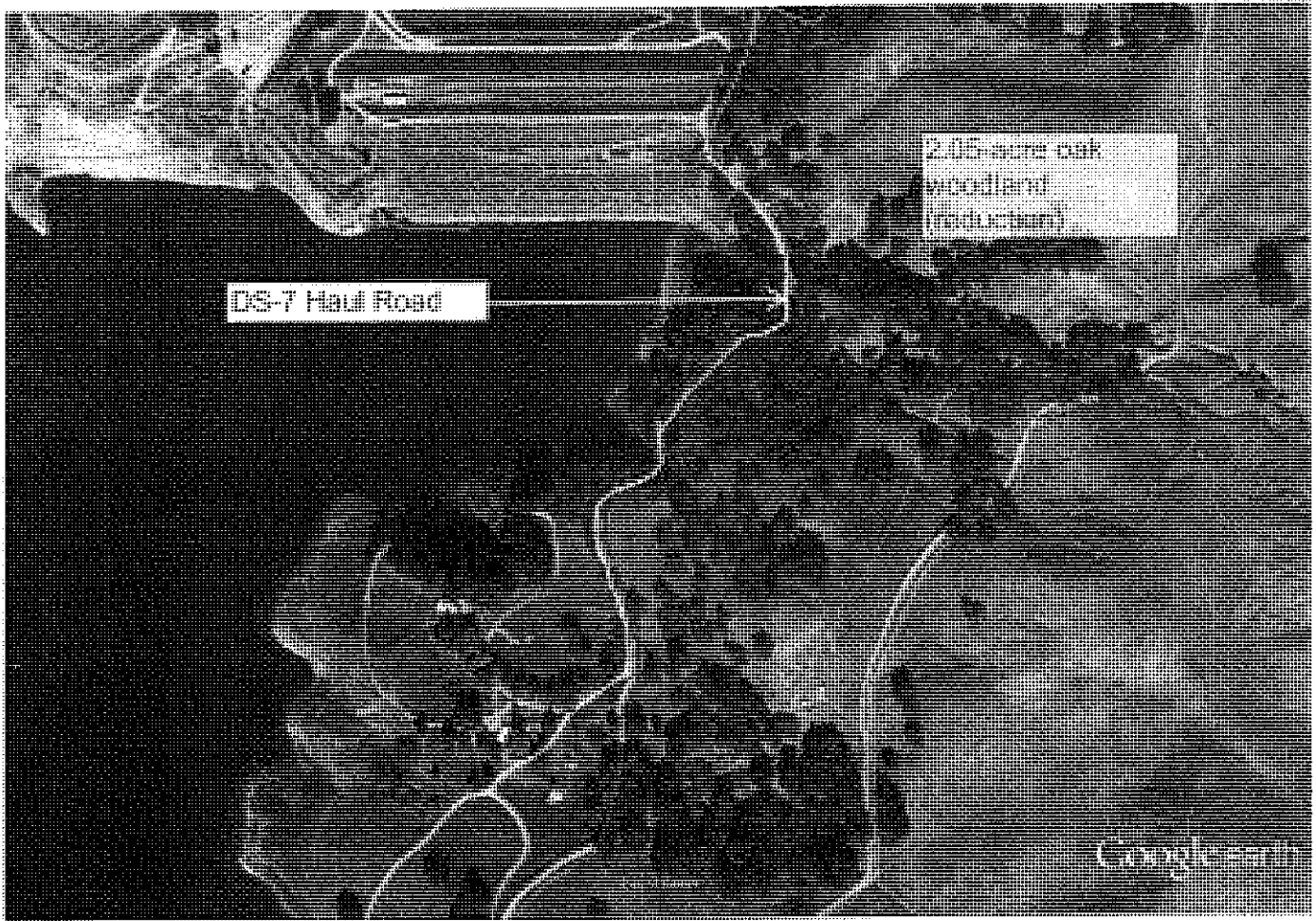
2.05 acres grassland -
Staging Area 11 reduction

Google earth



Figure 2 - Staging Area 11 acreage reduction

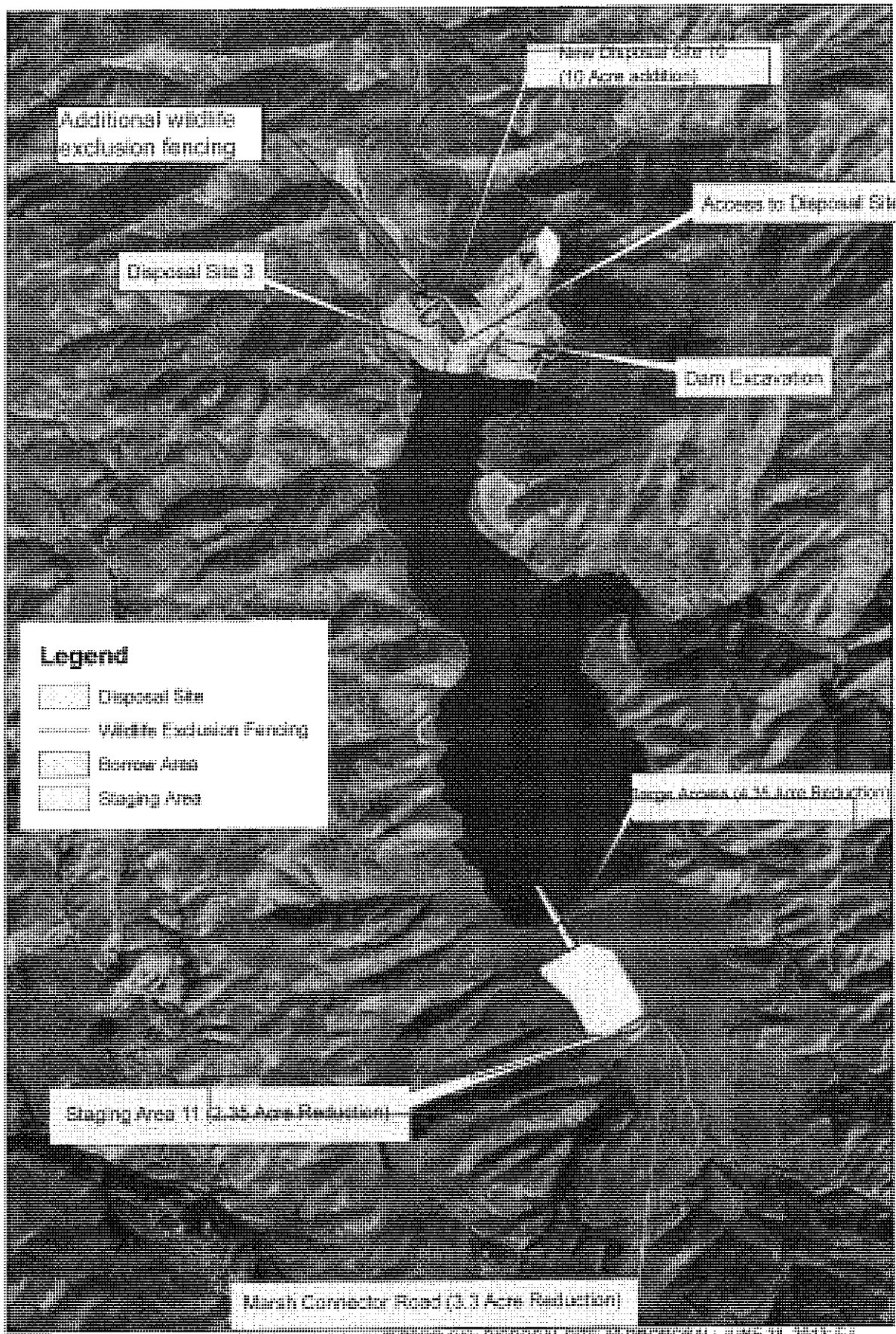
Disposal Site 7 Haul Road



Google earth



Figure 3 - DS-7 Haul Road acreage reduction



ES&P FOR DISPOSAL SITE 11 PROJECT, JUNE 28, 2012 (E)

Figure 1

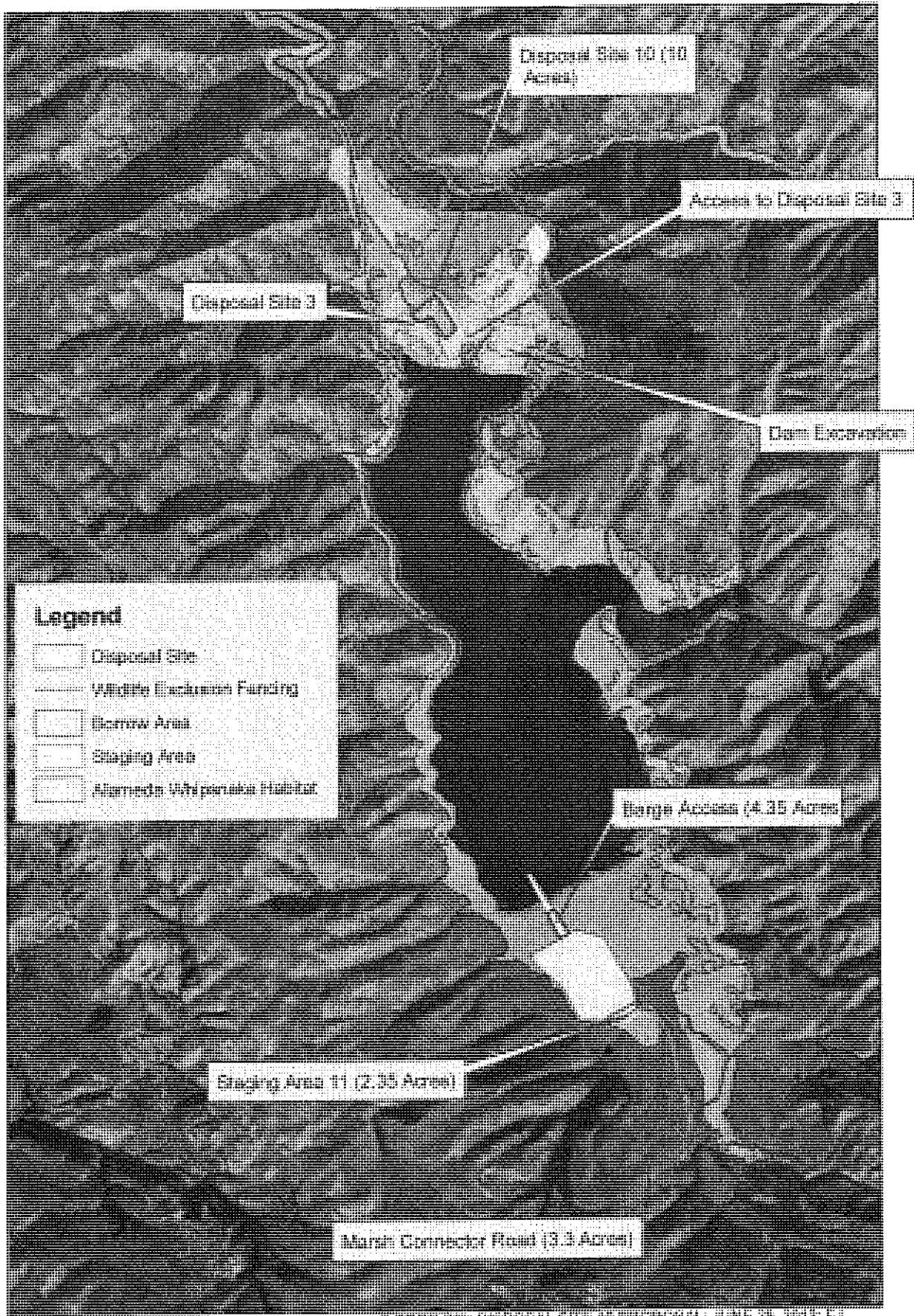
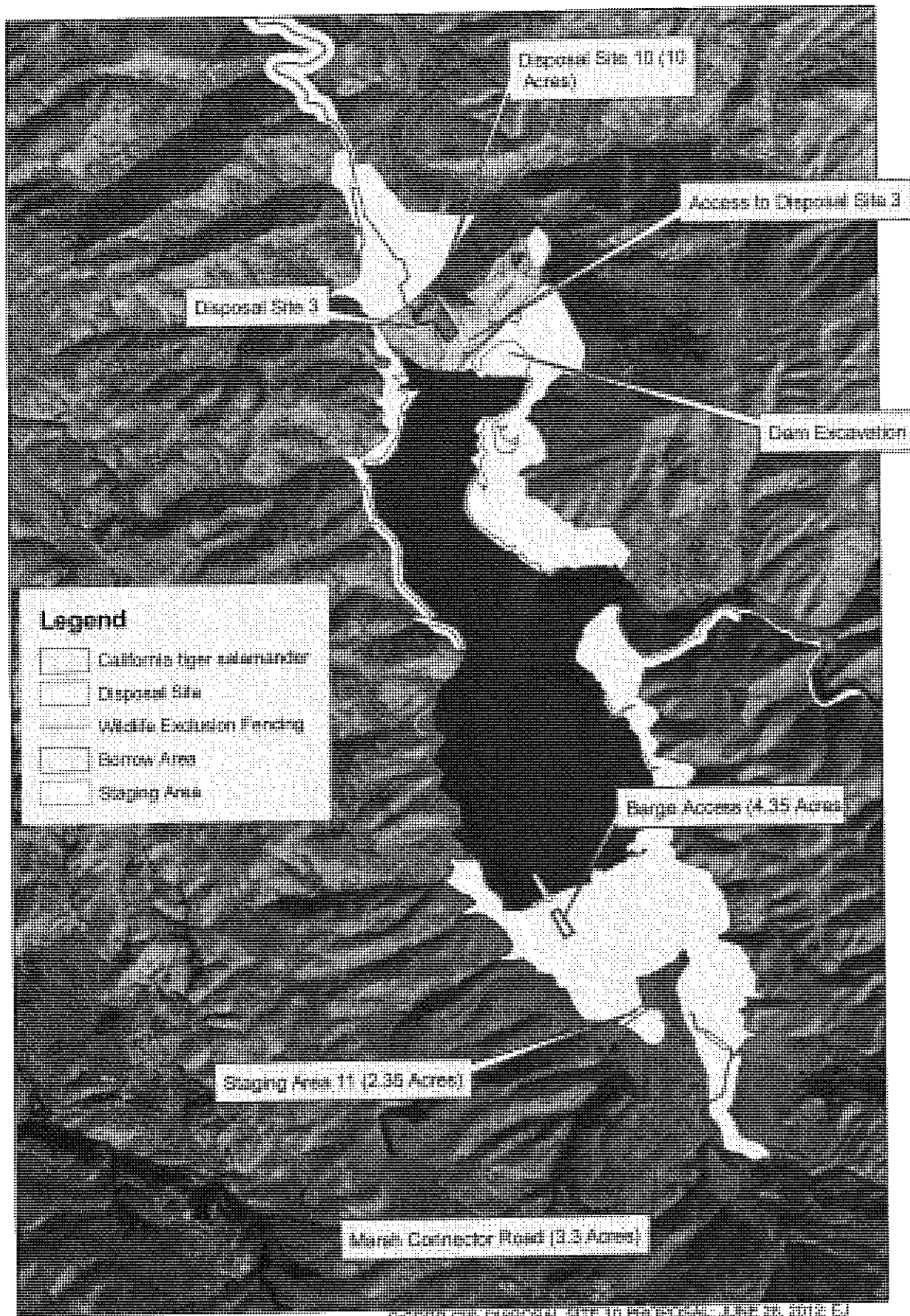


Figure 2





CONNECTING DISPOSAL SITE TO PROPOSED LINE 22, SITE E3

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number:	020	Date: 7/9/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
	<input checked="" type="checkbox"/> Other: SFPUC	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Open water	Net Acreage Affected: N/A
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: CEQA Description
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

Due to unexpected geological issues (i.e., landslides) during excavation of the Left Abutment on Observation Hill, the SFPUC is requesting to place additional fill in Disposal Site 2 (see Final Environmental Impact Report Figure S.2).

PROJECT DESIGN

Disposal Site 2 is approximately 16.6 acres (see Figure 1). The capacity of Disposal Site 2 (DS-2) is approximately 900,000 cubic yards (cy), as stated in the Calaveras Dam Replacement Project Final Environmental Impact Report (FEIR) pages 3.47-48. The SFPUC requests to increase the amount of fill placement in DS-2 to 1.3 million cy. A total of approximately 400,000 cy of additional fill will be placed in DS-2 which will raise the reservoir bottom in this location from an elevation of 650 feet to 720 feet (see Figure 2). The reservoir water level operating capacity is 756 feet; therefore the amount of submerged acres (13.9 acres) will not change. Fill placed at this location will consist of non-friable NOA and non-NOA material.

ENVIRONMENTAL IMPACTS

The additional amount of fill placed into DS-2 will be submerged (approximately 13.9 acres inundated). The proposed modification will not result in new or additional impacts to the physical, biological, and cultural historic environment beyond those analyzed in the Calaveras Dam Replacement FEIR. The SFPUC has received email concurrence from the California Department of Water Resources Division of Safety of Dams (DSOD) (see attached email) for this modification.

Attachments:

- Figure 1. - Disposal Site 2 Location

Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	There would be no new significant cultural resource impacts beyond those analyzed in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality resource impacts beyond those analyzed in the CDRF FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There would be no new additional significant noise and vibration impacts beyond what was analyzed in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the CDRF FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input type="checkbox"/> Y	There would be no new significant vegetation or wildlife impacts beyond those analyzed in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	

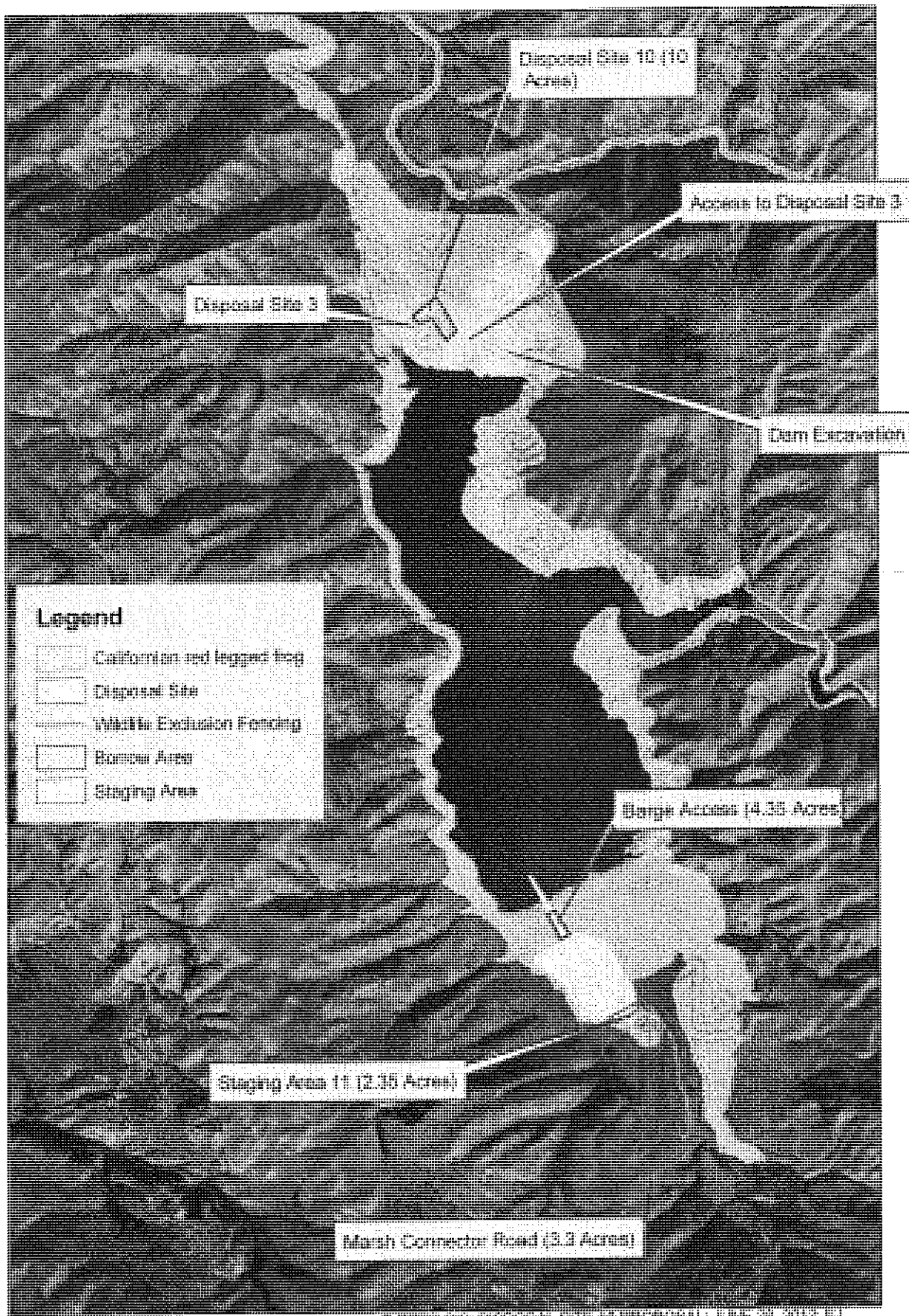
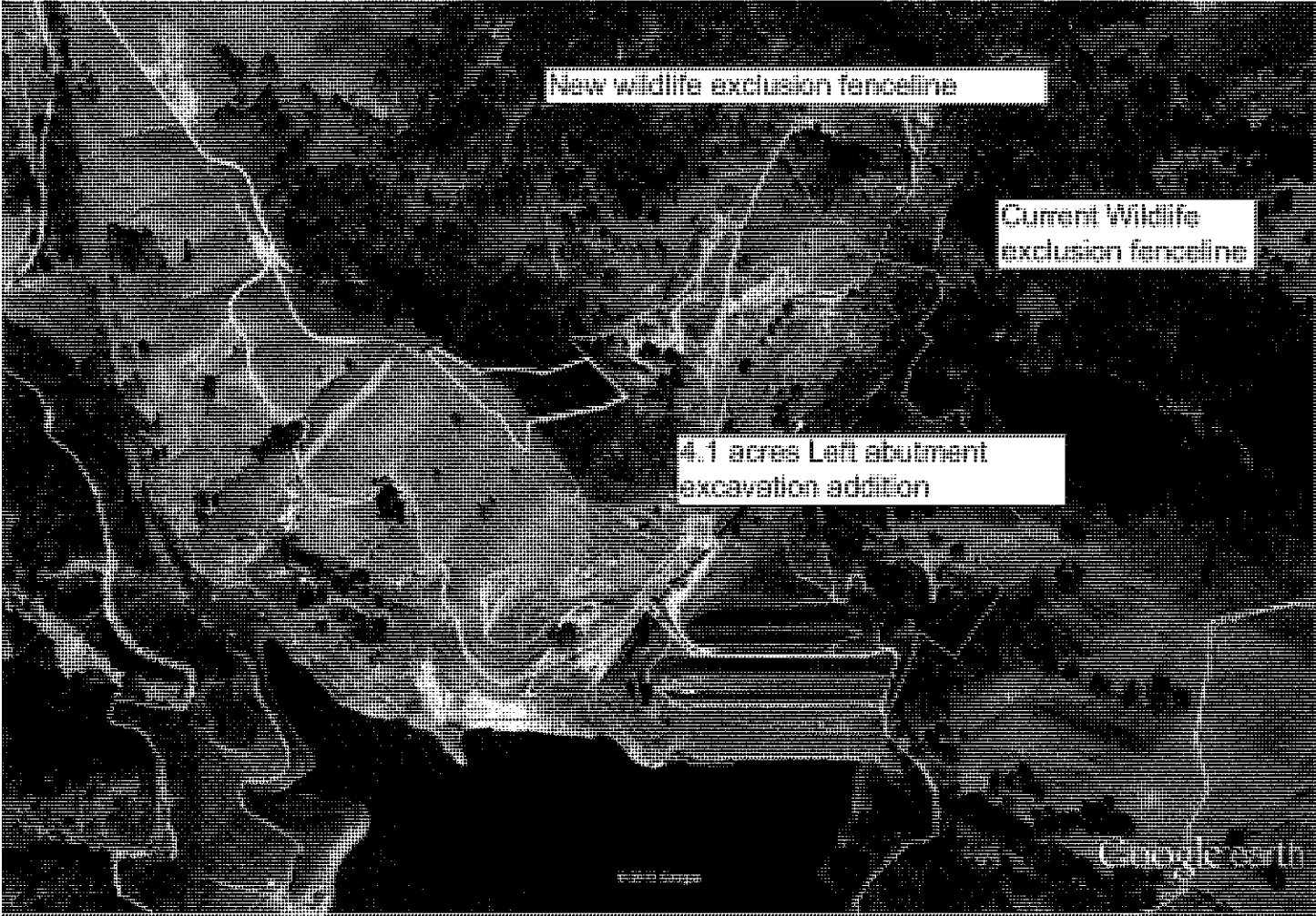


Figure 4





Photo 1 – Left Abutment Excavation

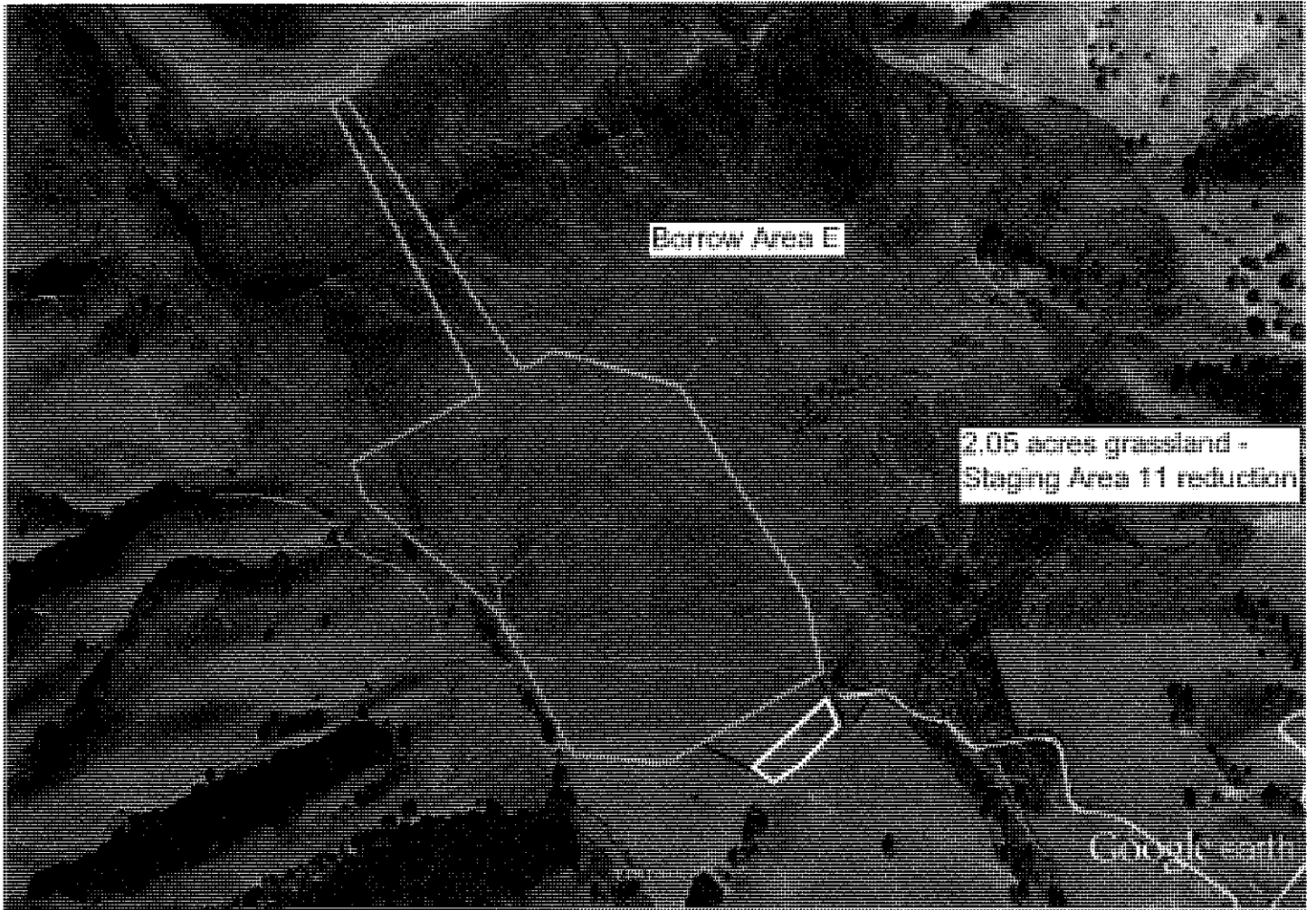


Google earth



Figure 1 - Left abutment excavation addition

Staging Area 11 and Borrow Area E



Borrow Area E

2.05 acres grassland -
Staging Area 11 reduction

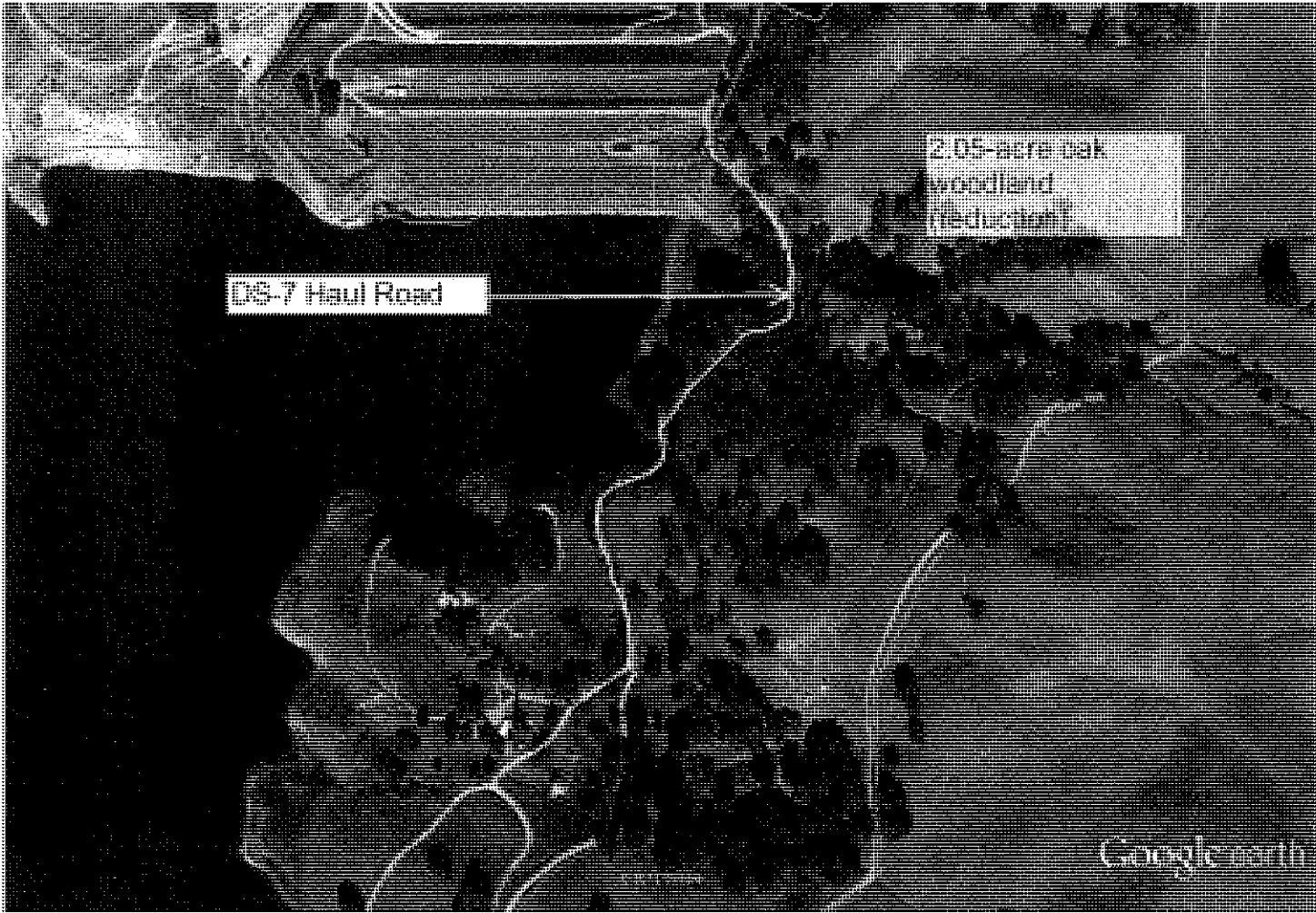
Google earth

feet
km



Figure 2 - Staging Area 11 acreage reduction

Disposal Site 7 Haul Road



Google earth



Figure 3 - DS-7 Haul Road acreage reduction



San Francisco Water Power Sewer

Operator of the Hetch Hetchy Regional Water System

Bureau of Environmental Management
1145 Market Street, 5th Floor
San Francisco, CA 94103
T 415.934-5700
F 415.934-5750

June 22, 2012

Mr. Carl Wilcox
California Department of Fish and Game
7329 Silverado Trail
Napa, CA 94558

**Subject: Incidental Take Permit – Project Modification Request
Calaveras Dam Replacement Project
ITP No. 2081-2010-033-03**

Dear Mr. Wilcox,

The San Francisco Public Utilities Commission (SFPUC) requests a project modification that will have a neutral net impact within a habitat described in the Incidental Take Permit (ITP) for the Calaveras Dam Replacement Project (CDRP). In accordance with ITP Major Amendment No. 1, Monitoring, Notification and Reporting Provision 7.11, this letter includes the following: 1.) description of proposed changes to the project area and natural resources, 2.) justification describing necessity of changes, 3) tables quantifying total impacts of proposed changes, and 4.) map illustrating proposed changes.

1.) Description of proposed changes to project area and of project elements and natural resources affected

The SFPUC proposed a project modification that includes changes to area of impacts at the left abutment excavation (see Figure 1). The proposed changes are described below and include an increase in the area of the work limits for the left abutment excavation and an equal reduction in the area of the work limits for Staging Area 11 and the Disposal Site 7 Access Road haul route (see Figures 2 and 3).

Dam Site – Left Abutment Excavation: As described in the ITP, the project includes the replacement of the existing Calaveras dam with a new earth and rock-fill dam. During construction of the left abutment excavation (i.e., cut slope) it was determined that the slope geology (i.e., slide planes and Trembleur Sandstone) creates a hazardous situation for the workers on and below the left abutment excavation (see Photo 1). Modification of the slope is needed to remove the Trembleur Sandstone and layback the slope to approximately 3:1. Approximately 4.1 acres would be disturbed outside the previously authorized limits of work (see Figure 1). To offset the addition of 4.1 acres, the area of Staging Area 11 will be reduced by ~~2.05~~ 4.1 acres of

Edwin M. Lee
Mayor

Anson Moran
President

Art Torres
Vice President

Ann Moller Caen
Commissioner

Francesca Viator
Commissioner

Vince Courtney
Commissioner

Ed Harrington
General Manager



grassland and the area of the Disposal Site 7 ~~haul route~~ Access Road will be reduced by 2.05 acres of oak woodland as described below.

Vegetation within the additional work area at the left abutment excavation is upland oak woodland and non-native grassland habitat with potential foraging and movement areas for Alameda whipsnake (AWS).

Staging Area 11: Staging Area 11 work limits will be reduced to offset part of the additional work limits needed at the left abutment excavation (Figure 2). The undisturbed ~~2.05~~ 4.1 acres grassland in Staging Area 11 that will be removed from the construction limits is potential foraging and ~~movement~~ dispersal areas for AWS.

Disposal Site 7 ~~haul route~~ Access Road: Disposal Site 7 ~~haul route~~ Access Road work limits will be reduced to offset part of the additional work limits needed at the left abutment excavation (Figure 3). The undisturbed 2.05 acres oak woodland along the Disposal Site 7 ~~haul route~~ Access Road that will be removed from the construction limits is potential foraging and ~~movement~~ dispersal areas for AWS.

2.) Justification describing the necessity of proposed changes

During construction of the left abutment excavation (i.e., cut slope) it was determined that the slope geology (i.e., slide planes) creates a hazardous situation for the workers on and below the left abutment excavation. Currently construction activities have been halted in this area due to safety concerns. Engineers have determined that in order to stabilize the left abutment excavation additional unstable material will have to be removed and the degree of the cut slope will have to be modified to an approximately 3:1 slope. Currently the slope is designed at 1:1. This modification will remove most of the highly disturbed and highly weathered weak Trembleur Sandstone. This will also remove the elevated worker safety risk associated with the existing steeper cut slope. This modification will require additional work area at the top of the cut slope as the slope is laid back to the revised 3:1 slope.

3.) Description of relevant mitigation and avoidance measures:

The SFPUC will continue to implement the 6. General Provisions, 7. Monitoring, Notification and Reporting Provisions, 8. Take Minimization Measures and 9. Habitat Management land Acquisition and Restoration described in the ITP when working in this area. In accordance with Take Minimization Measure 8.2 the existing wildlife exclusion fencing will be relocated to encompass the additional ~~4.1~~ 4 acres of additional workspace at left abutment excavation (Figure 1) prior to work occurring in this area. A DFG-approved Biological Monitor will be on-site during fence installation to relocate any Covered Species outside of the work area. Also in accordance with Take Minimization Measure 8.3, a DFG-approved Biological Monitor will be on-site during initial vegetation removal and grading activities in this area.

4.) Tables quantifying total impacts of proposed changes:

Tables 1 and 2 details the impacts of the proposed amendment to state-listed species habitat for this modification.

Table 1: Impacts for Proposed Changes to left abutment excavation work limits.

Species	Habitat Type	Requested Changes by Type (in acres) P / T / R
California tiger salamander	Aquatic	0
	Upland (refuge, forage, and dispersal)	0
	Dispersal only	0
Alameda whipsnake	Diablan sage scrub	0
	Willow riparian (other scrub/shrub)	0
	Woodland/grassland	4.1 / 0 / 0
	Rock outcrop	0

Note: Area of species habitat may overlap;
P = Permanent / T = Temporary / R = Reservoir Refilling

Table 2: Reduced Impacts for Proposed Changes to Staging Area 11 and Disposal Site 7 haul route Access Road work limits.

Species	Habitat Type	Requested Changes by Type (in acres) P / T / R
California tiger salamander	Aquatic	0
	Upland (refuge, forage, and dispersal)	0
	Dispersal only	0
Alameda whipsnake	Diablan sage scrub	0
	Willow riparian (other scrub/shrub)	0
	Woodland/grassland	-4.1 / 0.00 / 0.00
	Rock outcrop	0

Note: Area of species habitat may overlap:
P = Permanent / T = Temporary / R = Reservoir Refilling

Table 8: Requested changes to impacts in relation to the approved ITP for the CDRP.

2081 ITP Impacts Summary										
Species	Habitat Type	Total Approved Permanent Impact	Total Approved Temporary Impact	Total Approved Reservoir Refilling Impact	Total Approved Disturbance (P+T+R)	Completed Impacts (P/T)	Requested Changes by Type (P/T)	Total Impacts with Requested Changes (P+T+R)		
California tiger salamander	Aquatic	0.11	0	0	0.11	0	0	0.11		
	Upland (refuge, forage, and dispersal)	135.45	27.56	256	419.01	35 / 0	0	419.01		
	Dispersal only	33	4.24	50	87.24	20 / 0	0	87.24		
Alameda whipsnake	Diabian sage scrub	22.43	3.05	5	30.48	19.0 / 3.0	0	30.48		
	Willow riparian (other scrub/shrub)	3	0	0	3	3 / 0	0	3		
	Woodland/grassland	222.37	34.56	356	612.93	130 / 0	0	612.93		
	Rock outcrop	11	<1	2	14	3 / 0	0	14		

Note: 1) All impacts in acres; 2) Area of species habitat may overlap; 3) P = Permanent / T = Temporary / R = Refilling

Please contact me at (415) 554-2474 or at koneill@swater.org if you have any questions or comments regarding this project modification that will have a neutral net impact.

Sincerely,

Kerry O'Neill
Environmental Construction Compliance Manager

cc: Deborah Craven-Green, SFPUC
Dan Wade, SFPUC
Steve Leach, URS Corporation
Jeanne Wetzel Chinn, CDFG

Enclosures

List of Photos and Figures

Photo 1: Left abutment excavation.

Figure 1: Left abutment excavation addition.

Figure 2: Staging Area 11 acreage reduction.

Figure 3: Disposal Site 7 ~~haul route~~ Access Road acreage reduction.

Wilkerson, Cullen

From: King, Terry
Sent: Wednesday, June 20, 2012 3:53 PM
To: Wilkerson, Cullen
Subject: FW: Issue #064, Fill DS-2 to Elev. +720
Attachments: Figures 1 2_R1.pdf; DS-2 Memo_DSOD_R3.pdf

Cullen:

I looked and all I have is an email from Dan saying we have DSOD and CTAP approval to fill DS-2

From: King, Terry
Sent: Tuesday, April 24, 2012 10:56 AM
To: 'Golden, Shawn'; abenlloch@dragados-usa.com
Cc: Hou, Susan S; DelRosario, Manolito; Tang, Gilbert; 'Forrest, Michael' (michael.forrest@urs.com); Wade, Dan (DWade@sfwater.org)
Subject: Issue #064, Fill DS-2 to Elev. +720

Alberto and Shawn:

I want to get this to you as soon as possible. We have approval from the CTAP and DSOD to fill DS-2 up to the approach channel elevation. The attached memo and drawing provides the details of how the fill is to be placed. Please start preparing a formal proposal for cost/ credit of making this change in the work. I will send a formal PCO at a later date.

Terry

From: Wade, Dan
Sent: Monday, April 23, 2012 8:31 PM
To: King, Terry
Cc: Hou, Susan S; Tang, Gilbert
Subject: FW: DS-2 Memo for DSOD

Terry –

Both CTAP and DSOD concur with the VE proposal to increase the volume of DS-2. Please ask the contractor to submit a formal proposal for this site.

Thanks,
Dan

From: Tang, Gilbert
Sent: Monday, April 23, 2012 10:33 AM
To: Wade, Dan
Cc: 'Forrest, Michael'
Subject: FW: DS-2 Memo for DSOD

Dan:

We have official blessing from DSOD on increasing the volume of excavated material to be disposed at Disposal Site 2. URS and I am still working with them to resolve the Mass Concrete thermal cracking issue and concerns.

Gilbert

From: Pennington, Bill [<mailto:wpenn@water.ca.gov>]

Sent: Monday, April 23, 2012 10:05 AM

To: Tang, Gilbert; Lam, Wallace C.; Gauthier, Gary; Fraser, Bill A.; Lessman, Jim L.; Tracy, Chris; Woods, Marvin O.

Cc: Enzler, Y-Nhi D.; Waggoner, Michael G.

Subject: RE: DS-2 Memo for DSOD

Gilbert,

Your proposal to increase the amount of material storage at DS-2 is satisfactory, if completed as described in your attached memo and figures. If a future dam raise is contemplated, be advised that we would require the removal of this uncompacted material. Regards, Bill

From: Tang, Gilbert [<mailto:gtang@sfgwater.org>]

Sent: Friday, April 20, 2012 3:53 PM

To: Pennington, Bill

Cc: Enzler, Y-Nhi D.

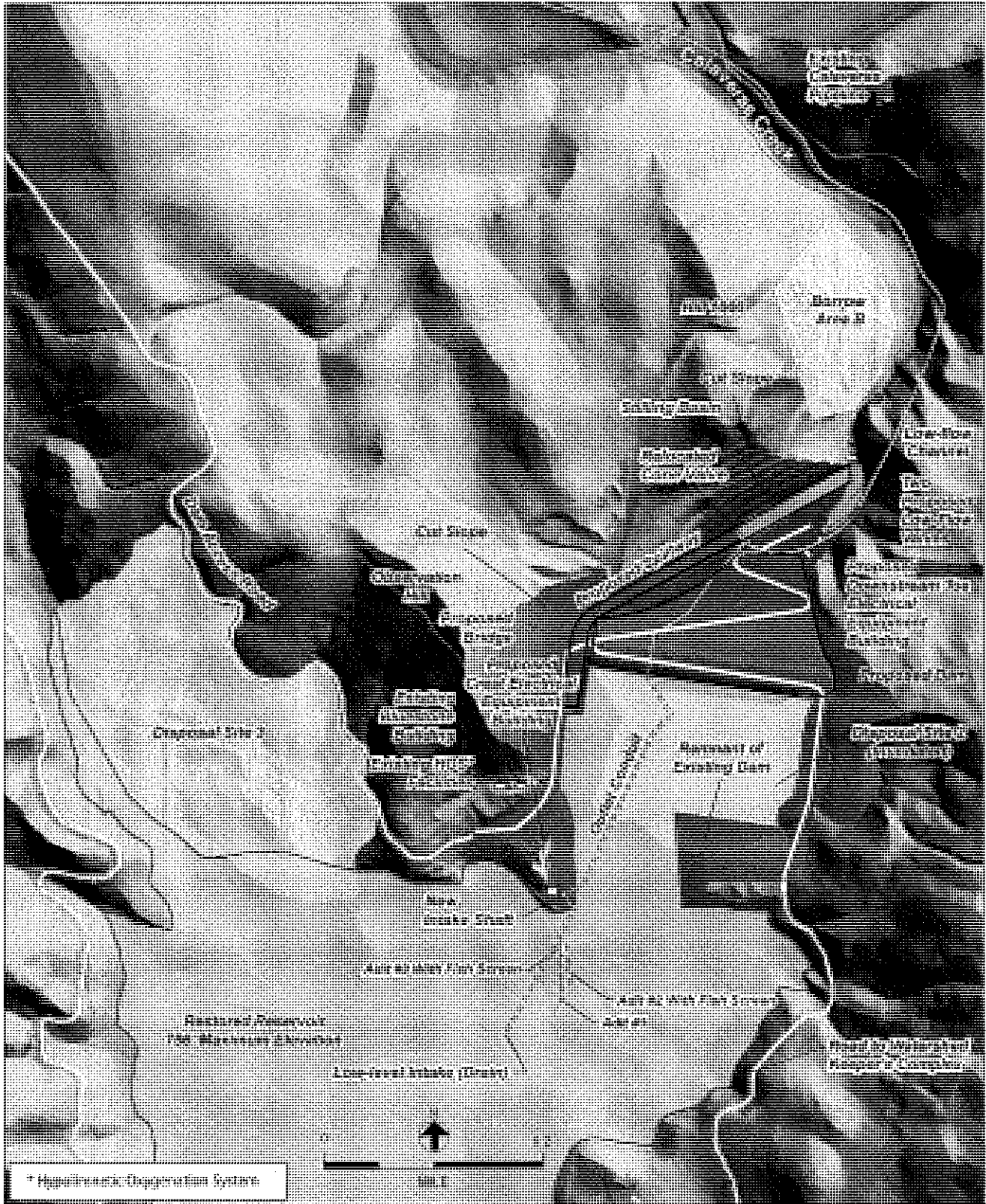
Subject: FW: DS-2 Memo for DSOD

Bill:

The Calaveras Dam Replacement project has another issue which we would like DSOD to review and comment on. Contractor has submitted a VE proposal to increase the capacity of Disposal Site 2 to accommodate disposal of more excavated material than the original design. URS has performed a detail analysis and prepared a design to raise the Disposal Site elevation to 720. Concept has been reviewed and agreed to by the Calaveras Technical Advisory Panel.

Please distribute the attached memo and drawings to the appropriate DSOD staff for review, comment, and concurrence. Thanks.

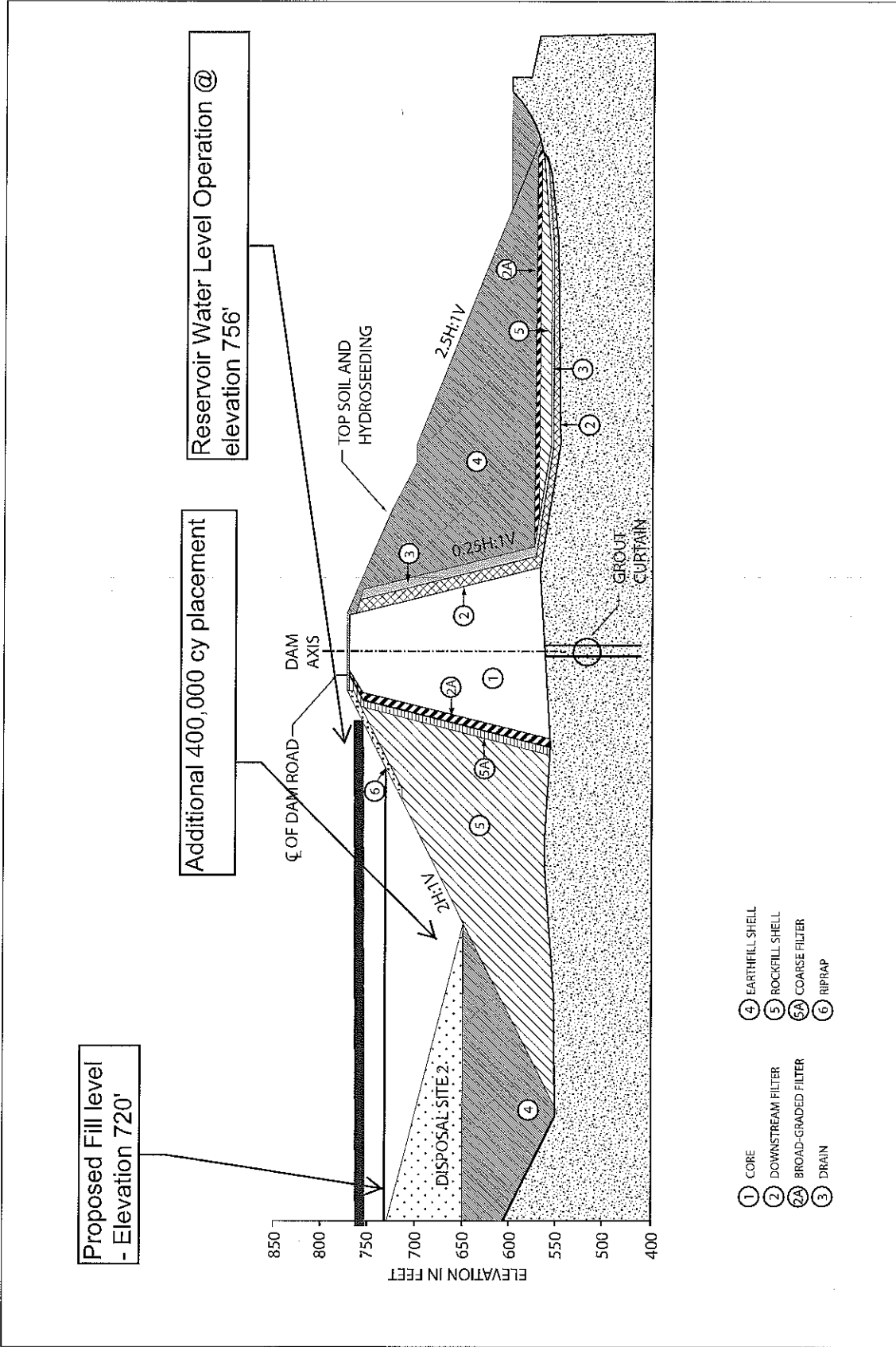
Gilbert



SOURCE: EDAW & Turnstone JV

CALAVERAS DAM REPLACEMENT PROJECT

FIGURE S.2: PROPOSED PLAN OF DAM AREA





SOURCE: URS; ED&W&Turnstone JV

CALAVERAS DAM REPLACEMENT PROJECT

FIGURE S.3: PROPOSED DAM CROSS-SECTION

MINOR PROJECT MODIFICATION

	<p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p>	
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Minor Project Modification Number:	021	Date: 7/27/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson, ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO	<input checked="" type="checkbox"/> Other: Unstable Geological Conditions
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Grassland/cattle grazing	Net Acreage Affected: 0.00073 acre (32 sq. ft.)
Modification to:	<input type="checkbox"/> Mitigation Measure: <input type="checkbox"/> Permit:	<input checked="" type="checkbox"/> Other: Project Description

Detailed Description of Minor Project Modification:

This MPM proposes the installation of two (2) temporary geological slope monitoring (Control) stations to monitor the stability of the false cut slope during excavation and construction. The proposed locations of these stations and access routes are outside the boundary of the Calaveras Dam Replacement Project Work Limit Area (see Figures 1 and 2). Both of the proposed stations would be accessed using existing roads and staging areas and no new roads would be required. The specific location for each new station is shown on Figure 2.

The monitoring stations are necessary due to geological concerns of slope stability on the Left Abutment of the proposed Calaveras Dam. Geo-slope monitoring will assist the construction and design teams to mitigate the potential safety and structural issues as the project progresses.

DESCRIPTION OF SLOPE MONITORING CONTROL STATIONS

The control monitors will consist of a concrete pillar approx. 30" above grade inserted into the ground with a steel rod. Installation of the structure will require a 36" diameter concrete caisson (Figure 3). The depth of the caisson will be about 3' deep. These locations will then be surrounded by cattle fence to protect them from any movement by grazing activities.

Equipment used to install the two (2) monitoring stations include one rubber wheeled bobcat with an

auger, one ½ ton pick-up truck, and two laborers. A Service and CDFG-approved biologist will monitor the construction activities.

ENVIRONMENTAL IMPACTS

Each of the proposed slope monitoring sites is located on level ground that would require only minimal site preparation. Anticipated site preparation would include clearing rocks for the drill, concrete slurry, and installation of four steel posts that will support the cattle wire for exclusion purposes. These two (2) components would be removed after completion of the monitoring program (end of construction). Monitoring station 2 and 3 are located outside of the Cultural (APE) study area (see Figure 2) and their installation would result in potential additional impacts to the physical and cultural historic environment, beyond those analyzed in the Calaveras Dam Replacement Project FEIR. Monitoring station 3 is within the biological study area for the FEIR and its installation would not result in new or additional impacts to the physical and biological environment beyond those analyzed in the Calaveras Dam Replacement FEIR. Monitoring Station 2 and the associated access road falls outside the perimeter of the Calaveras Dam Replacement Project Work Limit Area (see Figure 2), and its installation would constitute additional impacts to the physical and biological environment, beyond those analyzed in the Calaveras Dam Replacement Project FEIR.

Attachments:

- Figure 1. Calaveras Dam Replacement Project Overview Map
- Figure 2. Biological Study Area, Monument Point Location, Cultural Study Area (in Red), and Project Grading Limits.
- Figure 3. Proposed Geological Slope Monitoring Station design
- Attachment A – Biological memo
- Attachment B – Cultural memo

Biological <input checked="" type="checkbox"/> Yes <input type="checkbox"/>	Cultural <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Photos <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---	---	--

Biological	<input checked="" type="checkbox"/> No Resources Present	<input type="checkbox"/> Resources Present	<input type="checkbox"/> NA
-------------------	--	--	-----------------------------

Biological Survey Report Reference:
 Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS, March 10, April 22, and April 27, 2011.

Attachment A-Biological Assessment – July 23, 2012 CM Team Environmental Inspector.

Cultural	<input checked="" type="checkbox"/> No Resources Present	<input type="checkbox"/> Resources Present	<input type="checkbox"/> Within Project APE
	<input type="checkbox"/> NA (paved/graveled area and no ground disturbance)		

Cultural Survey Report Reference:
 Calaveras Dam Replacement Project FEIR and updated field surveys conducted by URS, March 10, April 22, and April 27, 2011 (see Attachment A).

Conditions of Approval or Reasons for Denial

USFWS/CDFG biological monitor will be present during installation.

SFPUC Required Signatures for Environmental Approval:

ECCM: Kerry O'Neill Date: 7/27/12

Approved Approved with Conditions (see conditions above)

Denied

SFPUC agrees that Contractor will abide by the mitigation measures detailed in the CEQA document and project permit requirements and have appropriate Specialty Environmental Monitors present where required.

Charge Code:

EP Required Signatures for Approval:

Signee: Steven H. Smith Date: 7/30/12

Approved Approved with Conditions (see conditions above)

Denied

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input type="checkbox"/> Y	There would be no hazardous material or waste impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant hydrology or water quality impacts beyond those analyzed in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input type="checkbox"/> Y	Although there would be no new cultural resource impacts beyond those identified in the FEIR the project will implement mitigation measure 5.10.1 for discoveries of human remains and associated or unassociated funerary objects and 5.10.2 Archaeological Measure II: Accidental Discovery Measures.
	<input checked="" type="checkbox"/> N	

Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality resource impacts beyond those analyzed in the CDRF FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There would be no new additional significant noise and vibration impacts beyond what was analyzed in the CDRP FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	Both of the slope monitoring stations (Control 2 and Control 3) would be located within existing SFPUC property areas. These two stations would be visible to the public using the adjacent East Bay Regional Park lands. The monitors and cattle fence enclosure would not be significantly visually intrusive and would not block views. Because the monitors will be removed following construction of CDRP the impacts will be temporary during construction only. The surrounding viewshed of each station location would be dominated by existing topography and vegetation. There would no new significant visual resource impacts beyond those analyzed in the CDRF FEIR.
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	Each slope monitoring station would occupy approx. 16 square feet of surface soil, in grassland habitat. There would be excavation and vegetation clearing required to install the stations. Each station location was the subject of recent biological surveys (March 10, 2011; April 22, 2011, April 27, 2011, July 23, 2012). The monument points are within California red legged frog, Alameda whipsnake, and California tiger salamander dispersal habitat (see Attachment A-Biological Memo). There would be no new significant vegetation or wildlife impacts beyond those analyzed in the CDRP FEIR. Additionally, applicable mitigation measures including 5.4.1 Avoidance and Minimization Measures (i.e., 5.4.1a and 5.4.1b) and 5.4.3 Compensation Measures will be implemented to reduce impacts to less than significant.
	<input type="checkbox"/> N	

Date: July 24, 2012
To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental Management
Subject: Biological Review of Proposed Project Modifications, Calaveras Dam Replacement Project (CUW 37401)

This memo presents an evaluation of the biological resources for a proposed MPM #21 to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

This MPM proposes the installation of two (2) temporary geological monitoring (Control) stations at new locations; (Monitoring stations 2 and 3). Monitoring station 3 is within the study area for the FEIR and its installation would not result in new or additional impacts to the physical, biological, and cultural historic environment beyond those analyzed in the Calaveras Dam Replacement FEIR. Monitoring Station 3 and the associated access road falls outside the perimeter of the Calaveras Dam Replacement Project Work Limit Area (see Figure 1), and its installation would constitute additional impacts to the physical, biological and cultural historic environment, beyond those analyzed in the Calaveras Dam Replacement Project FEIR.

ENVIRONMENTAL IMPACTS

Each of the proposed slope monitoring sites is located on level ground that would require only minimal site preparation. Anticipated site preparation would include clearing rocks for the drill, concrete slurry, and installation of four steel posts that will support the cattle wire for exclusion purposes. These two (2) components would be removed after completion of the monitoring program (end of construction).

Existing Conditions

A biological survey was conducted on July 23, 2012 at both monument locations. Vegetation consisted of native grasses and forbs with no tree cover. No special status plant species were observed during the survey. The soils were compacted and no California ground squirrel burrows suitable were present within the construction area. No aquatic features are present within 100ft of the proposed construction areas.

The Designated biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion (81420-2009-F-1339).

The potential for special status wildlife species to occur in the Project Area may be summarized by the following:

- Special status species may migrate through either of the areas proposed for the installation of the slope monitoring stations or use the area as a corridor for dispersal.
- The monument points are within California red legged frog, Alameda whipsnake, and California tiger salamander dispersal habitat (Figure 1). No breeding habitat for CRLF or CTS is present within the Monument 2 and 3 construction zones.

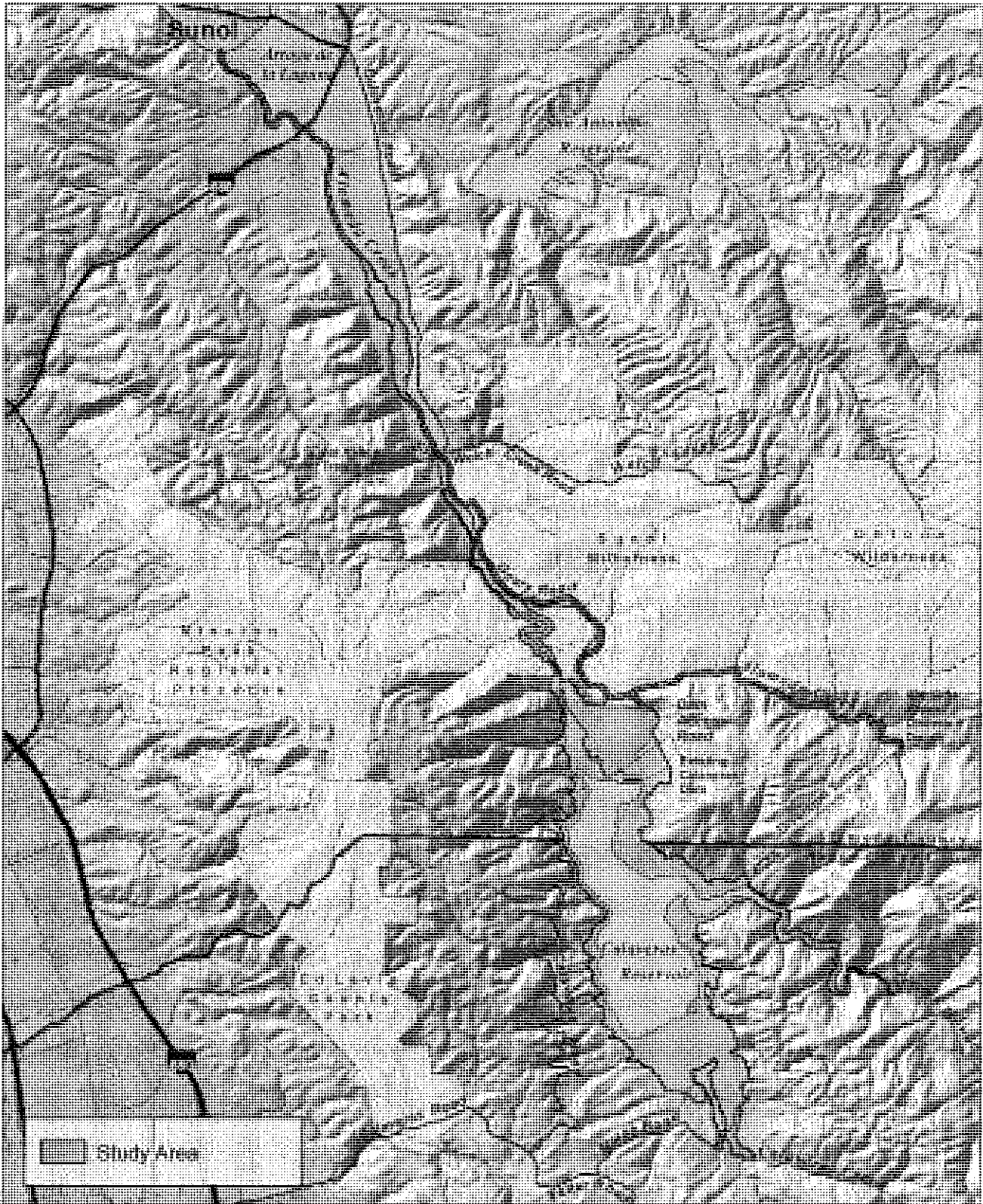
Recommendations

To reduce potential impacts to any special status species that could migrate through the area of the proposed monument installation, a biological monitor should conduct pre-construction surveys prior to ground disturbance activities. In addition, a biological monitor should be present during any ground disturbance and concrete pouring activities to ensure no impacts to the environment occur as a result of construction.

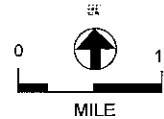
REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.



SOURCE: EIT JV 0508b



CALAVERAS DAM REPLACEMENT PROJECT

FIGURE 4.4.1: VEGETATION AND WILDLIFE STUDY AREA

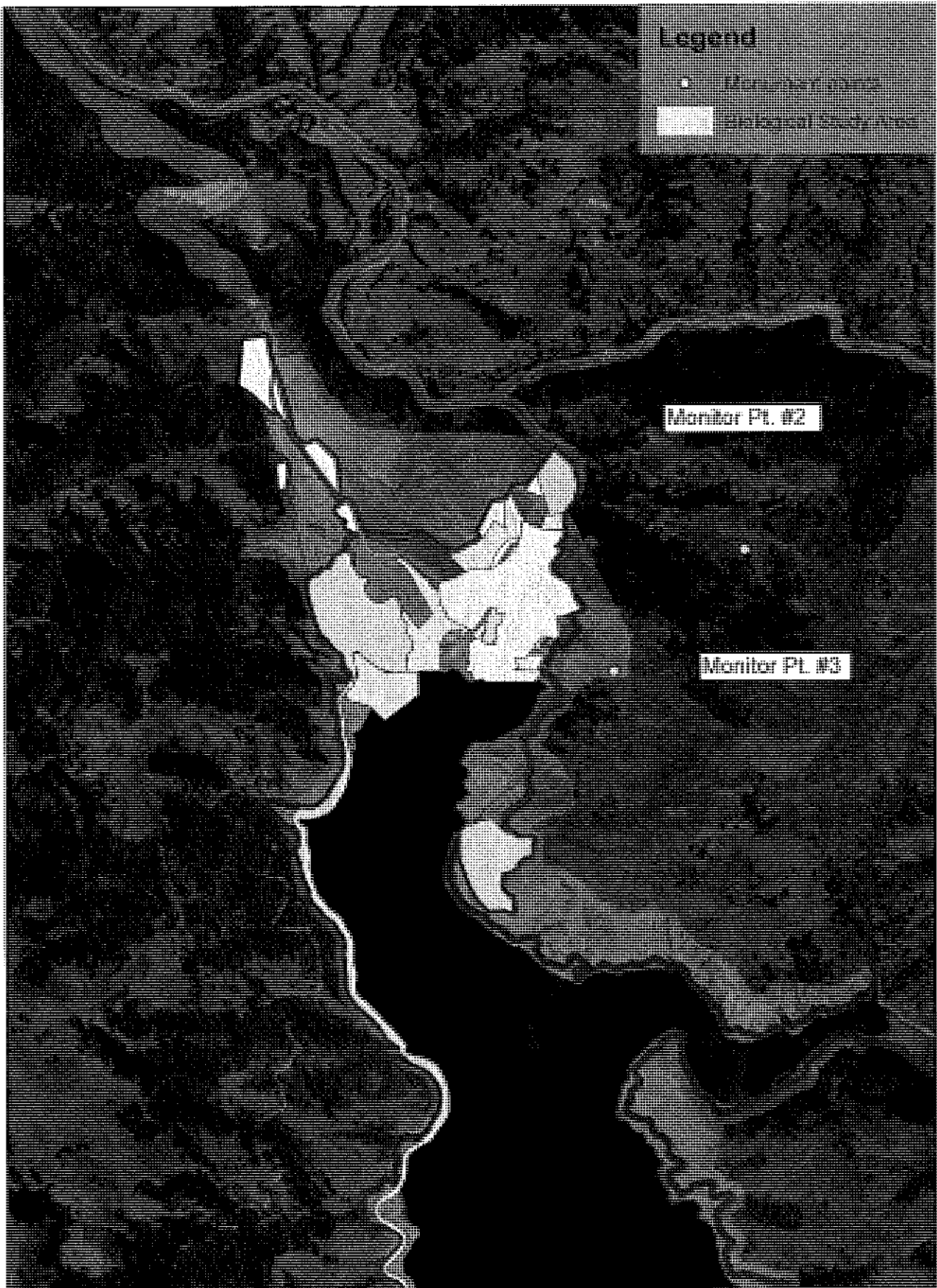
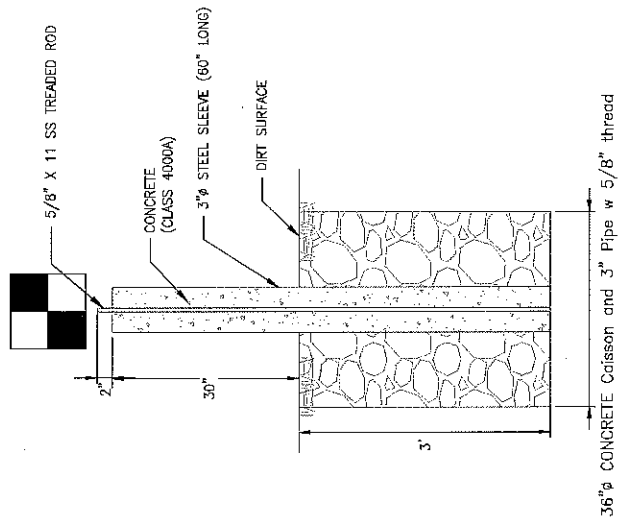





Figure 2 - Biological Study Area, Monument Point Location, Cultural Study Area (in Red), and Project Grading Limits.



SURVEY MONUMENT IN DIRT DETAIL
SCALE: N.T.S.

			MONITORING POSTS
DFS-JV			SHEET <u> </u> OF <u> </u>



Memorandum

Date:	July 28, 2012
To:	Cullen Wilkerson, San Francisco Public Utilities Commission Environmental Compliance Coordinator
Cc:	
From:	Alisa Reynolds and Lily Henry Roberts Cultural Resources
Subject:	Cultural Resources Survey for Monuments 2 and 3 at the Calaveras Dam Replacement Project (Minor Project Modification)

INTRODUCTION

This memorandum was prepared by ICF Jones & Stokes (ICF) for the Calaveras Dam Replacement Project (CDRP), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memorandum presents results of supplemental archaeological survey for proposed Monument Sites 2 and 3. The survey areas are contained on the United States Geological Survey Calaveras Reservoir (USGS 1980) and La Costa Valley (USGS 1994) 7.5 minute topographic quadrangles in Range 1E/Township 5S, Dump Site 3 in the southeast quadrant of Section 14 and Staging Area 7 the northwest quadrant of Section 13 (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the Final Environmental Impact Report [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey for a Minor Project Modification (MPM) was requested by the SFPUC. This report documents the methods and findings of archaeological surveys conducted on July 23, 2012 by ICF personnel. The survey was conducted because of the addition of two monuments outside of the APE. The survey did not identify any unrecorded cultural deposits or features.

PROJECT DESCRIPTIONS

Monuments 2 and 3

Both monument sites are located on the hills to the east of the dam outside the project area. Monument site #2 is on fairly flat ground, with a dry grass cover with dry, silty top soil. Monument site #3 is on a steep drop off at about an 80 degree slope with the same dry, silty topsoil with a tall dry grass cover.

LITERATURE REVIEW

Historic-era Resources

Multiple cultural resources studies have been completed for the CDRP. URS conducted record searches and two pedestrian surveys of portions of the APE during initial design phases for the CDRP (URS 2003, 2005). In 2003 and 2004 records and documents on file at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) were reviewed (File Numbers 03-270 and 04-194). As part of the environmental review process for the CDRP project, Archaeological Resources Technology (ART) reviewed the records searches completed by URS and conducted another intensive pedestrian survey of the APE in 2006 (ART and EDAW 2008). No resources were recorded near Monuments 2 or 3.

Prehistoric Resources

The Calaveras Valley, surrounding hills and ridges, and Calaveras, Alameda, and Arroyo Hondo Creeks watersheds comprise an environment conducive to prehistoric habitation and use. However, the most archaeologically sensitive portion of the CDRP APE for prehistoric habitation, the valley floor, has been inundated by the reservoir, so the archaeological surveys conducted for the CDRP project identified few prehistoric cultural resources. A total of three prehistoric resources (P-43-001600, CD#26, and Calaveras Dam Isolate) were recorded which indicate prehistoric use of the CDRP.

SURVEY RESULTS

On July 23, 2012, ICF completed an intensive pedestrian survey of three areas (Monuments 2 and 3) to identify and document unrecorded prehistoric or historic-era cultural resources within the APE. The survey was performed by Lily Henry Roberts under the supervision of ICF Senior Archaeologist Alisa Reynolds, who meets the Secretary of Interior's Professional Qualifications Standards for prehistoric archaeology.

Both expansion areas were surveyed in 10 to 20 meter transects contouring the hillside. Attempts were made to examine the native ground surface, including inspection of rodent burrow spoils and clearing vegetation in areas considered potentially sensitive for archaeological resources. Additionally, all exposed bedrock was examined for evidence of prehistoric milling activity. The two survey areas are characterized by grass and tree covered hillslopes. No cultural deposits of any kind were observed in the areas of Monuments 2 or 3.

Although no other archaeological resources were observed, the possibility remains that prehistoric or historic-era archaeological features and materials could be located during ground-disturbing construction activities. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) and guidelines contained in the MEA WSIP Archaeological Guidance No. 9 (CCSF 2008, Mitigation Measures I and II) should be implemented.

References Cited

ART and EDAW

2008 Calaveras Dam Replacement Project Archaeological Survey Report. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

City and County of San Francisco Planning Department [C&CSFPD]

2008 MEA WSIP Projects Archaeological Guidance.

2011 Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project.

JRP Historical [JRP]

2008 Calaveras Dam Replacement Project, Historic Resources Inventory and Evaluation Report. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

URS Corporation [URS]

2003 Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA. Prepared for San Francisco Water Department.

2005 Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures. Prepared for San Francisco Public Utilities Commission.

2009 Calaveras Dam Replacement Project Archaeological Survey Report, Addendum I, Alameda and Santa Clara Counties, California. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

1980 Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 photorevised 1980).

1994 La Costa Valley California 7.5 minute topographic quadrangle.

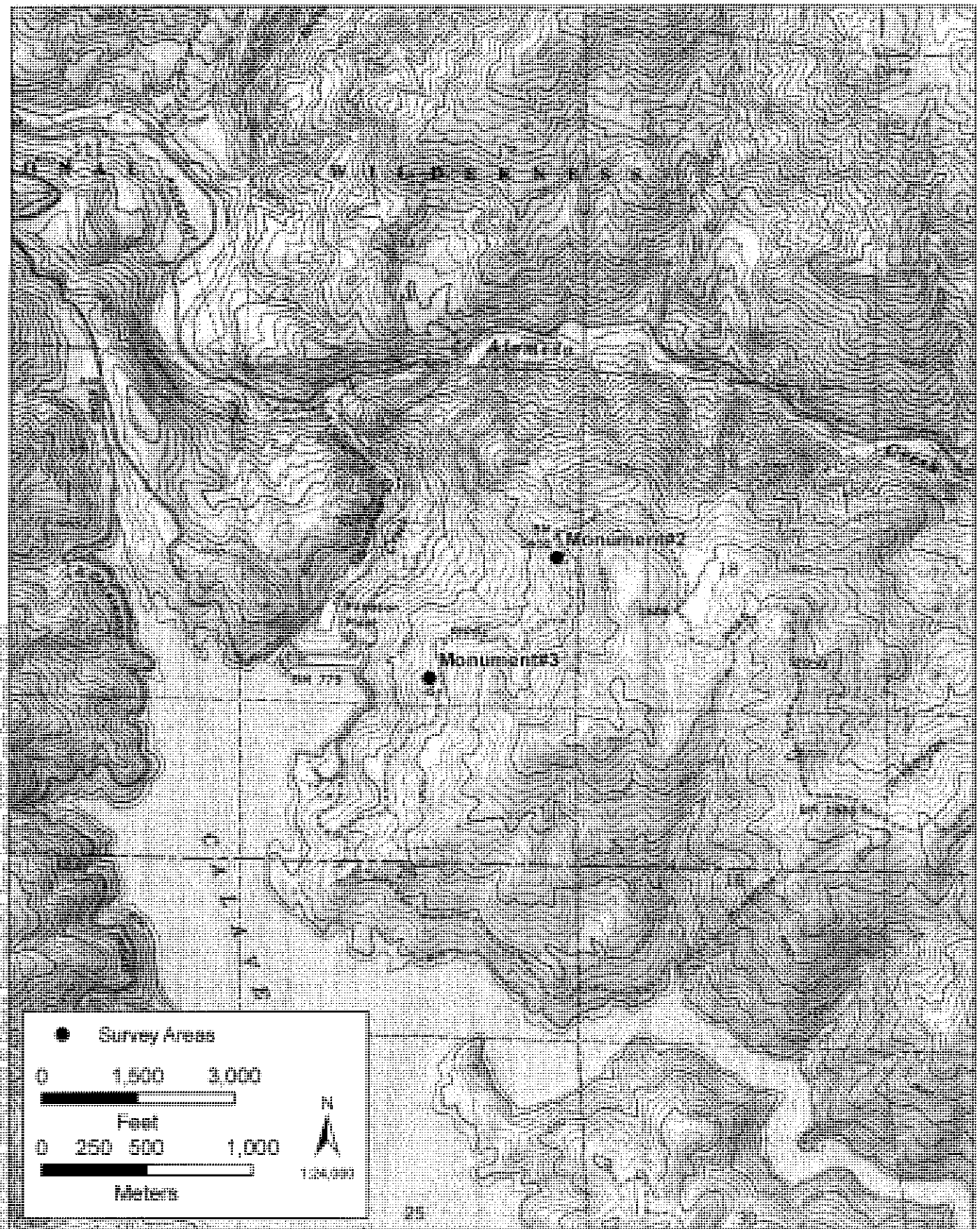


Figure 1
Survey Location

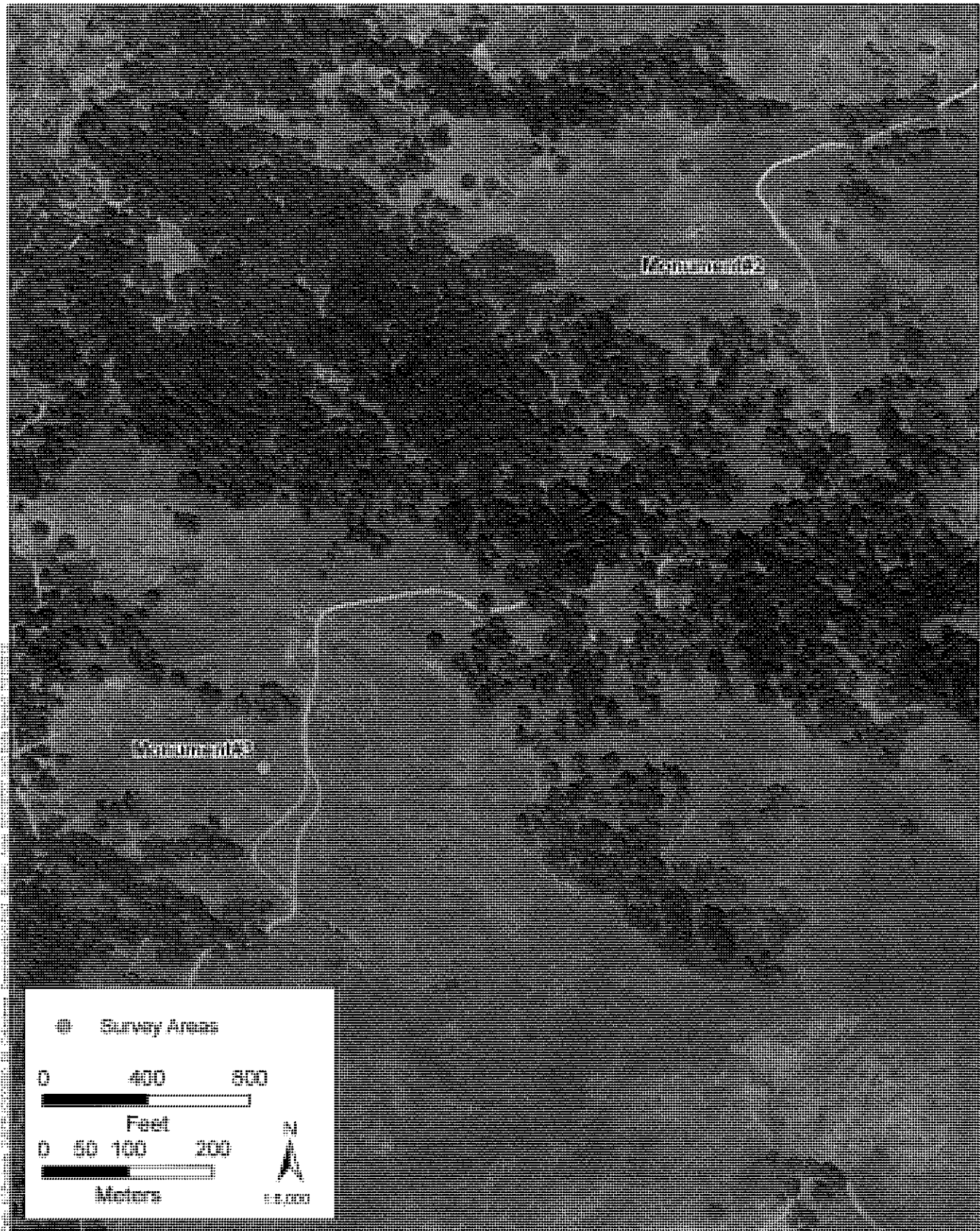


Figure 2
Survey Area



Figure 2 - Biological Study Area, Monument Point Location, Cultural Study Area (in Red), and Project Grading Limits.

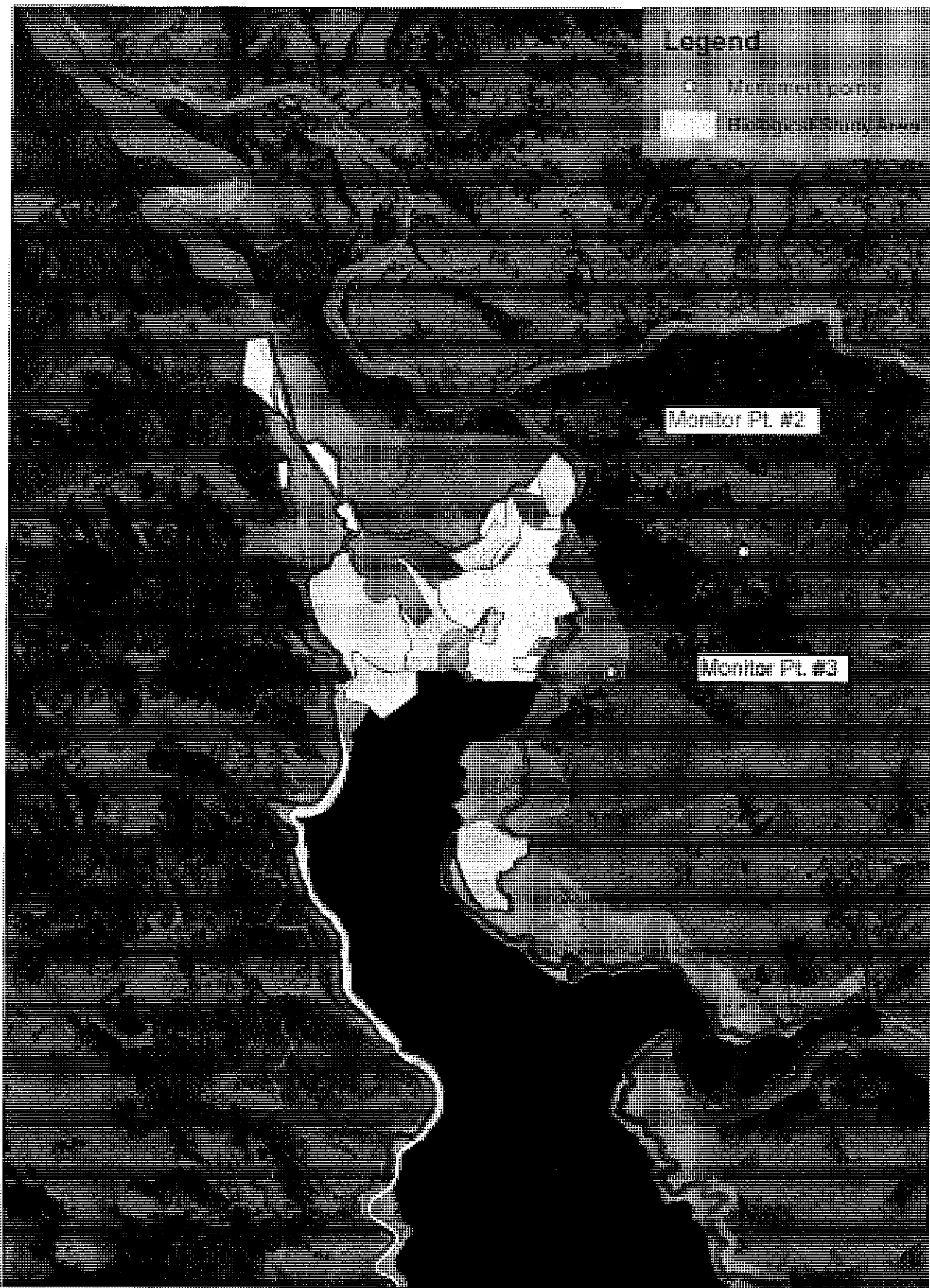


Figure 1 - Biological Study Area, Monument Point Location, Cultural Study Area (in Red), and Project Grading Limits.

O'Neill, Kerry

From: Smith, Steve <steve.smith@sfgov.org>
Sent: Monday, November 05, 2012 5:49 PM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 22 Existing Boat Ramp Improvements
Attachments: MPM 022 - Boat Ramp_Improvements-signed.doc

Hi Kerry – this includes approved MPM incorporates the minor edit provided in my prior email below. Please let me know if any questions.

Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: Smith, Steve
Sent: Monday, November 05, 2012 5:02 PM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 22 Existing Boat Ramp Improvements

Hi Kerry – please see my one minor edit on the attached. I'm waiting on a follow up email from Adrian, after which I expect to provide my electronic signature/approval.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: O'Neill, Kerry [<mailto:KONeill@sfgov.org>]
Sent: Monday, November 05, 2012 4:09 PM
To: Smith, Steve
Subject: RE: Calaveras - MPM 22 Existing Boat Ramp Improvements

Attached is the revised in track changes.

From: O'Neill, Kerry
Sent: Monday, November 05, 2012 12:18 PM
To: Smith, Steve
Cc: O'Neill, Kerry
Subject: RE: Calaveras - MPM 22 Existing Boat Ramp Improvements

I must have attached the wrong file, here it is.

From: Smith, Steve [<mailto:steve.smith@sfgov.org>]
Sent: Monday, November 05, 2012 12:15 PM
To: O'Neill, Kerry
Subject: RE: Calaveras - MPM 22 Existing Boat Ramp Improvements

Hi Kerry – the document you sent doesn't show any changes. Did you intend to add information/edits?

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: O'Neill, Kerry [<mailto:KONeill@swater.org>]
Sent: Monday, November 05, 2012 11:19 AM
To: Smith, Steve
Cc: Warren, Elaine
Subject: RE: Calaveras - MPM 22 Existing Boat Ramp Improvements

I've modified the MPM and hopefully the edits address your questions (see attached). Please let me know if you have other questions/concerns.

From: Smith, Steve [<mailto:steve.smith@sfgov.org>]
Sent: Monday, November 05, 2012 10:08 AM
To: Warren, Elaine
Cc: O'Neill, Kerry
Subject: FW: Calaveras - MPM 22 Existing Boat Ramp Improvements

PRIVILEGED COMMUNICATION--DO NOT FORWARD
ATTORNEY-CLIENT PRIVILEGED COMMUNICATION
ATTORNEY WORK PRODUCT

Hi Elaine – I continue to have questions on this request for a minor project modification. These are specified in my comments on the attached. Please let me know a good time to reach you. PUC has indicated this request is time-sensitive; I'm out of the office starting this Wednesday and would like to speak with you before I leave.

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: Smith, Steve
Sent: Monday, October 29, 2012 12:08 PM
To: Warren, Elaine
Subject: FW: Calaveras - MPM 22 Existing Boat Ramp Improvements

PRIVILEGED COMMUNICATION--DO NOT FORWARD
ATTORNEY-CLIENT PRIVILEGED COMMUNICATION
ATTORNEY WORK PRODUCT

Hi Elaine – in light of our recent conversations regarding this project, I was hoping to obtain your input on this most recent request from PUC for a minor project modification of the CDRP. Assuming you have the time, please give me a call or let me know a good time to reach you.

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: O'Neill, Kerry [<mailto:KONeill@sfgwater.org>]
Sent: Thursday, October 25, 2012 12:33 PM
To: Smith, Steve
Cc: Wilkerson, Cullen
Subject: Calaveras - MPM 22 Existing Boat Ramp Improvements

Steve, attached is MPM 22 that includes improvements to the existing boat ramp on Calaveras Reservoir. These improvements will be made in the dry, and are located below the reservoirs high waterline (elev. 756). The project has mitigated for the impacts related to raising the reservoir level and therefore these improvements won't require permit amendments. This work is within the site boundaries for Desmond Camp so we've attached correspondence with Adrian regarding measures to be implemented during boat ramp improvements. Please call or email any questions.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
525 Golden Gate Ave., 6th Floor
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750

MINOR PROJECT MODIFICATION



SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM



Minor Project Modification Number:	022	Date: 10/25/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson ECM	
MPM Triggered By:	<input type="checkbox"/> RFD	<input type="checkbox"/> PCO
	<input checked="" type="checkbox"/> Other: SFPUC Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Non-native grassland/ Scrub/developed	Net Acreage Affected: 0 acres
Modification to:	<input type="checkbox"/> Mitigation Measure:	<input checked="" type="checkbox"/> Other: FEIR Project Description
	<input type="checkbox"/> Permit:	

Detailed Description of Minor Project Modification:

The SFPUC is requesting a minor project modification (MPM) to the Final Environmental Impact Report (FEIR) Section 3: Project Description. Table 3.5 identifies the improvements to project area roads. The Boat Ramp Access Road was not included in Table 3.5. The SFPUC requests to stabilize and improve the existing Boat Ramp Access Road (Figure 1). Stabilization improvements to the existing road include widening, installing two safety turnarounds, and installing riprap on the road edges to minimize erosion from any potential future wave-action as described below:

The existing boat ramp road between elevation 695' and 756' is concrete. It currently has a concrete curb. We will be removing the concrete curb then replace the void with concrete. In addition, we will be adding three (3) feet on both sides of the existing road way of 3" aggregate base which will widen the road by six (6) total feet. We will also add 6 feet of riprap on both sides of the road way. A total of 12 feet of riprap will be added to the road for erosion armoring. The boat ramp access road improvements will be conducted within both the FEIR Cultural Area of Potential Effect and the biological study area, both of which are below the elevation 756 for the reservoir (i.e., restored reservoir elevation).

Figure 2 shows the improvements that will extend into the cultural site boundary of Desmond Camp (P-01-10870). Email correspondence received from the ERO archaeological designee (Adrian Praetzellis), identified additional mitigation measures to be implemented during boat ramp access improvement construction to prevent impacts to the archaeological site (see Attachment A).

ENVIRONMENTAL IMPACTS

The Boat Ramp access road improvements are located within the 756' restored reservoir elevation (i.e., open

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the Calaveras Dam Replacement Project Final Environmental Impact Report (FEIR).
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input checked="" type="checkbox"/> Y	The potential impacts per impact 4.9.6 (i.e., release of fuel and other hazardous materials to the environment, including Calaveras Reservoir during construction) will be similar to the potential impacts analyzed in the FEIR. With implementation of best management practices (BMPs) in Water Quality Mitigation Measure 5.7.1 and the Contractor's BMPs in their Spill Prevention Control and Countermeasure Plan potential impacts will be reduced to less than significant.
	<input type="checkbox"/> N	
Hydrology	<input checked="" type="checkbox"/> Y	Applicable mitigation measures related to impact 4.7.1 (i.e., impact on water bodies as a result of soil erosion and sediment discharge during construction) will be mitigated by implementation of Water Quality Mitigation Measure 5.7.1; and BMPs in the contractor's Storm Water Pollution Prevention Plan. With implementation of these measures, potential impacts will be reduced to less than significant.
	<input type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	The proposed Boat Ramp improvements, which extend through the Desmond Camp site boundary (P-01-10870), have the potential to impact cultural resources deemed eligible under California Register of Historical Resources. The SFPUC's Specialty Environmental Monitor (SEM) (archaeologist), assisted by the project's Environmental Inspector, will perform a pre-construction tailgate training prior to ground disturbing activities within the archaeological site in accordance with mitigation measure 5.10.2. In addition, the SEM (archaeologist) will perform monitoring of ground disturbing activities within archaeological site boundary in accordance with the project's Archaeological Monitoring Plan prepared in accordance with mitigation measure 5.10.1. Additionally if a deposit is discovered: "The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction crews and heavy equipment until the deposit is evaluated." per the Archaeological Monitoring Plan. Lath and flagging will be installed to delineate the construction work limits per mitigation measure 5.4.1b.
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	

Vegetation and Wildlife	<input type="checkbox"/> Y	The proposed Boat Ramp improvements have the potential to impact CTS upland refuge habitat, CRLF upland dispersal, AWS upland woodland and scrub habitat. Existing project mitigation measures (FEIR 5.4.1) will be implemented to reduce impacts to special status species (Attachment C) including delineation of the construction work limits with lath and flagging by the construction contractor per mitigation measure 5.4.1b. There would be no new significant vegetation or wildlife impacts beyond those analyzed in the FEIR.
	<input checked="" type="checkbox"/> N	

Attachment A

From: O'Neill, Kerry
To: Wilkerson, Cullen
Subject: FW: Calaveras - Boat Ramp Plan
Date: Wednesday, August 22, 2012 7:38:22 AM

Please prepare a MPM and include some simple "on-the-ground exclusion measures" to be implemented during the boat ramp construction to protect the remainder of the site from construction-related impacts.

From: Adrian Praetzellis [mailto:adrian.praetzellis@sonoma.edu]
Sent: Tuesday, August 21, 2012 10:32 AM
To: O'Neill, Kerry
Subject: RE: Calaveras - Boat Ramp Plan

Hello Kerry,

I don't think that the presence of CD-20 will be an impediment to completing this improvement. Some simple on-the-ground exclusion measures should protect the remainder of the site from construction-related impacts and it appears that the cobble feature has been adequately documented to preserve its information. However, between this project and the West Haul Road I am concerned that cumulative project impacts are incrementally degrading the site's value under California Register criterion A (importance in California history).

Adrian

From: O'Neill, Kerry [mailto:KONeill@sfgwater.org]
Sent: Friday, August 17, 2012 2:09 PM
To: Adrian Praetzellis
Cc: Steve.Smith@sfgov.org
Subject: Calaveras - Boat Ramp Plan

Adrian, as we discussed this morning attached is the layout for the existing boat ramp road at Calaveras Road showing the proposed limits of paving/riprap overlaid on a site map from the Archaeological Evaluation Report. As shown on the attached, a portion of this existing road lies within the boundaries of Site P-01-10870 ("Desmond Camp" or "CD-20"). As I suspected, and the mapping confirms, the road improvements will impact Feature #7 described as a sandstone cobble berm, 1 cobble wide and approximate 70 feet long that is parallel to the existing boat ramp. One of the proposed road turnouts also impacts ¾" diameter, or #3, reinforcing bar ("rebar"). Prior to preparing the Minor Project Modification package I'm trying to determine if there will be any potential issues with impacting these features or if the information on these features provided in the Archaeological Evaluation Report provides sufficient documentation.

As you know this site is described in the *Calaveras Dam Replacement Project, Archaeological Evaluation Report, Alameda and Santa Clara Counties, California*.
<https://infrastructure.sfgwater.org/fds/fds.asp?lib=FPU\doc\over\data\2012\20120821> that

Attachment A

previously provided to you.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
525 Golden Gate Ave, 6th Floor
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750



14 June 2012

To: Kerry O'Neill

From: Adrian Praetzellis

CC: Randall Dean
Diana Sokolove

Subject: Archaeological treatment for Camp Desmond (P-01-10870) West Haul Road,
Calaveras Dam

This memo conveys my evaluation of the Camp Desmond (P-01-10870) archaeological site and presents special mitigation measures to avoid construction-related impacts.

I have read URS' 2009 Archaeological Evaluation Report for Camp Desmond (P-01-10870) and conclude that this site does constitute a historical resource for the purposes of CEQA.

PUC proposes to realign a portion of an existing unpaved road that passes through the archaeological site. This will involve installing crushed rock or similar material. To avoid unnecessarily affecting the archaeological site, PUC will mark the construction limits on the ground with lath and flagging, and will ensure that the construction crew is aware of the importance of staying out of this sensitive zone. This exclusion area is not to be used to marshal equipment, as a turnaround, or for any other purpose during construction. PUC's environmental inspector will explain these requirements to the construction team at a pre-work tailgate meeting.



Memorandum

Date:	October 19, 2012
To:	Cullen Wilkerson, San Francisco Public Utilities Commission Environmental Compliance Coordinator
Cc:	
From:	Alisa Reynolds Cultural Resources
Subject:	Cultural Resources Survey for The Boat Ramp area at the Calaveras Dam Replacement Project (Minor Project Modification)

INTRODUCTION

This memorandum was prepared by ICF Jones & Stokes (ICF) for the Calaveras Dam Replacement Project (CDRP), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memorandum presents results of supplemental archaeological survey near the proposed boat ramp area. The survey area is contained within the project APE on the United States Geological Survey Calaveras Reservoir (USGS 1980) and La Costa Valley (USGS 1994) 7.5 minute topographic quadrangles (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the Final Environmental Impact Report [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey for a Minor Project Modification (MPM) was requested by the SFPUC. This report documents the methods and findings of archaeological surveys conducted on July 23, 2012 by ICF personnel.

PROJECT DESCRIPTION

The SFPUC is proposing to improve the existing Boat Ramp Access Road. The Boat Ramp Access Road is located on the western edge of the reservoir and connects with Calaveras Road (FEIR Figure). The current road material consists of concrete at elevation 735 feet to 760 ft, gravel and soil and is approximately 9 ft wide. There are no turn-outs or turn around locations on this road for vehicles. There exists an inherent safety issue for construction and SFPUC Water Supply Operators when they are forced to perform turn-arounds on un-cut vegetation adjacent to the reservoir shoreline during the dry and rainy seasons.

LITERATURE REVIEW

Historic-era Resources

Multiple cultural resources studies have been completed for the CDRP. URS conducted record searches and two pedestrian surveys of portions of the APE during initial design phases for the CDRP (URS 2003, 2005). In 2003 and 2004 records and documents on file at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) were reviewed (File Numbers 03-270 and 04-194). As part of the environmental review process for the CDRP project, Archaeological Resources Technology (ART) reviewed the records searches completed by URS and conducted another intensive pedestrian survey of the APE in 2006 (ART and EDAW 2008). One historical-era resource, portions of the Desmond Camp, is present within the boat ramp area (P-01-01087).

Prehistoric Resources

The Calaveras Valley, surrounding hills and ridges, and Calaveras, Alameda, and Arroyo Hondo Creeks watersheds comprise an environment conducive to prehistoric habitation and use. However, the most archaeologically sensitive portion of the CDRP APE for prehistoric habitation, the valley floor, has been inundated by the reservoir, so the archaeological surveys conducted for the CDRP project identified few prehistoric cultural resources. A total of three prehistoric resources (P-43-001600, CD#26, and Calaveras Dam Isolate) were recorded which indicate prehistoric use of the CDRP. None are recorded within this current survey area.

Calaveras Dam Cultural Memo
October 19, 2012
Page 3 of 4

SURVEY RESULTS

On July 23, 2012, ICF completed an intensive pedestrian survey of the boat ramp area to identify and document unrecorded prehistoric or historic-era cultural resources within the APE. This survey was conducted on areas within the APE (Figure 2). The survey was performed by Lily Henry Roberts under the supervision of ICF Senior Archaeologist Alisa Reynolds, who meets the Secretary of Interior's Professional Qualifications Standards for prehistoric archaeology.

Ground visibility was good, and isolated fragments of ceramic and rusted metal was observed on the ground surface.

CONCLUSION

No additional documentation within the APE is recommended. Although no other archaeological resources were observed, the possibility remains that prehistoric or other historic-era archaeological features and materials could be located during ground-disturbing construction activities. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) and guidelines contained in the MEA WSIP Archaeological Guidance No. 9 (CCSF 2008, Mitigation Measures I and II) should be implemented.

References Cited

ART and EDAW

2008 Calaveras Dam Replacement Project Archaeological Survey Report. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

City and County of San Francisco Planning Department [C&CSFPD]

2008 MEA WSIP Projects Archaeological Guidance.

2011 Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project.

JRP Historical [JRP]

2008 Calaveras Dam Replacement Project, Historic Resources Inventory and Evaluation Report. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

URS Corporation [URS]

2003 Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA. Prepared for San Francisco Water Department.

2005 Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures. Prepared for San Francisco Public Utilities Commission.

2009 Calaveras Dam Replacement Project Archaeological Survey Report, Addendum I, Alameda and Santa Clara Counties, California. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

1980 Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 photorevised 1980).

1994 La Costa Valley California 7.5 minute topographic quadrangle.

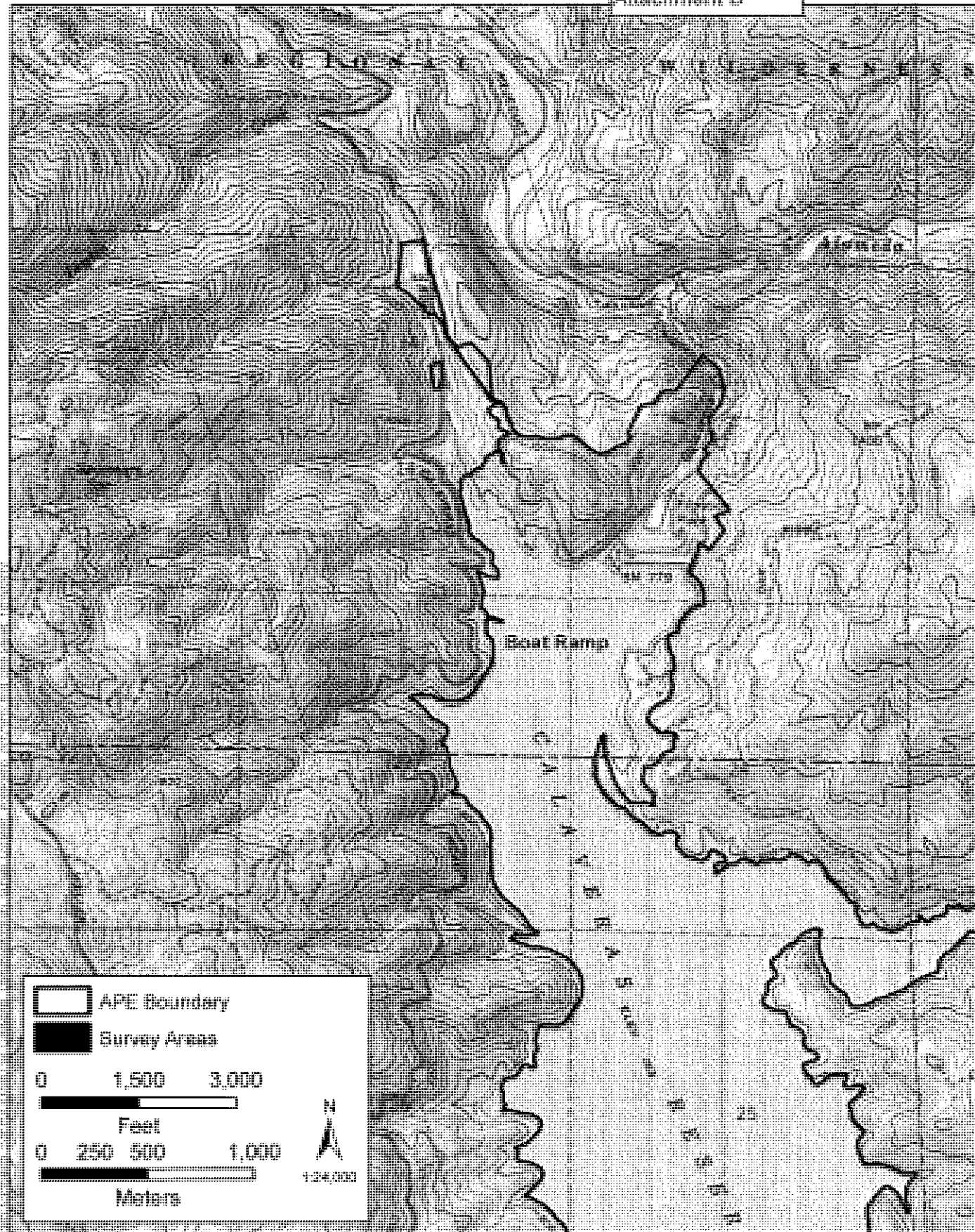


Figure 1
Survey Location



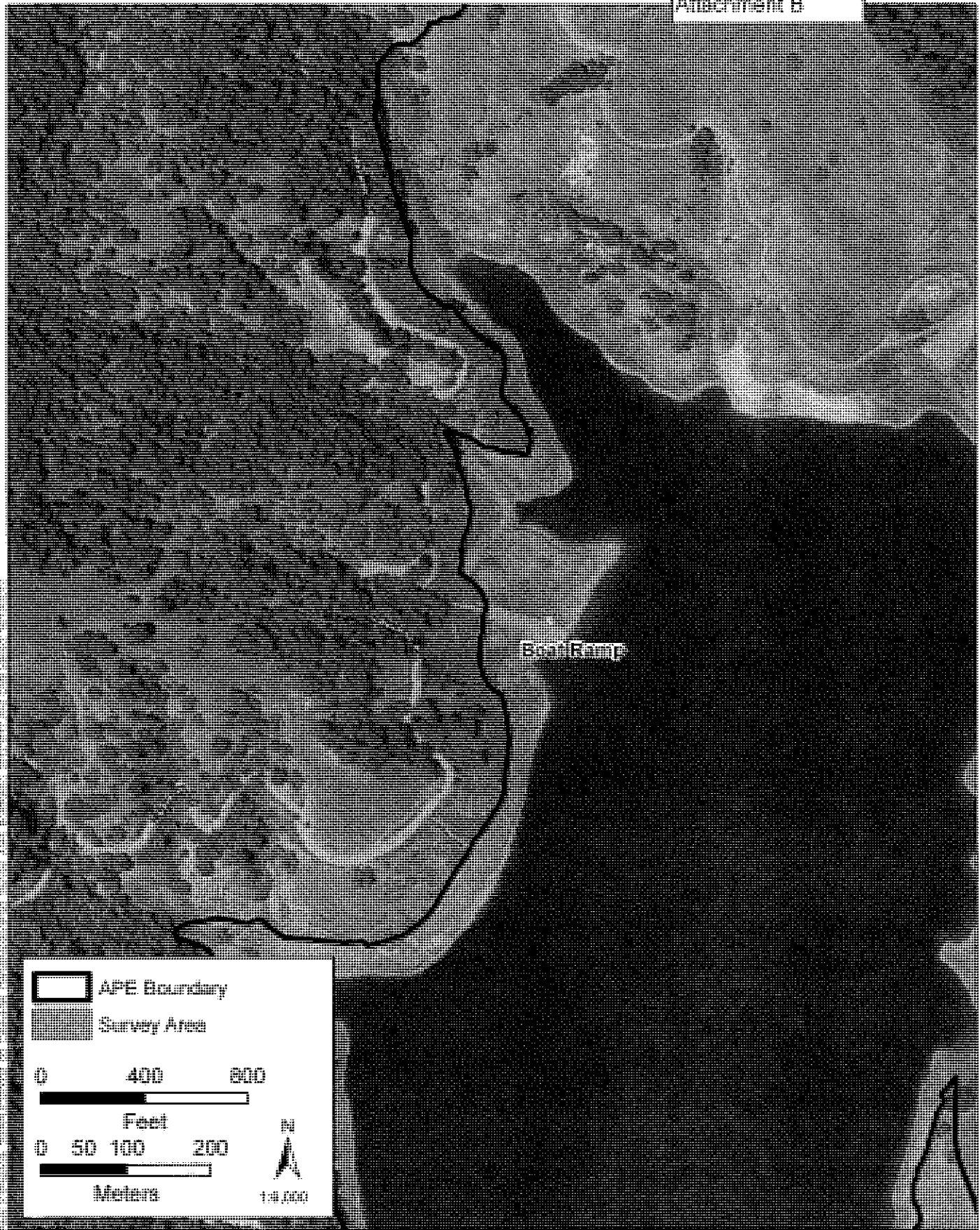


Figure 2
Survey Area



Date: September 13, 2012

To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental
Management

Subject: Biological Review of Proposed Project Modifications, *West Shore Boat Ramp*,
Calaveras Dam Replacement Project (CUW 37401)

This memo presents an evaluation of the biological resources for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification in accordance with SFPUC's Construction Management Procedure 054.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The contractor is requesting to expand a 0.335 acre (Project Area) portion of an existing boat ramp on the northwest shore of the reservoir. This project modification is being proposed in order to make improvements to an existing boat ramp. This memo assesses the potential biological constraints that may be associated with the proposed project modification.

BACKGROUND

The proposed project modification is located within the biological resource Study Area for the CDRP (e.g. ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007). The Final Environmental Impact Report (SFPUC 2011a) was reviewed in order to determine potential biological impacts from the proposed modification. In addition, the Project Area was traversed on foot and the Contract Drawings for the proposed Project Area was investigated for the presence of sensitive biological resources. This letter summarizes potential biological resources.

BIOLOGICAL RESOURCES

A USFWS/CDFG approved biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010) and 3) the United States Fish and Wildlife Service Biological Opinion.

The proposed expansion area is located in the northeast corner of Calaveras Reservoir, immediately east of Calaveras Road (Figure 1). The site consists of non-native grassland, coyote brush scrub and disturbed areas. The presence/potential for sensitive biological resources to occur in the Project Area are summarized in the following documents:

- The proposed expansion area is mapped as *Upland/Dispersal Habitat* for California red-legged frog (CRLF) and California tiger salamander (CTS) (SFPUC 2011a).

- The proposed expansion area is mapped as Alameda whipsnake (AWS) habitat: *Woodland or Annual Grassland Contiguous to Scrub/Shrub* and some small isolated patches of *Scrub/Shrub* communities.
- Scrub habitat has the potential to contain San Francisco dusky-footed woodrat nests.
- No rare plants or wetland features have been documented in the proposed expansion area (ETJV, 2006a, b).

RECOMMENDATIONS

The area impacted by the proposed project modification was previously analyzed in the FEIR and the project permits. All impacts below the 756ft restored reservoir elevation have been mitigated with the resource agencies.

The proposed project may also impact potential breeding bird habitat. The following measures are recommended to avoid impacts to special status species

Special Status Herpetofauna

A preconstruction survey should be performed by a qualified biologist prior to ground disturbance in the Project Area in order to determine the presence of special status herpetofauna. In addition, a biological monitor will be present during initial ground disturbance in accordance with resource agency permits and mitigation measure 5.4.1a. If sensitive herpetofauna are unearthed during ground disturbance activities, they will be relocated to suitable habitat that has been pre-approved by resource agency staff.

Breeding Birds

It is recommended that construction activities occur between August 31 and January 15 in order to avoid the breeding bird season. If this work window is not feasible, a qualified biologist will conduct a breeding bird survey in the Project Area and within suitable habitat in accordance with mitigation measure 5.4.1a.

Woodrats

Preconstruction surveys will be performed by a qualified biologist in order to determine potential woodrat occupancy in accordance with the project's CDFG Streambed Alteration Agreement. If young are detected during nest disassembly, disassembly shall discontinue. The qualified biologist may return at least 48 hours later to determine if the young were relocated due to the initial disturbance. If the nest is vacant, nest disassembly may proceed. If young are still present, the qualified biologist will make an age estimate during nest re-inspection to predict when the young will leave based on the species life history. The nest shall not be re-disturbed until the young are predicted to have left.

REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.

EDAW & Turnstone Joint Venture (ETJV). 2006c. California Red-legged Frog and California Tiger Salamander Habitat Assessment for the Calaveras Dam Replacement Project. Field work from April-May 2006, unpublished. EDAW, Sacramento, CA.



EDAW & Turnstone Joint Venture (ETJV). 2007. California tiger salamander and California red-legged frog habitat assessment field notes by Stephanie Coppeto, 21 March 2007, unpublished.

San Francisco Public Utilities Commission (SFPUC) 2010. Application for Incidental Take Permit. Prepared for the California Department of Fish and Game. Submitted November 2010.

San Francisco Public Utilities Commission (SFPUC) 2011a. Calaveras Dam Replacement Project, Final Environmental Impact Report. Final EIR Certification Date: January 27, 2011.

San Francisco Public Utilities Commission (SFPUC) 2011b. Calaveras Dam Replacement Project California Tiger Salamander Impact Evaluation. Prepared for the California Department of Fish and Game. Submitted June 2011.

MINOR PROJECT MODIFICATION

	SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM	
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Minor Project Modification Number:	023	Date: 10/30/12
Project Title:	Calaveras Dam Replacement Project	
EP Case No./Project No.	2005.0161E/CUW37401	
MPM Prepared By:	Cullen Wilkerson ECM	
MPM Triggered By:	<input type="checkbox"/> RFD <input type="checkbox"/> PCO <input checked="" type="checkbox"/> Other: CDFG Request	
Landowner:	SFPUC	
Vegetative Cover/Land Use:	Stock pond/Non-native grassland	Net Acreage Affected: 0.02 acres
Modification to:	<input type="checkbox"/> Mitigation Measure:	
	<input checked="" type="checkbox"/> Other: FEIR Project Description <input checked="" type="checkbox"/> Permit: CDFG 2081-2010-033-03, USFWS 81420-2009-F-1339	

Detailed Description of Minor Project Modification:

The SFPUC is requesting a minor project modification (MPM) to stabilize and improve the existing berm of an existing stock pond (Pond Z; Figure 1) in order to improve California tiger salamander (*Ambystoma californiense*, CTS) aquatic breeding habitat. Pond Z is located outside of the construction limits and is a pond that will be used for CTS relocation per mitigation measure 5.4.1a (i.e., CTS salvage and relocation plan). This stock pond maintenance was requested by California Department of Fish and Game (CDFG) representative, Jeanne Chinn in an 10/1/12 email to Kerry O'Neill (SFPUC Environmental Construction Compliance Manager). Concurrence for the repair work was also obtained from USFWS representative Ryan Olah on 10/5/12 ". This correspondence is attached.

The berm repair work will be performed using a bulldozer to shape, track walk and compact the existing berm. Fabric will be placed over the earthen berm to reduce the potential for future berm failures. An overflow pipe may be installed to reduce the potential for over topping of the berm.

ENVIRONMENTAL IMPACTS

The maintenance of Pond Z will include removal of sediment in the pond and repair of a failed berm (Figure 2). The proposed modification will not result in new or additional impacts to the physical, biological, or cultural historic environment beyond those analyzed in the Calaveras Dam Replacement FEIR. Ground disturbing activities that have the potential to harm sensitive species (e.g., grading) will be monitored by a CDFG/USFWS approved biological monitor in accordance with mitigation measures permit requirements. A cultural resource survey was performed and determined that this area has low sensitivity for prehistoric and historic resources

CEQA SECTION	APPLICABLE	(Y) Define Potential Impact or (N) Briefly Explain Why CEQA Section isn't Applicable
Geology, Soils and Seismicity	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the Calaveras Dam Replacement Project Final Environmental Impact Report (FEIR).
	<input checked="" type="checkbox"/> N	
Hazardous Materials and Waste	<input checked="" type="checkbox"/> Y	The potential impacts per impact 4.9.6 (i.e., release of fuel and other hazardous materials to the environment, including Calaveras Reservoir during construction) will be similar to the potential impacts analyzed in the FEIR. With implementation of best management practices (BMPs) in Water Quality Mitigation Measure 5.7.1 and the Contractor's BMPs in their Spill Prevention Control and Countermeasure Plan potential impacts will be reduced to less than significant.
	<input type="checkbox"/> N	
Hydrology	<input type="checkbox"/> Y	There would be no new significant geology, soil or seismicity impacts beyond those analyzed in the Calaveras Dam Replacement Project Final Environmental Impact Report (FEIR).
	<input checked="" type="checkbox"/> N	
Cultural Resources	<input checked="" type="checkbox"/> Y	There is a low likelihood to impact prehistoric or historic-era resources (see Attachment C - Cultural Resources Memo). In the event resources are located during construction, implementation of Mitigation Measures 5.10.1 in the Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) and "ALERT" sheet will be implemented.
	<input type="checkbox"/> N	
Traffic and Circulation	<input type="checkbox"/> Y	There would be no new traffic and circulation impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Air Quality	<input type="checkbox"/> Y	There would be no new air quality impacts beyond those identified in the FEIR.
	<input checked="" type="checkbox"/> N	
Noise and Vibration	<input type="checkbox"/> Y	There will not be additional new significant noise and vibration impacts beyond what was analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Visual Resources	<input type="checkbox"/> Y	There would be no new significant visual resource impacts beyond those analyzed in the FEIR. .
	<input checked="" type="checkbox"/> N	
Vegetation and Wildlife	<input checked="" type="checkbox"/> Y	The proposed berm improvements have the potential to impact CTS, California red-legged frog (CRLF), and Alameda whipsnake (AWS) during construction but also will improve habitat for AWS and CRLF after completion of the berm repairs that were requested by CDFG and USFWS (see Attachment A CDFG/USFWS emails and Attachment B – Biological Resources memo). Existing project mitigation measures (FEIR 5.4.1) will be implemented to reduce impacts to special status species.
	<input type="checkbox"/> N	

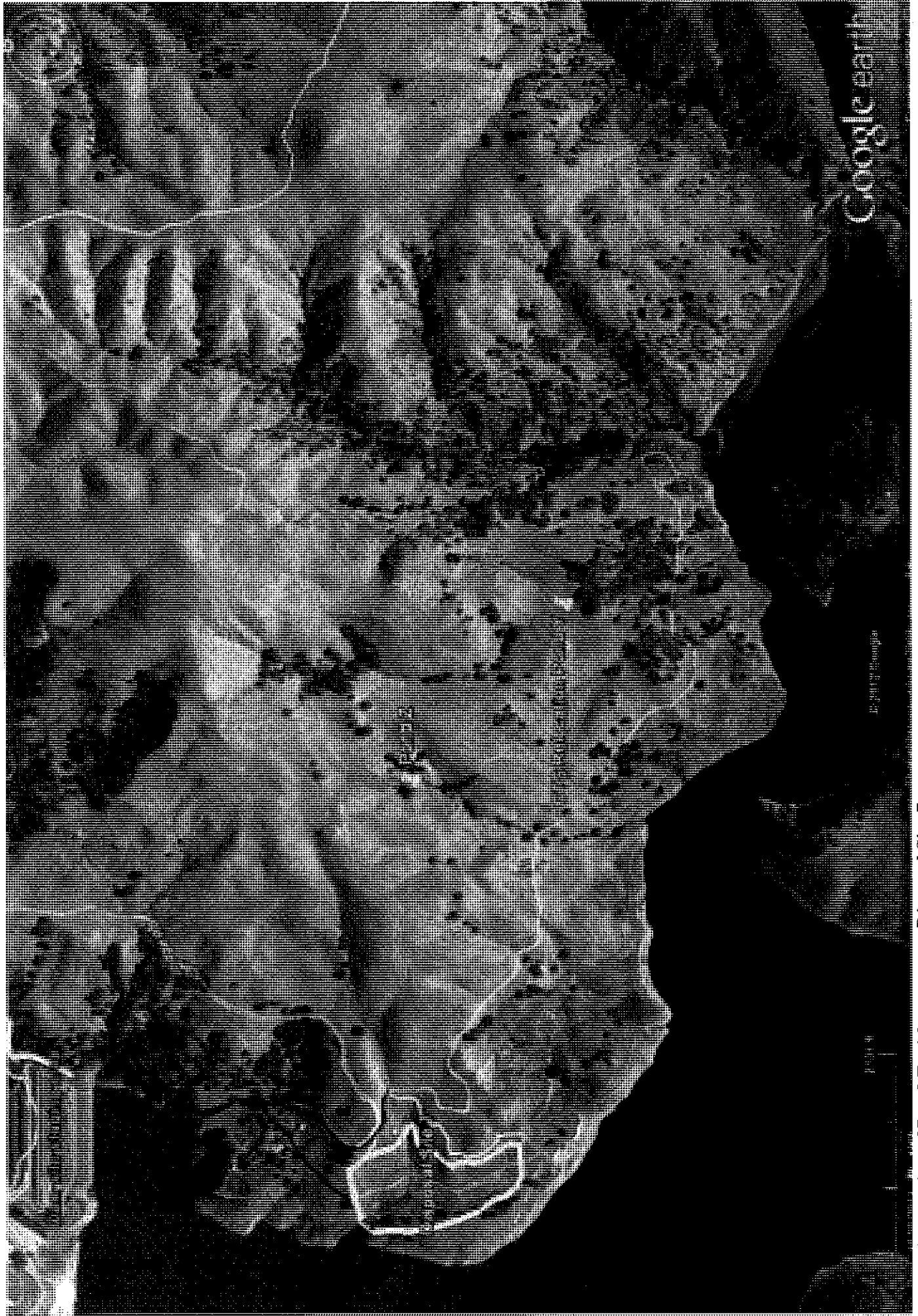


Figure 1. Location of Pond Z with respect to Disposal Site 7.

O'Neill, Kerry

From: Smith, Steve <steve.smith@sfgov.org>
Sent: Monday, November 05, 2012 12:14 PM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: MPM 23 - Pond Z berm repair
Attachments: MPM 023 - Pond Z Maintenance_(final)-Signed.doc

Signature/approval attached.

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: O'Neill, Kerry [<mailto:KONeill@sfgwater.org>]
Sent: Monday, November 05, 2012 11:22 AM
To: Smith, Steve
Cc: Wilkerson, Cullen
Subject: RE: MPM 23 - Pond Z berm repair

I've made the corrections (CDFG and route) and accepted your insertion. Attached is the final.

From: Smith, Steve [<mailto:steve.smith@sfgov.org>]
Sent: Monday, November 05, 2012 10:46 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen
Subject: RE: MPM 23 - Pond Z berm repair

A few minor comments/edits on the attached. Once I receive your response, I will sign/approve.

Thanks,
Steve

Steven H. Smith, AICP
1650 Mission Street, Suite 400
San Francisco, CA 94103
415/558-6373

From: O'Neill, Kerry [<mailto:KONeill@sfgwater.org>]
Sent: Tuesday, October 30, 2012 4:03 PM
To: Smith, Steve
Cc: Wilkerson, Cullen
Subject: MPM 23 - Pond Z berm repair

Steve, as we discussed attached is a MPM 23 for repair of a berm at an existing stock pond. This repair work was requested by CDFG to improve the California tiger salamander (CTS) habitat at Pond Z. Pond Z is located outside of the construction limits and is a pond that will be used for CTS relocation per mitigation measure S.4.1a (i.e., CTS salvage and relocation plan). Please let me know if you have any questions related to this work.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
525 Golden Gate Ave., 6th Floor
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750



Figure 2a. Dam face of Pond Z, looking upstream to it at the breach.

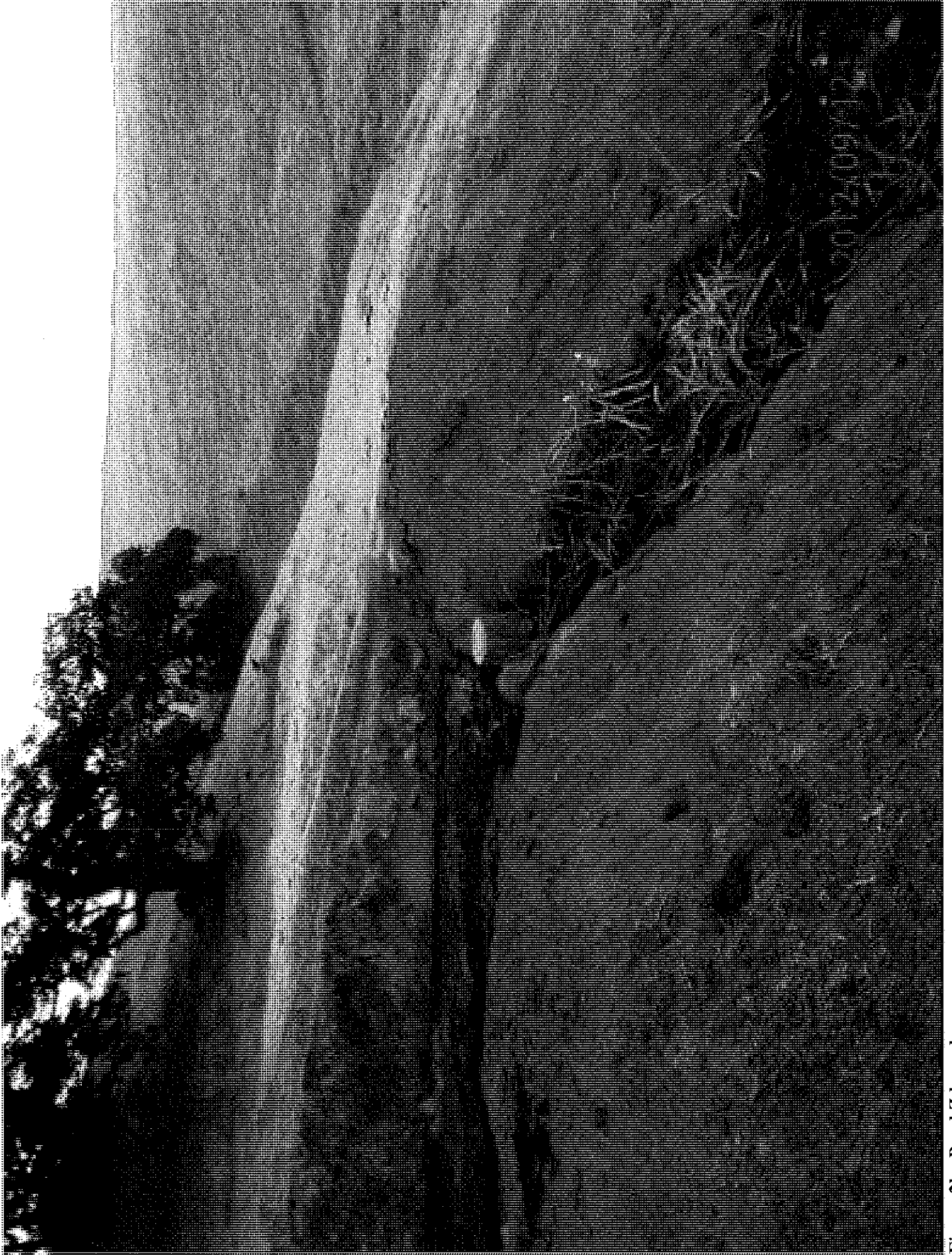


Figure 2b. Pond Z breach.



Figure 2c. Pond Z sediment to be removed during berm repair.

O'Neill, Kerry

From: Ryan_Olah@fws.gov
Sent: Friday, October 05, 2012 7:44 AM
To: O'Neill, Kerry
Cc: Wilkerson, Cullen; Jack, Emma
Subject: RE: Calaveras - CTS Trapping & Relocation Plan DS-7 Reserve Area for approval

I concur with DFG's comments that repair of Pond Z would be preferred, if possible.

Ryan

▼ "O'Neill, Kerry" <KONeill@sfgwater.org>

"O'Neill, Kerry"
<KONeill@sfgwater.org>

To<Ryan_olah@fws.gov>

10/03/2012 10:13 AM

cc"Wilkerson, Cullen" <CWilkerson@sfgwater.org>, "Jack, Emma" <EJack@sfgwater.org>

SubjectRE: Calaveras - CTS Trapping & Relocation Plan DS-7 Reserve Area for approval

Ryan, do you have any comments in addition to those provided by CDFG? If not, can you send your approval for our files? thanks

From: Jeanne Chinn [mailto:JCHINN@dfg.ca.gov]
Sent: Monday, October 01, 2012 3:13 PM
To: Ryan_olah@fws.gov; O'Neill, Kerry
Cc: Wilkerson, Cullen; Jack, Emma
Subject: Re: Calaveras - CTS Trapping & Relocation Plan DS-7 Reserve Area for approval

Hi Kerry,

Please refer to the Borrow Area E CTS Relocation Plan completed in 2/14/12 to incorporate the latest science protocol into the CTS trapping and relocation plan for the DS-7 Reserve Area; also please incorporate language that if buckets are to be used that they be checked at sunrise to minimize CTS being taken by predators in daylight.

Please fix Pond Z, which had a breach on the east side sometime between 6/07 and 10/08 and degraded further in 1/12, so it can be used for relocation of CTS from the project construction area. Pond Z is close to the construction site and had CTS prior to blowing out so it's likely it will be a good CTS pond after it has been repaired. On 2/2/12 a Pond Berm Evaluations document from Glen Gorski said, "The berms of these ponds can be repaired and maintained to provide the necessary habitat for CTS and continue to serve their primary function as cattle watering locations by...repairing the breach in Pond Z and excavating the grassed spillway to prevent the overtopping that caused the breach..."

Please email me if you have any questions.

Thank you,
Jeanne

Attachment A

Jeanne Wetzel Chinn, MS
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
707-944-5523
jchinn@dfg.ca.gov

>>> "O'Neill, Kerry" <KONeill@sfgwater.org> 9/24/2012 8:46 AM >>>

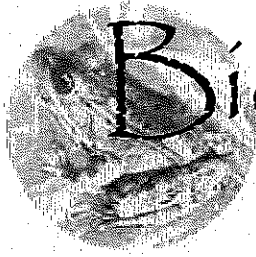
Subject: Calaveras - CTS Trapping & Relocation Plan DS-7 Reserve Area for approval
USFWS BO 81420-2009-F-1339: Avoidance and minimization measures #3 for California tiger salamander (page 22)

CDFG ITP 2081-210-033-03: Per the project's Application for Incidental Take of Listed Species (page 87)

The project has determined that there is a need to use the 2-acre Disposal Site 7 (DS-7) reserve area. The Disposal Site 7 reserve area is within the permitted construction work limits. Prior to expanding into this area, the project will implement a passive trapping and relocation program. The DS-7 reserve area passive trapping and relocation plan (see attached file) and is an addendum to the "*California Tiger Salamander (Ambystoma californiense) Trapping and Relocation Plan*" (dated September 2011) (see attached file for reference only) approved by CDFG on 9/14/11 and by USFWS on 9/13/11.

This plan is required by the USFWS BO Avoidance and Minimization Measure for CTS #3 and included in commitments in the project's CDFG Application for Incidental Take of Listed Species (page 87); both state: "*A California tiger salamander trapping and relocation plan will be prepared for review and approval by the Service and CDFG.*" Please let me know if you concur with this plan.

Kerry O'Neill
Environmental Construction Compliance Manager
Bureau of Environmental Management
San Francisco Public Utilities Commission
525 Golden Gate Ave., 6th Floor
San Francisco, CA 94103
Voice: 415-554-2474; Fax: 415-934-5750



BioMaAS

Biological Monitoring and Assessment Specialists, Inc.
333 Valencia Street, Suite #324, San Francisco, CA 94103
Phone (+15)255-8077 Fax (925)887-4702 www.BioMaAS.com

Date: October 26, 2012

To: Kerry O'Neill
San Francisco Public Utilities Commission, Bureau of Environmental
Management

From: Bill Stagnaro, BioMaAS

Subject: Biological Review of Proposed Project Modification, *Pond Z*, Calaveras Dam
Replacement Project (CUW 37401)

This memo presents an evaluation of the biological resources for a proposed modification to the Calaveras Dam Replacement Project (CDRP). This evaluation supports an application for a Minor Project Modification.

DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

The SFPUC is requesting a minor project modification (MPM) to stabilize and improve the existing berm of a stock pond (Pond Z; Figure 1) in order to improve California tiger salamander (*Ambystoma californiense*) (CTS) aquatic breeding habitat. Pond Z is located outside of the construction work limits. The area of impact (which includes the pond, berm, and borrow area) totals approximately 900 square feet (0.02 acres).

Ground disturbance will be required in order to 1) repair the dam berm and 2) remove excess sediment from behind the dam. The preferred work plan will use laborers with hand tools to the extent feasible but repair will require small sized equipment (e.g., small bulldozer or other light equipment with a small footprint and rubberized tires) All efforts will be made to minimize extent of ground disturbance. Sand bags or fabric may be required to shore up the berm in conjunction with native material if native material alone proves difficult to work with. Topsoil will be salvaged from the berm prior to berm repair and then replaced following berm repair.

BACKGROUND

This stock pond maintenance is being requested in order to accommodate the potential relocation of CTS individuals as a result of the approved winter 2012/2013 trapping effort in Disposal Site 7. CDFG representative Jeanne Chinn specifically requested maintenance of Pond Z

in an October 1st 2012 email to Kerry O'Neill (SFPUC Environmental Construction Compliance Manager):

"Please fix Pond Z, which had a breach on the east side sometime between 6/07 and 10/08 and degraded further in 1/12, so it can be used for relocation of CTS from the project construction area. Pond Z is close to the construction site and had CTS prior to blowing out so it's likely it will be a good CTS pond after it has been repaired. On 2/2/12 a Pond Berm Evaluations document from Glen Gorski said, "The berms of these ponds can be repaired and maintained to provide the necessary habitat for CTS and continue to serve their primary function as cattle watering locations by...repairing the breach in Pond Z and excavating the grassed spillway to prevent the overtopping that caused the breach..."

The proposed project modification is not located within the biological resource Study Area for the CDRP (ETJV 2006a; ETJV 2006b; ETJV 2006c and ETJV 2007). The Project Area was traversed on foot and investigated for the potential presence of sensitive biological resources.

BIOLOGICAL RESOURCES

A project biologist reviewed the biological resource data summarized by 1) ETJV (2006a, 2006b, 2006c, and 2007), 2) the California Department of Fish and Game (CDFG) Section 2081 Incidental Take Permit application (SFPUC 2010), 3) the United States Fish and Wildlife Service Biological Opinion, and the CDFG and USFWS approved California Tiger Salamander Capture and Relocation Plan (2011).

Pond Z is a shallow perennial feature approximately 6 inches deep at its greatest depth, and is being fed by a natural spring that drains directly into the pond from the north, and exits into a small creek to the south (Figures 2a, 2b, and 2c). The pond is approximately 20 ft. x 20 ft. in size and at an elevation of 1233 ft. The berm is approximately 5 ft. x 20 ft. Area of impact is approximately 900 sq. ft (0.02 acres).

Pond Z is approximately 0.62 miles from Pond 9 in Disposal Site 7. The pond is located approximately 1,000 feet from a fire road and 0.48 miles east of construction buffer zone at Disposal Site 7. The GPS coordinate for Pond Z are 37°29'04.47 "N longitude and 121°48'38.71"W latitude. The edges of this pond are surrounded by hog wallows as cattle use it as a watering hole. Visual surveys of Pond Z revealed two large CTS larvae in 2011. Abundant suitable aestivation habitat was present in the surrounding areas.

The habitat surrounding the pond consists of non-native grassland and oak woodland. The presence/potential for sensitive biological resources to occur in the Project Area may be summarized by the following:

- Pond Z has a known CTS population. CTS are assumed to be in the pond in winter and in all suitable refugia adjacent to the pond.
- Pond Z location is mapped as *Critical Habitat* for California red-legged frog (CRLF).
- The habitat adjacent to Pond Z is potential Alameda whipsnake dispersal and refugia habitat.

- The habitat adjacent to Pond Z has not been surveyed for rare plants as it was not part of the 2006 rare plant Study Area (EDAW, 2006a).
- No jurisdictional features are present within the footprint of the proposed modification.

RECOMMENDATIONS

The proposed project modifications could potentially adversely impact habitats that are utilized by CTS, CRLF and AWS in addition to potential impacts to breeding birds should construction occur between February 1 and August 15. A preconstruction survey should be performed by a qualified biologist prior to ground disturbance in the proposed project area in order to determine the presence of special status species. In addition, a biological monitor will be present during all construction activities and disturbance in accordance with resource agency permits and mitigation measure 5.4.1a. If sensitive species are unearthed during ground disturbance activities, they will be relocated to suitable adjacent habitat and the jurisdictional resource agencies will be notified.

No mitigation measures, beyond those presented in the MMRP Pre-Construction Measures, CDFG LSA 1602, and CDFG 2081 ITP are required. The work is scheduled to occur upon CEQA authorization and prior to the active nesting season to avoid potential impacts to nesting migratory birds. Applicable measures follow:

“If construction, grading, or other Project-related improvements are scheduled during the nesting season of protected raptors and migratory birds (Feb 15 through August 15), a focused survey for active nests of such birds shall be conducted by a qualified biologist”. MMRP 5.4.1a Pre-Construction Measures.

“Within 24 hours prior to initial ground disturbing activities including grading, excavation and vegetation removal activities, a qualified biologist shall survey areas to identify and safely relocate special status species. CDFG LSA 1602 Avoidance and Minimization Measure 2.22.

“At least one qualified Biological Monitor familiar with the habitat needs and biological of the CRLF, FYLF, AWS, CCS, CTS, Bald eagle, SF DFWR, WPT shall be on site full time during dewatering activities and initial ground disturbance activities” CDFG LSA 1602 Avoidance and Minimization Measure 2.24.

REFERENCES

EDAW & Turnstone Joint Venture (ETJV). 2006a (November 10). Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture.

EDAW & Turnstone Joint Venture (ETJV). 2006b (July). Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission.

EDAW & Turnstone Joint Venture (ETJV). 2006c. California Red-legged Frog and California Tiger Salamander Habitat Assessment for the Calaveras Dam Replacement Project. Field work from April-May 2006, unpublished. EDAW, Sacramento, CA.

EDAW & Turnstone Joint Venture (ETJV). 2007. California tiger salamander and California red-legged frog habitat assessment field notes by Stephanie Coppeto, 21 March 2007, unpublished.

Praetzilli, A. June 14, 2012 email to Kerry O'Neill (SFPUC ECCM) Subject : Calaveras - West Haul Road Modification.

San Francisco Public Utilities Commission (SFPUC) 2011a. Calaveras Dam Replacement Project, Final Environmental Impact Report. Final EIR Certification Date: January 27, 2011.



Attachment

Memorandum

Date:	October 25, 2012
To:	Cullen Wilkerson, San Francisco Public Utilities Commission Environmental Compliance Coordinator
Cc:	
From:	Alisa Reynolds, Lily Henry Roberts Cultural Resources
Subject:	Cultural Resources Survey for Pond Z at the Calaveras Dam Replacement Project (Minor Project Modification)

INTRODUCTION

This memorandum was prepared by ICF Jones & Stokes (ICF) for the Calaveras Dam Replacement Project (CDRP), a component of San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP). The purpose of the WSIP is to reestablish the seismic reliability of the regional and local water system. The CDRP involves the construction of a new, seismically stable dam and associated facilities to restore the water storage capabilities of Calaveras Reservoir. The Project is located in Alameda and Santa Clara Counties south of Sunol and east of Milpitas. This memorandum presents results of supplemental archaeological survey near Pond Z. The survey area is outside the project APE on the United States Geological Survey Calaveras Reservoir (USGS 1980) and La Costa Valley (USGS 1994) 7.5 minute topographic quadrangles (Figure 1).

CDRP CEQA compliance for cultural resources was achieved for the Project through the Final Environmental Impact Report [FEIR] prepared and certified by the San Francisco Planning Department (C&CSFPD 2011). Archaeological survey for a Minor Project Modification (MPM) was requested by the SFPUC. This report documents the methods and findings of archaeological surveys conducted on October 16, 2012 by ICF personnel.

PROJECT DESCRIPTION

The SFPUC is proposing to stabilize and improve the existing berm of a stock pond (Pond Z) in order to improve California tiger salamander (*Ambystoma californiense*, CTS) aquatic breeding habitat. Pond Z is located outside of the construction limits. This stock pond maintenance is being requested in order to accommodate the potential relocation of CTS individuals as a result of the approved winter 2012/2013 trapping effort in the Disposal Site 7 area. Currently, the agencies (CDFG & USFWS) have approved the relocation of 21 CTS individuals into Ponds 13 and 23. If the winter 2012/2013 trapping effort produces more than 21 CTS individuals, Environmental staff will not have an approved relocation area. Pond Z is a more desirable relocation feature as CTS have been observed in this feature by Environmental staff in 2011.

LITERATURE REVIEW

Multiple cultural resources studies have been completed for the CDRP. URS conducted record searches and two pedestrian surveys of portions of the APE during initial design phases for the CDRP (URS 2003, 2005). In 2003 and 2004 records and documents on file at the (NWIC) of the California Historical Resources Information System (CHRIS) were reviewed (File Numbers 03-270 and 04-194), including an area 1 mile beyond the current APE and covering Pond Z. As part of the environmental review process for the CDRP project, Archaeological Resources Technology (ART) reviewed the records searches completed by URS and conducted another intensive pedestrian survey of the APE in 2006 (ART and EDAW 2008).

The Calaveras Valley, surrounding hills and ridges, and Calaveras, Alameda, and Arroyo Hondo Creeks watersheds comprise an environment conducive to prehistoric habitation and use. However, the most archaeologically sensitive portion of the CDRP APE for prehistoric habitation, the valley floor, has been inundated by the reservoir, so the archaeological surveys conducted for the CDRP project identified few prehistoric cultural resources. No prehistoric resources are recorded near the Pond Z project area, the area is not considered archaeologically sensitive.

SURVEY RESULTS

On October 16, 2012, ICF completed an intensive pedestrian survey of Pond Z, and the surrounding area, to identify and document unrecorded prehistoric or historic-era cultural resources. This survey was conducted on areas outside of the APE (Figure 2). The survey was performed by Lily Henry Roberts under the supervision of ICF Senior Archaeologist Alisa Reynolds, who meets the Secretary of Interior's Professional Qualifications Standards for prehistoric archaeology.

Ground visibility was fair, although heavily impacted by cattle. The rock outcropping to the north/east of Pond Z was thoroughly surveyed for any cultural modifications. The existing banks of Pond Z were closely examined, as well as rodent back dirt in the surrounding area. No surface evidence of cultural activity observed.

CONCLUSION

No additional documentation is recommended. No recorded archaeological resources exist within the Pond Z area, and the survey did not reveal and sensitive landforms. Although no other archaeological resources were observed, the possibility remains that prehistoric or other historic-era archaeological features and materials could be located during ground-disturbing construction activities. Therefore, in the event that cultural resources and/or human remains are encountered during project construction, Mitigation Measures 5.10.1 in the Final Environmental Impact Report on the San Francisco Public Utilities Commission's Calaveras Dam Replacement Project (San Francisco Planning Department 2011, Volume 2:5-32 to 5-35) and guidelines contained in the MEA WSIP Archaeological Guidance No. 9 (CCSF 2008, Mitigation Measures I and II) should be implemented.

References Cited

ART and EDAW

2008 Calaveras Dam Replacement Project Archaeological Survey Report. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

City and County of San Francisco Planning Department [C&CSFPD]

2008 MEA WSIP Projects Archaeological Guidance.

2011 Final Environmental Impact Report MEA Case No. 2005.0161E San Francisco Public Utilities Commission Calaveras Dam Replacement Project.

JRP Historical [JRP]

2008 Calaveras Dam Replacement Project, Historic Resources Inventory and Evaluation Report. Prepared for EDAW Turnstone Consulting-Joint Venture (ETJV).

URS Corporation [URS]

2003 Technical Memorandum, Results of Archaeological Reconnaissance of Calaveras Dam Phase I Geotechnical Investigation, Alameda County, CA. Prepared for San Francisco Water Department.

2005 Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures. Prepared for San Francisco Public Utilities Commission.

2009 Calaveras Dam Replacement Project Archaeological Survey Report, Addendum I, Alameda and Santa Clara Counties, California. Prepared for San Francisco Public Utilities Commission.

U.S. Geological Survey (USGS)

1980 Calaveras Reservoir, California 7.5 minute topographic quadrangle (1961 photorevised 1980).

1994 La Costa Valley California 7.5 minute topographic quadrangle.

Photos:



Photo 1373- Overview of Pond Z
(view south/west)

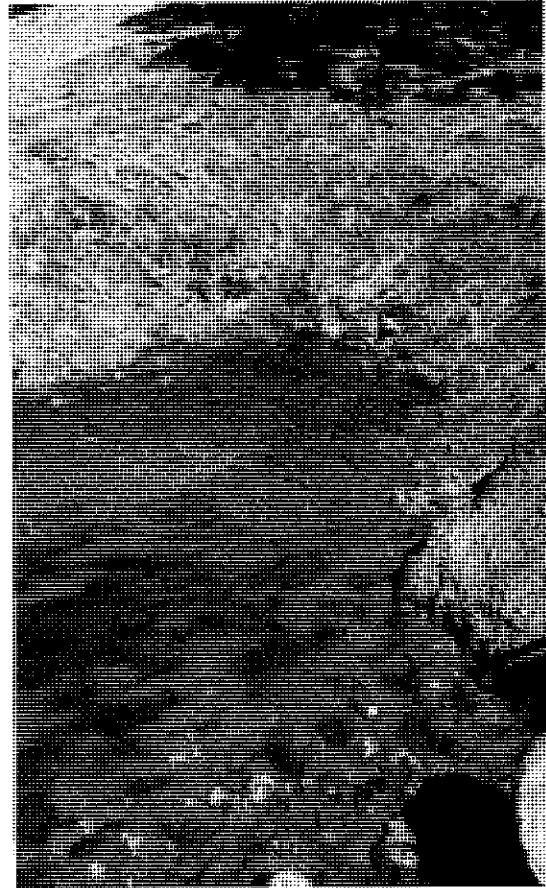


Photo 1375 – View of existing bank of Pond Z
(View north/east)

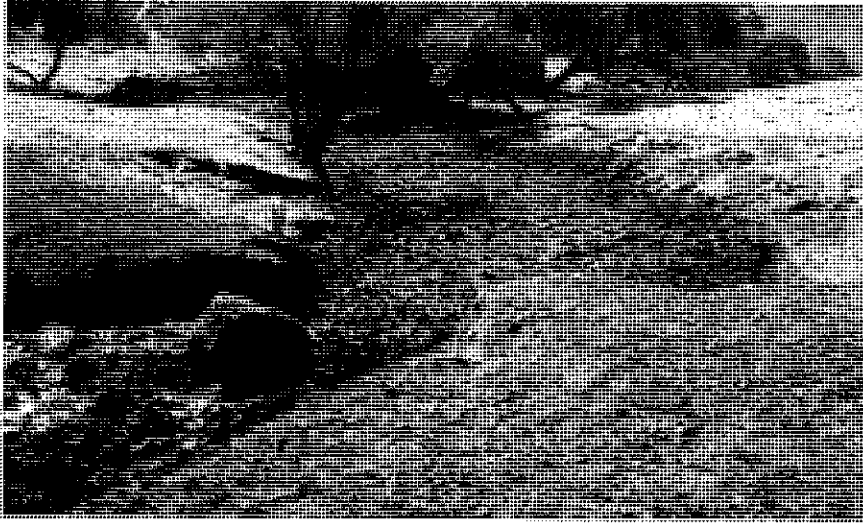


Photo 1376 – view of Pond Z overflow (View south)



Photo 1374 – View of rock outcrop to the north of Pond Z (View north/east)

Figures:

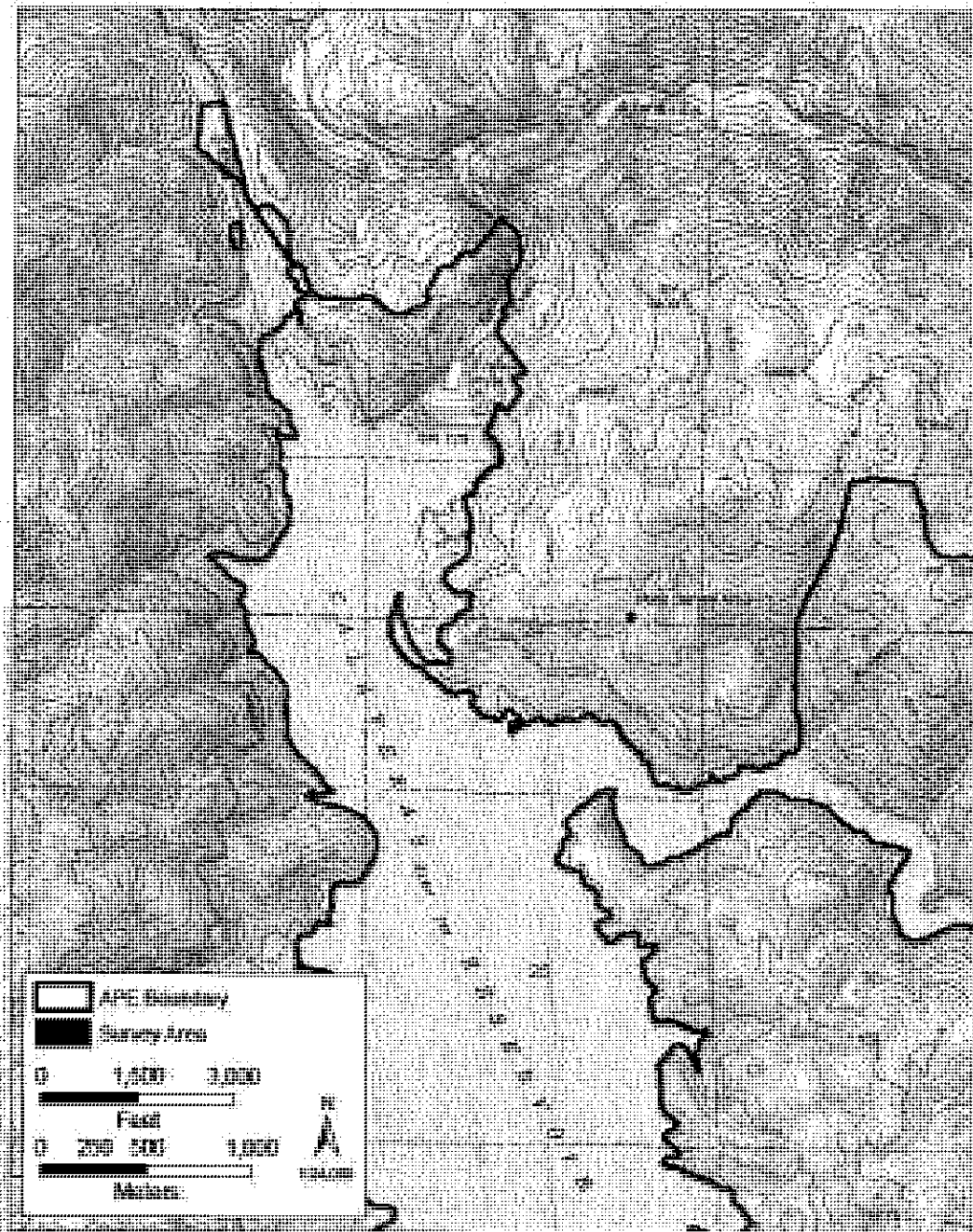


Figure 1
Survey Location

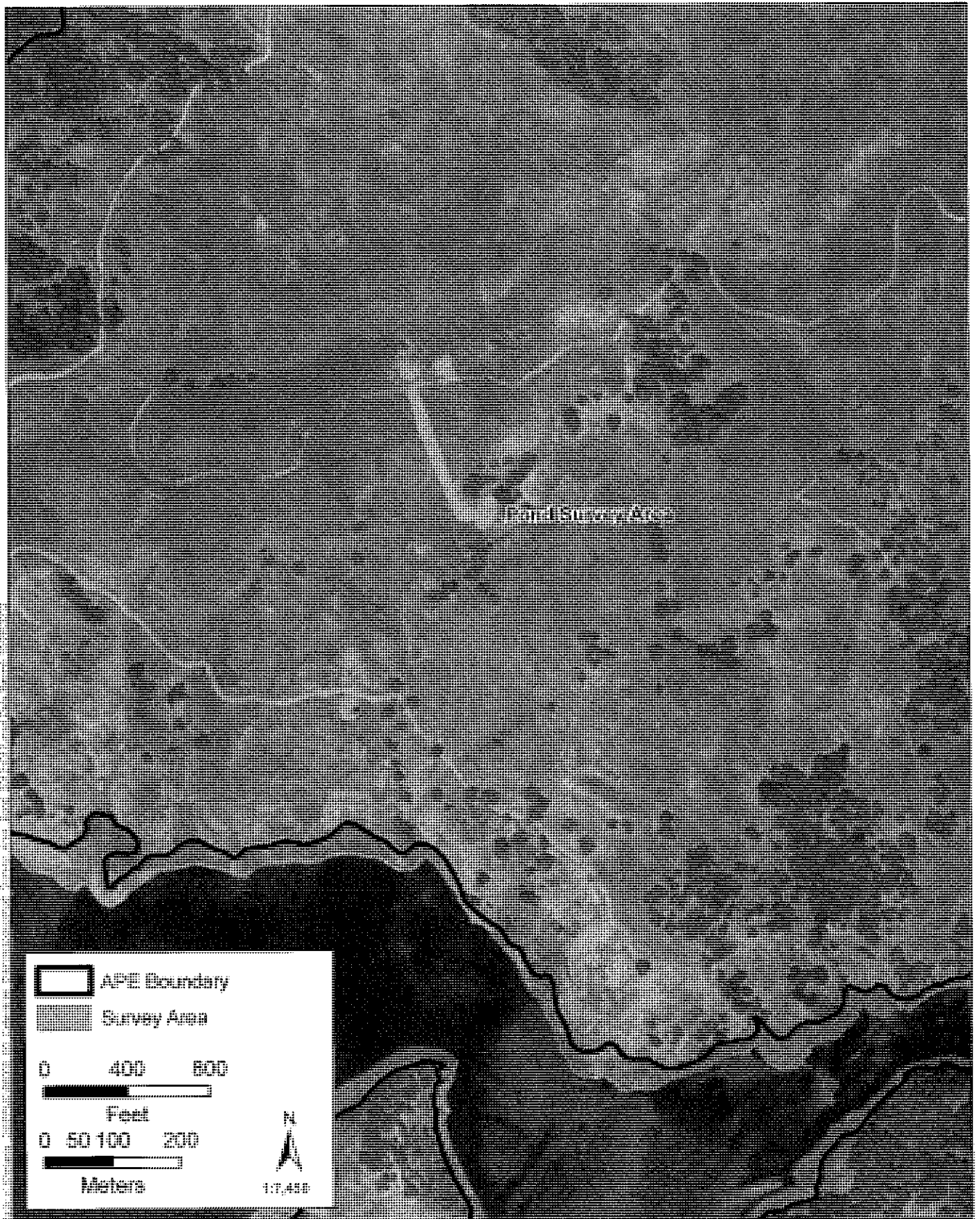


Figure 2
Survey Area

