Appendix D

Phase I Cultural Resources Report

Phase I Cultural Resources Report

Orange County Water District
Santiago Basins Saddle Improvement Project

Prepared for

Daniel Bott
Principal Planner
Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

Prepared by

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April 2016

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Submitted by:

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Key Words: Gabrieleno, 7.5 Minute Orange Quadrangle; T4S R9W Section 22

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1.0 INTRODUCTION

This project involves the repair and stabilization of the saddle area between Blue Diamond Basin and Bond Basin at the Santiago Recharge Basin Complex in the City of Orange, Orange County, California. The Proposed Action activities include stabilization of the saddle side slopes; reconstruction of a saddle apron and conveyance pipeline; and protection improvements to the saddle apron.

As shown in Exhibit 1, the Santiago Recharge Basin Complex is bound by Prospect Avenue to the west, Hughes Avenue to the east, Bond Avenue to the south, and Villa Park Road to the north. The basin can be regionally accessed by State Route 55 via the Chapman Avenue exit. The Santiago Recharge Basin Complex is located downstream of Santiago Reservoir and receives incoming flows from Santiago Creek, which drains into and out of the basin. The Santiago Recharge Basin Complex is located in the U.S. Geological Survey's (USGS') Orange, 7.5-minute quadrangle, Township T4 South, Range 9 West.

This project is under the jurisdiction of the Federal Emergency Management Agency (FEMA). FEMA reviewed the project and determined that the cultural resources work completed to date does not qualify as a programmatic allowance under its Section 106 Programmatic Agreement. This necessitates consultation with Native American tribes and the State Historic Preservation Office (SHPO), which is the focus of this study. As such, this report describes the findings of a records search and literature review undertaken at the South Central Coastal Information Center (SCCIC) at California State University Fullerton and a request of the Native American Heritage Commission (NAHC) for a Sacred Lands File (SLF) search. It also includes a brief cultural context and regulatory environment. BonTerra Psomas did not conduct fieldwork for this project.

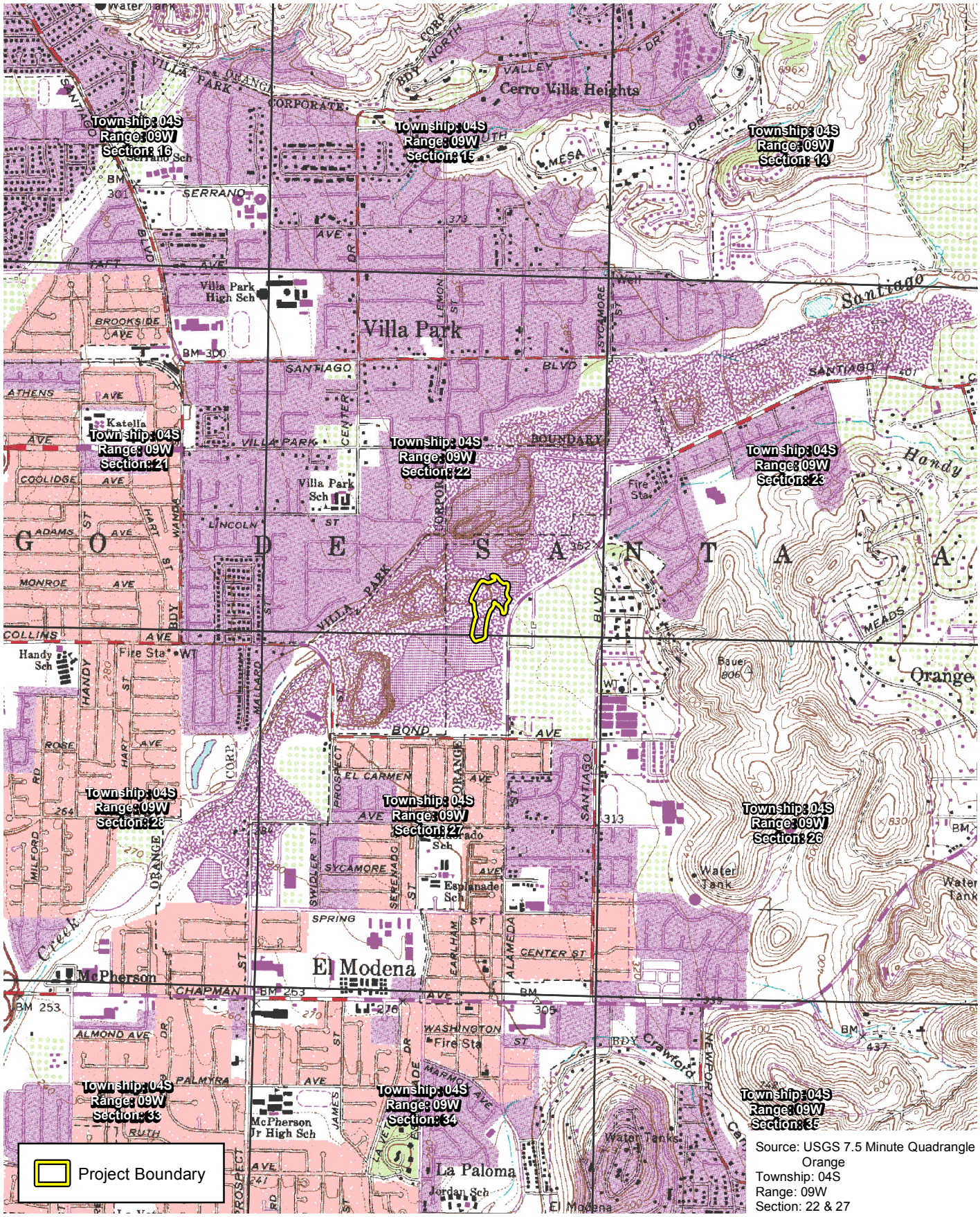
2.0 FEDERAL LEGISLATIVE FRAMEWORK

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The agency official shall apply the NRHP criteria (36 CFR 63) to properties identified in the APE that have not been previously evaluated for NRHP eligibility.

The criteria applied to evaluate properties (other than areas of the National Park System [NPS] and National Historic Landmarks) for the National Register of Historic Places (NRHP) are listed below. These criteria are worded in a manner to provide for a wide diversity of resources. The following criteria shall be used by the NPS to review nominations, as well as to evaluate properties for nomination to the NRHP and to evaluate NRHP eligibility of properties. Guidance in applying the criteria is further discussed in the NRHP's "How To" publications, Standards & Guidelines sheets, and Keeper's opinions.

The National Register Criteria for Evaluation (36 *Code of Federal Regulations* [CFR] 60.4) are as follows:

> The quality of significance in American history, architecture, archeology, 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
>
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or



Source: USGS 7.5 Minute Quadrangle
Orange
Township: 04S
Range: 09W
Section: 22 & 27

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Project Boundary

Exhibit 1

Santiago Basins Saddle Repair Project

N
W E
S

2,000 1,000 0 2,000

Feet

BonTerra PSOMAS

(Rev: 3-21-2016 JAZ) R:\Projects\OCW_OCWD\3OCW000515\Graphics\Cultural\ex1_USGS.pdf

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of construction, 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) that have yielded, or may be likely to yield, information important in prehistory or history.

3.0 PROJECT LOCATION AND DESCRIPTION

3.1 PURPOSE AND NEED

Saddle Side Slope Repairs

To improve the stability of the saddle side slopes, the slopes of the saddle would need to be cut back to a maximum steepness of 1.8 to 1.0. The proposed grading activity would remove slope failure-related debris and areas prone to failing.

Saddle Apron Improvements

In conjunction with the slope grading, the saddle would be widened by approximately 60 feet and the existing grade would be lowered by approximately 30 feet. A 6-foot diameter by 100-foot corrugated metal pipeline would be excavated and installed between the basins in the saddle area. Once the pipeline is constructed, the trench for the pipeline would be backfilled with native material. The underground pipeline would convey flows between Blue Diamond Basin and Bond Basin. Once the pipeline is constructed, the saddle would also function as an apron, allowing water within Blue Diamond Basin to spill over into Bond Basin. To minimize erosion, the apron would be re-armored with 4-ton rock and ¼-ton rock. The rocks would be positioned to allow incoming sediment into the basin to fill in between the rocks and eventually cover the rocks completely.

Construction Phasing/Staging Plan

The project would be constructed in three phases. Equipment staging for all phases of the Proposed Action would occur within the construction activity impact area.

- Phase 1 would involve rough grading and excavation to create a 1.8:1.0 slope on either side of the saddle and create the apron downstream of the saddle. The existing slope on the west side of the saddle that was damaged during storm events would also be reconstructed during the first phase. Equipment used during Phase 1 would include excavators, scrapers, bulldozers, off-road dump trucks, and compactors.
- Phase 2 would involve excavation and placement of the six-foot diameter pipeline. Equipment for the Phase 2 would include; excavators, loaders, and bulldozers to excavate, place and backfill the pipeline.
- Phase 3 would involve final grading and placement of the 4 ton and ¼ ton rock within the apron. Equipment for Phase 3 would include excavators, bulldozers, and on-road and off-road dump trucks to finish grading and placing the rocks on the apron.
- Phase 4 would involve restoration with native plantings in areas disturbed by the project.

4.0 SOURCES CONSULTED

4.1 ARCHAEOLOGICAL/HISTORIC RESOURCES RECORDS SEARCH

An archaeological resources records search for the project Area of Potential Effects (APE) and the surrounding ½-mile radius was conducted on March 23, 2016, by BonTerra Psomas Senior Archaeologist David Smith, at the SCCIC at California State University, Fullerton. The SCCIC is the designated regional repository of the California Historical Resources Information System (CHRIS) for records regarding archaeological and historic resources and associated studies in Orange, Los Angeles, San Bernardino, and Ventura Counties. The CHRIS provides data on the NRHP, the California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), Historical Landmarks of Orange County, and historical maps and photographs as needed.

4.2 NATIVE AMERICAN SCOPING

The resource identification effort included consultation with the NAHC in Sacramento regarding the possibility of traditional cultural properties, sacred sites, or other Native American sites in the project vicinity. BonTerra Psomas notified the NAHC of the proposed project on March 22, 2016. The NAHC responded in writing on March 23, 2016.

5.0 CONTEXT

5.1 NATURAL

The project area is located in the heavily developed part of the City of Orange. The landscape has changed dramatically with the ensuing development and little remains of the native landscape. The Santa Ana River drainage is west of Santiago Creek. Historically, Santiago Creek converged with the Santa Ana River south of the project area. The convergence zone would have been a dynamic environment. Seasonal flooding would have replenished soil nutrients regularly, resulting in a healthy floral and faunal population in the area. Vegetation in the area consisted of sycamore, oak, and many riparian species. The area was demonstrably an appealing setting for the prehistoric inhabitants of the area just as it is for modern people today.

5.2 PREHISTORY

Several chronologies are generally used to describe the sequence of the later prehistoric periods of Southern California. William Wallace (1955) developed the first comprehensive California chronologies and defines four periods for the southern coastal region.

Wallace's synthesis is largely "descriptive and classificatory, emphasizing the content of archaeological cultures and the relationships among them" (Moratto 1984:159). Wallace relies upon the concept of "cultural horizons", which are generally defined by the temporal and spatial distribution of a set of normative cultural traits, such as the distribution of a group of commonly associated artifact types. As a result, his model does not allow for much cultural variation within the same time period, nor does it provide precise chronological dates for each temporal division. Nonetheless, although now more than 50 years old, the general schema of the Wallace chronology has provided a general framework for Southern California prehistory that remains valid today.

Horizon I: Early Man or Paleo-Indian Period (11,000 BCE[1] to 7,500 BCE). While Wallace (1955) initially termed this period the Early Man Horizon (I), this early stage of human occupation is commonly referred to as the Paleo-Indian Period today (Chartkoff and Chartkoff 1984:24). The precise start of this period is still a topic of considerable debate. At inland archaeological sites, the surviving material culture of this period is primarily lithic, consisting of large, extremely well-made stone projectile points and tools such as scrapers and choppers. Encampments were probably temporary, located near major kills or important resource areas.

Horizon II: Milling Stone Assemblages (7,500 BCE to 1,000 BCE). Encompassing a broad expanse of time, the Milling Stone Period was named for the abundant millingstone tools associated with sites of this period. These tools, the mano and metate, were used to process small, hard seeds from plants associated with shrub-scrub vegetation communities. An annual round of seasonal migration was likely practiced, with movements coinciding with ripening vegetal resources and periods of maximal availability of various animal resources. Along the coast, shell midden sites are common site types. Some formal burials, occasionally with associated grave goods, are also evident. This period of time is roughly equivalent to Warren's (1968) Encinitas Tradition. Warren (1968) suggests that, as millingstones are common and projectile points are comparatively rare during this period of time, hunting was less important than the gathering of vegetal resources.

More recent studies (Koerper 1981; Koerper and Drover 1983) suggest that a diversity of subsistence activities, including hunting of various game animals, were practiced during this period. At present, little is known about cultural change during this time period in Southern California. While this lack of noticeable change gives the appearance of cultural stasis, it is almost certain that many regional and temporal cultural shifts did occur. Future research that is focused on temporal change during the Milling Stone Period would greatly benefit the current understanding of Southern California prehistory.

Horizon III: Intermediate Cultures (1,000 BCE to 750 CE[2]). The Intermediate Period is identified by a mixed strategy of plant exploitation, terrestrial hunting, and maritime subsistence strategies. Chipped stone tools, such as projectile points, generally decrease in size but increase in number. Abundant bone and shell remains have been recovered from sites dating to these time periods. In coastal areas, the introduction of the circular shell fishhook and the growing abundance of fish remains in sites over the course of the period suggest a substantial increase in fishing activity during the Intermediate Horizon. It is also during this time period that mortar and pestle use intensified dramatically. The mano and metate continued to be in use on a reduced scale, but the greatly intensified use of the mortar and pestle signaled a shift away from a subsistence strategy based on seed resources to that of the acorn. It is probably during this time period that the acorn became the food staple of the majority of the indigenous tribes in Southern California. This subsistence strategy continued until European contact. Material culture became more diverse and elaborate and included steatite containers, perforated stones, bone tools, ornamental items, and asphalt adhesive.

Horizon IV: Late Prehistoric Cultures (750 CE to 1769 CE). During the Late Prehistoric Period, exploitation of many food resources, particularly marine resources among coastal groups, continued to intensify. The material culture in the Late Prehistoric Horizon increased in complexity in terms of the abundance and diversity of artifacts being produced. The recovery and identification of a number of small projectile points during this period likely suggests a greater utilization of the bow and arrow, which was likely introduced near the end of the Intermediate

1 BCE is defined as "Before Common Era" and generally refers to that time period commonly referred to as "Before Christ" (B.C.).

2 CE is defined as "Common Era" and generally refers to that time period commonly referred to as "annō Dominī" (A.D.).

Period. Shell beads, ornaments, and other elements of material culture continue to be ornate, varied, and widely distributed; the latter evidence suggests elaborate trade networks. Warren's (1968) scheme divides the late prehistoric period into several regional traditions. Western Riverside County, Orange County, and the Los Angeles Basin area are considered part of the "Shoshonean" tradition, which may be related to a possible incursion of Takic speakers into these areas during this period. The Late Prehistoric Period includes the first few centuries of early European contact (1542–1769 CE); it is also known as the Protohistoric Period as there was a low level of interaction between native Californians and Europeans prior to Portolá's overland expedition in 1769.

In the few centuries prior to European contact, the archaeological record reveals substantial increases in the indigenous population (Wallace 1955:223). Some village sites may have contained as many as 1,500 individuals. Apparently, many of these village sites were occupied throughout the year rather than seasonally. This shift in settlement strategy was likely influenced by improved food procurement and storage technology, which enabled population growth and may have helped stimulate changes in sociopolitical organization.

Evidence is growing that prehistoric cultural change has been much more variable through time and across culture areas than previously thought. Cultural traits such as maritime economies, seafaring, complex trade networks, and year-round occupation of villages appear to have developed much earlier than previously thought. Culture change during the Late Prehistoric Period, in particular, may have been driven more by environmental and resource pressures than optimal adaptation to the environment (Byrd and Raab 2007).

5.3 ETHNOGRAPHY

Gabrielino/Tongva

At the time of European contact, this part of Orange County was the home of the Gabrielino or Tongva. The Gabrielino and their descendants are those people who became associated with Mission San Gabriel Arcángel, which was established in south-central Los Angeles County on September 8, 1771, in what has ever since been called the San Gabriel Valley. Today, these people are sometimes referred to as the *Tongva,* although the term apparently originally (i.e., before the arrival of Euro-Americans) referred to the inhabitants of the San Gabriel Valley only. In either case, the inhabitants of Santa Catalina Island and San Clemente Island are often included as being parts of this tribe, as are the Fernandeño, who inhabited most of the San Fernando Valley. Note that Chester King distinguishes between the *Eastern Gabrielino*, who lived south of the San Gabriel Mountains, mainly in the San Gabriel Valley, and the *Western Gabrielino*, who lived along the western coast of Los Angeles County, from Malibu to Palos Verdes, and included the people living in the San Fernando Valley (King 2003:14).

The ancestral Gabrielino arrived in the Los Angeles Basin probably before 500 BCE as part of the so-called Shoshonean (Takic speaking) Wedge from the Great Basin region and gradually displaced the indigenous peoples, probably Hokan speakers. Large, permanent villages were established in the fertile lowlands along rivers and streams and in sheltered areas along the coast. Eventually, Gabrielino territory encompassed the watersheds of the Los Angeles, San Gabriel, Rio Hondo, and Santa Ana Rivers, which includes the greater Los Angeles Basin, to perhaps as far south as Aliso Creek, as well as portions of the San Fernando, San Gabriel, and San Bernardino Valleys. Gabrielino territory also included the islands of San Clemente, San Nicholas, and Santa Catalina (McCawley 1996: 23–24; Bean and Smith 1978:538–540). Recent studies suggest the population may have numbered as many as 10,000 individuals at their peak in the Precontact Period.

The subsistence economy of the Gabrielino was one of hunting and gathering. The surrounding environment was rich and varied, and the natives were able to exploit mountains, foothills, valleys, deserts, and coasts. As was the case for most native Californians, acorns were the staple food (by the Intermediate Horizon), supplemented by the roots, leaves, seeds, and fruit of a wide variety of flora (i.e., cactus, yucca, sage, and agave). Fresh and saltwater fish, shellfish, birds, insects, and large and small mammals were exploited.

A wide variety of tools and implements were employed by the Gabrielino to gather, collect, and process food resources. The most important hunting tool was the bow and arrow. Traps, nets, blinds, throwing sticks, and slings were also employed. Fish were an important resource and nets, traps, spears, harpoons, hooks, and poisons were utilized to catch them. Ocean-going plank canoes and tule balsa canoes were used for fishing and for travel by those groups residing near the Pacific Ocean.

The processing of food resources was accomplished in a variety of ways: nuts were cracked with hammer stone and anvil; acorns were ground with mortar and pestle; and seeds and berries were ground with mano and metate. Yucca, an important resource in many areas, was eaten by the natives and exploited for its fibers.

Strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks were also employed. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels.

Gabrielino houses were circular domed structures of willow poles thatched with tule. They were actually quite large and could, in some cases, hold 50 individuals. Other structures served as sweathouses, menstrual huts, and ceremonial enclosures (Bean and Smith 1978).

Kroeber (1925:621) considered the Gabrielino:

> . . . to have been the most advanced group south of Tehachapi, except perhaps the Chumash. They certainly were the wealthiest and most thoughtful of all the Shoshoneans of the State, and dominated these civilizationally wherever contacts occurred.

5.4 HISTORY

The City of Orange provides a brief, yet detailed, overview of its history:

> Originally, the area we now call Orange was inhabited by Native Americans called Gabrielenos by the Spaniards.
>
> The first landholder in this area was Juan Pablo Grijalva, a retired Spanish soldier who had marched through California with one of the early expeditions from Mexico. In 1801, he was given permission by the Spanish colonial government to ranch "the place of the Arroyo de Santiago." His land ran from the Santa Ana River and the foothills above Villa Park to the sea at Newport Beach. Grijalva lived in San Diego, but he built an adobe ranch house on what is now Hoyt Hill. (A historical plaque marks the spot at the corner of Hewes and Santiago Canyon Road.)
>
> After Grijalva's death, the rancho was taken over by his son-in-law, Jose Antonio Yorba, and grandson, Juan Pablo Peralta. It came to be known as the Rancho Santiago de Santa Ana. Both Yorba and Peralta had nine children, and their children and grandchildren moved to various parts of the enormous rancho. New

acreage was added to the property until the family holdings extended from Riverside to the ocean.

In 1848, the Treaty of Guadalupe Hidalgo ceded California to the United States. The boundaries of the Rancho Santiago de Santa Ana were validated in 1857 and the Yorba and Peralta families continued to live there.

In the early 1860's, one member of the extended family -- Leonardo Cota -- borrowed money from Abel Stearns, the largest landowner in Southern California. He put up his share of the rancho as collateral. When Cota defaulted in 1866, Stearns filed a lawsuit in the Los Angeles Superior Court to demand a partition of the land, so that Stearns could claim Cota's section.

It took two years to sort out the complicated relationships among the families and to determine how much land each one owned. The rancho was divided into 1,000 units parceled out to the heirs and to the claimants in the lawsuit.

Two Los Angeles lawyers involved in the lawsuit were Alfred Beck Chapman and Andrew Glassell, who took some of their fees in land. They had already started buying other sections of the rancho as early as 1864. By 1870, they owned about 5,400 acres in what is now downtown Orange. It seemed like a good location for a town; the nearby Santa Ana River provided water, the soil was rich and a stage road ran nearby. Chapman hired a surveyor to divide the land into tracts of 40-, 80- and 120-acres. He called the area Richland and began selling the lots.

Although Chapman later liked to call himself the "father of Orange," the development of the city was actually guided by Captain William T. Glassell, Andrew Glassell's brother. He laid out the downtown area, bounded by Maple, Grand, Almond, and Lemon streets, with Chapman and Glassell streets meeting in a central "Public Plaza." Captain Glassell's home and office, on the west side of the Plaza Square, was the first building in Richland.

The town of Orange began as a farming community, although it took several years of trial and error for the settlers to discover the most successful crops. The first crops were grains such as barley, oats, wheat corn and rye. Many of the farmers then planted grape vines, primarily for raisins. Grapes were a major product until the 1886 blight that killed thousands of vines in Orange and surrounding communities. The settlers also tried growing tropical fruits such as bananas, pineapples and guavas, but without much success. In 1873, the farmers began planting orange groves.

The 1880s were boom times for Orange as well. To help attract tourists, promotional flyers were sent out across the country and three hotels were built in the downtown area. New subdivisions and town sites were offered for sale. Two local newspapers were founded: in 1885 the Orange Tribune (later renamed the Orange Post), and in 1888 the Orange News (later renamed the Orange Daily News). The first public library was opened in 1885. Asphalt sidewalks and gas streetlights were added to the downtown and two streetcar lines began operating. The town's first bank, the Bank of Orange, was organized in 1886. That same year a circular park with a fountain was set up in the middle of the Plaza.

The most significant event of the boom years was the incorporation of the City of Orange on April 6, 1888, and the first Mayor was William Blasdale. At the time of

incorporation, Orange was a 3.1-square mile city bounded by Batavia Street, La Veta Avenue, Santiago Creek, and Collins Avenue with a population of 600. It is said that the reason for the early incorporation was to prevent a saloon from coming to Orange. Consequently, one of the first ordinances passed was to prohibit the manufacture and sale of intoxicating beverages. The following year, the southern half of Los Angeles County was split off to form Orange County. Both Anaheim and Orange had hopes of becoming the county seat, but that honor went to Santa Ana.

By the end of the 1880s, the boom was over. Local farmers were planting orange trees, but growing other crops while the trees matured. Farmers had to cope with the Freeze of 1913 and the Floods of 1916, but by 1920, oranges had become the city's premier crop. By 1929 Orange County was producing more than $12 million in oranges, with 820,000 boxes of the fruit coming from just one of the packinghouses in Orange. However, citrus prices began falling at the beginning of the Depression, and Orange, like the rest of the country, fell into an economic decline that lasted until the beginning of World War II. The late '30s also brought terrible weather, including a freeze in 1937 and the devastating Flood of 1938, which killed 19 people in Orange County. There were no fatalities in Orange, but there was considerable damage to roadways and farmlands.

The city of Orange grew from 3.8 square miles in 1952 to 8.3 square miles in 1960. Between 1950 and 1960, the population more than doubled, increasing from 10,027 to 26,444, and had further increased to 77,374 by 1970. As of 2005, the population is estimated at over 138,000.

During the next decades, Orange will continue to expand to the east, where it has a 60-square mile sphere of influence extending to the county line. Preliminary plans call for a variety of developments in the area around Irvine Lake, with much of the area to the north of the lake remaining as open space. The city of Orange will continue to strive for a balance of attractive neighborhoods and a strong business base, maintaining a sense of community and the small town values upon which it was founded. (City of Orange, 2016)

6.0 SUMMARY OF RESULTS

6.1 ARCHAEOLOGICAL/HISTORIC RESOURCES RECORDS SEARCH

A records search for the project and surrounding a half-mile buffer was conducted on March 23, 2016, at the SCCIC. Resources consulted include the USGS' 7.5-minute Orange topographic map containing locational data for cultural resources studies and recorded site locations.

There have been six cultural resources studies conducted within a half mile of the project area; of those, one has included approximately half of the project area. The remaining half does not appear to have been surveyed.

A review of the topographic map indicated that there are no archaeological sites recorded on or within a half mile of the project. The nearest prehistoric site, CA-ORA-89, is located approximately two-thirds of a mile to the southwest of the project. That site was reportedly destroyed during the construction of an apartment complex.

Refer to Attachment A for lists of resources and studies within a half mile of the project site and records search maps depicting the location of cultural resources studies and resources.

6.2 NATIVE AMERICAN SCOPING

The NAHC reviewed its SLF to determine if it had any record of significant cultural resources within or near the project location. The results of the SLF check indicate that the NAHC has no record of any Native American sacred lands in the immediate vicinity of the project. The NAHC included a list of 24 Native American individuals/organizations that may know of cultural resources in the project area (refer to Attachment B). FEMA will conduct government-to-government consultations with the tribes listed by the NAHC if those tribes request consultation.

7.0 CERTIFICATION

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

DATE: April 12, 2016 SIGNED: _____

Patrick Maxon, M.A., RPA

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ATTACHMENT A

SOUTH CENTRAL COASTAL INFORMATION CENTER RECORDS SEARCH

ATTACHMENT B

SACRED LANDS FILE SEARCH RESULTS

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

March 23, 2016

Patrick O. Maxon, M.A., RPA
Bonterra Psomas

Sent by Email: Patrick.Maxon@Psomas.com
Number of Pages: 3

RE: Proposed Santiago Basins Saddle Repair Project, City of Orange, Orange USGS Quadrangle, Orange County, California

Dear Mr. Maxon:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent above reference codes is to mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the USGS quadrangle information provided with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

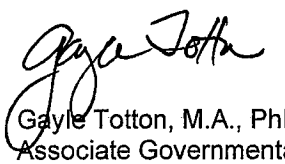
Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,



Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Heritage Commission
Tribal Consultation List
Orange County
March 23, 2016

Juaneno Band of Mission Indians Acjachemen Nation
Chairperson, Matias Belardes
32161 Avenida Los Amigos Juaneno
San Juan Capisttrano , CA 92675
(949) 293-8522
(949) 444-4340 (Cell)

Juaneño Band of Mission Indians
Sonia Johnston, Tribal Chairperson
P.O. Box 25628
Santa Ana , CA 92799 Juaneno
sonia.johnston@sbcglobal.net

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Tribal Manager
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
(949) 293-8522

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 Gabrielino Tongva
Los Angeles , CA 90012
sgoad@gabrielino-tongva.com
(951) 807-0479

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
1999 Avenue of the Stars, Suite 1100
Los Angeles , CA 90067
Gabrielino
(626) 676-1184 Cell

Juaneno Band of Mission Indians Acjachemen Nation
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan Capistrano , CA 92675
tromero@juaneno.com
(949) 488-3484
(530) 354-5876 Cell

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

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/Fax

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of 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 applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Santiago Basins Saddle Repair Project, City of Orange, Orange USGS Quadrangle, Orange County, California.

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

31 December 2018

Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Attn: Greg Woodside, Executive Director of Planning and Natural Resources

re: Paleontological Resources for the proposed OCWD Santiago Basins Saddle Repair and Smith Basin Rehabilitation sites Project, in the Cities of Orange and Villa Park, Orange County, project area

Dear Greg:

I have conducted a thorough search of our Vertebrate Paleontology records for the proposed OCWD Santiago Basins Saddle Repair and Smith Basin Rehabilitation sites Project, in the Cities of Orange and Villa Park, Orange County, project area as outlined on the portion of the Orange USGS topographic quadrangle map that you sent to me on 28 December 2018. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities somewhat nearby from the same sedimentary deposits that occur in the proposed project area.

In the Santiago Creek drainage that runs through most the proposed project area sites the surface deposits consist of active younger Quaternary sands and gravels that are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. The northwestern portion of the Smith Basin Rehabilitation Project site and probably the southeastern portion of the Santiago Basins Saddle Improvement Project sites proposed project area and the surrounding terrain have older Quaternary terrace deposits at the surface and these deposits probably underlie the younger Quaternary Alluvium in the Santiago Creek drainage. Our closest vertebrate fossil locality in older Quaternary deposits is LACM 4943, just north of west of the proposed project area in the City of Orange between the Newport Freeway (Highway 55) and the Santa Ana River

near the intersection of Glassell Street and Fletcher Avenue. Locality LACM 4943 is lower in elevation that the proposed project area sites, but produced fossil specimens of horse, *Equus*, at a depth of 8-10 feet below the surface.

Shallow excavations in the younger Quaternary Alluvium exposed in Santiago Creek in most of the proposed project area are unlikely to uncover significant fossil vertebrate remains. Deeper excavations in the those areas that extend down into older sedimentary deposits, or any excavations in the older Quaternary Alluvium exposed in the northwestern and southeastern portions of the proposed project area, however, may well encounter significant vertebrate fossil remains. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Sediment samples should also be collected and processed to determine the small fossil potential in the proposed project area. Any fossils collected should be placed in an accredited scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice