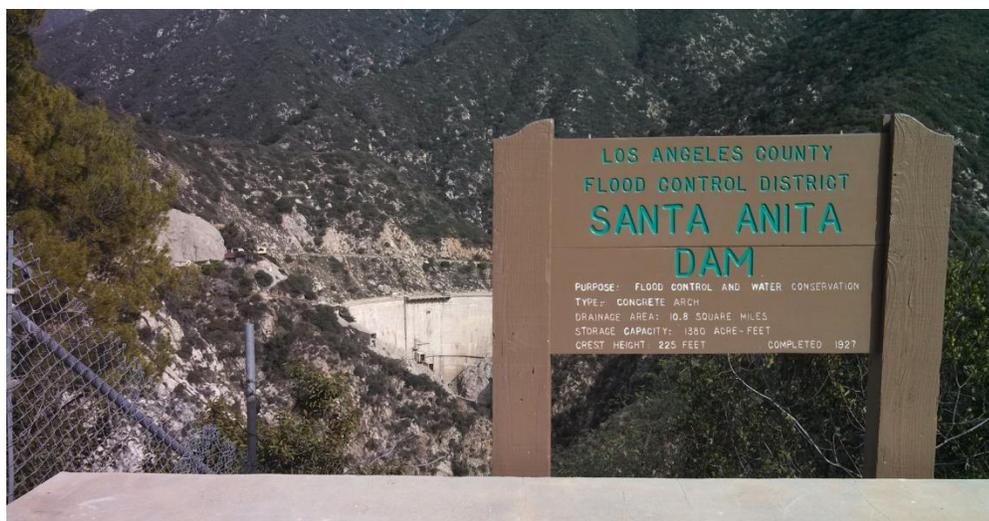


APPENDIX C
PHASE I CULTURAL RESOURCES ASSESSMENT

Phase I Cultural Resources Assessment

Santa Anita Stormwater Management and Seismic Strengthening Project

USGS **Mt. Wilson** 7.5 Minute Quadrangle in Township 1 North; Range 11 West, Sections 10 and 15; (S.B.B.M).



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October 2014



TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Executive/Management Summary.....	MS-1
1.0 Project Description.....	2
1.1 Project Components.....	2
1.1.1 Dam.....	3
1.1.2 Headworks and Wilderness Park Culvert Crossing.....	4
1.1.3 Debris Dam.....	6
1.2 Exhibit.....	7
2.0 Regulatory Setting.....	1
2.1 Federal.....	1
2.2 CEQA.....	1
2.3 Senate Bill 18.....	3
2.4 Human Remains.....	3
3.0 Setting.....	4
3.1 Natural.....	4
3.2 Cultural.....	4
3.2.1 Prehistoric.....	4
3.2.2 Ethnographic.....	5
3.2.3 Local History.....	7
4.0 Methods.....	8
4.1 Cultural Resources Records Search.....	8
4.2 Native American Scoping.....	8
4.3 Cultural Resources Field Survey.....	8
5.0 Results.....	9
5.1 Cultural Resources Records Search – SCCIC.....	9
5.2 Cultural Resources Records Search – U.S. Forest Service.....	10
5.3 Native American Sacred Lands File Review.....	10
5.4 Archaeological Field Survey.....	11
5.4.1 Santa Anita Dam.....	11
5.4.2 Santa Anita Headworks.....	11
5.4.3 Santa Anita Debris Dam.....	12
5.5 Historical Resources Survey.....	12
6.0 CEQA Impact Analysis.....	14
6.1 Significance Criteria.....	14
6.2 Project Impact Analysis.....	14
7.0 Recommended Mitigation Measures.....	17
8.0 Certification.....	18

9.0 **References** **19**

TABLES

<u>Table</u>		<u>Page</u>
1	Cultural Resources Studies Within the APE	9
2	Cultural Resources On or Within One Mile of the APE	9

EXHIBITS

<u>Exhibit</u>		<u>Follows Page</u>
1	Project Location.....	7
2	Area of Potential Effects	7
3	Dam Ancillary Facilities Improvements	7

APPENDICES

A	Cultural Resources Records Search (SCCIC)
B	Native American Consultation (NAHC)
C	Forest Service Permit (LAR9048)
D	Historic Resources Assessment (Daly 2013)
E	Personnel Qualifications

NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION SHEET

**PHASE I CULTURAL RESOURCES ASSESSMENT:
SANTA ANITA STORMWATER FLOOD MANAGEMENT AND SEISMIC STRENGTHENING
PROJECT**

by

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June 2014

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USGS *Mt. Wilson* 7.5 Minute Quadrangle in Township 1 North; Range 11 West, Sections 10 and 15 (*S.B.B.M.*).

BonTerra Psomas

Project Number: CoLADPW J166

Key Words: Santa Anita Dam Complex, USGS Mt. Wilson,

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EXECUTIVE/MANAGEMENT SUMMARY

PURPOSE AND SCOPE

BonTerra Psomas prepared this Phase I Cultural Resources Assessment to assess the potential impacts to cultural resources that would result from the implementation of the Santa Anita Stormwater Flood Management and Seismic Strengthening Project (Project). This document has been prepared to satisfy the requirements of the California Environmental Quality Act (CEQA). The format of this report follows *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (Office of Historic Preservation 1990).

DATES OF INVESTIGATION

Patrick Maxon, RPA conducted cultural resources literature reviews on December 3, 2012, at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and at the United States Department of Agriculture Forest Service (USFS) offices in the City of Arcadia on January 9, 2013 (Appendix A). Native American consultation was initiated on December 20, 2012, with a letter to the Native American Heritage Commission (NAHC). The NAHC responded on December 21, 2012, and letters were sent to Native American tribes and individuals on January 2, 2013 (Appendix B). A cultural resources survey of the property was conducted by Patrick Maxon on January 9, 2013 (refer to USFS Permit #LAR9048 in Appendix C). BonTerra Architectural Historian Pamela Daly completed a historic assessment and evaluation of the historic resources in the study area (refer to Appendix D). Subsequently, in April of 2014, several Dam Ancillary Facilities Improvements were added to the project. Mr. David Smith of BonTerra Psomas surveyed those areas slated for the improvements. Mr. Maxon prepared and completed this technical report in February 2013 and Mr. Smith revised this report in May of 2014. Resumes of BonTerra Psomas staff are provided in Appendix E.

FINDINGS OF THE INVESTIGATION

No significant archaeological or paleontological resources are recorded and none were discovered within the Area of Potential Effects (APE) as a result of this study. The historic resources associated with the Santa Anita Dam APE were determined to be not significant.

INVESTIGATION CONSTRAINTS

Much of the APE has been disturbed and developed by construction of the dam and reservoir, access roads, the Santa Anita Headworks structure, channels, and Santa Anita Debris Dam. Both native and non-native vegetation remains on site.

RECOMMENDED MITIGATION MEASURES

Mitigation Measure 1

Should archaeological resources be found during ground-disturbing activities for the Project, an Archaeologist shall be hired to first determine whether it is a “unique archaeological resource” pursuant to Section 21083.2(g) of the *California Public Resources Code* (PRC) or a “historical resource” pursuant to Section 15064.5(a) of the State CEQA Guidelines. If the archaeological resource is determined to be a “unique archaeological resource” or a “historical resource”, the Archaeologist shall formulate a mitigation plan in consultation with the LACFCD that satisfies the requirements of the above-referenced sections. If the Archaeologist determines that the archaeological resource is not a “unique archaeological resource” or “historical resource”, s/he may record the site and submit the recordation form to the California Historic Resources

Information System at the South Central Coastal Information Center at California State University, Fullerton.

Implementation of MM 1 would ensure that impacts to archaeological resources are reduced to a less than significant level.

Mitigation Measure 2

If human remains are encountered during excavation activities, all work shall halt in the immediate vicinity of the discovery and the County Coroner shall be notified (*California Public Resources Code* §5097.98). The Coroner shall determine whether the remains are of forensic interest. If the Coroner, with the aid of the County-approved Archaeologist, determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code*. The MLD shall make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code* §7050.5). If the landowner rejects the MLD's recommendations, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code* §5097.98).

Implementation of MM 2 would ensure that impacts to human remains are reduced to a less than significant level.

DISPOSITION OF DATA

This report will be filed with the Los Angeles County Flood Control District (LACFCD); with BonTerra Psomas; with the USFS; and at the SCCIC. All field notes and other documentation related to the study are on file at BonTerra Psomas.

1.0 PROJECT DESCRIPTION

1.1 PROJECT COMPONENTS

The Project would modify existing flood management and water conservation facilities along the Santa Anita Canyon Watershed, including the Santa Anita Dam, Santa Anita Headworks, Wilderness Park Culvert Crossing, and the Santa Anita Debris Dam. The Project benefits and the contributing LACFCD facility improvements are as follows:

- Reduce flood risk to downstream communities by:
 - Modifying the Santa Anita Dam spillway to safely pass the Probable Maximum Flood
 - Remediating seismic safety issues at the Santa Anita Dam and Debris Dam
- Enhance sustainability of the local water supply and increase recharge to the groundwater basin by over 500 acre-feet per year by:
 - Restoring storage capacity at Santa Anita Debris Dam

- Rehabilitating the Santa Anita Headworks for more reliable diversion of stormwater runoff to the spreading grounds
- Modernizing facilities and implementing new monitoring and control systems

Improve all-weather access to the Arcadia Wilderness Park by constructing a new culvert crossing

1.1.1 **Dam**

The Dam would be structurally altered to accommodate a new spillway with sufficient capacity to pass the probable maximum flood (PMF) of 26,100 cfs in order to reduce the risk of Dam failure from uncontrolled overtopping during major storm events. The proposed improvements to the Dam would not result in changes to the existing maximum water surface elevation restrictions; therefore, the reservoir's capacity to retain water would not be altered by Project implementation.

The spillway modification would consist of cutting a "notch" in the Dam crest to allow the PMF to overtop in a controlled manner. The proposed notch would be centered on the crest of the Dam, similar to the existing emergency crest spillway, and would require concrete removal from the Dam. An existing spillway on the far western edge of the Dam would remain and be unaltered by the Project; however, the existing auxiliary orifice spillway beneath the proposed new spillway would be removed. A new pedestrian bridge would be constructed over the notch and the existing hoist system would be upgraded to have a higher load capacity and re-aligned to accommodate the new spillway. The upgrade work includes the relocation of the lower hoist tower along the Dam crest (and potentially cantilevered of the back side, if necessary). The proposed improvements would not change the height of the Dam; the crest of the Dam would remain at an elevation of 1,325 feet above msl and the parapet wall would remain at an elevation of 1,328 feet above msl.

To better manage stormwater runoff and to ensure reliability and efficiency of operations, six of the existing valves would be replaced (three control valves and three backup valves), along with new electrical and control systems. The Dam's structural concrete would be repaired to ensure that it meets acceptable standards consistent with the required seismic performance of the Dam.

The downstream canyon walls and the toe of the Dam would be re-armored with additional reinforced gunite or equivalent concrete erosion protection to dissipate the energy from the potential overtopping water as the flow cascades through the spillway notch and the orifice spillway or sluiceway. The flow would be directed onto the downstream armoring before flowing into the channel downstream of the Dam. The new re-armoring would reinforce the existing armoring that extends approximately 100 feet downstream from the toe of the Dam. The re-armoring would be held in position with tie-back anchors to be drilled and grouted into the bedrock. The tie-ins for the re-armoring may include superficial rock excavation, grading, and subsurface pressure grouting. The color of the material used for re-armoring would be the same as the existing concrete.

The Project would also include improvements to ancillary facilities of the Dam. The existing garage/storage shed would be demolished and replaced with a new three-bay garage (the third bay would house a new back-up generator). The existing Dam Operator's house would be removed and replaced with a helipad to provide aerial access to the Dam in the event of an emergency. It is anticipated that the helipad would only be used 1 or 2 times per year. The existing relief quarters and control house would remain to serve as an office. Although the Dam Operator would no longer reside at the Dam, he/she would still be on-site daily and available on-call after hours. The Project would include remote control capabilities that provide redundant control options from multiple off-site locations. The Dam also has a built-in safety mechanism to

automatically pass water through the Dam once the reservoir surface level reaches the California Department of Water Resources, Division of Safety of Dams (DSOD) restriction.

The existing potable water system that serves the Dam site would be replaced. The water system currently consists of a 60,000-gallon upper tank located off Chantry Flats Road that connects to two 5,000-gallon lower tanks located near the Dam access road via a pipeline that runs down the mountainside. The slope adjacent to the upper tank has erosion damage and would be repaired as part of the Project. To repair the slope, an approximate 216-square-foot eroded gully located near the tank's foundation would be grubbed and stabilized with engineered fill and geotextile fabric or with support piles. The exposed portions of the existing water pipeline would be removed while any underground portions would be capped and abandoned in place. The replacement pipeline would run along the same general alignment as the existing pipeline. The two lower tanks would be removed and would not require replacement.

The existing manual swing gate at Chantry Flats Road that provides secured entry to the Dam access road would be replaced with a new electric slide gate. In order to provide electricity to the gate and new lighting/intercom systems, a power line would be strung on up to 7 new power poles to be installed along the outer edge of the Dam's access road, or where possible, in conduit along the inner slope of the access road.

1.1.2 Headworks and Wilderness Park Culvert Crossing

Headworks

The Headworks structure would be replaced and the associated earthen levee would be partially reconstructed to better manage the diversion of flows to the downstream spreading grounds and the downstream Debris Dam. A rehabilitation of the Headworks is needed to protect facilities from stormwater damage and to direct stormwater runoff to the spreading grounds for groundwater recharge. Redevelopment of the Headworks would include reconstruction of the levee to ensure it can withstand flows produced by a 25-year storm event and replacement of the existing tainter gate (used to divert flows) with a new rubber diversion structure. The new rubber diversion structure would be a pneumatically operated, bottom hinged, spillway gate system.

The majority of the existing Headworks structure would be demolished and removed, including the tainter gate, supporting walls, catwalk, and keys. The new facility would increase the width of the structure by approximately 20 feet in order to house the 34-foot rubber diversion structure. Operation of the rubber diversion structure would result in the retention of waters behind the levee to allow for the diversion of flows through the intake gates and into the existing 30-inch RCP leading to the Santa Anita Spreading Grounds and/or Sierra Madre Spreading Grounds. The pool created by the new rubber diversion structure would remain the same as under existing conditions. Construction of the new diversion structure would require work in the creekbed extending approximately 25 feet downstream of the Headworks, including the placement of new riprap on the downstream side.

The rehabilitation of the Headworks would also include a new control system, including remote operation capabilities, to increase efficiency of water conservation operations. Currently, the response time required for County personnel to drive to the Headworks and manually operate the tainter gate, along with the limited flow rates that can be bypassed, results in the loss of a water conservation opportunity. A new control system integrated with the control system of the other Project components would optimize water conservation. A control house for the rubber diversion structure would be constructed on the other side of the channel next to the access road.

The earthen levee would be reinforced and raised approximately five feet higher to match the height of the Headworks structure by removing and under-excavating the existing levee and rebuilding the new levee using a combination of imported fill and suitable material from the existing levee. It would then be recompacted to the proposed height. The access road leading to the facility would be modified to match the height of the reinforced earthen levee. The existing riprap on the upstream side of the levee would be reinforced. A subsurface conduit would be installed along the length of the levee to connect the rubber diversion structure to the control house on the other side.

Wilderness Park Culvert Crossing

In addition to the improvements at the Headworks, armoring of the roadway and construction of a replacement culvert crossing to the Wilderness Park is needed to ensure that the structure can withstand flows produced by a larger storm event. The existing Culvert Crossing located approximately 450 feet downstream of the Headworks, including the concrete slab and corrugated metal culverts, would be removed and replaced with a new crossing structure.

The Culvert Crossing would be approximately 30 feet wide on the deck plate, allowing for two-way traffic. The new Culvert Crossing would be built on top of a new abutment and would be designed with a permanent guard rail and flexible pavement driving surface adequate for emergency vehicles. The new roadway elevation of the Culvert Crossing would be raised above the existing roadway elevation by approximately 4.5 feet to accommodate higher flows. Approximately 1,800 square feet of the roadways leading to and from the Culvert Crossing would be repaved and sloped to join the existing grade.

Approximately 30 feet of the channel upstream and downstream of the existing Culvert Crossing would be grubbed and graded to accommodate the new Culvert Crossing. It is anticipated that adequate vehicular and pedestrian access could be provided to the Arcadia Wilderness Park for the majority of the construction period for the Culvert Crossing, with only occasional closures required for periods of about a week or less at any given time during construction. Notification of any temporary closures would be posted at the entrance to the Wilderness Park. Those brief closures would avoid important events at the Wilderness Park, such as the overnight Boy Scout campouts every Friday and Saturday and youth day camps every weekday between mid-June to late-August. However, in order to provide a conservative analysis for impacts to Biological Resources, the assembly of a temporary bypass crossing located north of the existing Culvert Crossing, which could require removal of a sycamore tree, has been assumed and assessed, to account for the event that the temporary crossing is used.

Therefore, access to the Wilderness Park would be maintained throughout construction with minimal interruptions to access. Two existing sycamore trees located adjacent to the crossing on the eastern shore of the Wash, south of the Culvert Crossing, would need to be removed. One sycamore located on the eastern shore of the Wash, north of the Culvert Crossing, may need to be removed, depending on whether or not the temporary bypass crossing is installed. In order to provide a conservative analysis, this IS/MND assumes that all three upstream and downstream sycamore trees would be removed.

The LACFCD may transplant the root ball(s) of the sycamores to a suitable riparian location, and/or utilize the woody debris from the sycamore to enhance habitat value at another nearby location, if determined to be feasible and if approved by the County and other appropriate parties. In addition, new sycamore trees would be planted within a 100-foot radius of the original location of any removed existing trees.

New riprap would be installed upstream and downstream of the Culvert Crossing. The roadways leading to and from the Culvert Crossing would be armored, 36 feet on the upstream side and 84 feet on the downstream side, to withstand flows and sloped to join the existing grade. The existing water and sewer lines that run through the current Culvert Crossing would need to be relocated to the new height and alignment of the structure. The sewer force main is on the downstream surface of the Culvert Crossing and the water line is on the upstream surface of the Culvert Crossing. Additionally, the fire hydrant, vault, water valve and standpipe would be demolished and relocated approximately 15 feet to the north in the case that the temporary bypass crossing is utilized. All utility trenching and relocations would remain within the area anticipated for impacts by the Culvert Crossing construction activities, and there would be no changes in water/sewer quantities or demands as a result of the Project.

1.1.3 Debris Dam

Remediation of the seismic deficiencies at the Debris Dam would involve improvements to the existing structures, including the intake tower and embankment. As a result of the loss of water conservation capacity from the DSOD restrictions on the Dam, there is an increased need to capture as much stormwater runoff as possible in facilities below the Dam. As a result, the Debris Dam would also be enlarged by raising the existing spillway by four feet. Remediating the seismic deficiencies at the Debris Dam would result in the DSOD removing the operational restrictions on the facility, thereby restoring 119 acre-feet of water conservation capacity. Enlarging the Debris Dam would create an additional 40 acre-feet of additional storage capacity, for a total of 159 acre-feet. When captured stormwater is released from the Dam to the spreading grounds for groundwater recharge, the Debris Dam can then capture more runoff, which would allow for water storage capacity multiple times in a single season depending on the frequency, duration, and intensity of storm events.

The intake tower located in the Debris Dam is unable to resist seismic loading and would be strengthened or replaced. The improved intake tower would be connected to the existing 48-inch outlet pipe (being lined as part of this Project). The outlet pipe has an existing junction box, which is used to deliver water either into the spillway channel or into the spreading grounds. The upstream and downstream portions of the Debris Dam embankment and alluvial foundation material that are subject to potential liquefaction would be reinforced with structural buttressing. Currently, a cross-section of the Debris Dam resembles a triangle (e.g., sloped sides on the upstream and downstream sides of the dam) with a flat top (e.g., flattened to accommodate vehicular access). The top of the embankment ranges from an elevation of 796 feet above msl at its center to an elevation of 811 feet above msl at the western edge. The construction activities would involve the removal of the existing riprap exterior surface on portions of both the upstream (approximately 0.69 acre) and downstream (approximately 0.89 acre) slopes. Engineered fill materials beneath the riprap would be excavated and removed, and an engineered buttress would be constructed. Upon completion of construction activities, the sloped upstream and downstream surfaces of the Debris Dam would be reconfigured into a single stair-stepped terrace. The surface of the Debris Dam would be completed with a riprap similar to the existing condition.

As part of the improvements, six non-native deodar cedar trees located at the downstream toe of the embankment would be removed as mandated by the DSOD to ensure the structural integrity of the Debris Dam.

A new automated outlet gate and control system would be constructed to modernize operations and to ensure compatibility with other Project components. Upon completion of these improvements, the DSOD would issue a new certificate for the facility and remove the current operating restriction on the Debris Dam, which would increase the Debris Dam's available and allowable water conservation storage capacity from 0 acre-feet to 159 acre-feet.

1.2 EXHIBIT

Exhibit 1 depicts the Project Location and identifies the location of each project element. It is shown on a portion of the U.S. Geological Survey's (USGS) Mt. Wilson 7.5-minute quadrangle. Exhibit 2 depicts the project's Area of Potential Effects (APE) on an aerial photograph. In April of 2014, several Dam Ancillary Facilities Improvements were added to the project (Exhibit 3).

2.0 REGULATORY SETTING

This section contains a discussion of the applicable laws, ordinances, regulations, and standards that govern cultural resources and must be adhered to both prior to and during Project implementation. The report is intended to satisfy the requirements of the California Environmental Quality Act (CEQA) regulations (14 *California Code of Regulations* [CCR] §15064.5 and *California Public Resources Code* [PRC] §21083.2), as well as the requirements for a federal action under the National Environmental Policy Act (NEPA) and an analysis pursuant to Section 106 of the National Historic Preservation Act (16 *United States Code* [USC] 470f) and its implementing regulations listed in the *Code of Federal Regulations* (36 CFR, 800, Protection of Historic Properties).

2.1 FEDERAL

Cultural resources are considered during federal undertakings chiefly under Section 106 of National Historic Preservation Act (NHPA) of 1966 (as amended) through one of its implementing regulations (36 CFR 800, Protection of Historic Properties) and NEPA. Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other federal laws include the Archaeological Data Preservation Act of 1974; the American Indian Religious Freedom Act of 1978; the Archaeological Resources Protection Act of 1979; and the Native American Graves Protection and Repatriation Act of 1989, among others.

Section 106 of NHPA (16 USC 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed, and mitigation measures are proposed to reduce the impacts to an acceptable level. Significant cultural resources are those resources that are listed or are eligible for listing in the NRHP per the criteria listed at 36 CFR 60.4 below:

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:

- (a) Are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) Are associated with the lives of persons significant in our past; or
- (c) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) Have yielded, or may be likely to yield, information important in prehistory or history.

2.2 CEQA

CEQA requires a lead agency to determine whether a project would have a significant effect on one or more historical resources. Section 15064.5(a) of the State CEQA Guidelines defines a “historical resource” as a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (PRC §21084.1); a resource included in a local register

of historical resources (14 *California Code of Regulations* [CCR], Section 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (14 CCR 15064.5[a][3]).

Section 5024.1 of the PRC, Section 15064.5 of the State CEQA Guidelines (14 CCR), and Sections 21083.2 and 21084.1 of the CEQA Statutes were used as the basic guidelines for the cultural resources study. PRC 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purposes of the CRHR are to maintain listings of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR, which were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP (per the criteria listed at 36 CFR 60.4) are stated below.

The quality of significance in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California is present in any object, building, structure, site, area, place, record, or manuscript that possesses integrity of location, design, setting, materials, workmanship, feeling and association and that:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
- (2) Is associated with the lives of persons important in our past; or
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

According to Section 15064.5(a)(3)(A–D) of the State CEQA Guidelines (14 CCR), a resource is considered historically significant if it meets the criteria for listing in the NRHP (per the criteria listed at 36 CFR 60.4). Impacts that affect those characteristics of the resource that qualify it for the NRHP or that would adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered to have a significant effect on the environment. Impacts to cultural resources from the proposed Project are thus considered significant if the Project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature in the setting of the resource that contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of a cultural resources investigation is to evaluate whether any cultural resources remain exposed on the surface of the APE or whether any cultural resources can reasonably be expected to exist in the subsurface. If resources are discovered, management recommendations would be required for evaluation of the resources for NRHP or CRHR eligibility.

Broad mitigation guidelines for treating historical resources are codified in Section 15126.4(b) of the State CEQA Guidelines. To the extent feasible, public agencies should seek to avoid significant effects to historical resources, with preservation in place being the preferred alternative. If not feasible, a data recovery plan shall be prepared to guide subsequent excavation. Mitigation for historical resources such as buildings, bridges, and other structures that are consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Weeks and Grimmer 1995) will generally be considered mitigated below a level of significance.

2.3 SENATE BILL 18

Senate Bill (SB) 18 (*California Government Code* §65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. A general plan or specific plan amendment or adoption is not required for this Project; therefore, formal consultation under SB 18 is not necessary; however, informal scoping was undertaken with local tribes through notification via informational letter.

2.4 HUMAN REMAINS

Section 7050.5 of the *California Health and Safety Code* provides for the disposition of accidentally discovered human remains. Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

Section 5097.98 of the PRC states that, if remains are determined by the Coroner to be of Native American origin, the Coroner must notify the NAHC within 24 hours which, in turn, must identify the person or persons it believes to be the most likely descended from the deceased Native American. The descendents shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

3.0 SETTING

3.1 NATURAL

The area surrounding the Santa Anita Dam APE is undeveloped and includes several vegetation types including mixed coastal sage scrub, disturbed mixed coastal sage scrub, southern mixed chaparral, southern mixed chaparral/mixed coastal sage scrub, disturbed southern mixed chaparral/mixed coastal sage scrub, southern mixed chaparral/rock outcroppings, southern cottonwood willow riparian forest, sycamore alluvial woodland/southern riparian forest, southern sycamore alder riparian woodland, mule fat scrub, coast live oak woodland, mixed woodland, coast live oak woodland/southern mixed chaparral, and ornamental, ornamental/coast live oak woodland. The APE is also host to ruderal species, disturbed areas, developed areas, open water, and rock outcroppings.

Steep vertical walls border the majority of the reservoir, which is surrounded by mountains. The topography steeply slopes down into the canyon; elevations range from approximately 800 to 1,320 feet above mean sea level (msl).

3.2 CULTURAL

3.2.1 Prehistoric

The prehistory of coastal Southern California has been described by a number of authors who generally agree on at least four major prehistoric periods (Wallace 1955; Warren 1968; Koerper and Drover 1983). These four sequential periods of time, sometimes called Horizons and sometimes Traditions, are each characterized by time-sensitive artifacts. The periods then are not arbitrary, but likely reflect material/cultural changes at those times.

The earliest occupations of the Southern California coastal area are debated to begin as early as 50,000 years before present, or “B.P.” (Bada et al. 1974).¹ The earliest radiocarbon dates, however, were derived from Los Angeles Man and Laguna Woman at 23,600 and 17,150 B.P. respectively (Berger et al. 1971). Unfortunately, little is known of the material culture of finds of this antiquity and subsequent analysis has undermined the antiquity of the discoveries (Erlandson et al. 2007). The earliest archaeological culture known in any detail is that of San Dieguito, named after the drainage of the same name near Del Mar, California where implements dating to 8,000 B.P. were found. Although the subsistence strategy of this tradition is unknown, Warren (1968:2) has inferred a hunting economy (cf. Koerper and Drover 1983; Drover et al. 1983). Typical artifacts would include percussion flaked implements, elongated knives, domed scrapers, teshoa flakes, crescentics, and an absence of millingstone tools. The San Dieguito culture is defined primarily from its single type site, the Harris Site of San Diego County, CA—SDi-149 (Warren 1966).

After San Dieguito, the next prehistoric period for coastal Southern California is termed “Millingstone” and “Encinitas” by Wallace (1955) and Warren (1968), respectively. The Millingstone Horizon or Encinitas Tradition are very similar as described by each author and have a time span beginning about 7,000 to 8,000 B.P. and ending between 3,000 to 4,000 B.P. The onset of Holocene climatic conditions may have brought about the cultural changes associated with this period. Processing tools like manos and metates (millingstone) reflect an increased dependence on plant foods. Projectiles are rare, but, when found, suggest the use of the atlatl or

¹ “Before Present” assumes that 1950 is “present”.

throwing stick. The material culture characteristic of this period is longer-lived the further one travels south of Santa Barbara.

The third period following Encinitas, or Millingstone, is known as the “Intermediate Horizon” and “Campbell Tradition” by Wallace (1955) and Warren (1968), respectively. This period is strongly represented north of the Los Angeles area and is only suggested in the San Diego area. Numerous, smaller projectile points suggesting increased hunting and the introduction of the use of the bow and arrow characterize this period. It is during the Intermediate Horizon, or Campbell Tradition that true maritime exploitation and occupation of the Channel Islands flourishes (Meighan 1959). The duration of this period is roughly 3,000 to 1,000 B.P. In general, the emphasis seems to shift from the hard seed orientation of the Milling Stone Tradition to the growing practice of balanophagy (acorn consumption) and processing of other soft, pulpy seeds. While mortars and pestles become more common in comparison to manos and metates, the latter survive into European contact times attesting to the use of hard seeds in the diet.

In the southern end of Los Angeles County, several traits make an appearance rather late in the Tradition; these include pottery and ground painting, which give rise to speculation that significant culture contact from the southeast was occurring (Meighan 1954). This complex is thought to owe its basic cultural orientations to the Southwestern United States.

A general picture emerges through time of growing population pressure resulting in intensified land use patterns. Increases in population or siltation of coastal estuaries are examples of intensifying the local carrying capacity (e.g., Newport Bay during the Milling Stone Tradition). Occasionally, siltation may actually progress to the point of making an estuary less productive as in the case of northern Orange County (Newport Back Bay) resulting in local populations adapting to other environments such as acorn processing.

3.2.2 Ethnographic

Gabrielino

While of limited use to much of prehistory, data acquired in contact times is somewhat useful as an analogy to the Late Prehistoric Period. At the time of contact in 1769, the Gabrielino Native Americans occupied the area around the APE. The Spanish named the Gabrielino after the Mission San Gabriel Archangel. The Gabrielino spoke Takic (Shoshonean) languages.

Settlement

According to Bean and Smith (1978:538), the Gabrielino is, in many ways, one of the least known groups of California’s native inhabitants. In addition to much of the Los Angeles Basin, they occupied the offshore islands of Santa Catalina, San Nicolas, and San Clemente. Gabrielino populations are difficult to reconstruct. However, at any one time, as many as 50 to 100 villages were simultaneously occupied. Like the prehistoric culture before them, the Gabrielino were a hunter/gatherer group who lived in small sedentary or semi-sedentary groups of 50 to 100 persons, termed rancherías. These rancherías were occupied by at least some of the people all of the time. Location of the encampment was determined by water availability. Houses were circular in form and constructed of sticks covered with thatch or mats. Each village had a sweat lodge as well as a sacred enclosure (Bean and Smith 1978). Although the earliest description of the Gabrielino dates back to the Cabrillo expedition of 1542, the most important and extensive accounts were those written by Father Geronimo Boscana about 1822 and Hugo Reid in 1852.

Subsistence

Gabrielino subsistence relied heavily on plant foods, but was supplemented with a variety of meat, especially from marine resources. Food procurement consisted of hunting and fishing by men and gathering of plant foods and shellfish by women. Hunting technology included use of bow and arrow for deer and smaller game, throwing sticks, snares, traps, and slings. Fishing was conducted with the use of shell fishhooks, bone harpoons, and nets. Seeds were gathered with beaters and baskets. Seeds and other foods were stored in baskets. Seeds were prepared with manos and metates and/or mortars and pestles. Food was cooked in baskets coated with asphaltum, in stone pots, on steatite frying pans, and by roasting in earthen ovens (Bean and Smith 1978).

Trade

Most trade between settlements was through reciprocity (barter), indicated by strings of Olivella shell beads used as a medium of exchange throughout Southern California (Ruby 1970). Gabrielino and Juaneño from the mainland probably traded trade beads, game, and plant foods in exchange for shell beads and steatite, and plant foods from the islanders. Steatite artifacts along with fish, shell money, and animal pelts were traded by the mainlander Gabrielino into the interior for seeds and deer skin. According to Bean and Saubel (1972), the Gabrielino traded with the Serrano and the Cahuilla to the east. The Gabrielino traded goods such as shell beads, dried fish, sea otter pelts, asphaltum, and steatite for goods such as salt, obsidian, deer hides, furs, and acorns. There is evidence of trade between the Arizona Hohokam and the Gabrielino, probably with the Mojave people as middleman (Mason et al. 1997). *Glycymeris* shell bracelets, ceramics, and blankets may have been exchanged for Pacific shells and shell beads (Mason et al. 1997).

Religion

Aside from shamanistic curing rituals, principal religious activity is related to the Chinigchinich cult that emphasized correct behavior as promulgated by a mythical figure, Chinigchinich. The Chinigchinich religion developed in Gabrielino territory and spread southeast to the Juaneño/Luiseño, Cupeño, and Ipai. It is a cult that is tied into an older creation myth. Chinigchinich is said to give laws and punishment for those who are disobedient in which shamans were given responsibilities to oversee the cult. It was an extensive system of polar opposites (duality) that are united under higher principals (unity) (Applegate 1979). Male-Female dualism found in the creation myth is also present in the origin myth (Applegate 1979). Chinigchinich cult ceremonies included boys' puberty ceremonies using *toloache*, a drug made from Jimson Weed (*Datura stramonium*). During the vision quest, a personal protector or totemic animal was acquired. Such totems could be bear, coyote, crow, or rattlesnake. Other ceremonies were to obtain vengeance on enemies, to express thanks for victory, and to commemorate the dead. The focus of the ceremonies was a circular sacred enclosure found in each village. The emphasis on male rites of passage and war may be a response to the increasing population and resultant competition for territory and access to resources; or it may be a response to the arrival of the Spanish since the Chinigchinich religion seems to be of recent (not prehistoric) origin.

Both inhumation (burial in a grave) and cremation was practiced. During cremations, the goods of the deceased and his hut were often buried with him. Annual mourning ceremonies were held in the late summer for all who had died during the previous year. Clothes of the deceased and an image of the deceased were often burned at this time. Eagles were sacrificed for recently deceased chiefs (Applegate 1979).

The Gabrielino community of *Aluupkenga* was located on the Rancho Santa Anita, a 13,319-acre land grant controlled by Hugo Reid—a Scotsman with Mexican citizenship—that included the present day cities of Arcadia and Monrovia among others (McCawley 1996:44).

3.2.3 Local History

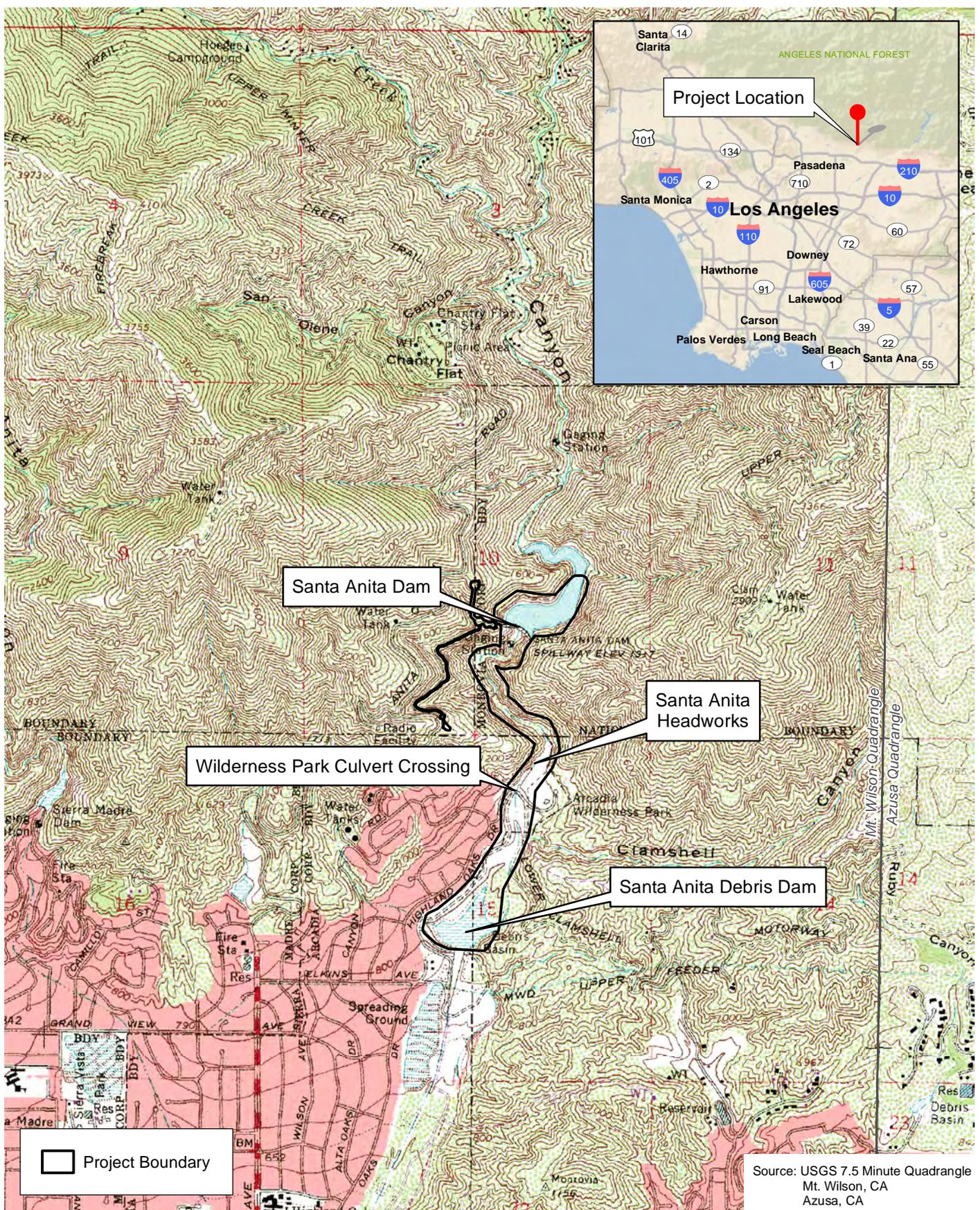
Arcadia saw its first notable settler in Hugo Reid who was deeded the land by the Spanish government, making him the first individual land owner of the area and the first to make a modern impact on the land by stocking cattle and building the first structure.

A succession of owners followed and the one who made a lasting impression on the area was Elias J. "Lucky" Baldwin who in 1875 bought a large area of land including what is known as Arcadia for \$200,000 (\$25 an acre). When Lucky Baldwin first saw the land of Arcadia with its beautiful foothill landscape, lush greenery and oak trees, fertile growing land, and acres full of potential, Lucky Baldwin was amazed and declared "By Gads! This is paradise". Upon buying the land, Baldwin chose to make the area his home and immediately started erecting buildings and cultivating the land for farming, orchards and ranches. It did not take long before he turned his sights to cityhood for the blossoming area he named Arcadia.

With a population of 500 and a booming economy that was somewhat based on entertainment, sporting, hospitality, and gambling opportunities, Arcadia became a city in 1903. Since then, Arcadia has grown and matured into a city in which Lucky Baldwin would have been proud – one of distinction, heritage, success and beauty (City of Arcadia 2013).

To protect the most populated communities located down slope of the San Gabriel Mountains, a \$35 million bond measure was passed in May 1924, to have the LACFCD construct dams in Pacoima, Santa Anita Canyon, and a storm channel from the Los Flores Canyon in Altadena. The Big Santa Anita dam was to be 225-feet-high with a reservoir capacity of 1,500 acre feet. The Dam was completed in 1927 (Daly 2013).

Please refer to the Historic Resources Assessment report (Daly 2013) in Appendix D for a more detailed historic setting.



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Project Location

Santa Anita Stormwater Flood Management and Seismic Strengthening Project

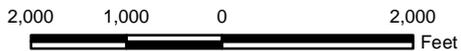
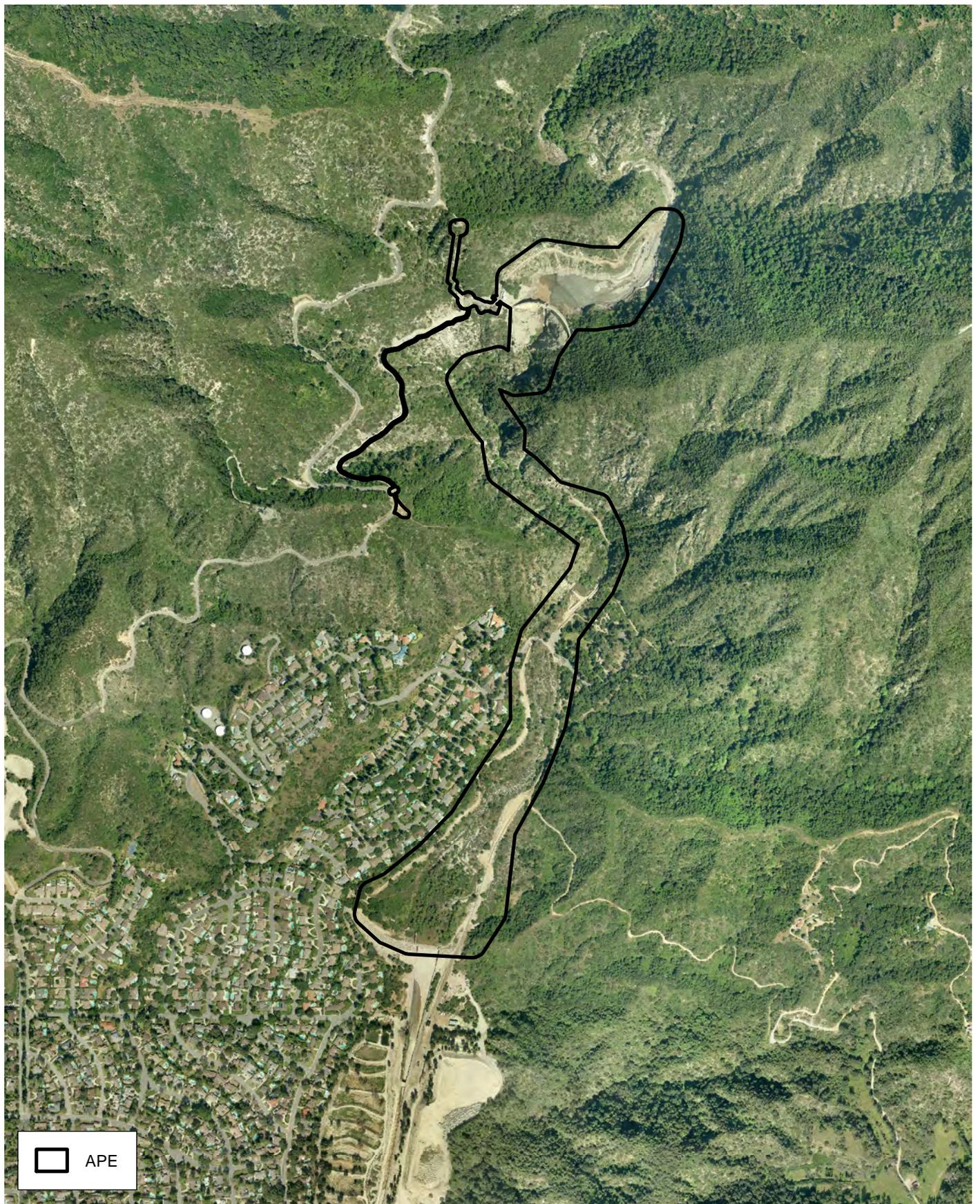


Exhibit 1

Bonterra
PSOMAS

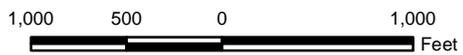
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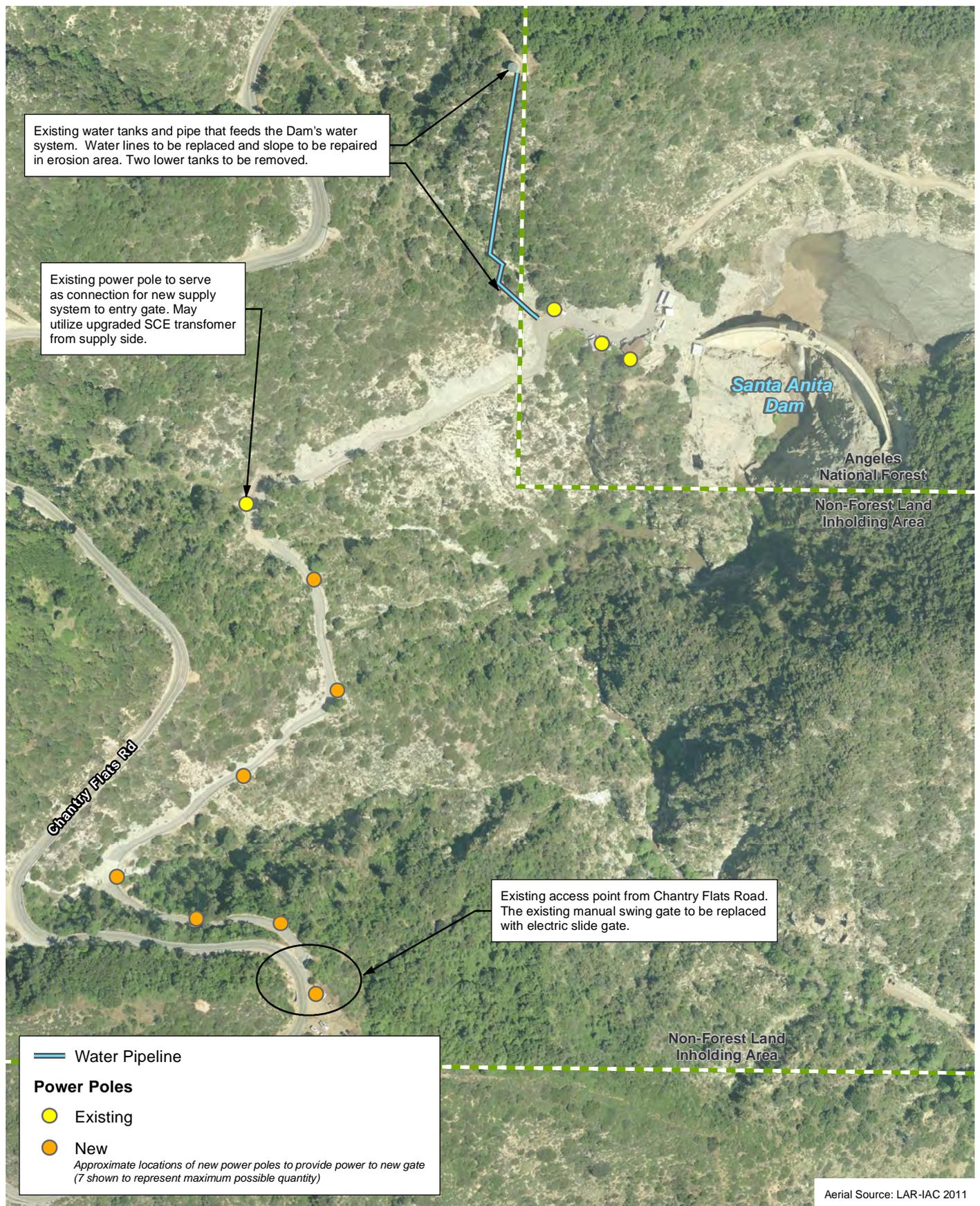
Area of Potential Effects

Exhibit 2

Santa Anita Stormwater Flood Management and Seismic Strengthening Project



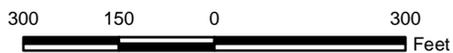
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Dam Ancillary Facilities Improvements

Exhibit 3

Santa Anita Stormwater Flood Management and Seismic Strengthening Project



4.0 METHODS

4.1 CULTURAL RESOURCES RECORDS SEARCH

A literature review of documents on file at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed by Patrick Maxon on December 3, 2012, and he completed a second records search at the USFS offices in Arcadia on January 9, 2013, with assistance from USFS Archaeologist Darrell Vance (Appendix A). The SCCIC review consisted of an examination of the USGS' Mt. Wilson, California 7.5-minute quadrangle to evaluate the APE for any sites recorded or cultural resources studies conducted on the parcel and within a one-mile radius. The SCCIC is the designated branch of the California Historical Resources Information System and houses records concerning archaeological and historic resources in Los Angeles, Orange, and Ventura Counties. The records search provided data on known archaeological and built environment resources as well as previous studies within one mile of the APE. Data sources consulted at the SCCIC included archaeological records; Archaeological Determinations of Eligibility; historic maps; and the Historic Property Data File (HPDF) maintained by the California Office of Historic Preservation (OHP). The HPDF contains listings for the CRHR and/or NRHP, California Historical Landmarks, and California Points of Historical Interest.

4.2 NATIVE AMERICAN SCOPING

An inquiry was made of the NAHC, located in Sacramento on December 20, 2012, to request a review of the Sacred Lands File database regarding the possibility of Native American cultural resources and/or sacred places in the Project vicinity that are not documented on other databases. The NAHC responded on December 21, 2012, and also provided a list of Native American groups and individuals who may have knowledge regarding Native American cultural resources not formally listed on any database. Each of these groups and individuals were mailed an informational letter January 2, 2013, describing the Project and requesting any information regarding resources that may exist on or near the APE. Information regarding the results of the Native American coordination/consultation is provided in Appendix B.

4.3 CULTURAL RESOURCES FIELD SURVEY

An archaeological survey of the APE was conducted by BonTerra Archaeologist and Director of Cultural Resources, Patrick Maxon, RPA on January 9, 2013. The survey focused on those portions of the APE where the subsurface might be impacted by the Project: the Dam, the Headworks, and the Debris Dam. Although these areas have undergone much historic modification, the Headworks and Debris Dam were surveyed closely for archaeological materials. The remainder of the APE was examined as necessary via windshield survey. A historic resources survey was undertaken on January 9, 2013 by architectural historian Pam Daly of Daly and Associates. Additionally, Mr. David Smith of BonTerra Psomas surveyed several Dam ancillary facilities on May 20, 2014.

5.0 RESULTS

5.1 CULTURAL RESOURCES RECORDS SEARCH – SCCIC

Twenty-two archaeological studies have been conducted within a one-mile radius of the Project's APE. Four of the studies included at least a portion of the APE. Twelve previously recorded resources are located within one mile of the APE. One recorded resource is located within the APE.

Table 1 identifies the four previous cultural resources studies that include at least a portion of the APE.

**TABLE 1
CULTURAL RESOURCES STUDIES WITHIN THE APE**

Report Number	Author(s) (Year)	Type of Study/Comments
LA3308	Bissell (1993)	Cultural Resources Reconnaissance of the Madison/Cloverleaf Specific Plan Area, Monrovia, Los Angeles County, California
LA3372	Triem (1993)	Historic Resources Evaluation and Management Plan, United State Forest Service, Angeles National Forest
LA6859	LSA Associates (1996)	Arcadia General Plan
LA10598	Strauss et al. (2007)	Cultural Resources Assessment for the Proposed Santa Anita Riser Modification and Reservoir Sediment Removal Project, Los Angeles County, California

Table 2 describes the twelve known cultural resources within one mile of the APE. One cultural resource noted in Table 2 is within the APE of the proposed Project: P-19-188707, the Santa Anita Dam.

**TABLE 2
CULTURAL RESOURCES ON OR WITHIN ONE MILE OF THE APE**

Site Number	Recorder/(Year)	Comment	Resource Within APE
CA-LAN-1951H	McIntyre (1991)	Zion Trail	No
CA-LAN-2102H	Becker et al. (1993)	Lux Cabin	No
CA-LAN-2103H	Becker and Gregory (1993)	Two Chimneys	No
CA-LAN-2014H	Becker and Stevens (1993)	Survey Monument 2	No
CA-LAN-2106H	Bissell (1993)	Survey Monument 1	No
CA-LAN-2109H	Becker and Gregory (1993)	Concrete Channel	No
P-19-150017	Gregory (1993)	Shinoda Property - 610-620 Cloverleaf Drive	No
P-19-150018	Gregory (1993)	Quest's End - 1250 Cloverleaf Drive	No
P-19-150019	Gregory (1993)	Clover Crest, Lux Arboretum Annex	No
P-19-150025/26	Stone (1992)	Sierra Madre Ranger Station	No
P-19-187819	Huckabee(2006)	Chantry Road, 2N41	No
P-19-188707	EDAW (2007)	Santa Anita Dam Complex	Yes

P-19-188707

This site is the Santa Anita Dam Complex. It consists of the Santa Anita Dam, shelter house, hoist house, relief quarters, storage shed, sluice gate control house, dam keeper's house and garage, and paint shed. The Dam was completed in 1927 while the remaining resources were built after 1936. The complex was recorded by EDAW, Inc. (2007) as a part of the Santa Anita Riser Modification Project and subsequently evaluated for significance by EDAW's Christy Dolan. It was determined to be not significant under all California Register of Historical Resources and National Register of Historic Places significance criteria (Dolan 2007).

5.2 CULTURAL RESOURCES RECORDS SEARCH – U.S. FOREST SERVICE

A second records search was undertaken at the USFS office in Arcadia. Mr. Maxon and Architectural Historian Pam Daly of Daly and Associates met Forest Service Archaeologist Darrell Vance at the USFS's Arcadia headquarters on January 9, 2013. Mr. Vance pointed out the location of reports and site records which BonTerra accessed independently. The reports and records documented work done outside of the proposed Project's APE. No sites or studies are recorded within the APE. It was determined that the EDAW assessment completed for the Santa Anita Riser Modification Project (Strauss et al. 2007) and the accompanying site record for the Dam (Dolan 2007) were missing from USFS archives. The 2007 EDAW report and site record was provided to Mr. Vance.

5.3 NATIVE AMERICAN SACRED LANDS FILE REVIEW

The NAHC Search of the Sacred Lands File on December 21, 2012, did not identify the presence of Native American cultural resources on the APE. The NAHC provided a list of Native American groups and individuals that may have knowledge of the religious and/or cultural significance of resources that may be in and near the APE. The NAHC listed the following groups and individuals:

- Ron Andrade, Director, LA City/County Native American Indian Commission;
- Cindi Alvitre, Chairwoman-Manisar, Ti'At Society/Inter-Tribal Council of Pimu;
- John Tommy Rosas, Tribal Administrator, Tongva Ancestral Territorial Tribal Nation;
- Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians;
- Sam Dunlap, Cultural Resources Director, Gabrielino Tongva Nation;
- Robert Dorame, Tribal Chair/Cultural Resources, Gabrielino Tongva Indians of California Tribal Council;
- Bernie Acuña, Chairperson, Gabrielino-Tongva Tribe;
- Linda Candelaria, Chairwoman, Gabrielino-Tongva Tribe;
- Andrew Salas, Chairperson, Gabrielino Band of Mission Indians; and
- Conrad Acuña, Gabrielino-Tongva Tribe.

Each of these Native American groups and individuals were mailed an informational letter on January 2, 2013, describing the Project and requesting any information regarding resources that may exist on or near the APE. Two responses have been received to date from the Native American groups and individuals contacted.

On January 22, 2013, Robert Dorame, Tribal Chair/Cultural Resources, Gabrielino Tongva Indians of California Tribal Council responded by telephone, stating that this area was his family's territory and it is sensitive for the presence of archaeological resources. In the event of a discovery of resources during grading, Mr. Dorame would like to be informed. On January 25, 2013, Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians responded by telephone. His call was returned by Mr. Maxon on February 12, 2013. Mr. Morales stated that the presence of water always increases the chances of presence of Native American cultural material and/or human remains, and that all due diligence should be completed to determine the impacts of the Project on those resources. All Native American correspondence can be viewed in Appendix C.

5.4 ARCHAEOLOGICAL FIELD SURVEY

On January 9, 2013, BonTerra's Patrick Maxon and Pamela Daly conducted a pedestrian survey of the APE. For the purposes of archaeological resources, the survey area can be described as three distinct areas: the Santa Anita Dam; the Santa Anita Headworks and culvert crossing; and the Santa Anita Debris Dam, with additional built environment elements interspersed among these areas. Additionally, Mr. David Smith of BonTerra Psomas surveyed several Dam ancillary facilities on May 20, 2014.

5.4.1 Santa Anita Dam

This area was not directly accessed, but a large part of it (mainly on the southwest side of the Dam) could be clearly seen from various vantage points just west of APE. The improvements to the Dam facilities would be limited to existing engineered structures and are not expected to disturb any native sediments. The photograph below, taken from the southwest and looking northeast, depicts the Dam.



5.4.2 Santa Anita Headworks

The Headworks area was examined for exposed archaeological resources. None were noted, but minimal impacts to previously undisturbed subsurface around the Headworks are anticipated. The excavations related to upgrading the Headworks would involve disturbance of sediments surrounding the existing Headworks facility and minimal, if any, undisturbed native sediments will be impacted. The replacement of the culvert crossing and disturbance to portions of the upstream channel is within the existing drainage and there is minimal chance that cultural material is present

there. Therefore, there is little opportunity for disturbing archaeological resources even if they are present in the area. The photograph below depicts the Headworks.



5.4.3 Santa Anita Debris Dam

The Debris Dam area was examined on foot and in the car. The entire Debris Dam area has been greatly modified by modern human activity and yet much of the current surface within the APE is undisturbed. Project plans are to remove the existing spillway and replace it with a new one immediately to the east. This would necessitate excavations into the ridge and slope to the east to prepare it for construction of the new spillway. These planned excavations will impact the bedrock that make up this ridge. However, the bedrock unit that will be impacted is composed of Granodioritic rock which does not contain fossil resources since it was once molten rock and any fossils near the rock would be destroyed. The photograph below depicts a portion of the Debris Dam, Spillway, and existing ridge, from right to left in the foreground.



5.5 HISTORICAL RESOURCES SURVEY

On January 9, 2013, BonTerra's Pamela Daly conducted a pedestrian survey of the APE to identify and assess the significance of portions of the Santa Anita flood control facilities. Ms. Daly identified and evaluated several historic resources on the site that are a part of the flood control facilities. They include:

- **Santa Anita Dam.** The complex includes the Dam; the dam keeper's house and garage; a paint and explosives shed; a sluice gate control house; and a shelter house. The complex was previously evaluated and determined not eligible for listing on the CRHR or NRHP (Strauss et al., 2007; Dolan 2007);
- **Sediment Transport Tunnel.** This tunnel was constructed to dispose of sediment that had accumulated in the Santa Anita Reservoir;
- **Headworks.** This structure intercepts the flow released from the Dam and redirects portions of it to the Spreading Grounds or allows it to continue to the Debris Dam;
- **Culvert Crossing.** The channel crossing, located approximately 450 feet southwest of the Headworks and adjacent to Arcadia Wilderness Park, consists of a concrete-slab road bed 29-feet-wide set on concrete walls. Four large steel culvert pipes have been set in concrete under the road bed to allow the flow of water and protect the culvert crossing;
- **Debris Dam and Spillway.** This area consists of an embankment constructed of compacted earth; an excavated area within the basin to catch debris; an outlet conduit to permit normal flow of water to pass through and drain the basin after a storm; and a concrete spillway to permit water to flow out of the basin when it is filled during a storm; and,

All the elements described above were evaluated for significance and all were determined not eligible for listing in the NRHP or CRHR. Refer to Daly (2013) in Appendix D and to the Project impact analysis in Section 6.0.

6.0 CEQA IMPACT ANALYSIS

This impact analysis is provided to assist in the preparation of an environmental document for the proposed Project and provides discussion regarding each significance criterion for cultural resources.

6.1 SIGNIFICANCE CRITERIA

Appendix G of the State CEQA Guidelines contains the Environmental Checklist form, which includes questions relating to cultural resources. The issues presented in the Environmental Checklist have been used as significance criteria. Accordingly, a project may result in a significant environmental impact if:

- *The project would cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.*
- *The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.*
- *The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*
- *The project would disturb any human remains, including those interred outside of formal cemeteries.*

6.2 PROJECT IMPACT ANALYSIS

Would the project cause a substantial adverse change in the significance of a historical resource?

The Santa Anita Dam (Dam) was constructed from 1924 to 1927 by the LACFCD. The Dam was previously evaluated and found not eligible for the NRHP (Dolan 2007). It was in the 1950s that the Headworks and Culvert Crossing; and Debris Dam and spillway, were constructed to control and capture the flow of water from the Dam to protect life and property as populations rose. The Sediment Transport Tunnel was constructed only to provide access to the basin of the Dam reservoir so that accumulated silt could be removed and deposited elsewhere. Surveyors were able to use the most modern technology available in the form of laser beams to direct the mining operations associated with constructing a 9-foot-wide tunnel through the mountain.

Under National Register and/or California Register criteria relating to the association of the built-environment structures located within the APE with significant historical events that exemplify broad patterns of our history, the Santa Anita Dam, Headworks and Culvert Crossing, Debris Dam and spillway, and Sediment Transport Tunnel, and Dam Ancillary Facilities Improvements do not appear to qualify as significant historic resources individually or collectively. Throughout the world, debris basins and dams (masonry, earthen or timber) have been constructed by both private and public entities to control seasonal rainfall, and to protect people and property. The structures located within the APE are just one of many flood control systems that were constructed in the canyons of San Gabriel Mountain. There is no evidence that any of the structures in the APE are eligible for listing under Criteria A/1.

Under National Register and/or California Register criteria related to the Project structure's association with persons of historic importance, the Santa Anita Dam, Headworks, Culvert Crossing, Debris Dam and spillway, and Sediment Transport Tunnel, and Dam Ancillary Facilities Improvements do not appear to qualify, individually or collectively, as significant resources. The

design plans for the structures located in the Santa Anita Wash were prepared by LACFCD staff engineers or the USACE as part of their normal tasks and duties. There is no evidence that any of the structures in the APE are eligible for listing under Criteria B/2.

Under National Register and/or California Register criteria relating to the distinctive characteristics of a type, period, region, or method of construction, the built-environment structures located in the APE are not significant as they do not, individually or collectively, embody any innovative engineering design or method of construction, or high artistic design. The Headworks was designed using common technology to channel water from the Dam towards the Debris Dam or into the pipe leading to the Sierra Madre Spreading Grounds. The Debris Dam was constructed by excavating a water containment area in the Santa Anita Wash, and a spillway was erected to hold heavier debris back during high rainfall events. The technology used to create the basin and associated spreading grounds were commonplace, as was the use of concrete to hold, channel, divert, and control the water as it came down from the foothills. The Santa Anita Dam, Headworks, Culvert Crossing, Debris Dam and spillway, and Sediment Transport Tunnel, and Dam Ancillary Facilities Improvements do not appear to present any technological achievement in the history of water systems locally, regionally or nationally, and are therefore not eligible for listing either individually or collectively under Criteria C/3.

Based upon a survey of the above-ground historic period resources in the APE, the resources have not yielded, nor do they appear to have the potential to yield, information important to the history of the local area, California or the nation pursuant to National Register and/or California Register criteria D/4.

In summation, the Santa Anita Dam, Headworks; Culvert Crossing; Debris Dam and spillway; and Sediment Transport Tunnel, and Dam Ancillary Facilities Improvements are not eligible for listing in the National Register and/or the California Register, because they do not, individually or collectively, meet any of the criteria necessary for listing in the registries. No further consideration must be given to these resources during completion of the proposed Project.

Would the project cause a substantial adverse change in the significance of an archaeological resource?

The proposed improvements to the Dam facilities would be limited to existing engineered structures and gunite surfaces and are not expected to disturb any native sediments. However, construction activities at the Headworks and the Wilderness Park Culvert Crossing will require excavations within the native soils of the creekbed. Construction at the Debris Dam will require disturbance of accumulated sediment and possibly native soils within the water retention area to install the new/replacement intake tower and the Debris Dam embankment.

Given that the proposed construction activities have the potential to disturb native soils, it is possible that archaeological materials would be uncovered during construction activities at the Headworks/Wilderness Park Culvert Crossing and Debris Dam facilities. Although the likelihood of encountering archaeological resources in the APE is considered low, this impact is potentially significant. MM 1 describes procedures for monitoring and protocols to be followed in the event that archaeological resources are discovered during construction activities. Implementation of this MM 1 would reduce this potentially significant impact to a less than significant level.

Would the project disturb or encounter any significant paleontological remains?

The proposed improvements to the Dam facilities would be limited to existing engineered structures and gunite surfaces and would not require deep excavations that may disturb underlying fossil remains. Construction activities at the Dam would have no impact on

paleontological resources or unique geologic features. At the Headworks and the Wilderness Park Culvert Crossing, the proposed improvements would involve localized excavations, shallow grading, and fill materials to construct the new facilities, but would not excavate into paleontologically sensitive rock units. Because the Project would not excavate into paleontologically sensitive rock units, the Project would have a less than significant impact on paleontological resources and no mitigation is required.

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

There is no indication that human remains are present within the Project area. The records search and field survey indicates no evidence of human remains on or near the Dam, Headworks/Wilderness Park Culvert Crossing, or Debris Dam. Recently deposited sediment, debris, and vegetation that flowed with storm waters into the Debris Dam are not expected to contain any human remains, including those interred outside formal cemeteries.

In the unlikely event of an unanticipated encounter with human remains in Project site, the *California Health and Safety Code* and the *California Public Resources Code* require that any activity in the area of a potential find be halted and the Los Angeles County Coroner be notified, as described in MM 2. Compliance with MM 2 would ensure that impacts would be less than significant.

7.0 RECOMMENDED MITIGATION MEASURES

MITIGATION MEASURE 1

Should archaeological resources be found during ground-disturbing activities for the Project, an Archaeologist shall be hired to first determine whether it is a “unique archaeological resource” pursuant to Section 21083.2(g) of the *California Public Resources Code* (PRC) or a “historical resource” pursuant to Section 15064.5(a) of the State CEQA Guidelines. If the archaeological resource is determined to be a “unique archaeological resource” or a “historical resource”, the Archaeologist shall formulate a mitigation plan in consultation with the LACFCD that satisfies the requirements of the above-referenced sections. If the Archaeologist determines that the archaeological resource is not a “unique archaeological resource” or “historical resource”, s/he may record the site and submit the recordation form to the California Historic Resources Information System at the South Central Coastal Information Center at California State University, Fullerton.

Implementation of MM 1 would ensure that impacts to archaeological resources are reduced to a less than significant level.

MITIGATION MEASURE 2

If human remains are encountered during excavation activities, all work shall halt in the immediate vicinity of the discovery and the County Coroner shall be notified (*California Public Resources Code* §5097.98). The Coroner shall determine whether the remains are of forensic interest. If the Coroner, with the aid of the County-approved Archaeologist, determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code*. The MLD shall make his/her recommendation within 48 hours of being granted access to the site. The MLD’s recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code* §7050.5). If the landowner rejects the MLD’s recommendations, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code* §5097.98).

Implementation of MM 2 would ensure that impacts to human remains are reduced to a less than significant level.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this cultural resources report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: June 2014

SIGNED:

Patrick O. Maxon, M.A., RPA
Director, Cultural Resources

9.0 REFERENCES

Applegate, R.B.

- 1979 The Black, the Red, and the White: Duality and Unity in the Luiseño Cosmos. *The Journal of California and Great Basin Anthropology* 1(1):71-88.

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Bada, J. L., R. A. Schroeder, and G. G. Carter

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Daly, P

- 2013 Historic Resources Assessment Report: Santa Anita Stormwater Flood Management and Seismic Strengthening Project Description Santa Anita Wash Headworks and Debris Dam, Arcadia, Los Angeles County, CA

Dolan, Christy

- 2007 DPR 523B Site Recording Form, P-19-188707: Santa Anita Dam Complex Building, Structure, and Object Record.

Drover, C.E., H.C. Koerper, and P.E. Langenwaller II

- 1983 Early Holocene Human Adaptation on the Southern California Coast: A Summary Report of Investigations at the Irvine Site (CA-ORA-64), Newport Bay, Orange County, California. *Pacific Coast Archaeological Society Quarterly* 19 (3+4): 1-84.

EDAW, Inc.

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Koerper, H.C., and C.E. Drover

- 1983 Chronology Building for Coastal Orange County: The Case from ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2):1-34.

Mason, R.D., W.H. Bonner, S.J. Bouscaren, L. Carbone, R.O. Gibson, L.P. Klug, M.L. Peterson and V. Popper

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- 1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11 :214-23th

Warren, C.N.

- 1966 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States, Eastern New Mexico University Contributions in Anthropology* 1 (3):1-14.

Weeks, K. and Grimmer, A.

- 1995 *The Secretary of The Interior's Standards for the Treatment of Historic Properties: With Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. U.S. Department of the Interior, National Park Service, Cultural Resource Stewardship and Partnerships, Heritage Preservation Services (Washington, D.C.).

APPENDIX A
CULTURAL RESOURCES RECORDS SEARCH (SCCIC)

SCCIC Bibliography: Santa Anita Dam

LA-00247

Author(s): Woodward, Jim
Year: 1988
Title: Archaeological Survey of Lux Arboretum City of Monrovia, California
Affiliation: California Department of Parks and Recreation
Resources:
Quads: MT WILSON
Pages:
Notes:

LA-00371

Author(s): Malone, Terry
Year: 1977
Title: Archaeological Survey Report on a Tentative Tract of 48.3 Acres Located in the City of Monrovia, County of Los Angeles
Affiliation: Scientific Resource Surveys, Inc.
Resources:
Quads: AZUSA, MT WILSON
Pages:
Notes:

LA-01499

Author(s): Gilliland, Donald B.
Year: 1985
Title: K.m.a.x. Radio Tower (arcadia Electronic Site) ARR
Affiliation: U.S. Forest Service
Resources:
Quads: MT WILSON
Pages:
Notes:

LA-02568

Author(s): Unknown
Year: 1992
Title: A Cultural Resource Assessment Conducted for a Ten-acre Parcel in Sierra Madre, Los Angeles County, California
Affiliation:
Resources:
Quads: MT WILSON
Pages:
Notes:

LA-02936

Author(s): Kerr, David
Year: 1993
Title: Chantry Picnic Area (los Angeles County)
Affiliation: Angeles National Forest
Resources:
Quads: MT WILSON
Pages:
Notes:

SCCIC Bibliography: Santa Anita Dam

LA-03308

Author(s): Bissell, Ronald M.
Year: 1993
Title: Cultural Resources Reconnaissance of the Madison/cloverleaf Specific Plan Area, Monrovia, Los Angeles County, California
Affiliation: RMW Paleo Associates, Inc.
Resources: 19-002102, 19-002103, 19-002104, 19-002106, 19-002107, 19-002108, 19-002109
Quads: AZUSA, MT WILSON
Pages:
Notes:

LA-03372

Author(s): Triem, Judith
Year: 1993
Title: Historic Resources Evaluation and Management Plan, United States Forest Service, Angeles National Forest
Affiliation: San Buenaventura Research Associates
Resources: 19-000248, 19-001010, 19-001870, 19-150023, 19-150024, 19-150025, 19-150026, 19-150027, 19-150028, 19-150029, 19-150030, 19-150031, 19-150032, 19-150033
Quads: CONDOR PEAK, CRYSTAL LAKE, GLENDORA, LAKE HUGHES, MT BALDY, MT WILSON, PASADENA, VALYERMO, WARM SPRINGS MOUNTAIN, WHITAKER PEAK
Pages:
Notes:

LA-04486

Author(s): Skaggs, Glenn A.
Year: 1998
Title: Archaeological Reconnaissance Report: Chantry Flats Bee Apiary & Communications Site Expansion, Los Angeles Co.
Affiliation: Angeles National Forest
Resources:
Quads: MT WILSON
Pages:
Notes:

LA-04734

Author(s): Kerr, David
Year: 1996
Title: Clamshell Fuelbreak
Affiliation: U.S. Forest Service
Resources:
Quads: AZUSA, MT WILSON
Pages:
Notes:

SCCIC Bibliography: Santa Anita Dam

LA-05513

Author(s): McIntyre, Michael J.
Year: 2000
Title: Archaeological Reconnaissance Report: Big Santa Anita Recreation Residence Tract, Angeles National Forest, Los Angeles County, California
Affiliation: Angeles National Forest
Resources: 19-001529, 19-001530, 19-001533, 19-001951, 19-001964, 19-002052, 19-002409, 19-002477
Quads: MT WILSON
Pages:
Notes:

LA-05514

Author(s): Vance, Darrell W.
Year: 2000
Title: Cultural Resource Evaluation of the Chantry Flat Firestation, Angeles National Forest
Affiliation: Angeles National Forest
Resources: 19-001951
Quads: MT WILSON
Pages: 20
Notes:

LA-06859

Author(s): Unknown
Year: 1996
Title: Arcadia General Plan
Affiliation: LSA Associates, Inc.
Resources: 19-001868
Quads: EL MONTE, MT WILSON
Pages:
Notes:

LA-07205

Author(s): Bartoy, Kevin M.
Year: 2003
Title: Big Santa Anita Canyon Telephone Line (special Use Permitlar 438401) Angeles National Forest, Los Angeles County, California
Affiliation: Pacific Legacy, Inc.
Resources:
Quads: MT WILSON
Pages:
Notes: ARR Number: 01-05-00-889

LA-07207

Author(s): Bartoy, K.
Year: 2003
Title: Archaeological Reconnaissance Report, Federal Communications Commission Communications Site (Special Use Permit LAR003201). Angeles National Forest, Los Angeles County
Affiliation: Pacific Legacy, Inc.
Resources:
Quads: MT WILSON
Pages: 6
Notes:

SCCIC Bibliography: Santa Anita Dam

LA-07213

Author(s): Bartoy, Kevin M.
Year: 2004
Title: Big Santa Anita Tract Recreation Residence Community Defense Zone Project, Angeles National Forest, Los Angeles, California
Affiliation: Pacific Legacy, Inc.
Resources: 19-001951
Quads: MT WILSON
Pages:
Notes: ARR No. 05-01-00896

LA-07217

Author(s): Bartoy, Kevin M.
Year: 2003
Title: Los Angeles County Flood Control Water Line (special Use Permit Lar101403) Angeles National Forest, Los Angeles County, California
Affiliation: Pacific Legacy, Inc.
Resources:
Quads: MT WILSON
Pages:
Notes: ARR Number: 05-01-00-873

LA-08138

Author(s): Jordan, Stacey C.
Year: 2007
Title: Revised Archaeological Survey Report for the See Deteriorated Pole Replacement Program for H-frame Poles 1927071e and 1927072e on the Pearblossom-vincent 220kv Circuit (wo#4753-0301) and Pole 884941e on the Arboretum 16kv Circuit (wo#6027-4800, Ji#6-4869)
Affiliation: Jones & Stokes
Resources:
Quads: MT WILSON, PALMDALE
Pages:
Notes:

LA-09710

Author(s): Solis, Laurie
Year: 2007
Title: Santa Anita Canyon Reservoir Project, Los Angeles Department of Public Works, Los Angeles County, California. ARR No. 05-01-01065
Affiliation: Angeles National Forest
Resources: 19-187819
Quads: MT WILSON
Pages: 13
Notes:

SCCIC Bibliography: Santa Anita Dam

LA-09716

Author(s): Brasket, Kelli
Year:
Title: Mt. Wilson Trails Maintenance Project, Angeles National Forest, Los Angeles River Ranger District, Los Angeles County, Ca. (ARR # 05-01-1012)
Affiliation: Angeles National Forest
Resources: 19-001951, 19-187820, 19-187821, 19-187822
Quads: MT WILSON
Pages: 12
Notes:

LA-10598

Author(s): Strauss, Monica, Christy Dolan, and Sara Dietler
Year: 2007
Title: Cultural Resources Assessment for the Proposed Santa Anita Riser Modification and Reservoir Sediment Removal Project, Los Angeles County, California
Affiliation: EDAW, Inc.
Resources: 19-188707
Quads: MT WILSON
Pages: 85
Notes:

LA-11322

Author(s): Peebles, David S.
Year: 2009
Title: Eligibility Assessment and National Register Evaluation of the Chantry Flat and Crystal Lake Administrative Sites
Affiliation: Unknown
Resources: 19-001951
Quads: CRYSTAL LAKE, MT WILSON
Pages: 69
Notes:

LA-11833

Author(s): Hoffman, Laura
Year: 2012
Title: Letter Report for Cultural Resources Survey and Monitoring for Southern California Edison Survey and Monitoring for Replacement of Pole Numbers 1363621E and 780599E/4524817E, Angeles National Forest, Los Angeles County, California
Affiliation: SWCA Environmental Consultants
Resources:
Quads: CRYSTAL LAKE, MT WILSON
Pages: 11
Notes:

APPENDIX B
NATIVE AMERICAN CONSULTATION (NAHC)



TRANSMITTAL

DATE: December 20, 2012

TO: Mr. Dave Singleton Program Analyst Native American Heritage Comm. 915 Capitol Mall, Rm. 364 Sacramento, CA 95814	FAX NUMBER: (916) 657-5390 TEL NUMBER: (916) 653-6251 PROJECT: Santa Anita Dam Project FROM: Patrick Maxon, RPA
---	---

Fax / Pages__ E-Mail Fed Ex / Overnite Express Delivery / Courier

REGARDING: Sacred Lands File Search and Contact List Request

Dear Mr. Singleton:

BonTerra Consulting has been retained to complete a cultural resources study for the proposed **Santa Anita Dam Project** located in unincorporated Los Angeles County, California. This project does not require a General or Specific Plan amendment or adoption; therefore, the project is not subject the statutory requirements of Senate Bill 18 (Tribal Consultation Guidelines).

At your earliest convenience, please conduct a search of the Sacred Lands File for the proposed project, located within Township 1 North; Range 11 West of the USGS **Mt. Wilson, CA 7.5 Minute Quadrangle**. Refer to attached exhibit.

The Santa Anita Stormwater Flood Management and Seismic Strengthening Project will modify four existing facilities related to the Santa Anita Dam along Santa Anita Wash. These facilities are the Santa Anita Dam itself, the Santa Anita Debris Basin approximately one mile downstream, and the Santa Anita Headworks situated between them. These facilities, which are operated and maintained by the Los Angeles County Flood Control District, serve to control and conserve the floodwaters of the Santa Anita Canyon watershed. This watershed is mostly undeveloped with the majority of it located in the Angeles National Forest within the San Gabriel Mountains, which are very steep and among the most highly erosive mountains in the world. This watershed is also susceptible to wildfires, which result in tremendous debris flows during subsequent storm events. The facilities are located within one mile of the Sierra Madre Fault, which is capable of a producing a maximum credible earthquake (MCE) of magnitude 7.5.

The proposed Project will improve District facilities to better manage stormwater runoff from the Santa Anita Canyon watershed and achieve the following goals: 1) reduce flood damage to the downstream communities, 2) increase recharge of the local groundwater basin and 3) improve public safety by remediating seismic safety issues at the Dam and the Debris Basin.

Please fax the results to me at (714) 444-9599, or e-mail to p.maxon@bonterraconsulting.com, referencing your letter to the **"Santa Anita Dam Project"**.

If you have any questions or require any additional information, please do not hesitate to contact me at (714) 444-9199 or via email.

Sincerely,

BONTERRA CONSULTING

A handwritten signature in black ink, appearing to read "Patrick Maxon". The signature is fluid and cursive, with the first name "Patrick" and last name "Maxon" clearly distinguishable.

Patrick Maxon, RPA
Director, Cultural Resources

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net



December 21, 2012

Mr. Patrick Maxon, RPA, Director – Cultural Resources

BONTERRA CONSULTING

2 Executive Circle, Suite 175
Irvine, CA 92614

Sent by FAX to: 714-444-9599
No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the proposed Sacred Lands File Search and Native American Contacts list for the proposed **Santa Anita Dam Project**; "located in the Santa Anita Canyon Watershed, mostly in the Angeles National Forest; Los Angeles County County, California"

Dear Mr. Maxon:

:

The Native American Heritage Commission (NAHC) conducted a search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (Area of Potential Effect or APE) referenced above. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of Native American cultural sites within one-half mile of the APE location data you provided. However, there are Native American cultural resources in close proximity to the APE.

Also, a Native American tribe or individual may be the only source for the presence of traditional cultural places. For that reason, enclosed is a list of Native American individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes

archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list that the NAHC has provided in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider *avoidance* as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 21083.2 which requires documentation, data recovery of cultural resources.

The NAHC makes no recommendation or preference of any single individual, or group over another. All of those on the list should be contacted, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 and (k) of the federal NHPA (16 U.S.C. 470 *et seq*), Section 4(f) of the Department of Transportation Act of 1966 (23 CFR 774); 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to

all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

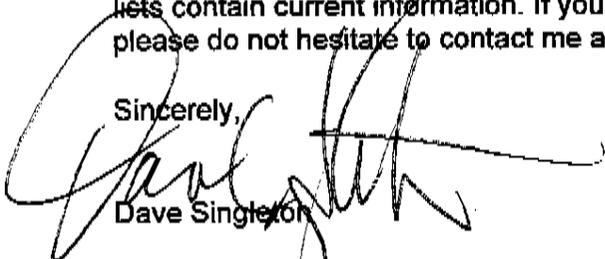
Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton

Attachment: Native American Contact List

**Native American Contacts
Los Angeles County
December 19, 2012**

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva

tattnlaw@gmail.com
310-570-6567

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Gabrielino Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Gabrielino-Tongva Tribe
Bernie Acuna, Chairperson
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
(619) 294-6660-work
(310) 428-5690 - cell
(310) 587-0170 - FAX
bacuna1@gabrieinotribe.org

Gabrielino-Tongva Tribe
Linda Candelaria, Chairwoman
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
palmsprings9@yahoo.com
626-676-1184- cell
(310) 587-0170 - FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Santa Anita Dam Project; located in the Santa Anita Canyon Watershed, mostly in the Angeles National Forest; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

**Native American Contacts
Los Angeles County
December 19, 2012**

**Gabrielino Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
(626) 926-4131
gabrielenoindians@yahoo.
com**

**Gabrielino-Tongva Tribe
Conrad Acuna,
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
310-587-2203**

310-587-2203

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Santa Anita Dam Project; located in the Santa Anita Canyon Watershed, mostly in the Angeles National Forest; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

January 2, 2013

Mr. Bernie Acuña, Chairperson
Gabrielino-Tongva Tribe
1875 Century Park East 1500
Los Angeles, California 90067

Subject: Santa Anita Dam Project

Dear Mr. Acuña:

BonTerra Consulting has been retained to complete a cultural resources study for the proposed Santa Anita Dam Project located in the Angeles National Forest in unincorporated Los Angeles County, California. This project does not require a General or Specific Plan amendment or adoption; therefore, the project is not subject to the statutory requirements of Senate Bill 18 (Tribal Consultation Guidelines). However, as part of the background cultural resources research being conducted, this letter is to inform you of the proposed project and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project site is located in the Angeles National Forest, within Township 1 North; Range 11 West of the USGS Mt. Wilson, CA 7.5 Minute Quadrangle. Refer to attached exhibit.

Project

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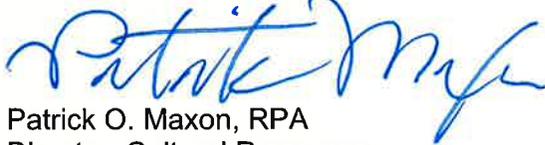
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Sincerely,

BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. Conrad Acuña
Gabrielino-Tongva Tribe
1875 Century Park East 1500
Los Angeles, California 90067

Subject: Santa Anita Dam Project

Dear Mr. Acuña:

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Mr. Conrad Acuña
January 2, 2013
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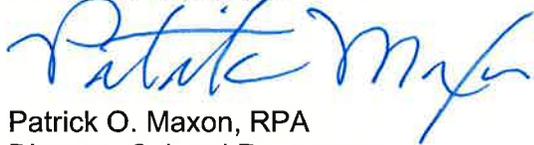
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BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Ms. Cindi Alvitre, Chairwoman-Manisar
Ti'At Society/Inter-Tribal Council of Pimu
3094 Mace Avenue, Apt B
Costa Mesa, California 92626

Subject: Santa Anita Dam Project

Dear Ms. Alvitre:

BonTerra Consulting has been retained to complete a cultural resources study for the proposed Santa Anita Dam Project located in the Angeles National Forest in unincorporated Los Angeles County, California. This project does not require a General or Specific Plan amendment or adoption; therefore, the project is not subject to the statutory requirements of Senate Bill 18 (Tribal Consultation Guidelines). However, as part of the background cultural resources research being conducted, this letter is to inform you of the proposed project and to request any relevant information you may have regarding cultural resources on or near the project site.

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Ms. Cindi Alvitre
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BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. Ron Andrade, Director
LA City/County Native American Indian Comm.
3175 W. 6th Street, Rm. 403
Los Angeles, California 90020

Subject: Santa Anita Dam Project

Dear Mr. Andrade:

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Mr. Ron Andrade
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Sincerely,

BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Ms. Linda Candelaria, Chairwoman
Gabrielino-Tongva Tribe
1875 Century Park East 1500
Los Angeles, California 90067

Subject: Santa Anita Dam Project

Dear Ms. Candelaria:

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Ms. Linda Candelaria
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BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. Robert Dorame, Tribal Chair/Cultural Resources
Gabrielino Tongva Indians of California Tribal Council
PO Box 490
Bellflower, California 90707

Subject: Santa Anita Dam Project

Dear Mr. Dorame:

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Mr. Robert Dorame
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Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. Samuel H. Dunlap, Cultural Resources Director
Gabrielino Tongva Nation
PO Box 86908
Los Angeles, California 90086

Subject: Santa Anita Dam Project

Dear Mr. Dunlap:

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Mr. Samuel H. Dunlap
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BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. Anthony Morales, Chairperson
Gabrieleno/Tongva San Gabriel Board of Mission Indians
P.O. Box 693
San Gabriel, California 91778

Subject: Santa Anita Dam Project

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Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. John Tommy Rosas, Tribal Administrator
Tongva Ancestral Territorial Tribal Nation

VIA EMAIL
tattnlaw@gmail.com

Subject: Santa Anita Dam Project

Dear Mr. Rosas:

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Patrick O. Maxon, RPA
Director, Cultural Resources

January 2, 2013

Mr. Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians
P.O. Box 393
Covina, California 91723

Subject: Santa Anita Dam Project

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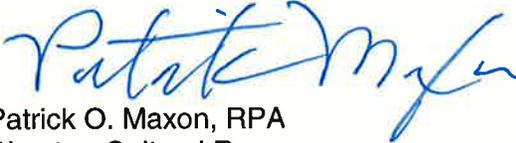
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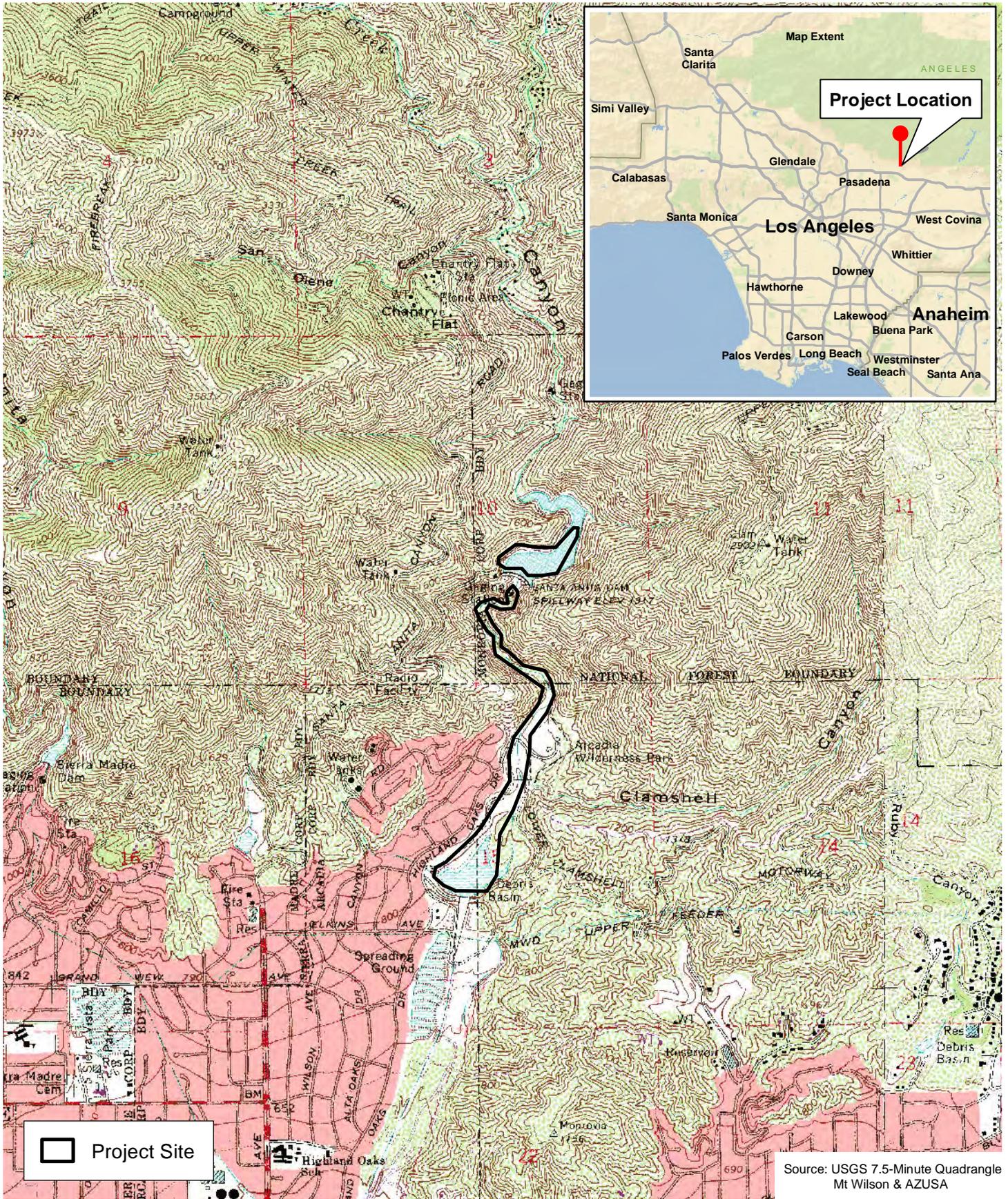
Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or any comment on the project, please contact me at your earliest convenience at (714) 444-9199 or via email at pmaxon@bonterraconsulting.com, with a subject line referencing the "Santa Anita Dam Project".

Sincerely,

BONTERRA CONSULTING



Patrick O. Maxon, RPA
Director, Cultural Resources



D:\Projects\ColADPWU175\mxd\Ex_LV_USGS.mxd

 Project Site

Source: USGS 7.5-Minute Quadrangle
Mt Wilson & AZUSA

Project Site
Santa Anita Dam

Exhibit 1



APPENDIX C
FOREST SERVICE PERMIT

Submit

Authorization ID: LAR9048
 Contact ID: BON TERRA
 Expiration Date: 12/10/2013

FS-2700-32 (10/09)
 OMB No. 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE**

PERMIT FOR ARCHAEOLOGICAL INVESTIGATIONS

Authority:
 The Antiquities Act of 1906, 16 U.S.C. 431-433
 The Organic Act of 1897, 16 U.S.C. 551

1. Holder BON TERRA CONSULTING	2. Date of corresponding application 11/14/2012
3. Address 2 Executive Circle, Suite 175 Irvine, CA 92614	4. Telephone numbers 714-444-9199 949-677-2393 (cell#) 5. Email addresses pmaxon@bonterraconsulting.com
6. Name of authorized officer Michael J. McIntyre, District Ranger Telephone numbers 626-574-1613 x275 (Darrel Vance) Email addresses Dvance@fs.fed.us	7. Name of principal investigators Patrick Maxon Telephone numbers 949-677-2393 Email addresses pmaxon@bonterraconsulting.com
8. Name of field directors authorized to carry out field projects Pamela Daly Patrick Maxon Albert Knight Dave Smith	Telephone numbers Maxon:714-444-9199 Knight:818-426-4730 Smith:949-922-9952 Daly:909-649-5149 Email addresses pmaxon@bonterraconsulting.com ahunknight@msn.com ehcaddis@sbcglobal.net daly.rvrsde@sbcglobal.net
9. Activities authorized <ul style="list-style-type: none"> • Consulting: Project-specific • Non-ground-disturbing activities (such as surveys) 	
10. Description of National Forest System lands authorized for use (hereinafter referred to as "the permit area") 83 acres along the Santa Anita Wash by existing facilities (Santa Anita Dam, Santa Anita Debris Basin, Santa Anita Head works) operated and maintained by the Los Angeles County Flood Control District. See attached map	
11. Permit term From December 26, 2012 To December 10, 2013	
12. Name and address of the curatorial facility in which collections, records, data, photographs, and other documents resulting from activities conducted under this permit shall be deposited for permanent preservation	

on behalf of the United States Government.

Angeles National Forest Attn: Darrel Vance 701 N. Santa Anita Ave. Arcadia, CA 91006

TERMS AND CONDITIONS

I. GENERAL TERMS

A. AUTHORITY. This permit is issued pursuant to The Organic Act of 1897, 16 U.S.C. 551 , 36 CFR Part 251, Subpart B, 36 CFR Part 296, the Uniform Rules and Regulations of the Antiquities Act of 1906, 43 CFR Part 3, and applicable Forest Service policies and procedures and is subject to their provisions.

B. AUTHORIZED OFFICER. The authorized officer for this permit is the Forest Supervisor or a subordinate officer with delegated authority.

C. ANNUAL REVIEW. If this permit is issued for more than one year, it shall be reviewed annually by the authorized officer.

D. RENEWAL AND EXTENSION. This permit is not renewable. The holder may request an extension of this permit for a limited, specified period to complete activities authorized under this permit. Requests for an extension must be submitted in writing at least one month before expiration of this permit.

E. AMENDMENT. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms that may be required by law, regulation, the applicable land management plan, or projects and activities implementing a land management plan pursuant to 36 CFR Part 215. Any amendments to individuals named in or activities authorized by this permit that are needed by the holder must be approved by the authorized officer in writing.

F. COMPLIANCE WITH LAWS, REGULATIONS, AND OTHER LEGAL REQUIREMENTS. In exercising the privileges granted by this permit, the holder shall comply with all present and future federal laws and regulations and all present and future state, county, and municipal laws, regulations, and other legal requirements that apply to the permit area, to the extent they do not conflict with federal law, regulations, or policy. The Forest Service assumes no responsibility for enforcing laws, regulations, and other legal requirements that fall under the jurisdiction of other governmental entities.

G. NON-EXCLUSIVE USE. The use and occupancy authorized by this permit are not exclusive. The Forest Service reserves the right of access to the permit area, including a continuing right of physical entry to the permit area for inspection, monitoring, or any other purpose consistent with any right or obligation of the United States under any law or regulation. The holder shall allow the authorized officer or the authorized officer's representative full access to the permit area at any time the holder is in the field for purposes of examining the permit area and any recovered materials and related records. The Forest Service reserves the right to allow others to use the permit area in any way that is not inconsistent with the holder's rights and privileges under this permit, after consultation with all parties involved.

H. ASSIGNABILITY. This permit is not assignable or transferable.

II. OPERATIONS

A. OPERATING PLAN. The application corresponding to this permit is incorporated as the operating plan for this permit and is attached as Appendix A. The authorized officer may supplement the information contained in the application as appropriate or necessary.

B. REQUIRED PERMITS. The holder shall obtain all other permits required for conducting the activities authorized by this permit.

C. QUALIFIED INDIVIDUALS. Archaeological project design, literature review, development of regional historical contexts, site evaluation, conservation and protection measures, and recommendations for subsequent investigations shall be developed with direct involvement of an individual who meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation. Fieldwork shall be overseen by an individual who meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation.

D. CONDITION OF OPERATIONS. The holder shall maintain the authorized improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this permit. Standards are subject to periodic change by the authorized officer.

E. PROHIBITION ON USE OF MECHANIZED EQUIPMENT IN WILDERNESS AREAS. The holder shall not use mechanized equipment in wilderness areas and shall not use mechanized equipment in proposed or potential wilderness areas without prior written approval from the authorized officer.

F. PROHIBITION ON FLINT KNAPPING AND LITHIC REPLICATION EXPERIMENTS. The holder shall not conduct any flint knapping or lithic replication experiments at any archaeological site, aboriginal quarry source, or non-archaeological site that might be mistaken for an archaeological site as a result of such experiments.

G. PROHIBITION ON IMPEDING OR INTERFERING WITH OTHER USES. The holder shall perform the activities authorized by this permit so as not to impede or interfere with administrative or other authorized uses of National Forest System lands.

H. RESTRICTION ON MOTOR VEHICLE USE. The holder shall restrict motor vehicle use to designated roads, trails, and areas, unless specifically provided otherwise in the operating plan.

I. MINIMIZING GROUND DISTURBANCE. The holder shall keep ground disturbance to a minimum consistent with the nature and purpose of the authorized fieldwork.

J. RESOURCE PROTECTION. The holder shall conduct all activities so as to prevent or minimize scarring, erosion, littering, and pollution of National Forest System lands, water pollution, and damage to watersheds. In addition, the holder shall take precautions at all times to prevent wildfire. The holder may not burn debris without prior written approval from the authorized officer.

K. PREVENTION OF INJURY. The holder shall take precautions to protect livestock, wildlife, the public, and other users of National Forest System lands from accidental injury at any excavation site.

L. DESTRUCTION AND REMOVAL OF TREES. The holder shall not destroy or remove any trees on National Forest System lands without prior written approval from the authorized officer.

M. RESOURCE MANAGEMENT FACILITIES. The holder shall not disturb resource management facilities, such as fences, reservoirs, and other improvements, within the permit area without prior written approval from the authorized officer. Where disturbance of a resource management facility is necessary, the holder shall return it to its prior location and condition.

N. BACKFILLING. The holder shall backfill all subsurface test and excavation sites as soon as possible after recording the results and shall restore subsurface test and excavation sites as closely as possible to their original contour.

O. REMOVAL OF STAKES AND FLAGGING. The holder shall remove temporary stakes and flagging installed by the holder upon completion of fieldwork.

P. SITE RESTORATION. The holder shall restore all camp and work areas to their original condition before vacating the permit area. Refuse shall be carried out and deposited in disposal areas approved by the authorized officer.

Q. TITLE TO ARTIFACTS AND ASSOCIATED DOCUMENTATION. Archaeological and historical artifacts excavated or removed from National Forest System lands and any associated documentation shall remain the property of the United States.

R. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION (NAGPRA). In accordance with 25 U.S.C. 3002 (d) and 43 CFR 10.4, if the holder inadvertently discovers human remains, funerary objects, sacred objects, or objects of cultural patrimony on National Forest System lands, the holder shall immediately cease work in the area of the discovery and shall make a reasonable effort to protect and secure the items. The holder shall immediately notify the authorized officer by telephone of the discovery and shall follow up with written confirmation of the discovery. The activity that resulted in the inadvertent discovery may not resume until 30 days after the authorized officer certifies receipt of the written confirmation, if resumption of the activity is otherwise lawful, or at any time if a binding written agreement has been executed between the Forest Service and the affiliated Indian tribes that adopts a recovery plan for the human remains and objects.

S. ADDITIONAL REQUIREMENTS. Prior to beginning any fieldwork under the authority of this permit, the holder shall contact the authorized officer responsible for administering the lands involved to obtain further instructions regarding current land and resource conditions.

III. REPORTING REQUIREMENTS

A. PRELIMINARY REPORT. The holder shall submit a preliminary report to the authorized officer within 30 days of completion of the first stage of fieldwork. The preliminary report shall enumerate what was done during the first stage of fieldwork, how it was done, by whom, where, and with what results, including maps, global positioning satellite data, an approved site form for each newly recorded archaeological site, and the holder's professional recommendations regarding resource significance, as appropriate. Depending on the scope, duration, and nature of the work, the authorized officer may require progress reports periodically for the duration of the authorized activities.

B. DRAFT FINAL REPORT. Within 60 days of completion of fieldwork, the holder shall submit an edited draft final report to the authorized officer for review to ensure conformance with applicable laws, regulations, policies, and procedures and the terms and conditions of this permit.

C. FINAL REPORT. The holder shall submit the original final report and at least two copies to the authorized officer within 90 days after completion of fieldwork.

D. BLANKET SURVEY CONSULTING PERMIT. If this is a multi-year survey consulting permit, at the end of each calendar year, the holder shall submit to the authorized officer a report enumerating all activities conducted under this permit.

E. DEPOSIT OF MATERIALS AND DOCUMENTS WITH A CURATORIAL FACILITY. Within 90 days of the date the final report is submitted to the authorized officer, the holder shall deposit all artifacts, samples, and collections and original or clear copies of all records, data, photographs, and other documents resulting from activities authorized by this permit with the curatorial facility named in block 12.

F. CATALOGUE AND EVALUATION OF DEPOSITED MATERIALS. The holder shall provide the authorized officer with a catalogue and evaluation of all materials deposited with the curatorial facility named in block 12, including the facility's accession or catalogue numbers, and confirmation, signed by an authorized curatorial facility official, that artifacts, samples, and collections were deposited with the approved curatorial facility. The confirmation shall include the date the materials were deposited and the type, number, and condition of the deposited materials.

G. CONFIDENTIALITY OF SENSITIVE RESOURCES. The holder agrees to keep the specific location of sensitive resources confidential. Sensitive resources include but are not limited to threatened, endangered, and rare species; archaeological sites; caves; fossil sites; minerals; commercially valuable resources; and traditional cultural properties.

H. CONFIDENTIALITY OF INFORMATION IDENTIFYING ARCHAEOLOGICAL SITES. Without the authorized officer's prior written approval, the holder shall not publish any locational or other information identifying archaeological sites that could compromise their protection and management by the federal government.

I. IDENTIFICATION OF FOREST SERVICE PERMIT. Any published article, paper, or book containing results of work conducted under this permit shall specify that the work was performed in the Angeles National Forest under a Forest Service permit.

J. SUBMISSION OF WRITTEN MATERIALS. The holder shall submit a copy of any published or unpublished report, article, paper, or book resulting from the authorized activities (other than reports required by clauses III.A, B, and C) to the authorized officer and the appropriate official of the curatorial facility named in block 12. The holder shall submit tabular and spatial data to the authorized officer in the format specified in Appendix A.

IV. RIGHTS AND LIABILITIES

A. LEGAL EFFECT OF THE PERMIT. This permit, which is revocable and terminable, is not a contract or a lease, but rather a federal license. The benefits and requirements conferred by this authorization are reviewable solely under the procedures set forth in 36 CFR Part 251, Subpart C, and 5 U.S.C. 704. This permit does not constitute a contract for purposes of the Contract Disputes Act, 41 U.S.C. 601. The permit is not real property, does not convey any interest in real property, and may not be used as collateral for a loan.

B. VALID OUTSTANDING RIGHTS. This permit is subject to all valid outstanding rights. Valid outstanding rights include those derived from mining and mineral leasing laws of the United States. The United States is not liable to the holder for the exercise of any such right.

C. ABSENCE OF THIRD-PARTY BENEFICIARY RIGHTS. The signatories of this permit do not intend to confer any rights on any third party as a beneficiary under this permit.

D. DAMAGE TO UNITED STATES PROPERTY. The holder has an affirmative duty to protect from damage the land, property, and other interests of the United States. Damage includes but is not limited to fire suppression costs, and all costs and damages associated with or resulting from the release or threatened release of a hazardous material occurring during or as a result of activities of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees on, or related to, the lands, property, and other interests covered by this permit. For purposes of clause IV.F, "hazardous material" shall mean any hazardous substance, pollutant, contaminant, hazardous waste, oil, and/or petroleum product, as those terms are defined under any federal, state, or local laws or regulations.

E. INDEMNIFICATION. The holder shall indemnify, defend, and hold harmless the United States for any costs, damages, claims, liabilities, and judgments arising from past, present, and future acts or omissions of the holder in connection with the use and occupancy authorized by this permit. This indemnification and hold harmless provision includes but is not limited to acts and omissions of the holder or the holder's family, guests, invitees, heirs, assignees, agents, employees, contractors, or lessees in connection with the use and occupancy authorized by this permit which result in (1) violations of any laws and regulations which are now or which may become applicable; (2) judgments, claims, demands, penalties, or

THIS PERMIT IS ACCEPTED SUBJECT TO ALL ITS TERMS AND CONDITIONS.

BEFORE ANY PERMIT IS ISSUED TO AN ENTITY, DOCUMENTATION MUST BE PROVIDED TO THE AUTHORIZED OFFICER OF THE AUTHORITY OF THE SIGNATORY FOR THE ENTITY TO BIND IT TO THE TERMS AND CONDITIONS OF THE PERMIT.

ACCEPTED:

Patrick Maxon, Director - CR, Bon Terra Cons. Patrick Maxon 12/19/12

 HOLDER NAME, PRECEDED BY NAME AND SIGNATURE DATE
 TITLE OF PERSON SIGNING ON BEHALF OF
 HOLDER, IF HOLDER IS AN ENTITY

APPROVED:

Robert J GARCIA Robert J Garcia 12/28/2012

 NAME AND TITLE OF AUTHORIZED OFFICER SIGNATURE DATE
 FOR MIKE MCINTYRE

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond, to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and, where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

Submit

Use Code: 411

Authorization ID: BAD

Contact ID: 662 LAK 9048

FS-2700-30 (Rev 05/06)

OMB No. 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE**

**APPLICATION FOR PERMIT FOR ARCHAEOLOGICAL
INVESTIGATIONS**

<USER NOTES FOR AUTHORITY>

<Select all authorities that apply. Delete any that do not apply.>

Authority:

**Archaeological Resources Protection Act of 1979,
16 U.S.C. 470aa-mm**

**Antiquities Act of 1906,
16 U.S.C. 431-433**

**Organic Act of 1897
16 U.S.C. 551**

Instructions: Complete and return two copies of this application form and required attachments to the appropriate Forest Service administrative unit. All information requested must be completed before the application will be considered. Use separate pages if more space is needed to complete a section.

1. Name of applicant (individual, institution, corporation, partnership, or other entity)

Patrick Maxon, RPA
BonTerra Consulting

2. Mailing address

2 Executive Circle, Suite 175
Irvine, CA 92614

3. Telephone numbers

714-444-9199 (office)
949-677-2393 (mobile)

4. Email addresses

pmaxon@bonterraconsulting.com

5. Nature of archaeological work proposed

- Survey and recordation
- Limited testing (shovel tests, scrapes, probes)
- Formal testing and/or surface collection (project-specific)
- Excavation and/or removal (project-specific)
- Conservation and protection, e.g., ruin stabilization, restoration, rock art conservation, ARPA damage assessments (project-specific)

6. Location of proposed work (attach additional sheets)

The proposed Project is located in Los Angeles County with the majority of the project site in the Angeles National Forest within the San Gabriel Mountains. Portions are within the City of Monrovia.

Project area is shown on the USGS 7.5 minute Mount Wilson, CA quadrangle (1995); Township 1 North, Range 11 West. A copy of the attached map showing the specific project area depicts the proposed survey area.

The Forest Service administrative unit is the Angeles National Forest Los Angeles River Ranger District.

7. Duration of proposed work

Duration of entire project: From December 10, 2012 To December 10, 2013

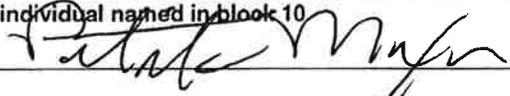
Duration of fieldwork: 1 day of field work From 12/10/12 To 12/10/13

8. Principal investigator

Patrick Maxon

Principal investigator contact information

949-677-2393 (mobile)
Email addresses:
pmaxon@bonterraconsulting.com

<p>9. Field directors</p> <p>Patrick Maxon (archaeology) Albert Knight (archaeology) Dave Smith (archaeology) Pamela Daly (history)</p>	<p>Field director contact information</p> <p>Maxon: 714-444-9199 (office) 949-677-2393 (mobile) pmaxon@bonterraconsulting.com</p> <p>Knight 818-426-4730 (mobile) ahunknight@msn.com</p> <p>Smith 949-922-9952 (mobile) ehcaddis@sbcglobal.net</p> <p>Daly 909-649-5149 (mobile) daly.rvrsde@sbcglobal.net</p>
<p>10. Permit holder</p> <p>Patrick Maxon, RPA</p> <p>Name of individual who will be responsible for fulfilling the terms and conditions of the permit or who has authority to bind the entity applying for the permit to its terms and conditions.</p>	<p>Permit holder contact information</p> <p>Telephone numbers: 714-444-9199 (office) 949-677-2393 (mobile)</p> <p>Email addresses: pmaxon@bonterraconsulting.com</p>
<p>11. The applicant must attach the following to the application form:</p> <p>a. A description of the purpose, nature, and extent of the work proposed, including how and why it is proposed to be conducted (include research design, methods, and curation).</p> <p>b. A summary of support capabilities, including the location and a description of necessary facilities and equipment, the personnel to be involved in the proposed work, and, in the case of an applicant that is an entity, its organizational structure and staffing.</p> <p>c. A summary of the applicant's experience in completing the kind of work proposed, including similar projects and government contracts and federal permits that were previously held, that are currently in force, with their effective dates, and that are pending or planned, by agency and region or state, reports or publications resulting from similar work, and any other pertinent experience.</p> <p>d. For each individual named in blocks 8 and 9, a resume including education, training, and experience in the kind of work proposed and in the role proposed.</p> <p>e. A written certification, signed by an authorized official of the proposed curatorial facility, attesting to the facility's capability and willingness to accept any collections, records, data, photographs, and other documents generated during the proposed permit term and to assume permanent curatorial responsibility for those materials on behalf of the United States Government pursuant to 36 CFR Part 79. Archaeological and historical artifacts excavated or removed from National Forest System lands and their associated documentation shall remain the property of the United States. Custody of any Native American human remains or cultural items subject to the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3001-3013, that are removed from National Forest System lands shall be determined in accordance with NAGPRA and its implementing regulations at 43 CFR Part 10.</p>	
<p>12. Proposed publications for results of work conducted under the permit</p> <p>Section 106 compliant Cultural Resources Assessment report using Archaeological Resource Management Reports (ARMR) guidelines.</p>	
<p>13. Signature of individual named in block 10</p> 	<p>14. Date signed</p> <p>11/14/12</p>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (800) 975-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

ARPA Permit Attachment

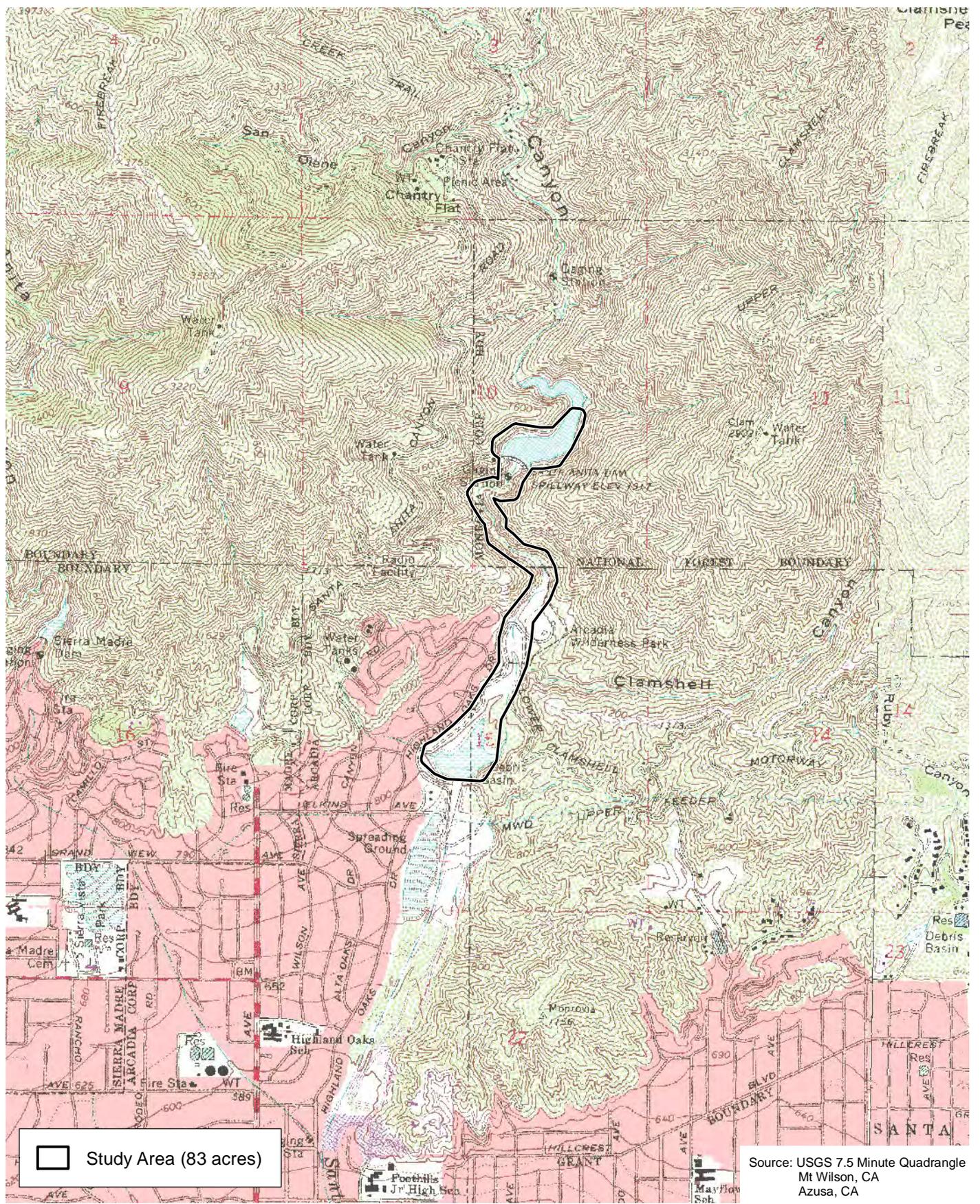
- a. The Santa Anita Stormwater Flood Management and Seismic Strengthening Project (Project) will modify four existing facilities along Santa Anita Wash. These facilities are the Santa Anita Dam (Dam), the Santa Anita Debris Basin (Debris Basin), and the Santa Anita Headworks (Headworks). These facilities, which are operated and maintained by the Los Angeles County Flood Control District (District), serve to control and conserve the floodwaters of the Santa Anita Canyon watershed. This Project will improve District facilities to better manage stormwater runoff from the Santa Anita Canyon watershed and achieve the following goals: (1) reduce flood damage to the downstream communities, (2) increase recharge of the local groundwater basin, and (3) improve public safety by remediating seismic safety issues at the Dam and the Debris Basin.

The purpose of the cultural resources study is to ensure that the proposed project does not adversely impact significant cultural resources. The study will consist of (1) a review of the records search completed for the 2007 Environmental Impact Report (EIR), and an updated records search through the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center, California State University, Fullerton; (2) Native American Heritage Commission (NAHC) and Native American scoping; (3) a one-day pedestrian survey of the Area of Potential Effects (APE) by Patrick Maxon, Albert Knight and/or Dave Smith and by historian Pamela Daly; and (4) completion of a technical cultural resources report (following Archaeological Resource Management Report [ARMR] guidelines) that summarizes the findings of the study and offers management recommendations.

- b. Patrick Maxon (Principal Investigator), Albert Knight (Archaeology Field Director), and Dave Smith (Archaeology Field Director) will be involved as archaeologists in the study. They meet the Secretary of Interior's Professional Qualification Standards for Archaeology. Pamela Daly (Architectural History) will complete the historical portion of the study. Ms. Daly meets the Secretary of Interior's Professional Qualification Standards for Architectural History.

BonTerra Consulting office support will consist of GIS capabilities to construct project maps, staff support, and computers for documentation purposes. No specialized equipment is necessary.

- c. Mr. Maxon has completed scores of reconnaissance studies over the past 18 years. Mr. Maxon has held ARPA and other use Permits for the Forest Service, Bureau of Reclamation, and USACE; BLM use permits; and permits for the California Energy Commission. In 2010, a Forest Service archaeological investigation permit (LAR9036CRI) was issued to survey portions of Big Tujunga Canyon Road for the County of Los Angeles Department of Public Works (LADPW), and in April 2011 an archaeological permit (LAR9039CRI) was acquired from the Forest Service for a sediment removal project by the LADPW at the Pacoima Reservoir.
- d. Resumes for Patrick Maxon, Albert Knight, Dave Smith and Pamela Daly are attached.
- e. By agreement with the Angeles National Forest, no collections will be made. All items of historical or archaeological nature will be left in place within the Forest and remain property of the United States Government.



 Study Area (83 acres)

Source: USGS 7.5 Minute Quadrangle
Mt Wilson, CA
Azusa, CA

Local Vicinity

Santa Anita Prop 1E Project

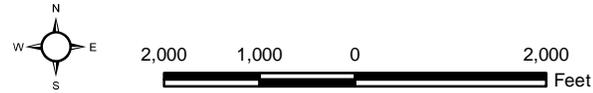


Exhibit 2



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Study Area (83 acres)

Survey Area

Santa Anita Prop 1E Project

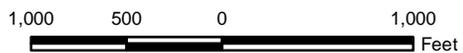


Exhibit 3



EDUCATION

Master of Arts, Anthropology, California State University, Fullerton, CA, 1994

Bachelor of Arts, Psychology/Sociology, Towson State University, Maryland, MD, 1987

PROFESSIONAL CERTIFICATIONS

Registered Professional Archaeologist (National), 1999 – present

Certified Archaeologist – Riverside County TLMA, 2008 – present

Certified Archaeologist – Orange County Environmental Management Agency, 1998 – present

Cultural Resources Specialist – California Energy Commission, 2004

PROFESSIONAL SUMMARY

Patrick Maxon is a Registered Professional Archaeologist, is certified by the County of Orange Environmental Management Agency and the Riverside County Transportation and Land Management Agency. He has 18 years of experience in all aspects of cultural resources management, including prehistoric and historic archaeology, paleontology, ethnography, and tribal consultation. He has expertise in compliance with the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), and the Clean Water Act (CWA), among others. Mr. Maxon has been previously certified by the City of San Diego, and meets the Secretary of Interior's standards for historic preservation programs for archaeology. Mr. Maxon has completed hundreds of cultural resources projects that have involved (1) agency, client, Native American, and subcontractor coordination; (2) treatment plans and research design development; (3) archival research; (4) field reconnaissance; (5) site testing; (6) data recovery excavation; (7) construction monitoring; (8) site recordation; (9) site protection/preservation; (10) mapping/cartography; (11) laboratory analysis; and (12) report production. He has managed a number of projects within the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Bureau of Land Management (BLM), the Bureau of Reclamation, and other federal agencies that require compliance with Section 106 of the NHPA. He has also completed projects throughout Southern California under CEQA for State and local governments and municipalities, including the California Department of Transportation (Caltrans), the Department of General Services (DGS), the California Energy Commission (CEC), the California Department of Water Resources, the Los Angeles County Department of Public Works (LACDPW), the Los Angeles Department of Water and Power (LADWP), the Los Angeles Unified School District, and others.

RELEVANT PROJECT EXPERIENCE

Lancaster Solar Farm Initial Study/Mitigated Negative Declaration, Lancaster (CoLACAO).

BonTerra Consulting is currently preparing an Initial Study/Mitigated Negative Declaration (MND) for the proposed Solar Energy Project to be developed on approximately 63 acres of undeveloped County-owned land within the City of Lancaster. The project site is surrounded on the east and west by several County facilities, and the California State Prison-Los Angeles County (CSP-LAC) is located to the south. The County is proposing to develop the project site with a solar facility capable of generating up to 4 megawatts of electricity under peak solar conditions, and the energy would be made equally available to the adjacent Mira Loma Detention Center and the Challenger Memorial Youth Center.

The cultural resources investigation at the site included a California Historical Resources Information System (CHRIS) records search and literature review for the project at the South Central Coastal Information Center (SCCIC) at the California State University, Fullerton. Native American consultation was initiated with the Native American Heritage Commission (NAHC) with a request for a Sacred Lands File Search and contact list, and informational letters were mailed to tribes requesting comment. A paleontological resources records search, completed previously by the Los Angeles County Natural History Museum (LACNHM) was reviewed for information on known paleontological resources in the project site and surrounding area. In addition, a current records review of the museum's vertebrate paleontology records for the project site and vicinity was undertaken and reviewed. A cultural resources survey of the project site was conducted and a Historic Resources Assessment involving a pedestrian survey of the project site and research into the historic development of the site and surrounding area, including individual property information available from archival sources, was also completed. The study concluded that five on-site structures of an extant but defunct wastewater treatment and reclamation system are eligible for listing in the National Register of Historic Places and the California Register of Historical Resources. Avoidance or formal documentation via a Historic American Engineering Report (HAER) to document the history of early sewage treatment and water reclamation systems of the type found in the project area, and the physical properties of the system, was recommended. No other significant cultural resources were identified as a result of the study; however, because of the presence of historic and prehistoric resources in the vicinity, and the possibility of significant resources buried under development at the project site, monitoring of grading was recommended.

Sylmar Ground Return Replacement Return System, City of Los Angeles (MWatson). BonTerra Consulting has been hired by Montgomery Watson Harza to perform an assessment of biological and cultural resources for the Sylmar Ground Replacement Return System Project in Los Angeles. The northern segment extends from north to south within the utility easement corridor that runs between the Sylmar West Converter Station in Sylmar to the Kenter Canyon Terminal Tower near Brentwood. The southern extension, from the Kenter Canyon Terminal Tower to the ocean, is currently being considered under three alternatives. Cultural resources work included a CHRIS records search and literature review for the project at the SCCIC at the California State University, Fullerton. Native American consultation was initiated with the NAHC with a request for a Sacred Lands File Search and contact list, and informational letters were mailed to tribes requesting comment. A paleontological resources records search was completed by the LACNHM to compile information on known paleontological resources in the project site and surrounding area. Brief, one-day field surveys were conducted for the northern segment and memo reports were produced that identified constraints to the construction work. Cultural resources surveys of the southern extension's three alternatives were subsequently conducted.

Centennial Specific Plan Environmental Impact Report, Cultural Resources Surveys, Los Angeles County. BonTerra Consulting is preparing the environmental documentation for the Centennial Specific Plan Environmental Impact Report (EIR) that involves a new community consisting of residential, commercial, business park, and cultural and civic/institutional uses and encompassing approximately 11,680 acres. Mr. Maxon, as the Cultural Resources Manager for the project, is managing the review, evaluation, and mitigation of cultural resources for this proposed project. To consider the current status of the project area's cultural and paleontological resources in the environmental analysis, others initially performed a Phase I cultural resources study of the entire project area. Mr. Maxon surveyed an off-site Caltrans right-of-way south of the project site. This included a records search at the South Central Coastal Information Center at the California State University, Fullerton; a paleontological records search

at the Los Angeles County Museum; and an intensive pedestrian survey to evaluate the project area for the presence of cultural and paleontological resources. Numerous cultural resources sites were discovered on the project site, and some were evaluated for significance. Those that were determined significant and were in the Phase I development area were preserved in place. As the project evolves and expands beyond the Phase I area, additional sites must be evaluated for significance. Some may need to undergo data recovery excavations, while one structure must be recorded and evaluated. Consultations with regulatory agencies, County staff, Native American tribes, the interested public, and Clients will be completed and their comments considered, and the monitoring of disturbances around the known sites will be undertaken when construction activities commence.

Newport Banning Ranch (City of Newport Beach), As project manager of the cultural resources portion of this on going project, Mr. Maxon conducted archaeological, historic, and paleontological investigations for resources potentially impacted by the proposed Newport Banning Ranch development. The investigation consisted of (1) a Phase II test level excavation of eight prehistoric and three historic archaeological sites present on the site; (2) an assessment and evaluation of the built environment resources associated with the West Newport Oil Company development on site; and (3) a paleontological assessment of the project site's potential for the presence of sensitive rock formations and fossil resources. Three archaeological sites were deemed significant as a result of the study and the paleontological significance of the project site was deemed as high. However, no historic resources associated with oil extraction operations were identified. Mr. Maxon oversaw the completion of fieldwork, the preparation of archaeological, historical and paleontological technical reports, and subsequently prepared the cultural resources section of the EIR for the project. Future work will include data recovery excavations and/or site protection/preservation of significant cultural and paleontological resources impacted by the proposed project. Archaeological/Paleontological monitoring will be undertaken during grading of the project site.

Poseidon Desalination Plant, Cultural Resources Services, Huntington Beach and Newport Beach. BonTerra Consulting completed cultural and biological resources Phase I and II studies for the proposed Poseidon Resources Desalination Plant project in the City of Huntington Beach and the associated desalination plant pump station in the City of Newport Beach. The project included a Phase I cultural resources reconnaissance study that consisted of a CHRIS records search and literature review for the project at the SCCIC at the California State University, Fullerton, Native American coordination with the Native American Heritage Commission and local Native American tribes and individuals, a pedestrian survey of both locations, and a cultural resources technical report describing the results of the study and offering management recommendations.

While no archaeological or paleontological resources were discovered, historic structures are present on the property and were evaluated for significance. The proposed desalination plant location in Huntington Beach, currently developed with three defunct fuel oil tanks and their infrastructure, is located within the existing AES Huntington Power Generation Plant facility in Huntington Beach. The second parcel is located in unincorporated County of Orange, immediately adjacent to the City of Newport Beach. It consists of an existing pump station site that will be expanded as part of the current project. Because they are nearly 50 years old, the fuel oil tanks in Huntington Beach were recorded on DPR Series 523 forms and evaluated for eligibility for listing in the California Register of Historical Resources. They were found not eligible. Mitigation for potential project effects included recommendations for the historic structures present on site and retention of an Archaeologist and/or Paleontologist in the event that cultural resources or fossil resources are discovered during grading.

Atlanta Ave Widening Project HPSR/ASR/XPI (KOMEX). As project manager for the Atlanta Avenue widening project, Mr. Maxon conducted a Phase I cultural resources study to evaluate the potential effects of the project on cultural resources. The initial work included consultation with Caltrans cultural resources specialists regarding the Area of Potential Effects (APE) to cultural resources; a cultural resources literature review; Native American consultation; a field survey of the project area; and submittal to Caltrans of an Archaeological Survey Report (ASR), and a Historic Property Survey Report (HPSR). After further consultation with Caltrans, Mr. Maxon directed the historic evaluation of the Pacific Mobile Home Park south of the site; and completed an Extended Phase I (XPI) study consisting of subsurface archaeological excavation to evaluate the presence of the archaeological site within the APE, An updated ASR, XPI report, DPR 523 site forms, and HPSR was submitted to Caltrans and SHPO for review and comment.

Wintersburg Channel (OrCo). Mr. Maxon performed a Phase I cultural resources study to determine if the proposed widening of the channel would have the potential to impact cultural resources. The study included a literature review at the SCCIC, a paleontological literature review at the Los Angeles County Museum, a pedestrian survey of the APE, and completion of the CEQA section describing the results of the study. As cultural resources project manager on this contract, Mr. Maxon also consulted with regulators at the USACE, Native American tribes and individuals, and with a local archaeologist who has extensive experience working in and around Bolsa Chica. Elements of the defunct Bolsa Chica Gun Club were identified in the wetlands, but it was determined that the channel work would have no impact on them. Recordation of the channel itself and the Slater Bridge to the north was subsequently completed by an architectural historian. Construction monitoring was recommended.

AFFILIATIONS AND COMMITTEES

Pacific Coast Archaeological Society (PCAS)

Society for California Archaeology (SCA)

Society for American Archaeology (SAA)

Association of Environmental Professionals (AEP) (Board of Directors, 2005–present)

American Cultural Resources Association (ACRA)

PROFESSIONAL EXPERIENCE

BonTerra Consulting, Director, Cultural Resources 2008–present

Chambers Group, Director, Cultural Resources 2006–2008

SWCA, Project Manager/Director, Cultural Resources 2001–2006

RMW Paleo Associates, Staff Archaeologist/Senior Project Manager 1994–2001

EDUCATION

Bachelor of Arts in Anthropology – Dean’s Honors List, University of California, Santa Barbara, 1983

Various Archaeology Extension Classes, UCLA 1988-2002

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Archaeology Conservancy

Malki Museum

Autry National Center

Santa Susana Mountains Park Association (Lifetime)

Little Landers Historical Society (Lifetime)

Society for California Archaeology (Lifetime).

PROFESSIONAL SUMMARY

Albert Knight worked on his first student dig in 1975 and has been performing archaeological and anthropological research since 1986. Mr. Knight has worked as a Field Technician, a Crew Chief, and a Field Director on his own and others’ projects. He has excavated many units, has performed field surveys at numerous locations across much of Southern and Central California, and has performed some lab work. Mr. Knight has conducted records searches and historical research; has performed construction monitoring on many large and small projects; and has written a variety of papers, including short project reports and professional articles, a few of which have been published. Mr. Knight has also conducted paleontological monitoring and is well informed about the geography, geology, and biology of Southern and Central California.

REPRESENTATIVE PROJECT EXPERIENCE

Sylmar-Kenter Electrode Upgrade Project Archaeology Assessment, Encino. In 2009, Mr. Knight was the Archaeological Field Surveyor for the County of Los Angeles Department of Public Work’s Sylmar-Kenter Electrode Upgrade Project. Mr. Knight conducted an archaeological assessment in Encino and at the Van Norman Reservoir. Mr. Knight examined the proposed project area and prepared a summary of the field notes, the photographs, and a photographic log. Several archaeological sites were identified and visited in the vicinity of the alignment, but all will be avoided with project implementation.

Big Tujunga Canyon Road Archaeological Surveys, Angeles National Forest. From 2009 to 2010, Mr. Knight served as the Archaeological Field Surveyor for this project, which included 450 feet of Big Tujunga Canyon Road in the Angeles National Forest (ANF) for the County of Los Angeles Department of Public Works (LADPW). He conducted an archaeological assessment, performed a records check at the ANF Headquarters Heritage Resources Office in Arcadia, visited the proposed project location, walked portions of the proposed work area, made notes, photographed the area, and provided a summary of all work completed. No prehistoric resources were discovered as a result of the survey; however, Big Tujunga Canyon Road itself, and a rock wall extending along a portion of the road, were recognized as potentially historic and will be evaluated by an Architectural Historian.

Mullally Canyon Debris Dam Archaeological Assessment, County of Los Angeles Department of Public Works. In 2009, Mr. Knight served as the Archaeological Field Surveyor for an archaeological assessment at the Mullally Canyon Debris Dam. Mr. Knight examined the proposed project area and prepared a summary of the field notes, the photographs, and a photographic log. The Mullally Debris Basin was constructed in 1965 and therefore does not meet the minimum age requirements for evaluation as a historic resource. No other cultural resources were observed.

Pilot Desalination Plant Project Archaeological Monitoring, Long Beach. In 2008, Mr. Knight served as the Archaeological Monitor for the Pilot Desalinization Plant Project. He coordinated with Native American (Gabrielino) and Paleontological Monitors and with project personnel. The monitors observed all excavation work, and monitoring results were reported to the Client. No cultural resources were discovered during monitoring. It was later determined that the project area was an artificial beach, created from dredged sand that was deposited there many years ago, in what had been open ocean.

Broad Beach Waterline Project, Archaeological Monitoring, Malibu. In 2007, Mr. Knight served as an Archaeological Monitor during the installation of a new water line in Broad Beach Road. Mr. Knight recovered around two dozen prehistoric artifacts, which were cleaned and catalogued. All information was properly recorded using California Department of Parks and Recreation (DPR) 523 forms. After the artifacts were recorded and after consultation, Mr. Knight contacted the University of California, Los Angeles (UCLA) Fowler Museum of Cultural History, which curates artifacts from Southern California and which agreed to curate the artifacts recovered from the site. Mr. Knight also personally transferred the artifacts to UCLA.

Baker Ranch Sites CA-ORA-1004 and CA-ORA-1150 Archaeological Excavations, Orange County. In 2009, Mr. Knight worked as an Archaeologist for two sites on Baker Ranch in Orange County. Mr. Knight directed the excavations of test units and shovel test pits, directed the crew, recorded notes pertinent to the excavations, photographed the excavations, produced photographic logs, and monitored equipment. All work produced negative results.

Irwindale Materials Recovery Facility Archaeological Assessment, Valley County Water District, Irwindale. Mr. Knight served as the Archaeological Field Surveyor for this project and conducted an archaeological survey at the Irwindale Materials Recovery Facility. Mr. Knight examined the proposed project area and prepared a summary of the field notes, the photographs, and a photographic log. No significant cultural resources were discovered; however, monitoring for paleontological resources was recommended during deeper excavations.

Thomas Roads Improvement Project Archaeological Assessment, Bakersfield. Mr. Knight served as one of two Archaeological Field Surveyors for this project, and conducted an archaeological assessment for the proposed Rosedale Highway (State Route 58)/State Route 99 Interchange Study. Over the course of three days, Mr. Knight examined the proposed project area and prepared a summary of the field notes, the photographs, and a photographic log. Because the vast majority of the project area is developed, no archaeological resources were expected or discovered. Monitoring was recommended in many areas, especially along the Kern River, which courses through the project area.

EDUCATION

Bachelor of Science, Anthropology, University of California, Riverside, CA, 1991

PROFESSIONAL CERTIFICATIONS

Certified Archaeologist, Orange County Environmental Management Agency

Certified Archaeologist, Riverside County Transportation and Land Management Agency

Principle Investigator, Southern California, Bureau of Land Management

Hazwoper 40 Hour Certification

PROFESSIONAL SUMMARY

David Smith has 25 years of experience as a principal investigator, field director, project archaeologist, and project manager. His project experience has involved the Bureau of Land Management (BLM) and BOR-managed properties, pipelines, transmission lines developments, facilities, mines, and parks. He has expertise in National Environmental Policy Act/California Environmental Quality Act (NEPA/CEQA) compliance involving surveys, inventories, monitoring, testing and data recovery, and Native American consultations. He is a certified archaeologist for Riverside County and has completed Riverside County cultural sensitivity training. He has extensive experience as a field and laboratory supervisor. He has conducted archaeological surveys in California, Nevada and Arizona, encompassing over 40,000 acres of private and public lands. These surveys were conducted for private and public clients. Agencies include the BLM in Arizona, California, and Nevada; the Prescott National Forest, the San Bernardino National Forest, the Cleveland National Forest, the Angeles National Forest, the Coconino National Forest, the Department of Defense, the Bureau of Reclamation, California State Lands Commission, Arizona State Lands, Arizona State Museum, the United States Army Corps of Engineers (USACE), and dozens of municipal, county, and state agencies.

Mr. Smith has extensive experience with agency, client, Native American, and subcontractor coordination; archival research; field reconnaissance; site testing; data recovery excavation; construction monitoring; site recordation; site protection/preservation; mapping; laboratory analysis; and report production. He has the practical experience necessary to staff, train, and manage field crews effectively to produce an accurate, reliable product for the client.

Mr. Smith's field experience includes all facets of safety training, education, and implementation to ensure compliance under the most rigid agency regulations.

REPRESENTATIVE PROJECT EXPERIENCE

Cultural Resources Survey, 51 Miles of the Ivanpah-Eldorado Transmission Project, CA/NV – Southern California Edison (SCE). Mr. Smith provided archaeological consulting, analysis, monitoring, and reporting services in support of SCE's Ivanpah-Eldorado Transmission Project. David Smith surveyed 51 miles of transmission lines and associated roads and updated all known sites throughout the right-of-way as well as recorded new sites on DPR records for the California segment and IMACS forms for the Nevada segment.

Class III Cultural Resource Inventories, Fiber Optic Cable Installation, Victorville, CA, to Las Vegas, NV, San Bernardino and Clark County – AT&T, sub to Forkert Engineering & Surveying, Inc.. The study area for the fiber optic cable installation project encompasses a

190-mile linear segment located primarily within the BLM. Mr. Smith served as the Project Archaeologist and conducted Class III cultural resources records search for the project Area of Potential Effect (APE) (including a one-mile query radius) at the San Bernardino Archaeological Information Center (SBAIC). A query was also sent to the California Native American Heritage Commission (NAHC) to determine whether any sacred sites or localities were located on or near the project site. Class III Inventories, consisting of high-resolution pedestrian surveys of the project site and adjacent areas, were also conducted. A survey report was prepared documenting the findings of the various record searches, information queries, and field inventories. David Smith will perform cultural resources construction monitoring.

Initial Study (IS), 220kV Alignment (25 sq. mi.), Riverside County – Riverside RTRD. The project consisted of an Initial Study to determine if archaeological resources would be impacted by any of three proposed utility alignments. Mr. Smith served as the Project Archaeologist and conducted studies included records and literature reviews for archaeological and paleontological resources.

Class III Cultural Resources Inventory, Two Pipeline Repair Excavations on the CALNEV Pipeline, California and Nevada – Bureau of Land Management, Barstow Resource Area. Mr. Smith served as the Project Archaeologist and performed Class III cultural resources inventory for two pipeline repair excavations on the CALNEV pipeline, Colton to Las Vegas. (2 acres). Mr. Smith conducted a Class III cultural resources inventory pursuant to Section 106 of the NHPA. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Class III Inventory for Mile Post 140 and 145 on the CALNEV Pipeline. Bureau of Land Management, Barstow Resource Area. Mr. Smith served as the Project Archaeologist and conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Testing and Data Recovery at 25 Sites, The Shady Canyon Archaeological Project, Orange County – City of Irvine. Mr. Smith served as the Project Manager and Project Archaeologist and managed the Phase II Testing and Evaluations for numerous sites and the Phase III Data Recovery for 25 sites located in Shady Canyon, County of Orange, California. Duties included field and laboratory management, Native American reburial coordination, technical writing, and technical editing.

Data Recovery at 7 Sites, The Bonita Mesa Archaeological Project, Irvine, Orange County – The Irvine Company. Mr. Smith served as the Project Archaeologist and managed the Phase II Testing and Evaluations and the Phase III Data Recovery for 25 sites located on Bonita Mesa. Duties included field and laboratory management, Native American reburial coordination, technical writing and technical editing.

PAMELA DALY

4486 University Ave., Riverside, California 92501 (951) 369-1366

Education

- Master of Science - Historic Preservation - University of Vermont, Burlington, Vermont. 1998
Awarded Graduate Teaching Fellowship in Historic Preservation.
- Bachelor of Science - Business Administration - Elmira College, Elmira, New York. 1994

Experience and Skills

Historic Preservation

• Federal Level Projects

- Section 106 - Evaluate impact of proposed removal and storage of National Register-eligible object at Camp Parks Army Reserve Base, Dublin, CA.
- Section 106 - Naval Air Station, North Island, San Diego, California. Historic Resources Survey and Eligibility Investigation of thirteen historic airplane hangars for eligibility to the National Register.
- Section 106 - Edwards Air Force Base, California - Report of findings on 37 Historic Wells and Homesteads. Includes HAER documentation, analysis and curation of historic and pre-historic artifacts, site form preparation, archival research, Phase II and Phase III reports.
- Section 106 - Air Force Research Laboratory, Mesa, Arizona - Historic Building Assessment and Evaluation Report. Project included archival research, historic context, building description and site form.
- Section 106 - Army Corp of Engineers, 404 Permit review of the decommissioned Marine Corps Air Station El Toro, California. Project consisted of re-surveying 76 buildings and structures previously reviewed in 1996 for National Register Eligibility. Project included field survey, archival research, and updating site forms.
- Section 106 - Nellis Air Force Base, Nevada - Historic Building Report on Capehart & Wherry Housing. Project included archival research, site forms, photography.
- Section 106 - Andersen Air Force Base, Guam - Supervise archaeological subcontractors Phase III survey project for Air Force client.
- Section 106 - Clear Air Force Base, Alaska - Project to create booklet, bronze plaque and outdoor interpretive signs to record the Cold War radar operations.
- Section 106 - Bureau of Land Management, Kern Front Oil Fields, Bakersfield, CA - Historic Building Assessment and Evaluation Report for leaseholder. Project included archival research, historic context, building description, industrial archeology investigation and site form.
- Section 106 - Army Corp of Engineers, Union Pacific Railroad - Historic Building Assessment and Evaluation Report of all the bridges and culverts located in 102 mile section. Project included field survey, archival research, historic context, bridge and culvert descriptions, and site forms.
- Section 106 re-survey of decommissioned El Toro Air Station, Irvine, CA.
- Section 106 review of Jim's Corner Store, Burlington, VT.
- Section 106 Level 1 Reconnaissance of Jericho, VT, Rt 15 intersection.
- Section 106 Level 1 Reconnaissance of Milton, VT, sidewalk project.
- Section 106 Level 1 Reconnaissance of Essex, VT, sidewalk project.
- Section 106 Level 1 Reconnaissance of Town of Hartford, VT, sidewalk/bike project.
- National Register Historic Landscape survey of historic agricultural properties in Essex County, NY.
Intensive level survey of 8 historic farmsteads.
- National Register Nomination for Residential Historic District, Vergennes, VT. NR nomination of 110 residences and outbuildings dating ca. 1790 to 1950.
- National Register Nomination of Fairfield Baptist Church, Fairfield, VT. Nomination of rural

community church with ties to President Chester Arthur.
National Register nomination for Laurel Hall, Cuttingsville, VT. Nomination of private country villa, conservatory, carriage barn, and mausoleum.
Integrated Cultural Resources Management Plan (ICRMP) Update – Corona Naval Weapons Center – update historic properties treatment.
Integrated Cultural Resources Management Plan (ICRMP) Update – Seal Beach Naval Weapons Center – update historic properties treatment.
Integrated Cultural Resources Management Plan (ICRMP) Update – Fort Hunter Liggett, U.S. Army Reserves Base – update historic properties treatment.
Integrated Cultural Resources Management Plan (ICRMP) Update – Camp Parks, U.S. Army Reserves Base – update historic properties treatment.
Integrated Cultural Resources Management Plan (ICRMP) – Moffat Field, U.S. Army Real Property – create historic properties treatment for ICRMP.

● **State Level Projects**

CEQA – Historic Resource Assessment Report for 4149 Chestnut Street, Riverside, CA.
CEQA – Historic Resource Assessment Report of Banning Ranch, Newport Beach, CA.
CEQA – Historic Resource Assessment Report for Centennial Ranch Project, Gorman, CA.
CEQA – Historic Resource Assessment Report of historic irrigation system, Turlock, CA.
CEQA – Historic Resource Assessment Report of residential structure in Rialto, CA.
CEQA – Historic Resource Assessment Report, Orange County Civic Center, Santa Ana, CA.
CEQA – Historic Resource Assessment Report of Los Angeles County Fire Station, Malibu, CA.
CEQA – Historic Resources Assessment Report of water diversion features, Sonoma, CA.
CEQA – Historic Resources Assessment Report for Fontana Fire Station #1, and American Legion Post 262, constructed in 1927.
CEQA – Historic Resources Assessment Report for Department of Water Resources, Redlands, CA. Record and research historic Cold War-era structures and landscape.
CEQA – Historic Resources Assessment Report of historic date and citrus farm in Coachella, CA.
CEQA – Historic Resources Assessment Report for Glendale College Expansion Project.
CEQA – Historic Resources Assessment Report of residential structure in Apple Valley, CA.
CEQA – Historic Resources Assessment Report of structures in Loma Linda, CA.
CEQA – Historic Resources Assessment Report of residence on Cedar Street, Glendale, CA.
CEQA – Historic Resources Assessment Report of 1894 carriage house in Los Angeles, CA.
CEQA – Historic Resources Assessment Report of farmhouse in the City of Moreno Valley, CA.
CEQA – Historic Resources Assessment Report of four properties on Carlton Avenue, Hollywood, CA.
CEQA - Wrightwood Housing Development – record and research historic structure located in the project ROW. Consult with San Bernardino County environmental department.
CEQA – White Springs Sulphur Pools, Riverside, CA – Phase I survey for determination of CRHR and NR eligibility.
CEQA – Fitch Avenue Bridge – Phase I survey determination of rural one-lane bridge.
CEQA –New Model Colony housing development – Phase I & II survey of rural agricultural properties, Ontario, CA.
CALTRANS survey of building and structures along State Route 99, Stockton, CA.
CALTRANS survey of 1915 railroad bridge for seismic repair project, El Monte, CA.
CALTRANS survey of 75 buildings and structures along State Route 99, Manteca, CA.
CALTRANS survey of Cherry Avenue and Pacific Coast Highway Interchange, Long Beach, CA.
CALTRANS review of residential structures located in the project area, Red Hill Avenue, Orange County.
NYS DOT survey of historic bridges in Owego, Oswego and Onodaga Counties, New York.
ISTEA Historic Resource survey, Lake Champlain Railroad Causeway/Bikepath, Colchester, VT.
VSA22 Historic Resource review, Goodrich Memorial Library, Newport, VT.
VAOT Highway Resurfacing Program, Dufresne-Henry Engineers. 2001-2003.

● **Local Level Projects**

Develop Mitigation Measures Plan (MMP) for historic resource listed on the National Register and California Register of Historic Resources, in accordance with the Secretary of the Interiors Standard of Treatment for Preservation of Historic Structures. Redlands, CA.

HAER-level documentation for mitigation of Reservoir #1, Yorba Linda, CA.

HABS-level documentation for mitigation of Fire Station #1, Fontana, CA.

HABS-level documentation for mitigation of American Legion Post 261, Fontana, CA.

HABS level documentation for mitigation of Riverrock bungalows in Riverside, CA.

HABS-level documentation for mitigation of The Quilt Stop, Sparks, NV.

HABS-level documentation for mitigation of the Snyder Ranch, Apple Valley, CA.

Historic resource evaluation of commercial property on Euclid Avenue, Ontario, CA.

Viewscape review for proposed housing development, Reno, NV.

Historic Sites and Structures Survey for the Town of Shelburne, VT. Phase II survey of 40 residential and agricultural properties

Survey Plan for the City of Burlington, Burlington, VT. Ten-year plan for future survey work in city.

Urban Survey, 2000, City of Burlington, Burlington, VT. Phase I survey and photographs of 250 urban historic resources.

Urban Survey, 2001, City of Burlington, Burlington, VT. Phase I survey and photographs of 220 urban historic resources.

Historic Sites and Structures Survey: Phase IV for the Town of Windsor, VT. Phase II survey of 40 structures and historic context of Buena Vista District.

Historic Sites and Structures Survey: Phase V for the Town of Windsor, VT. Review of 1977 National Register nomination, proposed additions, and additional description of resources.

● **Architectural Conservation Projects (per Secretary of the Interior's Standards)**

Develop design plans for the alteration of a historic cabin in the San Bernardino National Forest.

Develop exterior design plans for the rebuilding of historic cabin in San Bernardino National Forest.

Historic Structures Report, including conditions assessment and treatment plan for 1885 Lindo Lake Boathouse, Lakeside, CA.

Historic Structures Report, including conditions assessment and treatment plan for 1887 Bancroft Rock House, Spring Valley, CA.

Historic Structures Report, including conditions assessment and treatment plan for 1865 Rutland Railroad Train Station, Vergennes, VT.

Historic Structures Report for emergency stabilization of endangered historic property in Essex, NY.

Repair and restoration of early 20th century house in Riverside, CA.

Architectural repair specifications for the 1805 Bradley Law Office, Westminster, VT

Project management of early 19th century house rehabilitation, St. Albans, VT.

Repairs and maintenance of converted barn in Ithaca, NY.

Historic paint finishes analysis for Town of Rockingham, VT.

Historic paint finishes analysis for Middlebury Town Hall, VT.

Historic paint finishes analysis for Labor Union Hall, Barre, VT.

Repair and restoration of cast iron fence for Greystone Mansion, Essex, NY.

Photo survey of Labor Union Hall, Barre, VT, prior to rehabilitation.

Evaluation and research of historic colonial tannery structure in Essex, NY.

Rehabilitation of 19th century barn for use as residence, Trumansburg, NY.

● **Historic Preservation Educational Projects**

Education and slide presentation of American architectural styles.

Education and slide presentation of California revival architectural styles.

Walking tours of Windsor, Vergennes and Shelburne, Vermont.
Research paper on decorative historic painted finishes created in Vermont public buildings during the late 19th century.

● **Other Preservation Projects:**

Adaptive Reuse – Downtown Development Project for six historic structures in Morrisville, VT.

Develop Revised Design Review and Zoning Guidelines, City of Burlington, VT.

Part of team to develop guidelines for protecting historic resources in the city.

Presenter at Vermont Historic Preservation Conference on Industrial Archeology and site research.

Developed and implemented educational tours and day programs of historic sites and properties.

Awarded grant proposals for educational and historic preservation projects.

Developed and designed fundraising and publicity brochures.

● **Preservation Skills**

Maintenance and repairs to historic structures including painting, mortar analysis, mortar repointing, and plaster repair.

Historic Structures Reports - condition assessment reports.

Use of the Secretary of the Interiors Standards for the restoration, rehabilitation, or restoration of historic buildings.

Historical paint analysis (chromochronology).

Research of historic structures using deeds, wills, public records and archival documentation.

Nomination of historic sites and structures for the National Register of Historic Places.

Section 106 and 110 of the National Historic Preservation Act.

Federal Historic Preservation Tax Incentive program.

Business Management/Accounting

- Over 25 years experience in financial management and accounting.
- Competence in all accounting aspects: profit and not-for-profit organizations.
- Successful grant writing and funding from state, private and federal agencies.
- Extensive experience corresponding with federal, state, county and private organizations regarding agency fiscal requirements.
- Analyzed the efficiency of business internal accounting systems, implementing procedures to improve financial accuracy and operating cost-effectiveness.

Financial Project Management/Supervision

- Managed agency and individual project budgets from \$350,000 to \$2.5 million.
- Responsible for overseeing budget and direct labor requirements of Government contracts.
- Financial project management for 26 concurrent projects valued at \$29 million.
- Coordinated five departments to meet financial and organizational goals.
- Supervised eight project managers to meet contractual agreements.
- Negotiated prime and sub-contractor agreements and purchase orders.
- Qualified contract specialist with U.S. Department of Defense, NASA and National Park Service. Experience with FAR, DFAR and associated regulations.

Employment History

2005 - present	Architectural Historian Consultant	Daly & Associates, Riverside, CA.
2003 – 2005	Sr. Architectural Historian	Earth Tech, Inc., Colton, CA.
1998 to June 2003	Architectural Historian Consultant	Daly & Associates, Shelburne, VT.

1998 (two semesters)	Teaching Assistant	Historic Preservation Dept., University of Vermont
1989 - 1997	Director of Contracts	Odyssey Research Assoc., Inc., Ithaca, NY.
1987 - 1989	Senior Corporate Accountant	Emerson Power Transmission, Ithaca, NY.
1982 - 1987	Director of Budget & Finance	Tompkins County Senior Citizens Council, Inc., Ithaca, NY.

Volunteer History

2007 – present	Old Riverside Foundation	Riverside, CA.
2000- 2003	Commission Member - Town of Shelburne, Vermont Historic Preservation Design Review Board.	
1996 - 1997	President - Board of Directors	Historic Ithaca, Ithaca, NY.
1993 - 1996	Board Member, Secretary	Historic Ithaca, Ithaca, NY.

Professional Affiliations

NTHP - National Trust for Historic Preservation - Forum Member
SIA - Society for Industrial Archeology
VAF - Vernacular Architecture Forum
CCPH - California Council for the Promotion of History
APT - Association for Preservation Technology

APPENDIX D

HISTORIC RESOURCES ASSESSMENT (DALY 2013)

HISTORIC RESOURCES ASSESSMENT REPORT

Of

Santa Anita Stormwater Flood Management and Seismic Strengthening Project Santa Anita Wash, Headworks, and Debris Basin Los Angeles County, CA

**Maintained by: Los Angeles County Flood Control District
Owned by: County of Los Angeles Department of Public Works**

**(South ½ of Section 10 and Section 15, Township 1 North, Range 11 West
San Bernardino Base and Meridian)**

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EXECUTIVE SUMMARY

This assessment report documents and evaluates the federal, state, and local significance and eligibility of the Sediment Transport Tunnel, Headworks and Culvert Bridge, Debris Basin and spillway, located in the Area of Potential Effect (APE). The Big Santa Anita Dam was evaluated in 2007 by EDAW, Inc. and determined not eligible to be considered a historic resource. The collection of built-environment resources in the APE are owned and maintained by the County of Los Angeles Department of Public Works, Alhambra, California.

The historic resource assessment and evaluation of the built-environment resources located in the APE was conducted by Pamela Daly, M.S.H.P., Senior Architectural Historian. In order to identify and evaluate the subject area, and the potential historic resources, a multi-step methodology was utilized. An inspection of the Santa Anita Wash and existing structures, combined with a review of local and regional historic archives regarding the APE, was performed to document existing conditions and assist in assessing and evaluating the water-related structures for significance.

In evaluating the historical significance of the structures located within the APE, federal, state, and local criteria were applied. The structures identified in this study are not currently listed, individually or collectively, in either the National Register of Historic Places or the California Register of Historical Resources.

The Big Santa Anita Dam was constructed in 1924-1927 by the Los Angeles County Flood Control District. Because the area below the dam was not heavily populated until many years later, the water released by the Dam could just follow the Santa Anita Wash down into the Rio Hondo Wash, without too much damage to private property. But after World War II, the population in the areas of Arcadia, Sierra Madre, and Monrovia increased dramatically, and residents began to construct houses into the foothills of the San Gabriel Mountains. The water coming out of the various canyons had to be controlled to protect life and property. It was in the 1950s that the Headworks and Culvert Bridge, Debris Basin, and spillway were constructed to control and capture the flow from the Big Santa Anita Dam. The Sediment Removal Tunnel was constructed only to provide access to the basin of the Big Santa Anita Dam reservoir so that accumulated silt could be removed.

Under National Register and/or California Register criteria relating to the association of the built-environment structures located within the APE with significant historical events that exemplify broad patterns of our history, the Dam, Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, do not appear to qualify as significant historic resources individually or collectively. Throughout the world, debris basins and dams (masonry, earthen or timber) have been constructed by both private and public entities to control seasonal rain fall, to protect people and property. The structures located in the APE are just part of one of many flood-control systems that were constructed in the San Gabriel Mountain

canyons. There is no evidence that any of the structures in the APE is eligible for listing under Criteria A/1.

Under National Register and/or California Register criteria relating to the built-environment structures located within the APE's association with persons of historic importance, the Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, do not appear to qualify as significant resources, individually or collectively. The plans for the structures located in the Santa Anita Wash were prepared by the Los Angeles County Flood Control District staff engineers, or the Army Corp of Engineers, as part of their normal tasks and duties. There is no evidence that any of the structures in the APE are eligible for listing under Criteria B/2.

Under National Register and/or California Register criteria relating to the distinctive characteristics of a type, period, region, or method of construction, the built-environment structures located within the APE are not significant as they do not, individually or collectively, embody any innovative engineering design or method of construction, or high artistic design. The Headworks was designed using common technology to channel water from the Dam towards the Debris Basin or into the 30' pipe to the Sierra Madre spreading grounds. The Debris Basin was constructed by excavating a water containment area in the Santa Anita Wash, and a spillway was constructed to hold heavier debris back during high rainfall events. The technology used to create the basin was commonplace, as was the use of concrete to hold, channel, divert, and control the water as it came down the foothills. The Dam, Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, do not appear to present any technological achievement in the history of water systems locally, regionally or nationally, and are therefore not eligible for listing either individually or collectively under Criteria C/3.

Based upon a survey of the above-ground historic period resources within the APE performed in January 2013, the APE has not yielded, nor does it appear to have the potential to yield, information important to the history of the local area, California or the nation pursuant to National Register and/or California Register criteria D/4.

In summation, the Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, are not eligible for listing in the National Register and/or the California Register, as they do not, individually or collectively, meet any of the criteria necessary for listing in the registries.

TABLE OF CONTENTS

I. INTRODUCTION	1
A. Project Description	1
B. Background Information	3
C. Methodology.....	4
II. REGULATORY FRAMEWORK.....	6
A. Federal Level	6
1. National Register of Historic Places	6
B. State Level.....	9
1. California Register of Historical Resources	9
2. California Office of Historical Preservation Survey Methodology	10
C. Local Level.....	11
1. City of Arcadia	11
III. EVALUATION	12
A. Historic Context	12
1. Arcadia	12
2. Big Santa Anita Canyon	12
B. Historic Resources Identified	15
C. Significance	21
IV. BIBLIOGRAPHY	24
A. Publications.....	24
B. Public Records, Prior Reports, Other	25

Figures

1. Regional Project Location
2. Location of Area of Potential Effect (APE)

Photographs

1. Aerial view of the Big Santa Anita Dam, Headworks, and Debris Basin
2. South portal of the tunnel
3. Headworks
4. Bridge over 4-pipe culvert in Santa Anita Dam Wash, near Arcadia Wilderness Park
5. South elevation of spillway
6. Santa Anita Wash storm channel adjacent to spreading grounds

Appendices

- A. Selection of drawings and plans of the Headworks, Debris Basin, and Sediment Removal Tunnel
- B. California Department of Parks and Recreation Inventory Site Forms (DPR forms)

I. INTRODUCTION

A. PROJECT DESCRIPTION

The Santa Anita Stormwater Flood Management and Seismic Strengthening Project (Project) will modify existing facilities south of the Big Santa Anita Dam, located in Santa Anita Wash. These facilities are the Santa Anita Headworks (Headworks) and associated Culvert Bridge; Santa Anita Debris Basin (Debris Basin) and associated spillway; and the Sediment Removal Tunnel. These facilities, which are operated and maintained by the Los Angeles County Flood Control District (District), serve to control and conserve the floodwaters of the Santa Anita Canyon watershed. This watershed is mostly undeveloped with the majority of it located in the Angeles National Forest within the San Gabriel Mountains, which are very steep and among the most highly erosive mountains in the world. This watershed is also susceptible to wildfires, which result in tremendous debris flows during subsequent storm events. The facilities are located within one mile of the Sierra Madre Fault, which is capable of producing an earthquake of magnitude 7.5.

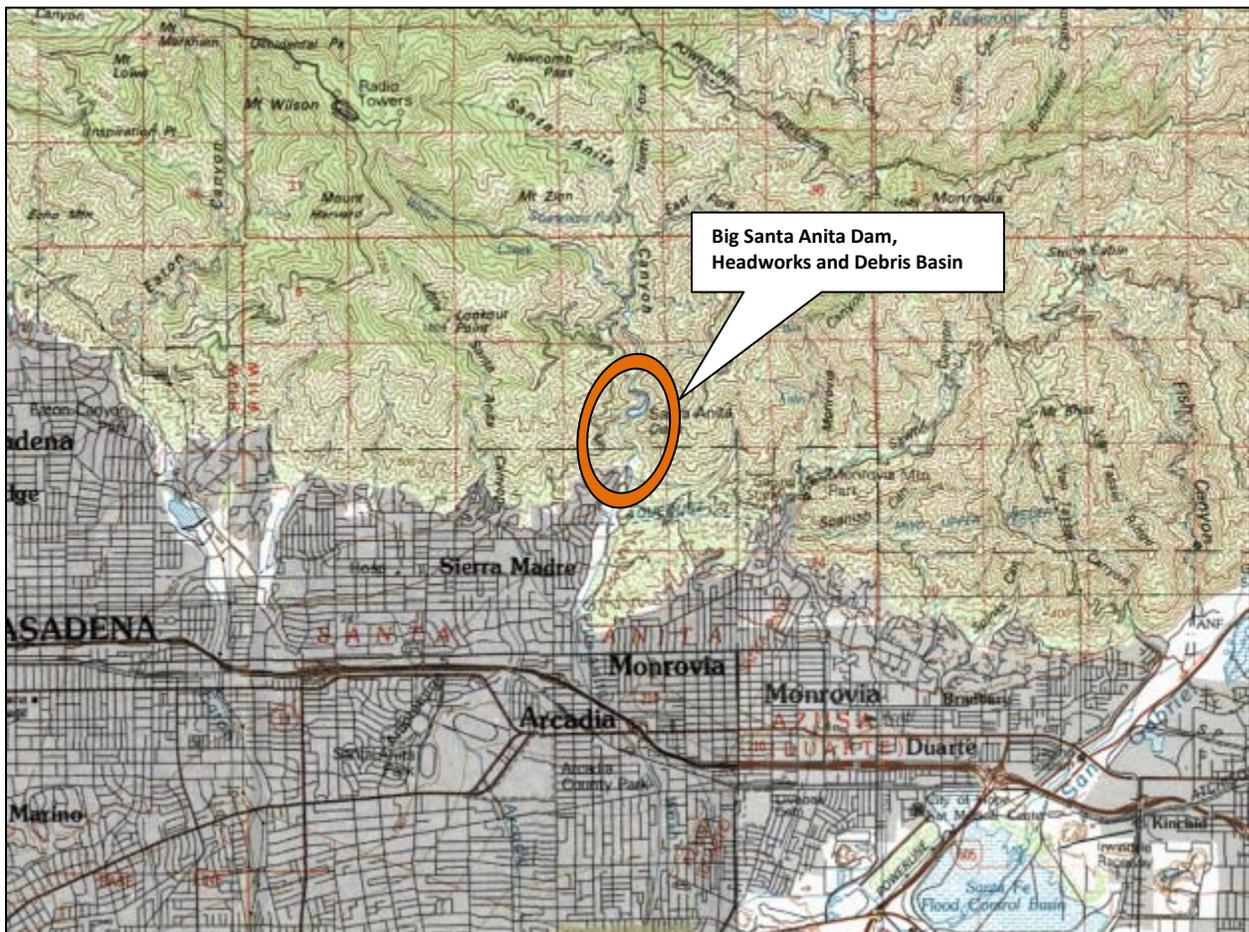
This Project will improve District facilities to better manage stormwater runoff from the Big Santa Anita Canyon watershed and achieve the following goals: 1) reduce flood damage to the downstream communities, 2) increase recharge of the local groundwater basin and 3) improve public safety by remediating seismic safety issues at the Big Santa Anita Dam and the Debris Basin.

Rehabilitation of the Headworks structure will include: 1) reconstruction of the levee to ensure it can withstand flow of up to 1000 cubic feet per second (cfs); 2) armoring of the roadway and construction of a new culvert bridge to the Arcadia Wilderness Park to ensure the roadway and bridge can withstand flow of up to 2000 cfs; 3) removal of the tainter gate and replacement with an *Obermeyer*[™] pneumatically operated spillway gate to allow for continued capability to divert flows through the spreading grounds diversion gates; 4) installation of new automated spreading grounds diversion gates; and 5) installation of new control systems integrated with the control systems of the other Project components to optimize water conservation. A critical component of the Headworks' control system is remote operation capability to allow for changes in flow rates to each of the spreading grounds based on available capacity.

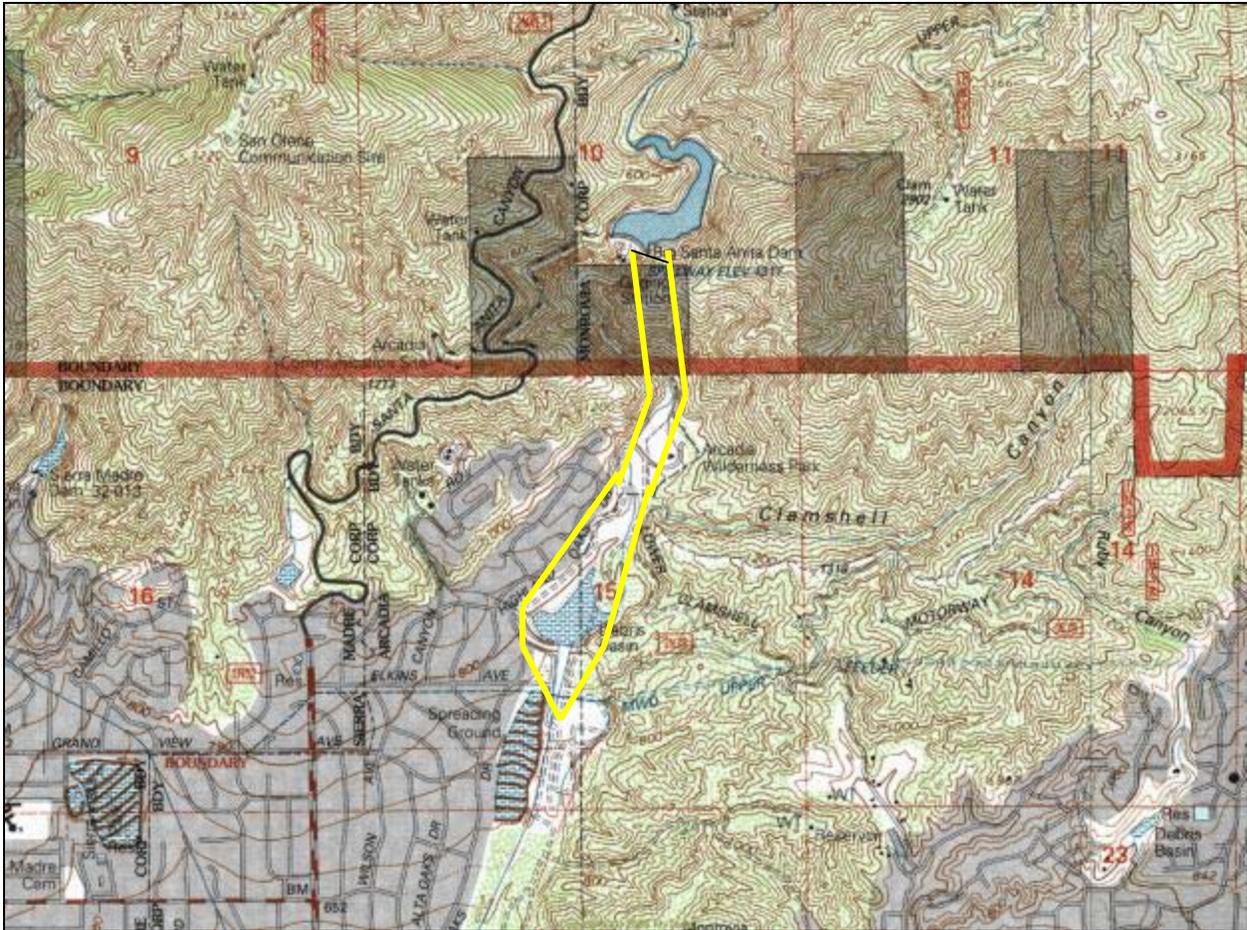
The Debris Basin provides flood protection by capturing sediment laden stormwater runoff and discharging clear stormwater runoff to the channel downstream. If the Debris Basin were to sustain damage or to fail as a result of seismic activity, debris would be deposited in the downstream channel, reducing the ability to safely convey subsequent storm flows in the channel through the communities resulting in flood damage. In addition, a Debris Basin failure would result in the spreading grounds being washed out and incapable of recharging stormwater runoff into the underlying groundwater basin.

Remediation of the seismic deficiencies at the Debris Basin will consist of the following improvements: 1) replacement of the spillway tower due to inability of the existing tower to resist seismic loading, 2) replacement of a portion of the Debris Basin embankment subject to liquefaction, and 3) reconstruction of the spillway to address concerns with settlement/separation between the spillway and the embankment and to remove potential for failure in bending of the spillway walls. A new automated outlet gate and control system will be constructed to modernize operations and ensure compatibility with other Project components.

The evaluation of the built-environment resources south of the Big Santa Anita Dam has been prepared so that the Los Angeles County Department of Public Works may have available information necessary for any future alterations within the Santa Anita Wash project area. This report includes a discussion of the survey methodology used, a brief historic context, and formal evaluation of the built-environment structures within the project survey area.



**Figure 1: Regional Project Location
(U.S.G.S. Los Angeles Quad, 1:100,000)**



**Figure 2: Area of Potential Effect (APE) for this evaluation report
(U.S.G.S. Mt. Wilson Quad, 1:24,000)**

B. BACKGROUND INFORMATION

The area of potential effect (APE) for the proposed project spans three legal jurisdictions. The northern portion of the project survey area is located in Section 10 of Township 1 North, Range 11 West. Section 10 is situated within the boundary of the Angeles National Forest overseen by the United States Forest Service. The Big Santa Anita Dam, reservoir, and portion of the Santa Anita Wash that runs south up to the boundary with Section 15 of Township 1 North, Range 11 West are under the control of the U.S. Army Corp of Engineers Los Angeles Division. The Sediment Removal Tunnel used for the disposal of silt from the bottom of Santa Anita Dam reservoir, spans south from the reservoir to the southern boundary of Section 10, and is located in the Angeles National Forest.

From there south, the project survey area is primarily on land that is located in the City of Arcadia. A small portion of undeveloped land south of Arcadia Wilderness Park belonging to the City of Monrovia protrudes into the APE, and appears to be comprised mostly of scrub

vegetation on loose creek bed. The Headworks, Culvert Bridge, Debris Basin, and spillway, are located on land in the City of Arcadia.

In November 2007, EDAW, Inc., prepared the document *Cultural Resources Assessment for the Proposed [Big] Santa Anita [Dam] Riser Modification and Reservoir Sediment Removal Project, Los Angeles County, California*, authored by Monica Strauss, M.A., et. al. The report identified, described, and presented evaluations for only those built-environment resources located within the boundary of the Angeles National Forest that could be adversely impacted by proposed project activities. The report did not identify, document, or evaluate any built-environment resources located south of the Angeles National Forest boundary line. The EDAW report determined that the Big Santa Anita Dam and those built-environment resources closely associated with the dam and reservoir, described collectively as the Santa Anita Dam Complex, were not eligible for listing in the National Register of Historic Places as required by Section 106 of the National Historic Preservation Act. Project activities were also evaluated under requirements of the California Environmental Quality Act (CEQA) and were determined to have no potential to cause a significant impact to historic resources.

The current APE has not been previously surveyed for the presence of built-environment historic resources. The structures within the APE have not been evaluated for eligibility for listing in the National Register of Historic Places or California Register of Historical Resources.

C. METHODOLOGY

The historic resource assessment and evaluation for this report was conducted by Pamela Daly, M.S.H.P., Senior Architectural Historian. In order to identify and evaluate the subject property as a potential historic resource, a multi-step methodology was utilized. An inspection of the existing structure and associated features, combined with a review of accessible archival sources for this structure, was performed to document existing conditions and assist in assessing and evaluating the property for significance. Photographs were taken of the structure and associated structures and features, including photographs of architectural details or other points of interest, during the pedestrian-level survey.

The National Register of Historic Places (National Register) and California Register of Historical Resources (California Register) were employed to evaluate the significance of the structures within the Area of Potential Effect (APE.) The City of Arcadia does not have specific regulations in their municipal code for the preservation, alteration or demolition of historic resources. As such, the City of Arcadia uses the California Register criteria to evaluate the significance of built-environment resources over 50 years old.¹ In addition, the following tasks were performed for the study:

¹ *Arcadia General Plan: Parks Recreation and Community Resources, November 2010. Page 7-45.*

- The National Register and the California Historical Resources Inventory were searched.
- Site-specific research was conducted on the Big Santa Anita Dam, Debris Basin, Headworks and Santa Anita Wash utilizing maps, city directories, newspaper articles, historical photographs, and other published sources.
- Background research was performed at local historic archives and through internet resources.
- Ordinances, statutes, regulations, bulletins, and technical materials relating to federal, state, and local historic preservation, designation assessment processes, and related programs were reviewed and analyzed.

II. REGULATORY FRAMEWORK

Historic resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification, and in certain instances, protection of historic resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities. The National Historic Preservation Act of 1966 as amended (NHPA), and the California Register of Historical Resources (CRHR), are the primary federal and state laws and regulations governing the evaluation and significance of historic resources of national, state, regional, and local importance. A description of these relevant laws and regulations are presented below.

In analyzing the historic significance of the subject property, criteria for designation under federal, and State landmark programs were considered. Additionally, the Office of Historic Preservation (OHP) survey methodology was used to survey and rate the relative significance of the property.

A. FEDERAL LEVEL

1. National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the National Register was established by the NHPA as “an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment.”² The National Register recognizes properties that are significant at the national, state and local levels.

To be eligible for listing in the National Register, the quality of significance in American history, architecture, archaeology, engineering, or culture must be in a district, site, building, structure, or object that possesses integrity of location, design, setting, materials, workmanship, feeling and association, and:³

- A. is associated with events that have made a significant contribution to the broad patterns of our history; or
- B. is associated with the lives of persons significant in our past; or

² *Code of Federal Regulations (CFR), 36 § 60.2.*

³ *Guidelines for Completing National Register Forms, National Register Bulletin 16, U.S. Department of the Interior, National Park Service, September 30, 1986 (“National Register Bulletin 16”). This bulletin contains technical information on comprehensive planning, survey of cultural resources, and registration in the National Register of Historic Places.*

- C. embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. yields, or may be likely to yield, information important to prehistory or history.

A property eligible for listing in the National Register must meet one or more of the four criteria (A-D) defined above. In addition, unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing.

In addition to meeting the criteria of significance, a property must have integrity. "Integrity is the ability of a property to convey its significance."⁴ According to *National Register Bulletin 15*, within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of these seven aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.⁵ The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. The following is excerpted from *National Register Bulletin 15*, which provides guidance on the interpretation and application of these factors.

- Location is the place where the historic property was constructed or the place where the historic event occurred.⁶
- Design is the combination of elements that create the form, plan, space, structure, and style of the property.⁷
- Setting is the physical environment of a historic property.⁸
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.⁹

⁴ *National Register Bulletin 15, page 44.*

⁵ *Ibid.*

⁶ "The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of historic property, complemented by its setting is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved." *Ibid.*

⁷ "A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape." *Ibid.*

⁸ *National Register Bulletin 15, page 45.*

⁹ "The choice and combination of materials reveals the preferences of those who created the property and indicated the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place." *Ibid.*

- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.¹⁰
- Feeling is property's expression of the aesthetic or historic sense of a particular period of time.¹¹
- Association is the direct link between an important historic event or person and a historic property.¹²

In assessing a property's integrity, the National Register criteria recognize that properties change over time; therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must, however, retain the essential physical features that enable it to convey its historic identity.¹³

For properties that are considered significant under National Register criteria A and B, *National Register Bulletin 15* states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s).¹⁴

In assessing the integrity of properties that are considered significant under National Register criterion C, *National Register Bulletin 15* provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.¹⁵

The primary effects of listing in the National Register on private property owners of historic buildings is the availability of financial and tax incentives.¹⁶ In addition, for projects that receive federal funding, the Section 106 clearance process must be completed. State and local laws and regulations may apply to properties listed in the National Register. For example,

¹⁰ "Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques." *Ibid.*

¹¹ "It results from the presence of physical features that, taken together, convey the property's historic character." *Ibid.*

¹² "A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to the observer. Like feeling, associations require the presence of physical features that convey a property's historic character...Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." *Ibid.*

¹³ *National Register Bulletin 15*, page 46.

¹⁴ *Ibid.*

¹⁵ "A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of features that once characterized its style." *Ibid.*

¹⁶ See 36 CFR 60.2(b) (c).

demolition or inappropriate alteration of National Register eligible or listed properties may be subject to the California Environmental Quality Act (CEQA).

B. STATE LEVEL

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also carries out the duties as set forth in the Public Resources Code (PRC) and maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdictions.

1. California Register of Historical Resources

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."¹⁷ The criteria for eligibility for the California Register are based upon National Register criteria.¹⁸ Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.¹⁹

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register of Historic Places and those formally Determined Eligible for the National Register of Historic Places;
- California Registered Historical Landmarks from No. 770 onward;
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.²⁰

Other resources which may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;

¹⁷ *California Public Resources Code § 5024.1(a).*

¹⁸ *California Public Resources Code § 5024.1(b).*

¹⁹ *California Public Resources Code § 5024.1(d).*

²⁰ *California Public Resources Code § 5024.1(d).*

- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.²¹

To be eligible for listing in the California Register, a historic resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, a historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.²²

Integrity under the California Register is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historic resource may not retain sufficient integrity to meet criteria for listing in the National Register, but it may still be eligible for listing in the California Register.²³

2. California Office of Historical Preservation Survey Methodology

The evaluation instructions and classification system prescribed by the California Office of Historic Preservation in its Instructions for Recording Historical Resources provide a three-digit evaluation rating code for use in classifying potential historic resources. The first digit indicates one of the following general evaluation categories for use in conducting cultural resources surveys:

²¹ *California Public Resources Code § 5024.1(e).*

²² *California Code of Regulations, California Register of Historical Resources (Title 14, Chapter 11.5), Section 4852(c).*

²³ *Ibid.*

1. Listed on the National Register or the California Register;
2. Determined eligible for listing in the National Register or the California Register;
3. Appears eligible for the National Register or the California Register through survey evaluation;
4. Appears eligible for the National Register or the California Register through other evaluation;
5. Recognized as Historically Significant by Local Government;
6. Not eligible for any Listing or Designation; and
7. Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit of the evaluation status code is a letter code indicating whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number that is used to further specify significance and refine the relationship of the property to the National Register and/or California Register. Under this evaluation system, categories 1 through 4 pertain to various levels of National Register eligibility. The California Register, however, may include surveyed resources with evaluation rating codes through level 5. In addition, properties found ineligible for listing in the National Register, California Register, or for designation under a local ordinance are given an evaluation status code of 6.

C. LOCAL LEVEL

1. City of Arcadia

As previously stated in this report, the City of Arcadia and unincorporated areas of Los Angeles County do not have specific historic resource regulations in their municipal codes. As such, built-environment resources in those areas use the California Register criteria to evaluate the significance of buildings, structures, objects, features and landscapes over 50 years old.

III. EVALUATION

A. HISTORIC CONTEXT

1. Arcadia

The city of Arcadia is located within the boundaries of land that was once associated with the San Gabriel Mission. Hugo Reid applied to the Mexican government to purchase the Rancho Santa Anita tract that spans across present-day Arcadia, Sierra Madre, and Monrovia. Reid took the possession of 13,319 acres of land in 1845, and set about to build a sizeable cattle ranch. Like so many cattle ranchers, the great drought of 1871 caused Reid to go into bankruptcy, and he was forced to sell his ranch for pennies on the dollar.

Having made his fortune in the silver mines, Elias “Lucky” Baldwin came to own the Santa Anita Rancho in 1875. He sold off large parcels of his holding to Nathaniel Carter in 1881 and William Monroe in 1883, who established the communities of Sierra Madre and Monrovia. While the Southern Pacific Railroad (SPRR) had built a line into Los Angeles in 1876, it was more than 10 years later when the Atchison, Topeka & Santa Fe Railroad (ATSF) was negotiating with land holders to buy land and construct train stations to compete with the SPRR. Baldwin sold land and a right-a-way to a subsidiary of ATSF in 1887. By 1896, both the ATSF and SPRR (Monrovia Branch) had lines running to Arcadia, with both stopping at the Arcadia railroad depot. Henry Huntington created the Pacific Railway (Red Car) system in 1901, primarily for passenger transportation. With these three main transportation systems stopping in Arcadia, to provide commercial and passenger travel needs, the future of the City of Arcadia was assured.

2. Big Santa Anita Canyon

The United States Government set aside 555,520 acres of undeveloped forest land to create the San Gabriel National Forest Reserve in 1892. Prior to that time, Timber Land Patents had been issued to Leonard H. Emerson in 1887 and Phillip M. Peterbaugh in 1889 for parcels of land in Section 10. In Section 15 to the south, “Lucky” Baldwin had purchased 431 acres of surplus railroad land in 1876, and added these to his extensive holdings. Owning this land would have been both extremely valuable for his having direct access to a fresh water source in the San Gabriel Mountain watershed, and a high risk from the danger of seasonal floods that could come surging down the Big Santa Anita Canyon creek.

To protect the most populated communities located down slope of the San Gabriel Mountains, a \$35 million bond measure was passed in May 1924 to have the Flood Control District construct dams in Pacoima, Santa Anita Canyon, and a storm channel from the Los Flores Canyon in Altadena. The Big Santa Anita dam was to be 225 feet high with a reservoir

capacity of 1,500 acre feet, for a cost of \$586,000.²⁴ The Big Santa Anita dam would be the repository for the watershed of a thirteen-mile area above Arcadia and Monrovia running into Big Santa Anita Canyon. By August of 1924, the estimated cost of the Big Santa Anita dam was \$700,000, and the plans for the dam and reservoir had been approved by the State Engineer.²⁵

Although not completed by September of 1926, J. W. Reagan, chief engineer of the Los Angeles Flood Control District gave a tour of the Big Santa Anita dam that was being constructed by Ross Construction Company. Over 40,000 cubic yards of concrete had been poured, and the dam wall had reached the height of 135 feet of the total goal of 235 feet.²⁶

A five-day rainstorm in early March of 1938 brought over 10 inches of rain to the San Gabriel Mountains and the valley below. Chief Flood Control engineer C. H. Howell stated that the storm put the greatest test on the system since it had been constructed. The storm runoff had filled all of the 14 dams in the District's system, and the reservoir behind the Big Santa Anita dam had actually overflowed when the floodgates could not drain the water quickly enough. Fortunately, no serious damage from the Big Santa Anita Dam overflow occurred downstream.²⁷ The Los Angeles Times wrote an article in 1940 about the caretaker of the dam, Joseph Propst and his family, who had been living in the caretaker's house for the last 10 years. The dam was equipped with banks of electric spotlights that allow the caretaker to see the level of the water at night. The Propst's recalled the night of the great March flood of 1938, watching the waters reach the top of the dam and working the valves to open gates to relieve the pressure on the dam.²⁸

In 1950, the Los Angeles County Flood Control District headed a consortium of local, state, and county governments, to construct a concrete diversion structure just south of the Big Santa Anita Dam in the Santa Anita Wash. A 30-inch pipe would be attached to the diversion structure sending water two-miles away to the 10-acre percolation grounds in Sierra Madre. The cost of the project was estimated at \$240,000.²⁹

The Los Angeles Flood Control District began the project to excavate a tunnel through 1,500 feet of solid rock, from the base of the Big Santa Anita Dam reservoir to a point almost due south near the existing Headworks, in 1968. The tunnel was to be used to remove some 825,000 cubic yards of silt that had been deposited in the reservoir since 1927 from the seasonal rains draining into the basin. The amount of silt coming off the hills had been exacerbated from when the vegetation that usually held the topsoil in place had been burned

²⁴ *Los Angeles Times*. "Start on Flood Job Urged." May 24, 1924.

²⁵ *Los Angeles Times*. "Speed on Flood Control Asked." August 24, 1924.

²⁶ *Los Angeles Times*. "Flood Dams of County Viewed." September 24, 1926.

²⁷ *Los Angeles Times*. "Small Losses Prove Value of Dam System." March 4, 1938.

²⁸ *Los Angeles Times*. "Couple Keep Lonely Vigil at Dam to Protect Lives of Lowlanders." February 2, 1940.

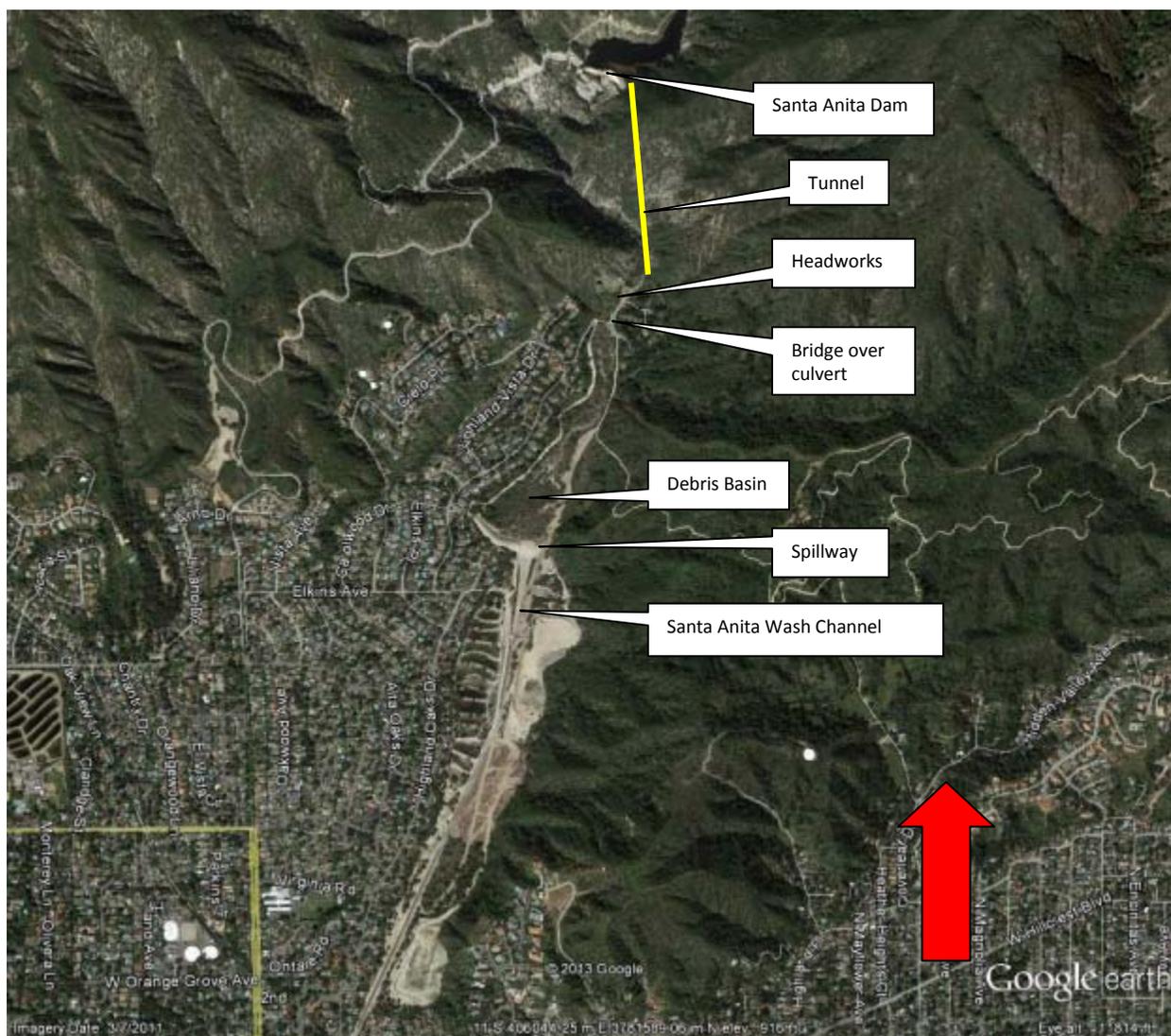
²⁹ *Los Angeles Times*. "Water Diversion Project Speeded by Sierra Madre." January 24, 1951.

off in the occasional forest fires in the canyon. The tunnel project had come to the attention of the *Los Angeles Times* as the miners, working for the Clifford C. Bong & Company of Arcadia, were being guided through the base of the mountain by laser beams, heretofore only a tool of science fiction.³⁰ Once completed, the reservoir would be drained and the silt would be hauled by a conveyor-belt system through the tunnel and loaded onto trucks for depositing away from the tunnel. Using modern tunnel mining equipment, the tunnel was able to proceed at almost 20-feet per day.

³⁰ *Los Angeles Times*. "Laser Beam Guides Miners Tunneling Through Mountain." September 1, 1968.

B. HISTORIC RESOURCES IDENTIFIED

A site visit and pedestrian-level inspection of the APE was performed on January 9, 2013. The APE consists of a narrow area starting from the base of the Big Santa Anita Dam, and continuing south following the wash for approximately 1.7 miles. The APE is widest at 335 yards at the earthen berm Debris Basin dam and spillway. (Photograph 1) The built-environment resources over 45-years of age will be discussed below in order of their placement in the APE, from north to south. We have included copies of the original plans for structures and features located in the APE in Appendix A.



**Photograph 1: Aerial view of the Big Santa Anita Dam, Headworks, and Debris Basin.
(Source: Google Earth, 2013.)**

Santa Anita Dam (also known as the Big Santa Anita Dam)

As previously discussed in Section I. B., EDAW, Inc., prepared the document *Cultural Resources Assessment for the Proposed [Big] Santa Anita [Dam] Riser Modification and Reservoir Sediment Removal Project, Los Angeles County, California*, authored by Monica Strauss, M.A., et. al., in November 2007. The EDAW report determined that the Big Santa Anita Dam and those built-environment resources closely associated with the dam and reservoir, described collectively as the Santa Anita Dam Complex, were not eligible for listing in the National Register of Historic Places as required by Section 106 of the National Historic Preservation Act. Project activities were also evaluated under requirements of the California Environmental Quality Act (CEQA) and determined to have no potential to cause a significant impact to historic resources.

Sediment Removal Tunnel

The tunnel was constructed in 1968-1969 to provide a means of disposing years of accumulated silt that had been deposited by runoff into the Big Santa Anita reservoir. Because the dam and reservoir are located in a very steep canyon, it appears that District engineers found that creating a tunnel through solid rock for 1,500 feet would be a more prudent and cost-effective means of removing the silt rather than trying to haul the 825,000 cubic yards of dirt up to Chantry Flats Road. A 24-foot wide haul road was built from the southern portal of the tunnel to the Santa Anita Wash area below the Debris Dam, where the silt could be deposited. The entire tunnel is located within the boundary of the Angeles National Forest.

The unlined tunnel measured 9' 9" inches high, and wide. It was then clad with a 9 inch layer of concrete.³¹ The conveyor belt system was installed inside the tunnel to carry silt from the bottom of the reservoir (which had been drained) to trucks waiting at the south portal of the tunnel. To insure that the tunnel was excavated in a straight line, the project contractor used a laser beam unit to guide the direction of digging. Today, only the large steel doors set in a large concrete frame are visible from the old haul road that runs north, towards the dam, from Arcadia Wilderness Park. (Photograph 2)

While using a laser beam in a commercial application in 1968 was worthy of being reported in the *Los Angeles Times*, the construction of the tunnel at Santa Anita Dam was not considered to be a significant technological or engineering event as it is a minor accomplishment compared to other mountain tunnels or mine adits.

³¹ *Los Angeles County Flood Control District. Plans for Santa Anita Dam and Reservoir Removal of Debris. September 1966.*

Headworks

The Headworks structure is located approximately 263 yards downstream of the south portal of the Sediment Removal Tunnel, in the City of Arcadia. (Photograph 3) The Headworks intercepts the flow of the Santa Anita Wash released from the dam and redirects portions of that flow to the Santa Anita Wash spreading grounds and/or the Sierra Madre spreading grounds, where the water is recharged into the local groundwater basin (East Raymond Basin). The Headworks can also allow water to continue directly downstream to the Debris Basin. The Headworks consists of a curved earthen levee approximately 130 feet long used to slow and direct water towards the Headworks system, a bypass channel with an 8-foot tall tainter gate, and manual diversion gates, one each for the two different spreading grounds. A tainter gate is a type of radial arm floodgate use in dams and canal locks to control water flow, and was named after its inventor, the structural engineer Jeremiah Burnham Tainter in 1886. The Santa Anita Wash Headworks was designed in 1950 by Quinton Engineers, Ltd., Los Angeles.

The concrete diverter box that sends water to the Sierra Madre spreading grounds measures 7' 6" wide by 13' 6" long, and 10' feet tall. The tainter gate is situated in a concrete channel box that measures 12' 4" wide by approximately 34' long, and 17' high.

The tainter gate can direct flow to the two spreading grounds diversion gates. One gate diverts flow, up to 30 cfs, to the Sierra Madre spreading grounds, and the other gate diverts flow, up to 15 cfs, to the Santa Anita spreading grounds. Any flow not diverted to either of the spreading grounds will continue past the tainter gate and be directed downstream past the Wilderness Park to the Debris Basin. Currently, whenever changes to the flow rates to be delivered to either of the spreading grounds is needed, field crews must be contacted and sent to make manual adjustments to the gates. The response time required to make these adjustments results in lost water conservation.

These types of headwork configurations have been in use for hundreds of years. The fact that this headwork has been manually operated for over 50 years points to its design longevity and ease of operation. The Headworks is not a significant engineering or technological structure.

Culvert Bridge

The current channel crossing was designed by Quinton Engineers, Ltd. In 1950, and was most probably installed at the same time as the Headworks structure just upstream. The channel crossing consists of a concrete-slab road bed 29' wide set on concrete walls lining the stream bed. Four large steel culvert pipes have been set in concrete under the road bed to control the flow of water and protect the bridge walls from erosion. (Photograph 4)

This type of bridge has been commonly used throughout the United States to span short distances for automobile and railroad use since the 1910s when large galvanized steel pipes

could be easily massed produced. The bridge is not a significant engineering or technological structure.

Debris Basin and Spillway

A debris basin consists of an embankment constructed of compacted earth, and excavated area within the basin to catch the debris, an outlet conduit to permit normal flow of water to pass through the basin and to drain the basin after a storm and a concrete spillway to permit water to flow out of the basin when it is filled during a storm. When a storm occurs; mud, boulders or any other debris is washed down the canyon by the stream. As the turbulent water enters the basin it is slowed down enough to cause it to drop most of this material into the excavation and the water continues to flow through the outlet conduit or the low pool drain. If an unusually large flood should occur, as the water stored in the basin nears the top of the embankment, the spillway then acts like the overflow in a bathtub and allows the excess to escape before it can endanger the earthen embankment.³² Some of the water may be diverted to associated spreading grounds (percolation fields) so that the underground water table may be refreshed.

The Big Santa Anita Canyon Debris Basin is a 56' high earth embankment dam constructed in 1958 - 1960 by the U.S. Army Corps of Engineers (USACOE) for debris control and water conservation. The Debris Basin is located just over one mile downstream of the Dam and has a capacity of 245 acre-feet of water. Water could be directed through sluice gates into the adjacent spreading grounds or, excess water could escape over the spillway and into the storm channel. The Debris Basin spillway consists of an un-gated, smooth concrete-lined rectangular open channel, located within the Debris Basin embankment near the left abutment. (Photograph 5) The spillway is approximately 165 feet wide and has a capacity of allowing 38,000 cubic feet per second (cfs) wash over the crest of the structure. The width of the spillway gradually narrows to meet the width of the concrete-lined Santa Anita Wash storm channel. (Photograph 6)

After its completion, the Debris Basin was transferred from the USACOE to the District for operation and maintenance. Upon review of the Debris Basin in 1982, it was determined that it did not meet standards for seismic safety and it was required to keep the outlet gate open at all times to prevent any collection of water. Since then, the water conservation activities at the Debris Basin have ceased and it is used only to capture debris flows heading downstream.

The Santa Anita Debris Basin and spillway were designed using common engineering techniques for controlling water. Over thirty debris basins of various sizes were constructed throughout the canyons of the San Gabriel Mountains to control the runoff from seasonal rains. The Debris Basin and spillway are not significant structures.

³² *Los Angeles Times*. "Debris Basins Stand Guard at Hillside Areas." December 13, 1954.



Photograph 2: South portal of the tunnel that runs through the hills from the basin of the Big Santa Anita reservoir to a service road near the Headworks. View looking northwest.



Photograph 3: Headworks. View looking west.



**Photograph 4: Bridge over 4-pipe culvert over Santa Anita Dam wash, near Arcadia Wilderness Park.
View looking east.**



Photograph 5: South elevation of spillway. View looking north.



**Photograph 6: Santa Anita Wash storm channel adjacent to spreading grounds.
View looking south.**

C. SIGNIFICANCE

The Big Santa Anita Dam was constructed in 1924-1927 by the Los Angeles County Flood Control District. Because the area below the dam was not heavily populated until many years later, the water released by the Dam could just follow the Santa Anita Wash down into the Rio Hondo Wash, without too much damage to private property. But after World War II, the population in the areas of Arcadia, Sierra Madre, and Monrovia, began to increase and residents constructed houses in the foothills of the San Gabriel Mountains. The water coming out of the various canyons in the region had to be controlled to protect life and property. It was in the 1950s that the Headworks and Culvert Bridge, Debris Basin and spillway, were constructed to control and capture the flow of water from the Big Santa Anita Dam.

The Sediment Removal Tunnel was constructed only to provide access to the basin of the Big Santa Anita Dam reservoir so that accumulated silt could be removed and deposited elsewhere. Surveyors were able to use the most modern technology available in the form of laser beams to direct the mining operations of building a 9-foot wide tunnel through the mountain.

In assessing the historical significance of built-environment structures located within the APE and evaluated in this study, federal and state significance criteria were applied.³³ The structures identified in this study are not currently listed in either the National Register or the California Register.

Under National Register and/or California Register criteria relating to the association of the built-environment structures located within the APE with significant historical events that exemplify broad patterns of our history the Sediment Removal Tunnel, Headworks and Culvert Bridge, Debris Basin and spillway, do not appear to qualify as significant historic resources individually or collectively. Throughout the world, debris basins and dams (masonry, earthen or timber) have been constructed by both private and public entities to control seasonal rain fall, and to protect people and property. The structures located in the APE are just one of many flood-control systems that were constructed in the San Gabriel Mountain canyons. There is no evidence that any of the structures in the APE are eligible for listing under Criteria A/1.

Under National Register and/or California Register criteria relating to the built-environment structures located within the APE's association with persons of historic importance, the Dam, Sediment Removal Tunnel, Headworks and Culvert Bridge, Debris Basin and spillway, do not appear to qualify, individually or collectively, as significant resources. The design and plans for the structures located in the Santa Anita Wash were prepared by the Los Angeles County Flood Control District staff engineers, or the Army Corp of Engineers, as part of their normal tasks and duties. There is no evidence that any of the structures in the APE are eligible for listing under Criteria B/2.

Under National Register and/or California Register criteria relating to the distinctive characteristics of a type, period, region, or method of construction, the built-environment structures located within the APE are not significant as they do not, individually or collectively, embody any innovative engineering design or method of construction, or high artistic design. The Headworks was designed using common technology to channel water from the Dam towards the Debris Basin or into the 30' pipe to the Sierra Madre spreading grounds. The Debris Basin was constructed by excavating a water containment area in the Santa Anita Wash, and a spillway was erected to hold heavier debris back during high rainfall events. The technology used to create the basin and associated spreading grounds were commonplace, as was the use of concrete to hold, channel, divert, and control the water as it came down from the foothills. The Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, do not appear to present any technological achievement in the history of water systems locally, regionally or nationally, and are therefore not eligible for listing either individually or collectively under Criteria C/3.

Based upon a survey of the above-ground historic period resources within the APE performed in January 2013, the APE has not yielded, nor does it appear to have the potential to

³³ *The City of Arcadia does not have a formal set of significance criteria.*

yield, information important to the history of the local area, California or the nation pursuant to National Register and/or California Register criteria D/4.

In summation, the Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, are not eligible for listing in the National Register and/or the California Register, or as they do not, individually or collectively, meet any of the criteria necessary for listing in the registries.

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B. PUBLIC RECORDS, PRIOR REPORTS, OTHER

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Los Angeles Times.

“Start on Flood Job Urged.” May 24, 1924.

“Speed on Flood Control Asked.” August 24, 1924.

“Flood Dams of County Viewed.” September 24, 1926.

“Small Losses Prove Value of Dam System.” March 4, 1938.

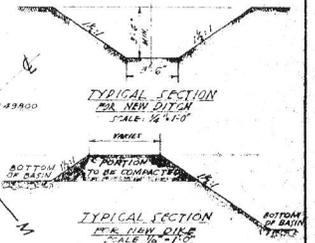
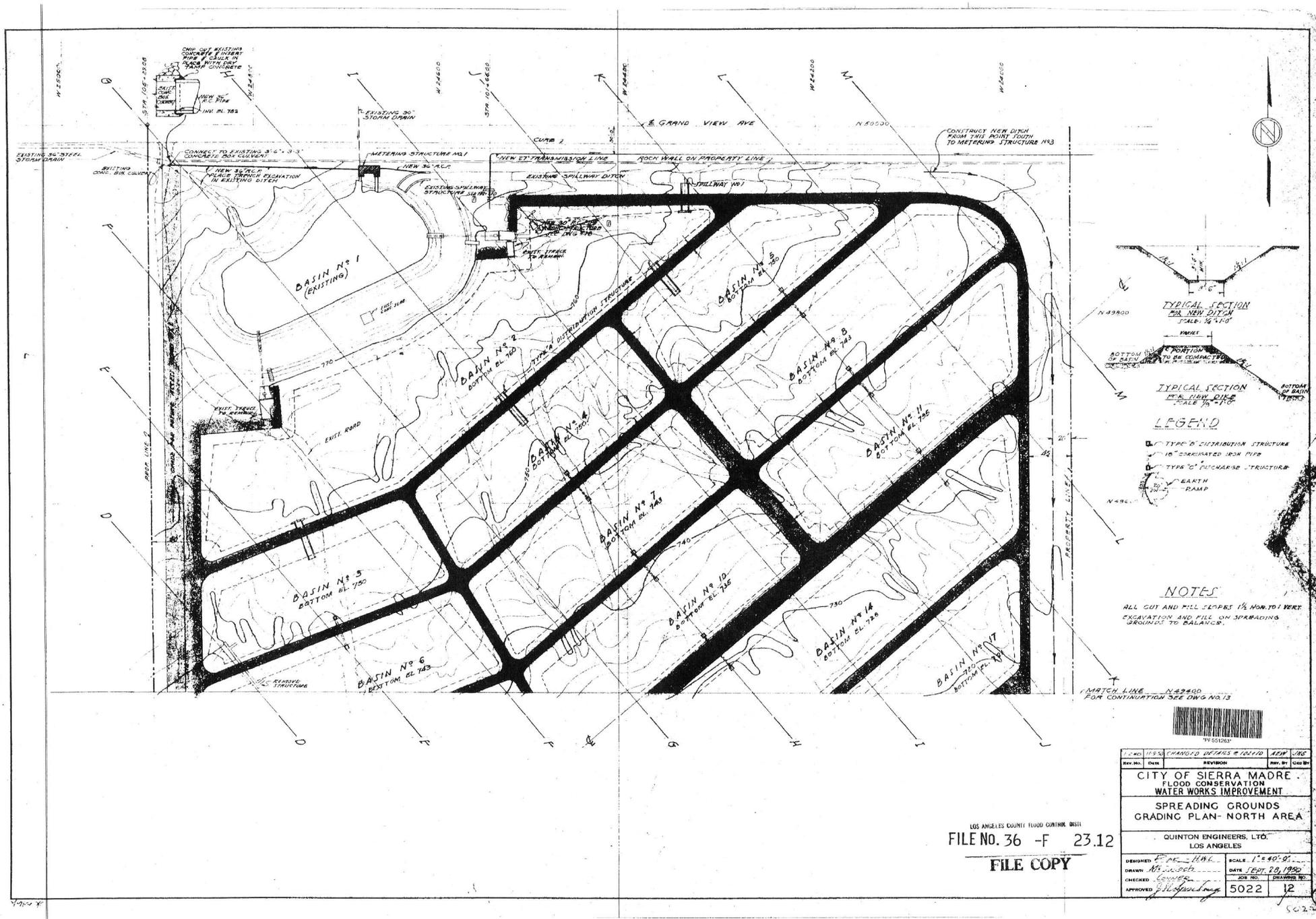
“Couple Keep Lonely Vigil at Dam to Protect Lives of Lowlanders.” February 2, 1940.

“Water Diversion Project Speeded by Sierra Madre.” January 24, 1951.

“Laser Bam Guides Miners Tunneling Through Mountain.” September 1, 1968.

“Debris Basins Stand Guard at Hillside Areas.” December 13, 1954.

APPENDIX A – Selected Drawings



- LEGEND**
- TYPE 'B' DISTRIBUTION STRUCTURE
 - 16" CORRUGATED IRON PIPE
 - TYPE 'C' ENCHASING STRUCTURE
 - EARTH
 - RAMP

NOTES

ALL CUT AND FILL LEAVES 1/2 HORIZ. TO 1 VERT. EXCAVATION AND FILL ON SPREADING GROUNDS TO BALANCE.

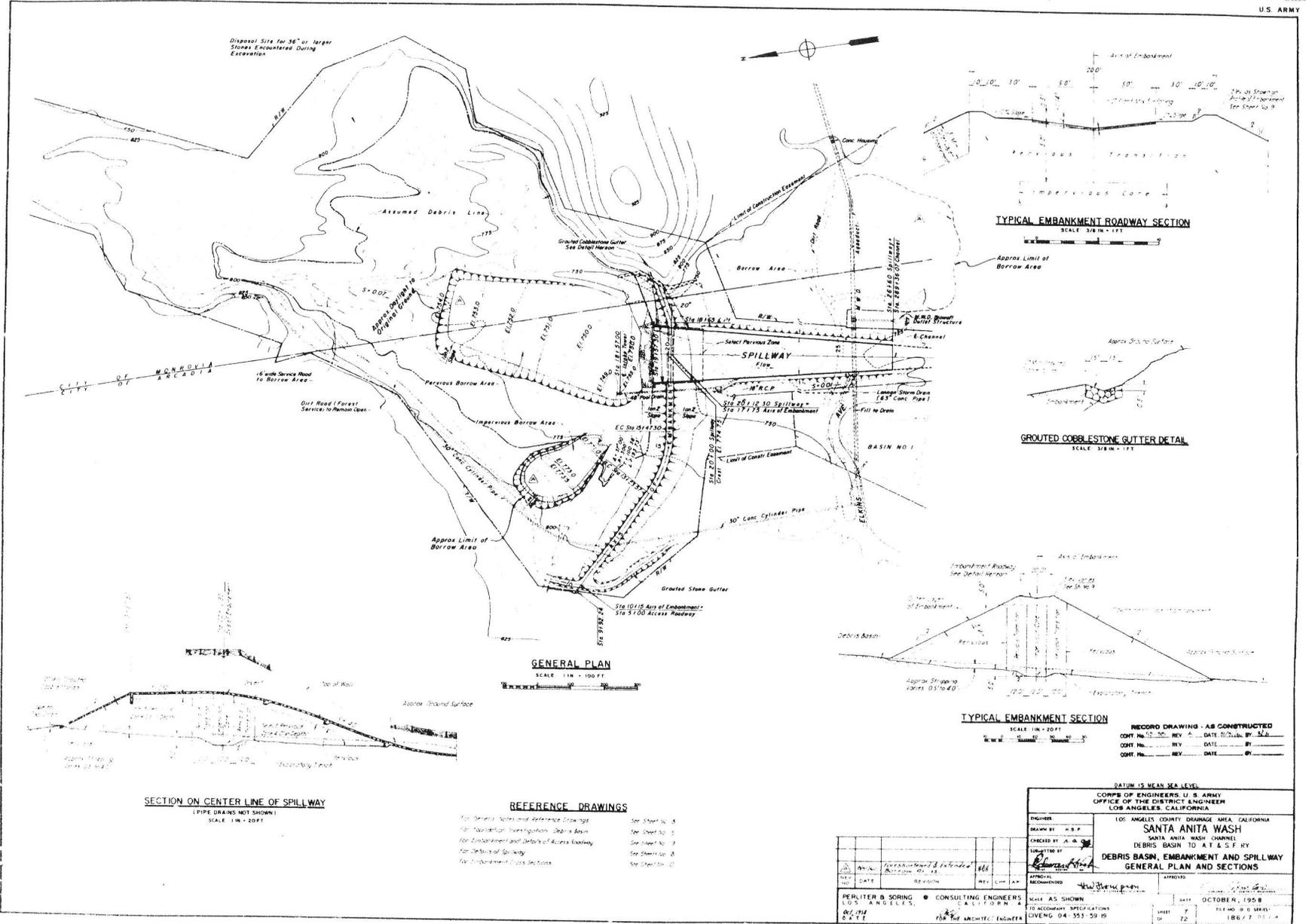
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1		ISSUED		

CITY OF SIERRA MADRE
FLOOD CONSERVATION
WATER WORKS IMPROVEMENT
SPREADING GROUNDS
GRADING PLAN - NORTH AREA

QUINTON ENGINEERS, LTD.
 LOS ANGELES

DESIGNED: *[Signature]* H.M.L. SCALE: 1" = 40'-0"
 DRAWN: *[Signature]* M.W.B. DATE: SEPT. 29, 1950
 CHECKED: *[Signature]* C.W.E. JOB NO.: 5022 DRAWING NO.: 12
 APPROVED: *[Signature]* M.W.B.

LOS ANGELES COUNTY FLOOD CONTROL DIST. II
FILE NO. 36 -F 23.12
FILE COPY



Disposal Site for 36" or larger Stones Encountered During Excavation

TYPICAL EMBANKMENT ROADWAY SECTION
SCALE 3/8" = 1'-0"

GRAUDED COBBLESTONE GUTTER DETAIL
SCALE 3/8" = 1'-0"

GENERAL PLAN
SCALE 1/4" = 100'-0"

TYPICAL EMBANKMENT SECTION
SCALE 1/4" = 20'-0"

SECTION ON CENTER LINE OF SPILLWAY
(PIPE DRAINS NOT SHOWN)
SCALE 1/4" = 20'-0"

REFERENCE DRAWINGS

- For General Notes and Reference Drawings See Sheet No. 8
- For Topographic Investigation, Debris Basin See Sheet No. 6
- For Embankment and Details of Access Highway See Sheet No. 7
- For Details of Spillway See Sheet No. 8
- For Embankment Cross Sections See Sheet No. 10

RECORD DRAWING - AS CONSTRUCTED

CONT. NO.	REV.	DATE	BY
CONT. NO.	REV.	DATE	BY

DATE: 10 SEP 1958

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
LOS ANGELES, CALIFORNIA

100 ANGELES COUNTY DRAINAGE AREA, CALIFORNIA
SANTA ANITA WASH
SANTA ANITA WASH CHANNEL
DEBRIS BASIN TO A.T. & S.F. RY.
DEBRIS BASIN, EMBANKMENT AND SPILLWAY
GENERAL PLAN AND SECTIONS

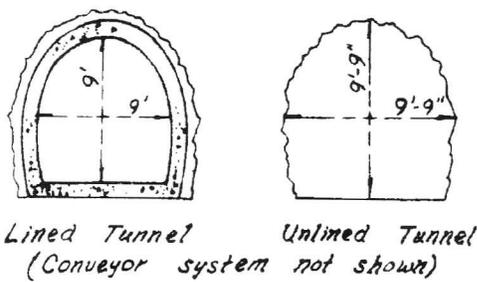
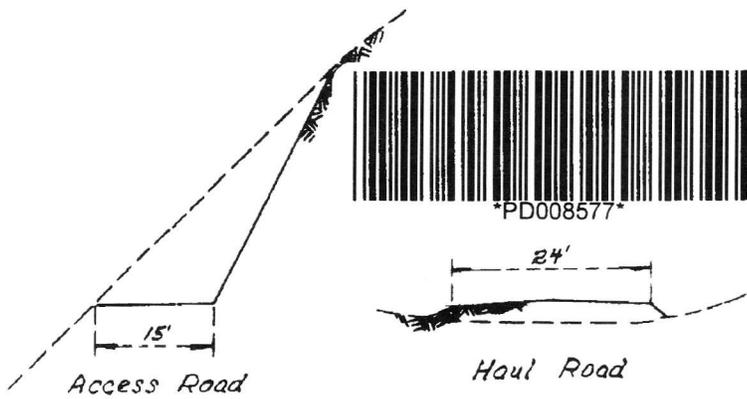
ENGINEER	
DRAWN BY	H.B.P.
CHECKED BY	A.O.
APPROVED BY	
DATE	
REV.	
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REV.	

PERLITER B. SPRING • CONSULTING ENGINEERS
LOS ANGELES, CALIFORNIA
061-718
6247

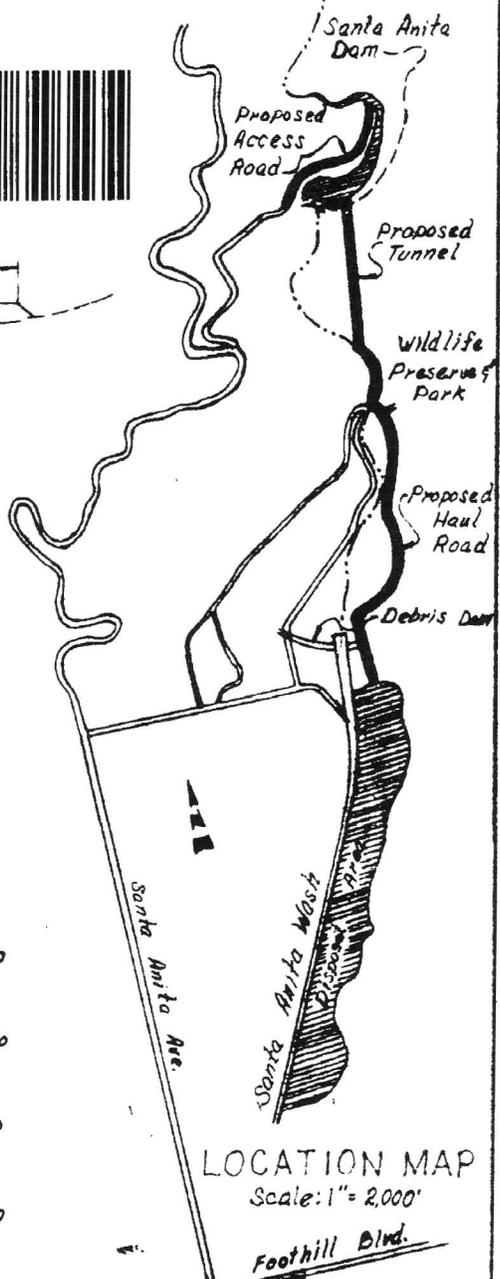
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FOR ACCURACY SPECIFICATIONS
GIVING 04-353-50-05

SHEET 7
OF 72

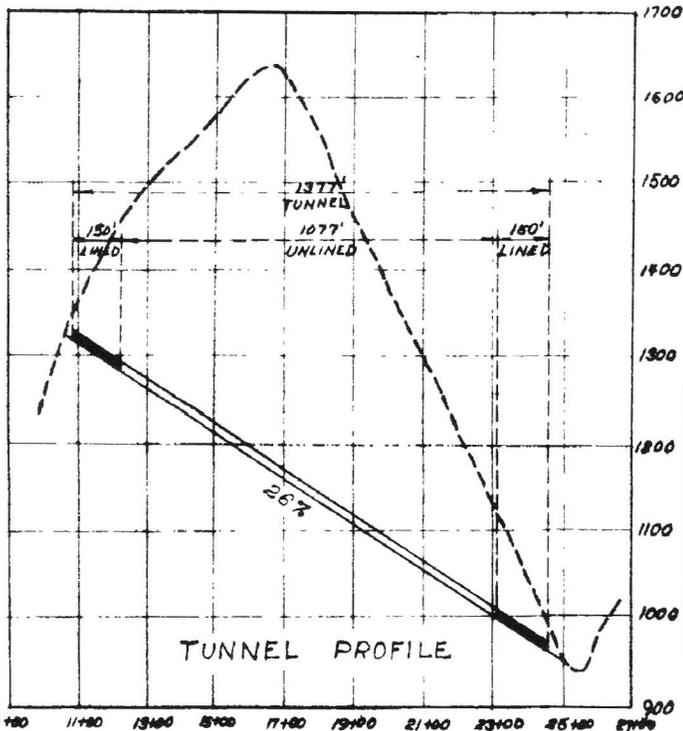
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TYPICAL SECTIONS
No Scale



LOCATION MAP
Scale: 1" = 2,000'



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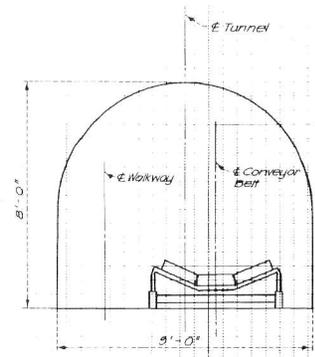
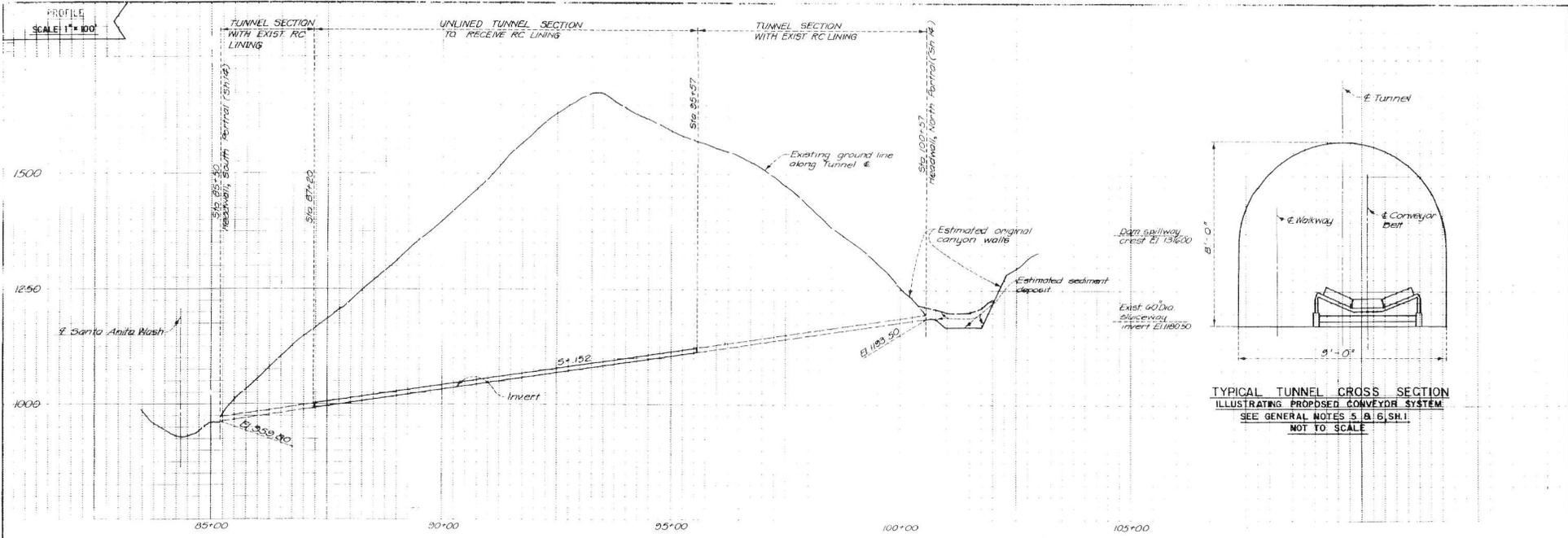
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FLOOD CONTROL DISTRICT

SANTA ANITA DAM
AND RESERVOIR

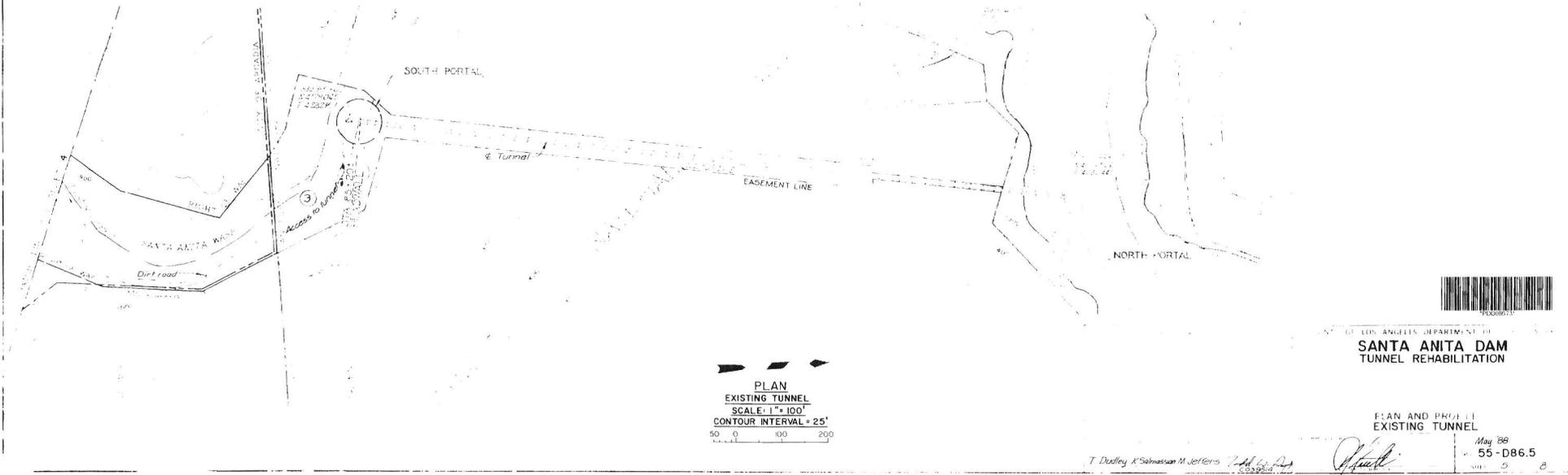
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APPROVED BY _____
CHIEF ENGINEER

SCALE AS SHOWN	DATE SEP 1966	NO. 55-D54 SHEET 1 OF 1
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TYPICAL TUNNEL CROSS SECTION
 ILLUSTRATING PROPOSED CONVEYOR SYSTEM
 SEE GENERAL NOTES 5, 6, 6, SH.1.
 NOT TO SCALE



LOS ANGELES DEPARTMENT OF
SANTA ANITA DAM
 TUNNEL REHABILITATION

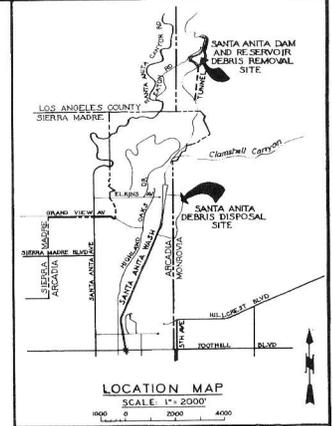
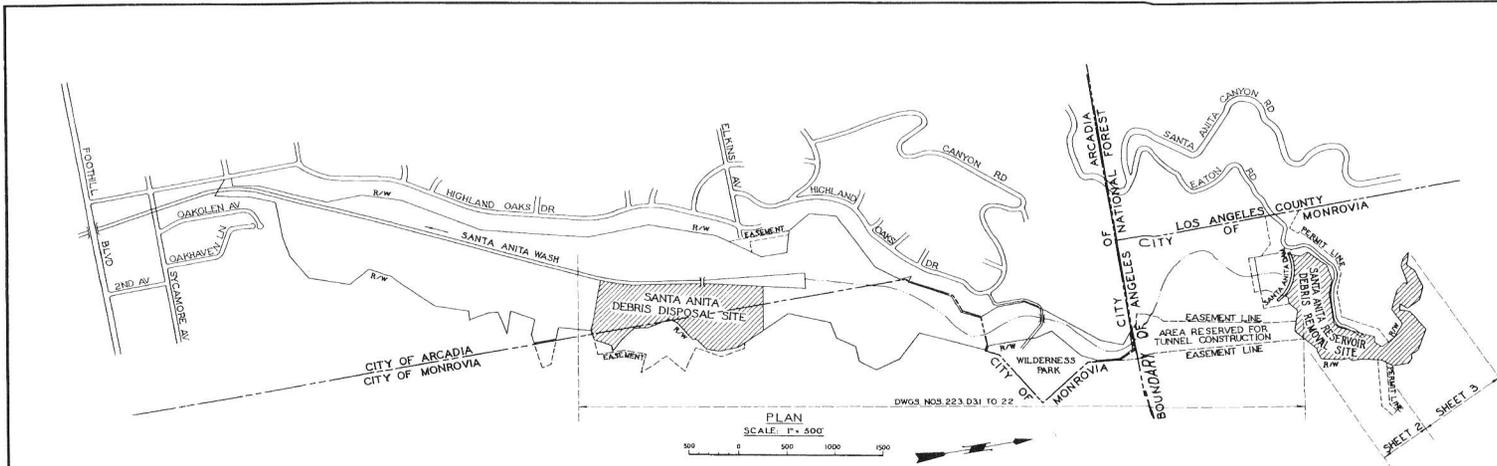
PLAN AND PROFILE
 EXISTING TUNNEL

T. Dudley K. Salmasian M. Jeffers 7/24/58

[Signature]

May 88
 55-DB6.5
 SHEET 5 OF 8

"AS BUILT" DRAWING



INDEX TO DRAWINGS	
DWG. NO.	TITLE
55-D581	GENERAL PLAN, GENERAL NOTES, LOCATION MAPS, AND INDEX TO DRAWINGS
2	PLAN AND PROFILE
3	PLAN AND PROFILE
4	CROSS SECTIONS
5	CROSS SECTIONS
55-D591 TO 5	LOG. OF BORINGS

GENERAL NOTES

- Elevations shown are in feet above the U.S.C. & G.S. Mean. See Level datum, 1924 adjustment.
- Sections shown on drawings are along the Control Line.
- The contours and grades shown on these drawings are intended to give the Contractor an idea of the work to be performed; they do not necessarily show the exact limits of excavation. See Note 2, Drawing No. 55-D582.
- See Drawings Nos. 223-D-1 through 223-D-22 for fill in debris disposal area associated with cleanup of reservoir depicted on this set of drawings.

REFERENCES

Topography: C 280, 55T1, 55T26, 55 T29, 55-735
 Right of Way: 55-ML9, 55-RW21, Calc. Books 36-RW12.1 and 36-RW2
 Miscellaneous: 55-D57.1 to 5.

■ "AS BUILT" DWGS.

REVISIONS				
DATE BY	MARK	DATE	DESCRIPTION	
DESIGNED BY A.E.M.				
CHECKED BY R.D.Q.				
APPROVED BY R.D.Q.				
APPROVED BY A.B.R.				

LOS ANGELES COUNTY
 FLOOD CONTROL DISTRICT

**SANTA ANITA DAM
 AND RESERVOIR**

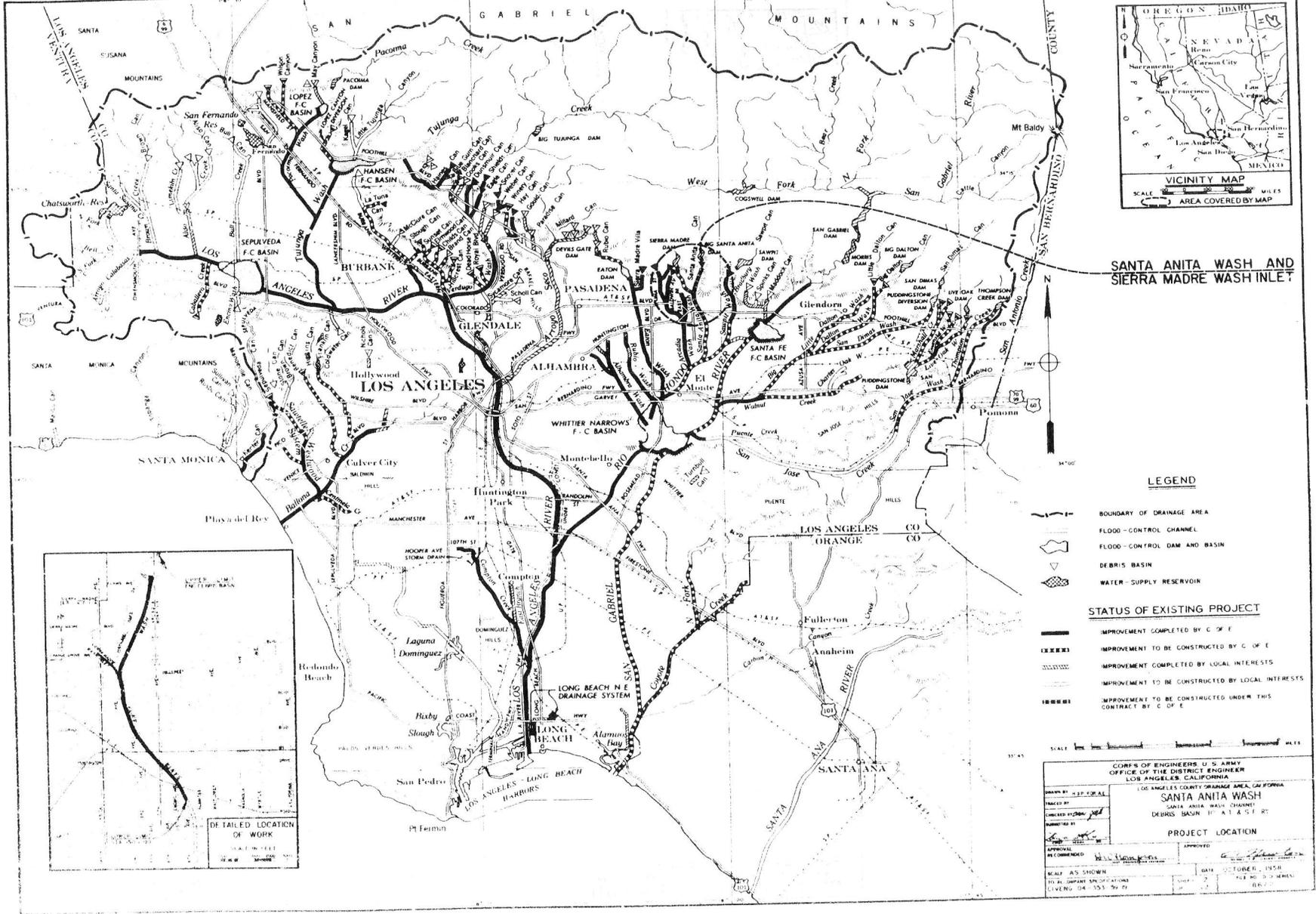
GENERAL PLAN, GENERAL NOTES,
 LOCATION MAP, AND
 INDEX TO DRAWINGS

APPROVED BY: *[Signature]* DISTRICT ENGINEER

SCALE: AS SHOWN DATE: MAR. 1958 DWG. NO. 55-D581 SHEET 1 OF 5



"AS BUILT" DRAWING



APPENDIX B – DPR Inventory Site Forms

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
 HRI #
 Trinomial
 NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 7

*Resource Name or #: Santa Anita Wash Flood Control System Features south of Big Santa Anita Dam

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County: Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Mt. Wilson

Date: 1995 T 1 N ; R 11 W; Sec 15 ; S.B.B.M.

c. Address: System features are located on land in the Angeles National Forest and City of Arcadia

d. UTM: See attached sheet of features for individual UTM coordinates.

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The area of potential effect (APE) for the proposed project spans three legal jurisdictions. The northern portion of the project survey area is located in Section 10 of Township 1 North, Range 11 West. Section 10 is situated within the boundary of the Angeles National Forest overseen by the United States Forest Service. The Big Santa Anita Dam, reservoir, and portion of the Santa Anita Wash that runs south up to the boundary with Section 15 of Township 1 North, Range 11 West are under the control of the U.S. Army Corp of Engineers Los Angeles Division. The Sediment Removal Tunnel used for the disposal of silt from the bottom of Santa Anita Dam reservoir, spans south from the reservoir to the southern boundary of Section 10, and is located in the Angeles National Forest.

From there south, the project survey area is primarily on land that is located in the City of Arcadia. A small portion of undeveloped land south of Arcadia Wilderness Park belonging to the City of Monrovia protrudes into the APE, and appears to be comprised mostly of scrub vegetation on loose creek bed. The Headworks, Culvert Bridge, Debris Basin and spillway, are located on land in the City of Arcadia.

***P3b. Resource Attributes:** HP-11 (Engineering structure: flood control), AH-6 (Water conveyance system)

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Aerial by Google Earth, 2013. View looking north.

*P6. Date Constructed/Age and Sources: Historic

Prehistoric Both

1950 - 1968 per LADPW.

*P7. Owner and Address:

Los Angeles County Department of Public Works

900 S. Fremont Ave.
 Alhambra, CA 91803

*P8. Recorded by:

Pamela Daly, M.S.H.P.

Daly & Associates

4486 University Avenue

Riverside, CA 92501

*P9. Date Recorded: February 13, 2013

*P10. Survey Type:

CEQA – Intensive Level

*P11. Report Citation:

Historic Resources Assessment Report of Santa Anita Stormwater Flood Management and Seismic Strengthening Project, Santa Anita Wash, Headworks, and Debris Basin, Los Angeles County, CA.

*Attachments: NONE Location Map Sketch Map Continuation

Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

DPR 523A (1/95)

*Required information

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

*Resource Name or #: Sediment Removal Tunnel

P1. Other Identifier: Silt Tunnel

***P2. Location:** Not for Publication Unrestricted

***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Mt. Wilson

Date: 1995 **T** 1N ; **R** 11W ; **S** ½ of Sec 10 ; **S.B.B.M.**

c. Address: Angeles National Forest

City:

Zip:

d. UTM: Zone: 11 ; Point A: 406149 mE/ 3783006 mN; Point B: 406132 mE/ 3782591 mN. (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

The tunnel runs from the bottom of Big Santa Anita Dam in a straight line through the mountain to its south portal. There is a unpaved road that runs north up the canyon from Arcadia Wilderness Park, to the south portal.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The tunnel was constructed in 1968-1969 to provide a means of disposing years of accumulated silt that had been deposited by runoff into the Big Santa Anita reservoir. Because the dam and reservoir are located in a very steep canyon, it appears that District engineers found that creating a tunnel through solid rock for 1,500 feet would be a more prudent and cost-effective means of removing the silt rather than trying to haul the 825,000 cubic yards of dirt up to Chantry Flats Road. A 24-foot wide haul road was built from the southern portal of the tunnel to the Santa Anita Wash area below the Debris Dam, where the silt could be deposited. The entire tunnel is located within the boundary of the Angeles National Forest.

The unlined tunnel measured 9' 9" inches high, and wide. It was then clad with a 9 inch layer of concrete. The conveyor belt system was installed inside the tunnel to carry silt from the bottom of the reservoir (which had been drained) to trucks waiting at the south portal of the tunnel. To insure that the tunnel was excavated in a straight line, the project contractor used a laser beam unit to guide the direction of digging. Today, only the large steel doors set in a large concrete frame are visible from the old haul road that runs north, towards the dam, from Arcadia Wilderness Park.

While using a laser beam in a commercial application in 1968 was worthy of being reported in the *Los Angeles Times*, the construction of the tunnel at Santa Anita Dam was not considered to be a significant technological or engineering event as it is a minor accomplishment compared to other mountain tunnels or mine adits.

***P3b. Resource Attributes:** HP-11 (Engineering structure), HP-39 (Other: tunnel)

***P4. Resources Present:** Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) South portal of tunnel. January 9, 2013. View looking northwest.

***P6. Date Constructed/Age and**

Sources: Historic

Prehistoric Both

1968 per LA County DPW.

***P7. Owner and Address:**

Los Angeles County Department of Public Works

900 S. Fremont Avenue

Alhambra, CA 91803

***P8. Recorded by:** Pamela Daly

Daly & Associates

4486 University Avenue

Riverside, CA 92501

***P9. Date Recorded:**

February 12, 2013

***P10. Survey Type:**

CEQA – Intensive Level

***P11. Report Citation:**

Historic Resources Assessment Report of Santa Anita Stormwater Flood Management and Seismic Strengthening Project, Santa Anita Wash, Headworks, and Debris Basin, Los Angeles County, CA.

***Attachments:** NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County: Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Mt. Wilson

Date: 1995 T 1 N ; R 11 W; Sec 15 ; S.B.B.M.

c. Address: In Arcadia Wash north of Arcadia Wilderness Park

City: Arcadia

Zip:

d. UTM: Zone: 11 ; 406139 mE/ 3782378 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 915 ft.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Headworks intercepts the flow of the Santa Anita Wash released from the dam and redirects portions of that flow to the Santa Anita Wash spreading grounds and/or the Sierra Madre spreading grounds, where the water is recharged into the local groundwater basin (East Raymond Basin). The Headworks can also allow water to continue directly downstream to the Debris Basin. The Headworks consists of a curved earthen levee approximately 130 feet long used to slow and direct water towards the Headworks system, a bypass channel with an 8-foot tall tainter gate, and manual diversion gates, one each for the two different spreading grounds. A tainter gate is a type of radial arm floodgate use in dams and canal locks to control water flow, and was named after its inventor, the structural engineer Jeremiah Burnham Tainter in 1886. The Santa Anita Wash Headworks was designed in 1950 by Quinton Engineers, Ltd., Los Angeles. The concrete diverter box that sends water to the Sierra Madre Spreading Grounds measures 7' 6" wide by 13' 6" long, and 10' feet tall. The tainter gate is situated in a concrete channel box that measures 12' 4" wide by approximately 34' long, and 17' high.

These types of headwork configurations have been in use for hundreds of years. The fact that this headwork has been manually operated for over 50 years points to its design longevity and ease of operation. The Headworks is not a significant engineering or technological structure.

*P3b. Resource Attributes: HP-11 (Engineering structure), AH-6 (Water conveyance system)

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Headworks, January 9, 2013. View looking west.

*P6. Date Constructed/Age and

Sources: Historic

Prehistoric Both

1950 per LADPW.

*P7. Owner and Address:

Los Angeles County Department of Public Works

900 S. Fremont Ave.

Alhambra, CA 91803

*P8. Recorded by:

Pamela Daly, M.S.H.P.

Daly & Associates

4486 University Avenue

Riverside, CA 92501

*P9. Date Recorded: February 13, 2013

*P10. Survey Type:

CEQA – Intensive Level

*P11. Report Citation:

Historic Resources Assessment Report of Santa Anita Stormwater Flood Management and Seismic Strengthening Project, Santa Anita Wash, Headworks, and Debris Basin,

Los Angeles County, CA.

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

*Resource Name or #: Culvert Bridge over Santa Anita Wash

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County: Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Mt. Wilson

Date: 1995 T 1 N ; R 11 W; Sec 15 ; S.B.B.M.

c. Address: On the road off of Highland Oaks Road that leads to Arcadia Wilderness Park City: Arcadia Zip:

d. UTM: Zone: 11 ; 406069 mE/ 3782260 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 873 ft.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The current channel crossing was designed by Quinton Engineers, Ltd. In 1950, and was most probably installed at the same time as the Headworks structure just upstream. The channel crossing consists of a concrete-slab road bed 29' wide set on concrete walls lining the stream bed. Four large steel culvert pipes have been set in concrete under the road bed to control the flow of water and protect the bridge walls from erosion.

This type of bridge has been commonly used throughout the United States to span short distances for automobile and railroad use since the 1910s when large galvanized steel pipes could be easily massed produced. The bridge is not a significant engineering or technological structure.

***P3b. Resource Attributes:** HP-19 (Bridge), AH-6 (Water conveyance system)

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Culvert bridge, January 9, 2013. View looking east.

***P6. Date Constructed/Age and**

Sources: Historic

Prehistoric Both

1950 per LADPW.

***P7. Owner and Address:**

Los Angeles County Department of Public Works

900 S. Fremont Ave.

Alhambra, CA 91803

***P8. Recorded by:**

Pamela Daly, M.S.H.P.

Daly & Associates

4486 University Avenue

Riverside, CA 92501

***P9. Date Recorded:** February 13, 2013

***P10. Survey Type:**

CEQA – Intensive Level

***P11. Report Citation:**

Historic Resources Assessment Report of Santa Anita Stormwater Flood Management and Seismic Strengthening Project, Santa Anita

Wash, Headworks, and Debris Basin, Los Angeles County, CA.

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

DPR 523A (1/95)

*Required information

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County: Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Mt. Wilson Date: 1995 T 1 N ; R 11 W ; Sec 15 ; S.B.B.M.

c. Address: Located at the east end of Elkins Avenue City: Arcadia Zip:

d. UTM: Zone: 11 ; 405761 mE/ 3781552 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 774 ft.

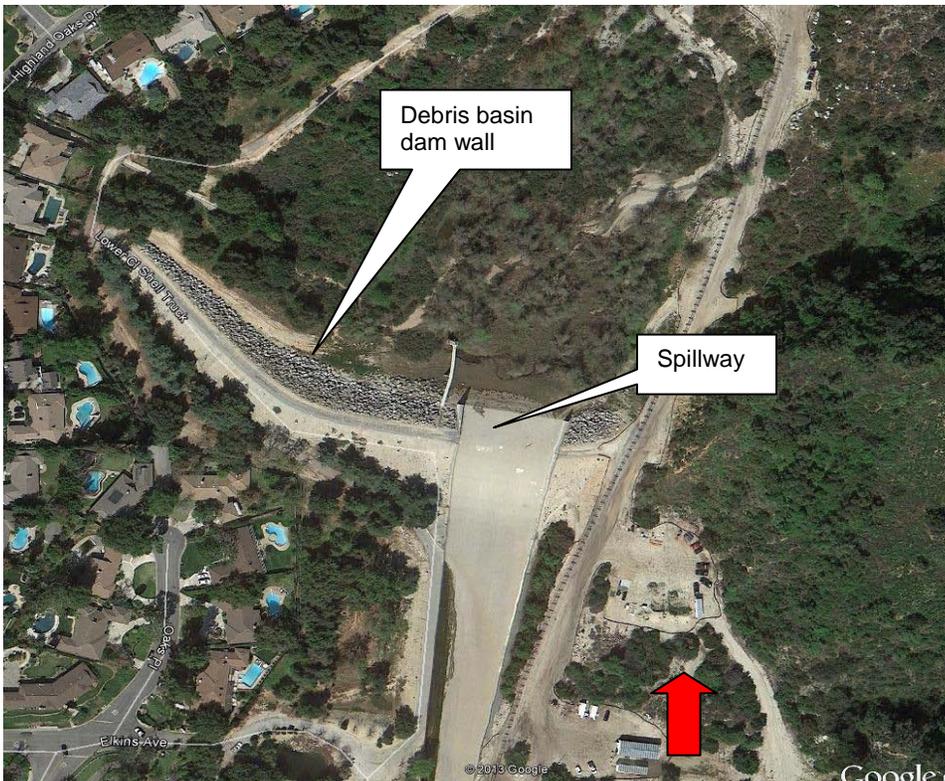
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Big Santa Anita Canyon Debris Basin is a 56' high earth embankment dam constructed in 1958 - 1960 by the U.S. Army Corps of Engineers (USACE) for debris control and water conservation. The Debris Basin is located just over one mile downstream of the Dam and has a capacity of 245 acre-feet of water. Water could be directed through sluice gates into the adjacent spreading grounds or, excess water could escape over the spillway and into the storm channel. The Debris Basin spillway consists of an un-gated, smooth concrete-lined rectangular open channel, located within the Debris Basin embankment near the left abutment. The spillway is approximately 165 feet wide and has a capacity of allowing 38,000 cubic feet per second (cfs) wash over the crest of the structure. The width of the spillway gradually narrows to meet the width of the concrete-lined Santa Anita Wash storm channel. After its completion, the Debris Basin was transferred from the USACE to the District for operation and maintenance. Upon review of the Debris Basin in 1982, it was determined that it did not meet standards for seismic safety and it was required to keep the outlet gate open at all times to prevent any collection of water. Since then, the water conservation activities at the Debris Basin have ceased and it is used only to capture debris flows heading downstream.

The Santa Anita Debris Basin and spillway were designed using common engineering techniques for controlling water. Over thirty debris basins of various sizes were constructed throughout the canyons of the San Gabriel Mountains to control the runoff from seasonal rains. The Debris Basin and spillway are not significant structures.

***P3b. Resource Attributes:** HP-11 (Engineering structure: flood control), AH-6 (Water conveyance system)

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Aerial by Google Earth, 2013. View looking north.

***P6. Date Constructed/Age and**

Sources: Historic

Prehistoric Both

1950 per LADPW.

***P7. Owner and Address:**

Los Angeles County Department of Public Works

900 S. Fremont Ave.

Alhambra, CA 91803

***P8. Recorded by:**

Pamela Daly, M.S.H.P.

Daly & Associates

4486 University Avenue

Riverside, CA 92501

***P9. Date Recorded:** February 13, 2013

***P10. Survey Type:**

CEQA – Intensive Level

***P11. Report Citation:**

Historic Resources Assessment Report of Santa Anita Stormwater Flood Management and Seismic Strengthening Project, Santa Anita Wash, Headworks, and Debris Basin, Los Angeles County, CA.

*Attachments: NONE Location Map

- Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

*Recorded by: Pamela Daly, M.S.H.P

*Date: February 12, 2013 Continuation Update

B. 10. Significance:

The Big Santa Anita Dam was constructed in 1924-1927 by the Los Angeles County Flood Control District. Because the area below the dam was not heavily populated until many years later, the water released by the Dam could just follow the Santa Anita Wash down into the Rio Hondo Wash, without too much damage to private property. But after World War II, the population in the areas of Arcadia, Sierra Madre, and Monrovia, began to increase and residents constructed houses in the foothills of the San Gabriel Mountains. The water coming out of the various canyons in the region had to be controlled to protect life and property. It was in the 1950s that the Headworks and Culvert Bridge, Debris Basin and spillway, were constructed to control and capture the flow of water from the Big Santa Anita Dam.

The Sediment Removal Tunnel was constructed only to provide access to the basin of the Big Santa Anita Dam reservoir so that accumulated silt could be removed and deposited elsewhere. Surveyors were able to use the most modern technology available in the form of laser beams to direct the mining operations of building a 9-foot wide tunnel through the mountain.

In assessing the historical significance of built-environment structures located within the APE and evaluated in this study, federal and state significance criteria were applied. The structures identified in this study are not currently listed in either the National Register or the California Register.

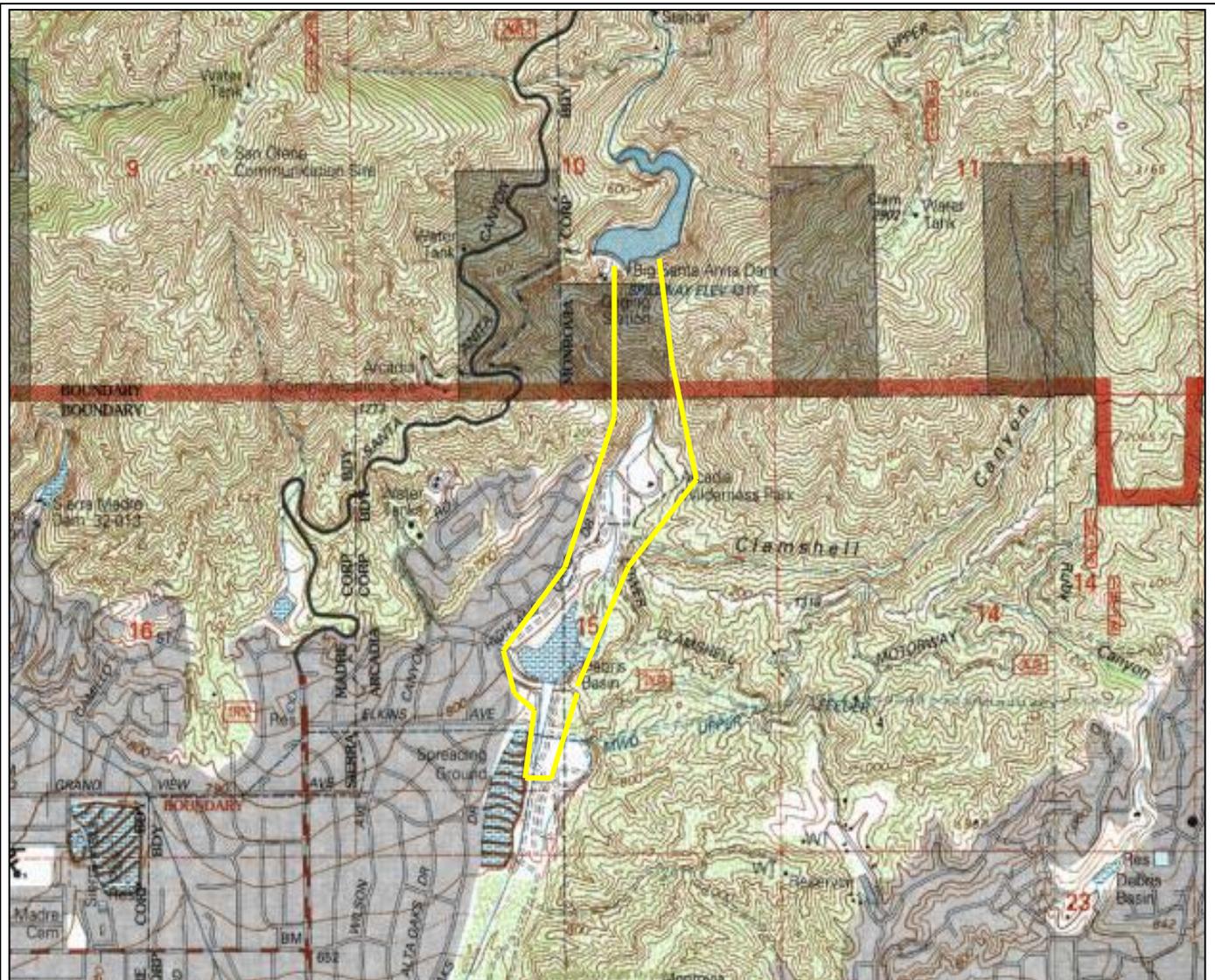
Under National Register and/or California Register criteria relating to the association of the built-environment structures located within the APE with significant historical events that exemplify broad patterns of our history the Sediment Removal Tunnel, Headworks and Culvert Bridge, Debris Basin and spillway, do not appear to qualify as significant historic resources individually or collectively. Throughout the world, debris basins and dams (masonry, earthen or timber) have been constructed by both private and public entities to control seasonal rain fall, and to protect people and property. The structures located in the APE are just one of many flood-control systems that were constructed in the San Gabriel Mountain canyons. There is no evidence that any of the structures in the APE are eligible for listing under Criteria A/1.

Under National Register and/or California Register criteria relating to the built-environment structures located within the APE's association with persons of historic importance, the Dam, Sediment Removal Tunnel, Headworks and Culvert Bridge, Debris Basin and spillway, do not appear to qualify, individually or collectively, as significant resources. The design and plans for the structures located in the Santa Anita Wash were prepared by the Los Angeles County Flood Control District staff engineers, or the Army Corp of Engineers, as part of their normal tasks and duties. There is no evidence that any of the structures in the APE are eligible for listing under Criteria B/2.

Under National Register and/or California Register criteria relating to the distinctive characteristics of a type, period, region, or method of construction, the built-environment structures located within the APE are not significant as they do not, individually or collectively, embody any innovative engineering design or method of construction, or high artistic design. The Headworks was designed using common technology to channel water from the Dam towards the Debris Basin or into the 30' pipe to the Sierra Madre spreading grounds. The Debris Basin was constructed by excavating a water containment area in the Santa Anita Wash, and a spillway was erected to hold heavier debris back during high rainfall events. The technology used to create the basin and associated spreading grounds were commonplace, as was the use of concrete to hold, channel, divert, and control the water as it came down from the foothills. The Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, do not appear to present any technological achievement in the history of water systems locally, regionally or nationally, and are therefore not eligible for listing either individually or collectively under Criteria C/3.

Based upon a survey of the above-ground historic period resources within the APE performed in January 2013, the APE has not yielded, nor does it appear to have the potential to yield, information important to the history of the local area, California or the nation pursuant to National Register and/or California Register criteria D/4.

In summation, the Headworks and Culvert Bridge, Debris Basin and spillway, and Sediment Removal Tunnel, are not eligible for listing in the National Register and/or the California Register, or as they do not, individually or collectively, meet any of the criteria necessary for listing in the registries.



**Area of Potential Effect (APE) for this evaluation report
(U.S.G.S. Mt. Wilson Quad, 1:24,000)**

APPENDIX E
PERSONNEL QUALIFICATIONS

Patrick O. Maxon, RPA

Director, Cultural Resources

EDUCATION

1994 / Master of Arts,
Anthropology / California State
University, Fullerton, CA

1987 / Bachelor of Arts,
Psychology/Sociology / Towson
State University, Maryland, MD

PROFESSIONAL CERTIFICATIONS

Registered Professional
Archaeologist (National), 1999 –
present

Certified Archaeologist – Riverside
County TLMA, 2008 – present

Certified Archaeologist – Orange
County Environmental
Management Agency, 1998 –
present

Cultural Resources Specialist –
California Energy Commission,
2004

AFFILIATIONS AND COMMITTEES

Pacific Coast Archaeological
Society (PCAS)

Society for California Archaeology
(SCA)

Society for American Archaeology
(SAA)

Association of Environmental
Professionals (AEP) (Board of
Directors, 2005 to present)

American Cultural Resources
Association (ACRA)

PROFESSIONAL EXPERIENCE

BonTerra Consulting, Director,
Cultural Resources 2008–present

Chambers Group, Director,
Cultural Resources 2006–2008

SWCA, Project Manager/Director,
Cultural Resources 2001–2006

RMW Paleo Associates, Staff
Archaeologist/Senior Project
Manager 1994–2001

Patrick Maxon is a Registered Professional Archaeologist, is certified by the County of Orange Environmental Management Agency and the Riverside County Transportation and Land Management Agency. He has 20 years of experience in all aspects of cultural resources management, including prehistoric and historic archaeology, paleontology, ethnography, and tribal consultation. He has expertise in compliance with the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), and the Clean Water Act (CWA), among others. Mr. Maxon has been previously certified by the City of San Diego, and meets the Secretary of Interior's standards for historic preservation programs for archaeology. Mr. Maxon has completed hundreds of cultural resources projects that have involved (1) agency, client, Native American, and subcontractor coordination; (2) treatment plans and research design development; (3) archival research; (4) field reconnaissance; (5) site testing; (6) data recovery excavation; (7) construction monitoring; (8) site recordation; (9) site protection/preservation; (10) mapping/cartography; (11) laboratory analysis; and (12) report production. He has managed a number of projects within the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Bureau of Land Management (BLM), the Bureau of Reclamation, and other federal agencies that require compliance with Section 106 of the NHPA. He has also completed projects throughout Southern California under CEQA for State and local governments and municipalities, including the California Department of Transportation (Caltrans), the Department of General Services (DGS), the California Energy Commission (CEC), the California Department of Water Resources, the Los Angeles County Department of Public Works (LADPW), the Los Angeles Department of Water and Power (LADWP), the Los Angeles Unified School District, and others.

Representative Project Experience

Lancaster Solar Farm Initial Study/Mitigated Negative Declaration, Lancaster (CoLACAO). BonTerra Consulting is currently preparing an Initial Study/Mitigated Negative Declaration (MND) for the proposed Solar Energy Project to be developed on approximately 63 acres of undeveloped County-owned land within the City of Lancaster. The project site is surrounded on the east and west by several County facilities, and the California State Prison-Los Angeles County (CSP-LAC) is located to the south. The County is proposing to develop the project site with a solar facility capable of generating up to 4 megawatts (MW) of electricity under peak solar conditions, and the energy would be made equally available to the adjacent Mira Loma Detention Center and the Challenger Memorial Youth Center.

The cultural resources investigation at the site included a California Historical Resources Information System (CHRIS) records search and literature review for the project at the South Central Coastal Information Center (SCCIC) at the California State University, Fullerton. Native

American consultation was initiated with the Native American Heritage Commission (NAHC) with a request for a Sacred Lands File Search and contact list, and informational letters were mailed to tribes requesting comment. A paleontological resources records search, completed previously by the Los Angeles County Natural History Museum (LACNHM) was reviewed for information on known paleontological resources in the project site and surrounding area. In addition, a current records review of the museum's vertebrate paleontology records for the project site and vicinity was undertaken and reviewed. A cultural resources survey of the project site was conducted and a Historic Resources Assessment involving a pedestrian survey of the project site and research into the historic development of the site and surrounding area, including individual property information available from archival sources, was also completed. The study concluded that five on-site structures of an extant but defunct wastewater treatment and reclamation system are eligible for listing in the National Register of Historic Places and the California Register of Historical Resources. Avoidance or formal documentation via a Historic American Engineering Report (HAER) to document the history of early sewage treatment and water reclamation systems of the type found in the project area, and the physical properties of the system, was recommended. No other significant cultural resources were identified as a result of the study; however, because of the presence of historic and prehistoric resources in the vicinity, and the possibility of significant resources buried under development at the project site, monitoring of grading was recommended.

Sylmar Ground Return Replacement Return System, City of Los Angeles (MWatson). BonTerra Consulting has been hired by Montgomery Watson Harza to perform an assessment of biological and cultural resources for the Sylmar Ground Replacement Return System Project in Los Angeles. The northern segment extends from north to south within the utility easement corridor that runs between the Sylmar West Converter Station in Sylmar to the Kenter Canyon Terminal Tower near Brentwood. The southern extension, from the Kenter Canyon Terminal Tower to the ocean, is currently being considered under three alternatives. Cultural resources work included a California Historical Resources Information System (CHRIS) records search and literature review for the project at the South Central Coastal Information Center (SCCIC) at the California State University, Fullerton. Native American consultation was initiated with the Native American Heritage Commission (NAHC) with a request for a Sacred Lands File Search and contact list, and informational letters were mailed to tribes requesting comment. A paleontological resources records search was completed by the Los Angeles County Natural History Museum (LACNHM) to compile information on known paleontological resources in the project site and surrounding area. Brief, one-day field surveys were conducted for the northern segment and memo reports were produced that identified constraints to the construction work. Cultural resources surveys of the southern extension's three alternatives were subsequently conducted.

Centennial Specific Plan Environmental Impact Report, Cultural Resources Surveys, Los Angeles County. BonTerra Consulting is preparing the environmental documentation for the Centennial Specific Plan EIR that involves a new community consisting of residential, commercial, business park, and cultural and civic/institutional uses and encompassing approximately 11,680 acres. Mr. Maxon, as the Cultural Resources Manager

for the project, is managing the review, evaluation, and mitigation of cultural resources for this proposed project. To consider the current status of the project area's cultural and paleontological resources in the environmental analysis, others initially performed a Phase I cultural resources study of the entire project area. Mr. Maxon surveyed an off-site Caltrans right-of-way south of the project site. This included a records search at the South Central Coastal Information Center at the California State University, Fullerton; a paleontological records search at the Los Angeles County Museum; and an intensive pedestrian survey to evaluate the project area for the presence of cultural and paleontological resources. Numerous cultural resources sites were discovered on the project site, and some were evaluated for significance. Those that were determined significant and were in the Phase I development area were preserved in place. As the project evolves and expands beyond the Phase I area, additional sites must be evaluated for significance. Some may need to undergo data recovery excavations, while one structure must be recorded and evaluated. Consultations with regulatory agencies, County staff, Native American tribes, the interested public, and Clients will be completed and their comments considered, and the monitoring of disturbances around the known sites will be undertaken when construction activities commence.

Newport Banning Ranch (City of Newport Beach), As project manager of the cultural resources portion of this on going project, Mr. Maxon conducted archaeological, historic, and paleontological investigations for resources potentially impacted by the proposed Newport Banning Ranch development. The investigation consisted of (1) a Phase II test level excavation of eight prehistoric and three historic archaeological sites present on the site; (2) an assessment and evaluation of the built environment resources associated with the West Newport Oil Company development on site; and (3) a paleontological assessment of the project site's potential for the presence of sensitive rock formations and fossil resources. Three archaeological sites were deemed significant as a result of the study and the paleontological significance of the project site was deemed as high. However, no historic resources associated with oil extraction operations were identified. Mr. Maxon oversaw the completion of fieldwork, the preparation of archaeological, historical and paleontological technical reports, and subsequently prepared the cultural resources section of the EIR for the project. Future work will include data recovery excavations and/or site protection/preservation of significant cultural and paleontological resources impacted by the proposed project. Archaeological/Paleontological monitoring will be undertaken during grading of the project site.

Poseidon Desalination Plant, Cultural Resources Services, Huntington Beach and Newport Beach. BonTerra Consulting completed cultural and biological resources Phase I and II studies for the proposed Poseidon Resources Desalination Plant project in the City of Huntington Beach and the associated desalination plant pump station in the City of Newport Beach. The project included a Phase I cultural resources reconnaissance study that consisted of a California Historical Resources Information System (CHRIS) records search and literature review for the project at the South Central Coastal Information Center (SCCIC) at the California State University, Fullerton, Native American coordination with the Native American Heritage Commission and local Native American tribes and individuals, a pedestrian survey of both

locations, and a cultural resources technical report describing the results of the study and offering management recommendations.

While no archaeological or paleontological resources were discovered, historic structures are present on the property and were evaluated for significance. The proposed desalination plant location in Huntington Beach, currently developed with three defunct fuel oil tanks and their infrastructure, is located within the existing AES Huntington Power Generation Plant facility in Huntington Beach. The second parcel is located in unincorporated County of Orange, immediately adjacent to the City of Newport Beach. It consists of an existing pump station site that will be expanded as part of the current project. Because they are nearly 50 years old, the fuel oil tanks in Huntington Beach were recorded on DPR Series 523 forms and evaluated for eligibility for listing in the California Register of Historical Resources. They were found not eligible. Mitigation for potential project effects included recommendations for the historic structures present on site and retention of an Archaeologist and/or Paleontologist in the event that cultural resources or fossil resources are discovered during grading.

Atlanta Ave Widening Project HPSR/ASR/XPI (KOMEX). As project manager for the Atlanta Avenue widening project, Mr. Maxon conducted a Phase I cultural resources study to evaluate the potential effects of the project on cultural resources. The initial work included consultation with Caltrans cultural resources specialists regarding the Area of Potential Effects (APE) to cultural resources; a cultural resources literature review; Native American consultation; a field survey of the project area; and submittal to Caltrans of an Archaeological Survey Report (ASR), and a Historic Property Survey Report (HPSR). After further consultation with Caltrans, Mr. Maxon directed the historic evaluation of the Pacific Mobile Home Park south of the site; and completed an Extended Phase I (XPI) study consisting of subsurface archaeological excavation to evaluate the presence of the archaeological site within the APE, An updated ASR, XPI report, DPR 523 site forms, and HPSR was submitted to Caltrans and SHPO for review and comment.

Wintersburg Channel (OrCo). Mr. Maxon performed a Phase I cultural resources study to determine if the proposed widening of the channel would have the potential to impact cultural resources. The study included a literature review at the South Central Coastal Information Center, a paleontological literature review at the Los Angeles County Museum, a pedestrian survey of the Area of Potential Effects, and completion of the CEQA section describing the results of the study. As cultural resources project manager on this contract, Mr. Maxon also consulted with regulators at the US Army Corps of Engineers, Native American tribes and individuals, and with a local archaeologist who has extensive experience working in and around Bolsa Chica. Elements of the defunct Bolsa Chica Gun Club were identified in the wetlands, but it was determined that the channel work would have no impact on them. Recordation of the channel itself and the Slater Bridge to the north was subsequently completed by an architectural historian. Construction monitoring was recommended.