



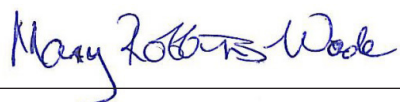
# Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project

## Cultural Resources Survey

April 2023 | 02701.00007.001

Prepared for:

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## **National Archaeological Database Information**

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Firm: HELIX Environmental Planning, Inc.

Client/Project: GHD, Inc. / Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project

Report Date: April 2023

Report Title: Cultural Resources Survey for the Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project

Type of Study: Cultural resources survey; geotechnical monitoring

New Sites: None

Updated Sites: P-37-005445 (CA-SDI-5445)

USGS Quad: San Luis Rey 7.5' Quadrangle

Acreage:

Key Words: San Diego County, Oceanside; San Luis Rey; coastal; positive archaeological survey; shell, mano; previously recorded significant habitation site; Township 11 South, Range 4 West

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## Acronyms and Abbreviations

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AB	Assembly Bill
AFY	acre-feet per year
APN	Assessor's Parcel Number
BP	Before Present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CMU	concrete masonry unit
CRHR	California Register of Historical Resources
HELIX	HELIX Environmental Planning, Inc.
HVAC	heating, ventilation, and air conditioning
MBGPF	Mission Basin Groundwater Purification Facility
MCC	motor control center
MGB	Mission Groundwater Basin
MGD	million gallons per day
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
RO	reverse osmosis
SCIC	South Coastal Information Center
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas & Electric Company
sf	square feet
SHPO	State Historic Preservation Officer
SR	State Route
TCP	Traditional Cultural Property
TCR	Tribal Cultural Resource
TSRO	third stage reverse osmosis

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## EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) conducted a cultural resources study for the City of Oceanside's Mission Basin Groundwater Purification Facility (MBGPF) Brine Minimization and Production Well Expansion Project (project) in northwestern San Diego County, California. The cultural resources study included a records search, Sacred Lands File search, a review of historic aerial photographs and maps, a field survey, and monitoring of drilling at potential well locations. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

The purpose of the project is to improve production and increase utilization of the existing MBGPF. The project consists of several aspects: facility upgrade and reconfiguration, brine minimization, a new well and well improvements, and a connector pipeline. The project would result in the demolition of the existing reverse osmosis (RO) building structure (retaining the equipment) and constructing a single 9,800-square foot building that would house the existing RO equipment and the new third stage RO. The site of the new well is approximately one half-mile southwest of the MBGPF, located on a City parcel that supports Oceanside Fire Station 7 at 3350 Mission Avenue. A combination of new pipeline and rehabilitated pipe would be used to convey water extracted from the well towards Mission Avenue, within Mission Avenue towards Fousat Road, and then connect near Well 11 to the existing network of raw water piping that feeds the MBGPF.

The records search results from the indicated that 112 previous cultural resources studies have been conducted within one mile of the project area, 11 of which intersect with the project area. The reports include archaeological surveys, testing programs, monitoring, and more general overview studies. Twenty-four cultural resources with Primary numbers and/or trinomials were identified within the search radius, all of which are archaeological resources, as well as nine historic addresses (buildings that range in age of construction from the late nineteenth century to the mid-twentieth century). Of these resources, none are located within the main project area (MBGPF); however, the well location adjacent to Oceanside Fire Station 7 and the pipeline alignments are within the mapped location of site CA-SDI-5445 (P-37-005445).

Site CA-SDI-5445 is a large, significant cultural resource site covering over 100 acres that has been the subject of a number of surveys, testing, data recovery, and monitoring programs covering various portions of the site. Although it was originally assessed in 1991 as not eligible for the National Register of Historic Places, due to poor integrity, the site was later found to have pockets of significant intact cultural deposits, as well as human remains. Based on this, the site is assumed eligible for the California Register of Historical Resources and National Register of Historic Places, although it has not been formally evaluated after these finds. The site is of importance to the Luiseño community. Although not addressed in the site records, CA-SDI-5445 is part of the ethnohistoric Luiseño village of San Luis Rey.

The field investigations for the project included pedestrian survey by HELIX archaeologists and Luiseño Native American monitors from Saving Sacred Sites (San Luis Rey Band of Mission Indians), as well as monitoring of drilling at potential well locations. Survey of the main project site was conducted in February 2021, with monitoring of drilling conducted there in February 2021 and December 2021. Survey and monitoring of the well location at Fire Station 7 (Well 12) was conducted in July 2022.

Both project areas have been subject to a great deal of past disturbance, the parcel adjacent to the fire station has been significantly affected by surrounding development, including the adjacent Mission Avenue and SR 76. A scattering of marine shell and one granitic mano fragment were observed near the sewer box on the parcel at the fire station. Although this area is within the archaeological site CA-SDI-5445, given the high degree of past disturbance, the provenience for the cultural material here is suspect, and the integrity of this portion of CA-SDI-5445 is poor.

Based on the high degree of cultural sensitivity of the project area, the presence of known cultural resources, and the potential for buried cultural resources, it is recommended that an archaeological and Native American monitoring program be implemented for ground-disturbing activities, to include the measures outlined in this report.

During the monitoring program, all ground disturbance (trenching/excavation/drilling) occurring within the boundaries of CA-SDI-5445 should be monitored full-time by an archaeologist and a Luiseño Native American monitor, with screening of a sample of the soils occurring. The monitors will direct the pace of excavation within the archaeological site to allow sufficient time to thoroughly examine the soils and the trench sidewalls. In addition, to minimize impacts to cultural resources, it is recommended that trench widths be kept as narrow as feasible to accommodate the new or replacement pipelines.

## 1.0 INTRODUCTION

GHD, Inc. contracted HELIX Environmental Planning, Inc. (HELIX) to provide cultural resources services for the Mission Basin Groundwater Purification Facility (MBGPF) Brine Minimization and Production Well Expansion Project (project) in the City of Oceanside (City), San Diego County, California. A cultural resources study including a records search, Sacred Lands File search, a review of historic aerial photographs and maps, pedestrian survey, and monitoring of potential well locations was conducted for the project. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

### 1.1 PROJECT LOCATION

The Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project (project or proposed project) involves improvements at two locations, the City's existing MBGPF site and new production well site, both located within the city of Oceanside, in northwestern San Diego County, California (Figure 1, *Regional Location*). The MBGPF site is located at 215 Fireside Street, approximately 0.4 mile north of State Route (SR) 76 (Figure 2, *USGS Topography* and Figure 3, *Aerial Vicinity*). The proposed production well site is located approximately 0.5 mile south of the MBGPF, along Mission Avenue and immediately east of the City's Fire Station No. 7, which is located at 3350 Mission Avenue (see Figures 2 and 3). The MBGPF is surrounded by residential development to the east, Mission Avenue to the south, new construction to the west, Fireside Park to the northeast, and the San Luis Rey River Park to the northwest. It is located within Township 11 South, Range 4 West, Section 18 on the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute topographic quadrangle map (Figures 2 and 3). The proposed well site, located southwest of the MBGPF, adjacent to the City of Oceanside Fire Station 7, is north of commercial and residential development and Mission Avenue, and south of SR 76 (Figures 2 and 3). This parcel is also in Township 11 South, Range 4 West, Section 18.

### 1.2 PROJECT DESCRIPTION

The project is proposed by the City to improve production and increase utilization of the existing MBGPF. The City has a water portfolio that includes local supplies extracted from the Mission Groundwater Basin (MGB) through a system of eight groundwater production wells. Water extracted from the MGB has concentrations of magnesium and sulfate that are considered too elevated for domestic use and levels of chloride and total dissolved solids that are too elevated for both domestic and irrigation use. As such, water from the MGB is treated using reverse osmosis (RO) processes at the City's MBGPF (previously known as the Mission Basin Desalting Facility) for distribution to local users, providing 15 percent of the City's water supply.

Currently, the MBGPF, which was constructed in 1992, has a capacity of 6.4 million gallons per day (MGD). However, the capacity is not being fully utilized, with the average production since 2002 being 3.5 MGD and peak production not exceeding 5.7 MGD, due to declining capacities at the existing well sites and overall wellfield in recent years. In addition, the current MBGPF RO process operates at a capacity of 75 percent water recovery, producing 1.5 MGD of brine (water with high salt concentrations). This brine is currently discharged to a 24-inch-diameter outfall line that conveys flow to the Pacific Ocean through the Oceanside Ocean Outfall.

With the proposed project, the City aims to increase the utilization of the existing 6.4 MGD capacity of the MBGPF to bolster its supply of locally sourced water by (1) reducing the volume of brine produced and thus increasing the amount of product water recovered at the MBGPF; and (2) increasing the amount of groundwater supplied to the MBGPF through installation of a new groundwater production well. The overall project is estimated to increase MBGPF production by 881 acre-feet per year (AFY), including 431 AFY from the brine minimization and 450 AFY from the well expansion.

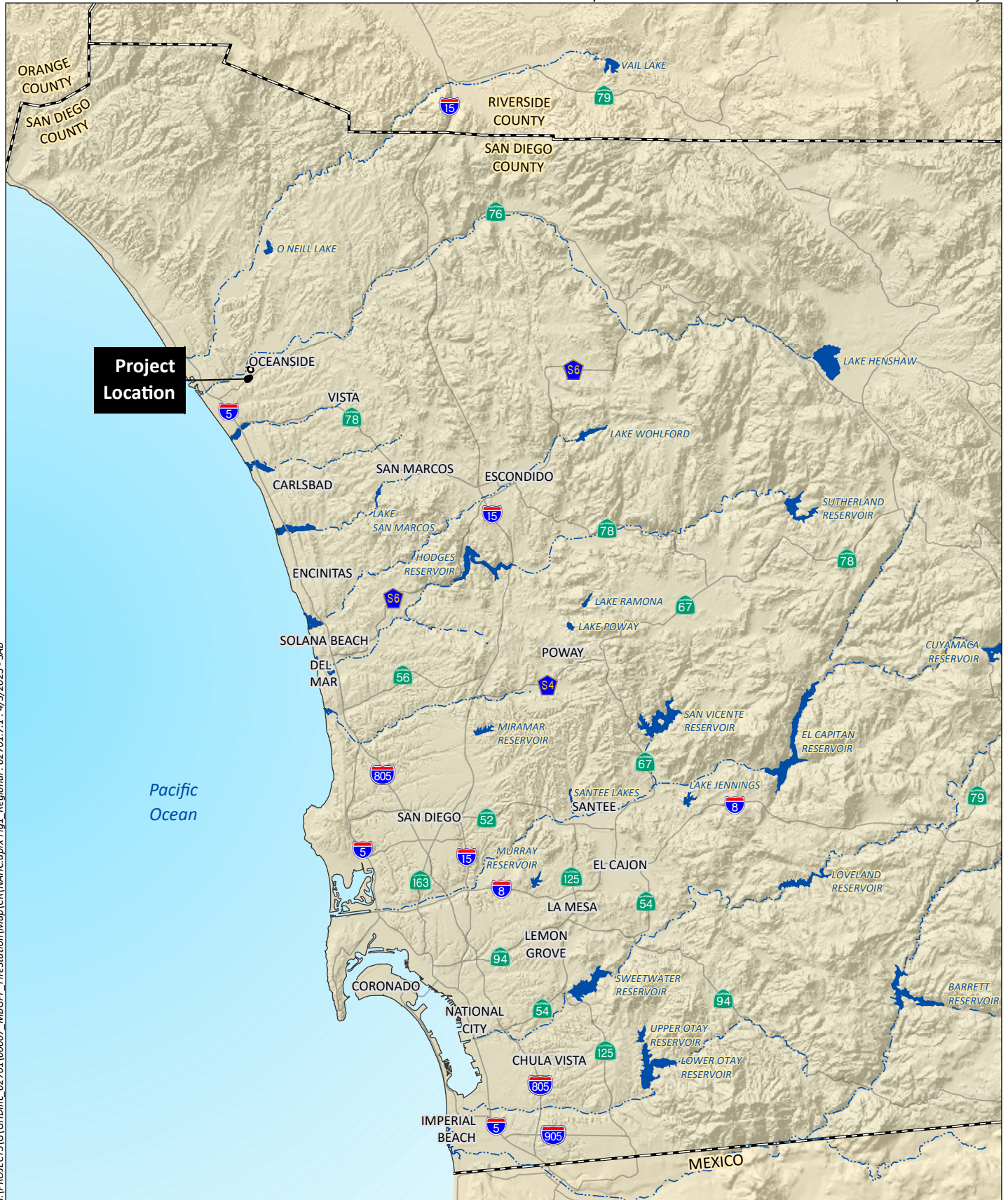
To reduce the volume of brine and increase the amount of product water recovered, the project would provide a third stage RO (TSRO) train to treat the brine from the existing primary RO train. The proposed TSRO-based brine minimization system would reclaim 40 to 50 percent of the water from the brine generated by the existing primary RO train. The new TSRO system would be fed by connecting to the primary RO train brine line ahead of the valve that feeds to the outfall line, where the brine is currently discharged to. The primary RO train brine would be treated at the TSRO system where additional product water would be extracted. The remaining brine from the TSRO system would be returned to the brine line ahead of the valve that feeds the outfall line to be discharged to the outfall.

The new and existing RO facilities would be located within a new 9,000-square foot (sf) process building that would replace the existing 3,600-sf process building at the MBGPF. The new process building would be a 150-foot by 60-foot single-story, pre-engineered steel building with a wall height of approximately 19 feet. The process building would include a main process room with the existing primary RO equipment, new TSRO equipment, modified RO clean-in-place (CIP) system, chemical storage area, and heating, ventilation, and air conditioning (HVAC) equipment; storage room; workshop area; fitness room; and motor control center (MCC) that contains electrical systems and equipment (Figure 4, *Proposed MBGPF Site Plan*). Access to the MBGPF would remain the same as the existing condition, which is provided by Heritage Street.

The new groundwater production well (Well 12) would be constructed on a City-owned parcel approximately 0.5 mile south of the MBGPF, adjacent to the City's Fire Station No. 7, in proximity to Wells 10 and 11. Similar to the eight existing wells, Well 12 would be a precast concrete wet well with a fixed speed submersible pump and flows would be controlled hydraulically at the MBGPF. The well piping would be comprised of welded steel piping, a restrained flexible coupling, air release valves, gate and check valves, shut-off valves, butterfly valves with motor operators, flow meters to monitor the well's overall production, pressure sustaining valves, pressure gauges, and controls for the pump control valves. A control panel would be installed next to the wellhead and piping.

A new pipeline to convey water extracted from the well would exit the well site towards Mission Avenue and intersect the abandoned 16 inch diameter Talamantes Reservoir Water Pipeline located within Mission Avenue, which would be rehabilitated for use by the proposed conveyance pipeline. The pipeline would head southwest within Mission Avenue towards Foussat Road, and then connect near Well 11 to the existing network of raw water piping that feeds the MBGPF. Two drain options are currently being considered for if the well needs to be flushed. One option entails installation of approximately 1,000 linear feet of 18-inch-diameter reinforced concrete pipe within Mission Avenue, connecting the well to a storm drain located adjacent to Well 11. The second option is to drain to the adjacent on-site sewer manhole. Electrical service would be provided by an existing utility service switchboard and pad mounted transformer at the site that serves Wells 10 and 11.



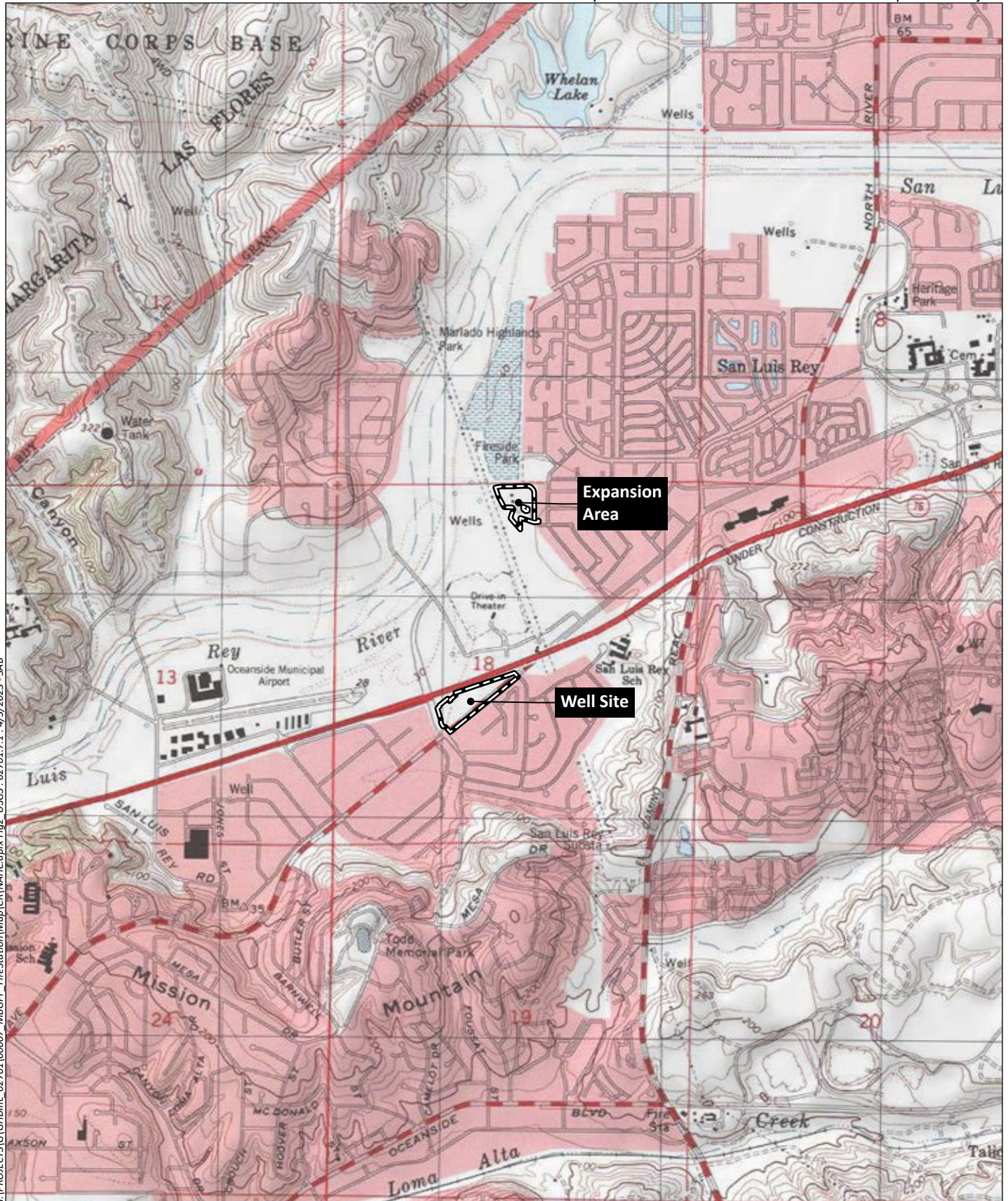


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Source: Base Map Layers (SanGIS, 2016)

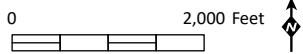






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Source: SAN LUIS REY 7.5' Quad (USGS)



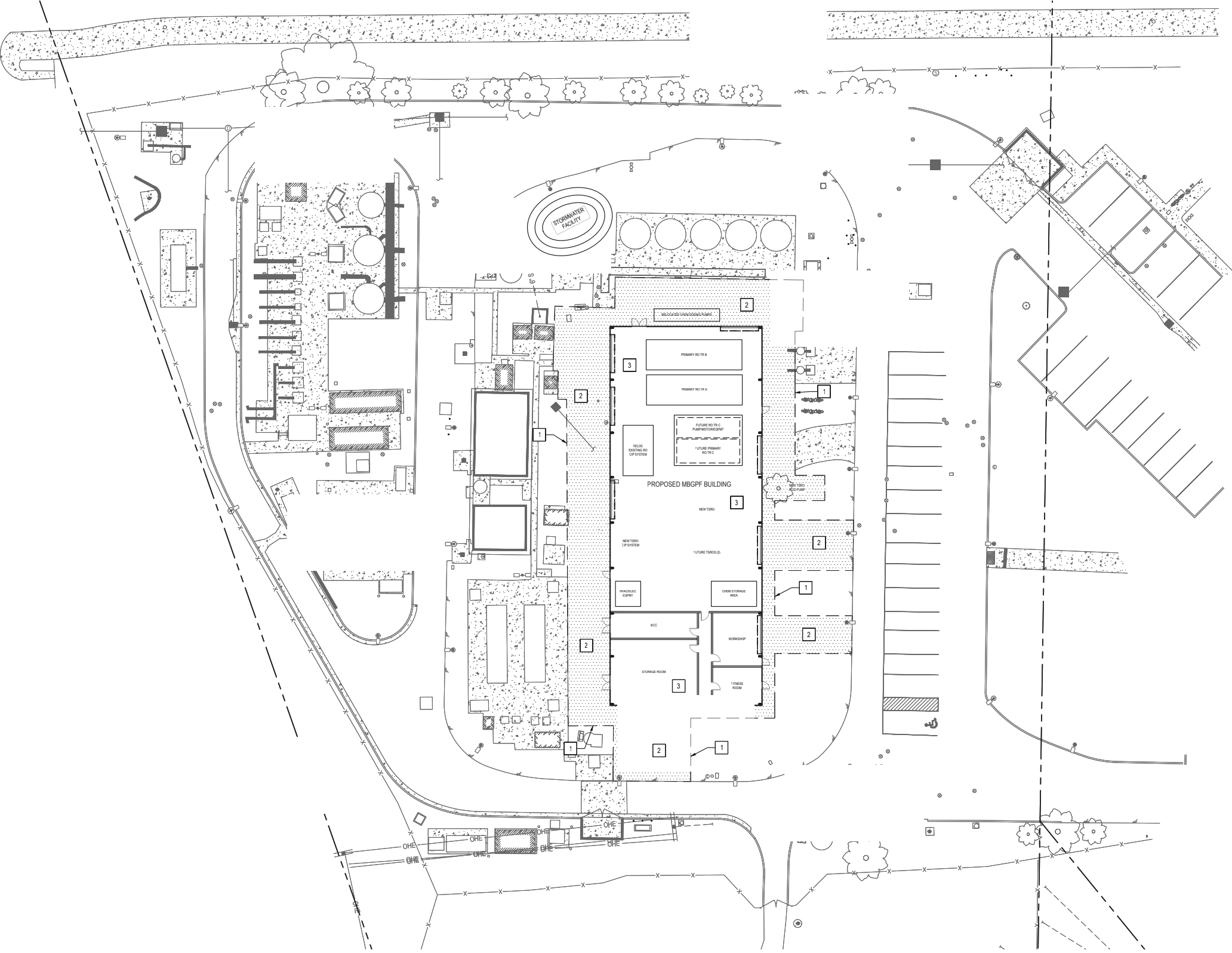




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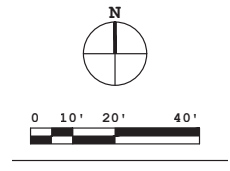
Source: Aerial (NearMap, 2019)





**KEYNOTES**

1	SAWCUT EXISTING PAVEMENT
2	PROPOSED PAVEMENT
3	PROPOSED MBGPF BUILDING



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Source: GHD Inc. 2023

In addition to the above-mentioned well structure and associated infrastructure, the Well 12 site would include a horizontal surge tank and emergency backup generator that would be located on concrete pads and pedestals. These components would be surrounded by an eight-foot-tall concrete masonry unit (CMU) enclosure measuring 25 feet by 65 feet with one 4-foot-wide personnel entry gate and two 10-foot-wide vehicular access gates. This enclosed area would be surrounded by pavement to allow for access to the well. Primary access would be provided from Mission Avenue, with an additional egress route connected to the fire station driveway that would be used by occasional large trucks that would not be able to turn around within the well site after entering from Mission Avenue (Figure 5, *Proposed Well 12 Site Plan*).

Construction activities for upgrades to the MBGPF and installation of the new Well 12 would include site preparation, demolition of existing structures and hardscape, grading, underground utility installation, structure construction, and paving. Construction for both components is anticipated to begin in October 2023 and be complete in March 2025 for the MBGPF and September 2024 for the well. Staging and storage for project construction would occur within the project site boundaries shown on Figure 3.

## 1.3 REGULATORY FRAMEWORK

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources that have been found eligible to the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP), as applicable.

### 1.3.1 Federal

Federal regulations that would be applicable to the project, if there is a federal nexus (e.g., permitting or funding from a federal agency), consist of the NHPA and its implementing regulations (16 United States Code 470 et seq., 36 Code of Federal Regulations [CFR] Part 800). Section 106 of the NHPA requires Federal agencies to consider the effects of their undertakings on “historic properties”, that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

- A. associated with events that have made a significant contribution to the broad patterns of our history;
- B. associated with the lives of persons significant in our past;
- C. embodies 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; and/or
- D. has yielded or may be likely to yield, information important in prehistory or history.

### 1.3.2 State

CEQA, Public Resources Code (PRC) 21084.1, and California Code of Regulations (CCR) Title 14 Section 15064.5, address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as “historical resources,” which are defined as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])
- resource(s) either listed in the National Register of Historic Places or in a “local register of historical resources” or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless “the preponderance of evidence demonstrates that it is not historically or culturally significant” (14 CCR Section 15064.5[a][2])
- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or
4. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a “historical resource” for the purposes of CEQA at the discretion of the lead agency.

### 1.3.3 Integrity

Significant resources must retain enough of their historic character or appearance to be recognizable as historical resources/historic properties and to convey the reasons for their significance. Resource integrity, which is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance, is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular CRHR or NHPA criteria under which it is proposed for eligibility. Under Section 106 of the NHPA, actions that alter any of the characteristics that qualify a property for eligibility for listing in the NRHP “in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5[a]) constitute an adverse effect to the historic property.





SHEET GENERAL NOTES

1. ONE TWO-WAY ACCESS DRIVEWAY THAT IS ACCESSIBLE FROM MISSION AVENUE (HWY 76). THIS DRIVEWAY WILL PROVIDE INGRESS/EGRESS FOR ALL VEHICLES INCLUDING CONSTRUCTION VEHICLES.
2. ONE TWO-WAY ACCESS DRIVEWAY CONNECTING TO THE CITY OF OCEANSIDE FIRE STATION 7 TO PROVIDE INGRESS/EGRESS FOR LARGE MAINTENANCE VEHICLES.
3. THIS PROJECT SITE IS SUBJECT TO THE FOLLOWING SETBACKS:
  - RW = 10'
  - SSMH=100'

KEYNOTES

- |   |  |
|---|--|
| 1 | PROPOSED WELL #10  |
| 2 | EXISTING SEWER MANHOLE   |
| 3 | EXISTING FIRE HYDRANT  |
| 4 | PROPOSED WELLHOUSE ENCLOSURE FOOTPRINT 65FT X 25FT                             |
| 5 | PROPOSED PAVEMENT  |
| 6 | CONNECT TO EXISTING PAVEMENT   |
| 7 | PROPOSED EXPANDED DRIVEWAY RETURN PER CITY OF OCEANSIDE STANDARD DRAWING M-10. |
| 8 | CONNECT TO EXISTING FIRE DEPARTMENT DRIVEWAY WITH A PERMEABLE PAVER ACCESS.    |

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Source: GHD Inc. 2023

### 1.3.4 City of Oceanside Regulations

The City's General Plan is currently undergoing an update; the existing General Plan has as one of its stated goals to:

Encourage the conservation and protection of significant cultural resources for future scientific, historic, and educational purposes (City of Oceanside 2002).

The Land Use Element of the General Plan includes the following polices related to cultural resources (City of Oceanside 2002:125-126):

- A. The City shall encourage open space land use designations and open space zoning or open space easements for the preservation of cultural resources.
- B. The City shall encourage the acquisition, restoration and/or maintenance of significant cultural resources by private organizations.
- C. Cultural resources that must remain in-situ to preserve their significance shall be preserved intact and interpretive signage and protection shall be provided by project developers.
- D. An archaeological survey report shall be prepared by a SOPA (Society of Professional Archaeologists) certified archaeologist for a project proposed for grading or development if any of the following conditions are met:
  - 1) The site is completely or largely in a natural state;
  - 2) There are recorded sites on nearby properties;
  - 3) The project site is near or overlooks a water body (creek, stream, lake, freshwater lagoon);
  - 4) The project site includes large boulders and/or oak trees; or
  - 5) The project site is located within a half-mile of Mission San Luis Rey.
- E. The presence of agriculture on a potential project site shall not preclude the requirement for an archaeological survey report if any of the above listed conditions are established.

Chapter 14A of the City's Municipal Code addresses historic preservation. Section 14A.2, Policy and Purpose, of the code states:

It is hereby declared as a matter of public policy that the recognition, preservation, enhancement, perpetuation and use of structures, landscape features, sites and areas within the City of Oceanside having historical, architectural, archeological, cultural, or aesthetic significance is required in the interest of the economic prosperity, cultural enrichment, and general welfare of the people [City of Oceanside Code of Ordinances, Sec. 14A.2].

Sec. 14A.6. - Historical area or site designation criteria.

For the purposes this chapter, an historical area or site may be designated as such by resolution of the city council pursuant to section 14A.7 if it meets the following criteria:

- a) It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, or architectural history; or
- b) It is identified with persons or events significant in local, state, or national history; or
- c) It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or
- d) It is representative of the notable work of a builder, designer, or architect; or
- e) It is found by the council to have significant characteristics which should come under the protection of this chapter.

### **1.3.5 Native American Heritage Values**

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans about potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCP) in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Cultural resources can include TCPs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. State Assembly Bill (AB) 52, effective July 1, 2015, introduced the Tribal Cultural Resource (TCR) as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and the required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

## 1.4 PROJECT PERSONNEL

Mary Robbins-Wade, M.A., RPA served as principal investigator and is the primary author of this technical report. Ms. Robbins-Wade provided overall project management support and senior technical oversight and meets the qualifications of the Secretary of Interior's Standards and Guidelines for archaeology. Theodore Cooley, M.A., RPA was the report co-author, and James Turner, M.A, RPA, Trevor Gittelhough, M.A., RPA, and Dominique Diaz de Leon, B.A. served as report contributors. HELIX archaeologists Dominique Diaz de Leon and Mary Villalobos, B.A., as well as tribal cultural monitors Cami Mojado and Logovi'i Sialo'i, from Saving Sacred Sites (San Luis Rey Band of Mission Indians) conducted archaeological surveys and monitoring of drilling at proposed well locations. Resumes for key HELIX project personnel are presented in Appendix A.

## 2.0 PROJECT SETTING

### 2.1 NATURAL SETTING

The project area is in the coastal plains of northwestern San Diego County, where the climate is characterized as semi-arid, cool (Griner and Pryde 1976: Figure 3.4). Average annual temperatures range from a January low of about 44 degrees Fahrenheit (° F) to a July high of about 75°F, and annual rainfall averages around 10 inches (Griner and Pryde 1976). The project is in the San Luis Rey River Valley, south and east of the river (Figure 2).

Geologically, the project area is underlain by young alluvial flood-plain deposits dating to the Holocene and Late Pleistocene (Kennedy and Tan 2007). Soils consist of Grangeville fine sandy loam and Tujunga sand—both of which are formed in alluvium derived from granitic sources (Natural Resources Conservation Service 1999, 2017). Coastal sage scrub vegetation was undoubtedly present on nearby mesas and ridges in the past, with riparian vegetation along the river. Plants found in these vegetation communities are known to have been used by the Luiseño people for food, medicine, tools, shelter, ceremonial, and other uses (Bean and Shipek 1978; Sparkman 1908). Many of the animal species found in these communities would have been used by native populations as well. The proximity to the coast and to the environments of the San Luis Rey River would have provided access to fish, shellfish, birds, and other resources as well.

### 2.2 CULTURAL ENVIRONMENT

#### 2.2.1 Prehistoric Period

The earliest well-documented sites in the San Diego area belong to the San Dieguito Tradition, dating to over 9,000 years ago (Warren 1967; Warren et al. 1998). The San Dieguito Tradition is thought by most researchers to have an emphasis on big game hunting and coastal resources (Warren 1967). Diagnostic material culture associated with the San Dieguito complex includes scrapers, scraper planes, choppers, large blades, and large projectile points (Rogers 1939; Warren 1967). In the southern coastal region, the traditional view of San Diego prehistory has the San Dieguito Tradition followed by the Archaic Period, dating from circa 8600 Before Present (BP) to circa 1300 BP (Warren et al. 1998).

A large number of archaeological site assemblages dating to this period have been identified at a range of coastal and inland sites. These assemblages, designated as the La Jolla/Pauma complexes, are



considered part of Warren's (1968) "Encinitas tradition" and Wallace's (1955) "Early Milling Stone Horizon." The Encinitas tradition is generally "recognized by millingstone assemblages in shell middens, often near sloughs and lagoons" (Moratto 1984:147) and brings a shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. The local cultural manifestations of the Archaic period are called the La Jolla complex along the coast and the Pauma complex inland. Pauma complex sites lack the shell that dominates many La Jolla complex site assemblages. Sites dating to the Archaic Period are numerous along the coast, near-coastal valleys, and around estuaries. In the inland areas of San Diego County, sites associated with the Archaic Period are less common relative to the Late Prehistoric complexes that succeed them (Cooley and Barrie 2004; Laylander and Christenson 1988; Raven-Jennings and Smith 1999; True 1970). The La Jolla complex tool assemblage is dominated by rough cobble tools, especially choppers and scrapers (Moriarty 1966). The La Jolla complex tool assemblage also includes manos and metates, terrestrial and marine mammal remains, flexed burials, doughnut stones, discoidals, stone balls, plummets, biface points, beads, and bone tools (True 1958, 1980).

While there has been considerable debate about whether San Dieguito and La Jolla patterns might represent the same people using different environments and subsistence techniques, or whether they are separate cultural patterns (e.g., Bull 1983; Ezell 1987; Gallegos 1987; Warren et al. 1998), abrupt shifts in subsistence and new tool technologies occur at the onset of the Late Prehistoric Period (1500 BP to AD 1769). The Late Prehistoric period is characterized by higher population densities and intensification of social, political, and technological systems. The Late Prehistoric period is represented by the San Luis Rey (SLR) complex in the northern portion of San Diego County and the Cuyamaca complex in the southern portion.

The SLR complex is divided into two phases: SLR I and SLR II. Elements of the SLR complex include small, triangular, pressure-flaked projectile points (generally Cottonwood series, but Desert Side-notched series also occurs); milling implements (mortars and pestles, manos and metates, and bedrock milling features); bone awls; Olivella shell beads; other stone and shell ornaments; and cremations (Meighan 1954; Moratto 1984; True et al. 1974). The later SLR II complex also includes several elements not found in the SLR I complex: "pottery vessels, cremation urns, red and black pictographs, and such nonaboriginal items as metal knives and glass beads" (Meighan 1954:223).

SLR I was originally thought to date from AD 1400 to AD 1750, with SLR II dating between AD 1750 and AD 1850 (Meighan 1954). However, that division assumed that the Luiseño did not practice pottery manufacture until just prior to the arrival of the Spanish. The chronology has since been revised due to evidence that pottery may have been introduced to the Luiseño circa AD 1200 to 1600. Ceramics were probably introduced from the Luiseños' southern neighbors, the Kumeyaay (True et al. 1974).

Based on ethnographic data, including the areas defined for the Hokan-based Yuman-speaking peoples (Kumeyaay) and the Takic-speaking peoples (Luiseño) at the time of contact, it is generally accepted that the Cuyamaca complex is associated with the Kumeyaay people and the San Luis Rey complex with the Luiseño. The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Native people associated with that mission, while the Kumeyaay people are also known as Ipai, Tipai, or Diegueño (named for Mission San Diego de Alcalá). Agua Hedionda Creek is often described as the division between the territories of the Luiseño and the Kumeyaay people (Bean and Shipek 1978; Luomala 1978; White 1963), although various archaeologists and ethnographers use slightly different boundaries. Native people know their traditional use areas through traditional stories and songs.

## 2.2.2 Ethnohistory

The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Native people associated with the mission. The Luiseño language belongs to the Cupan group of the Takic subfamily and is part of the widespread Uto-Aztecan language family (Bean and Shipek 1978; Sparkman 1908; White 1963). Neighboring groups that speak Cupan languages are Cupeño, Cahuilla, and Gabrielino. The people associated with Mission San Juan Capistrano were called Juaneño by the Spanish; they call themselves Acjachemen. The language, culture, and territory of the Luiseño and Juaneño people are so closely related that the two are sometimes considered by ethnographers to be a single ethnic nationality (Bean and Shipek 1978; White 1963); however, the Luiseño and Juaneño people consider themselves to be separate tribes, as do some ethnographers (e.g., Kroeber 1925). Cameron (1987:319-321) noted archaeological differences between the two groups.

Ethnographic and ethnohistoric studies of the Luiseño include Bean and Shipek (1978), Boscana (1846 [1947]), Kroeber (1925), Robinson (1846 [1947]), Shipek (1977), Sparkman (1908), Talley (1982), and White (1963). Archaeological studies addressing the Late Prehistoric San Luis Rey complex include Meighan (1954), McCown (1955), True et al. (1974), and Wallace (1960). Most of the ethnographic studies, as well as the “classic” archaeological studies of the Luiseño, have concentrated on the Pauma Valley and the Palomar Mountain area, although Wallace’s (1960) study was an archaeological survey of the Buena Vista Creek watershed.

It must be noted that interpretations by archaeologists and linguistic anthropologists may differ from the traditional knowledge of the Luiseño people. The Luiseño creation story indicates that the Luiseño people have always been here, not migrating from elsewhere. The creation story of the Pechanga Band of the Luiseño tells that the world was created at Temecula. “The Káamalam [first people] moved to a place called Nachíivo Pomíisavo, but it was too small, so they moved to a place called ‘exva Teméeku,’ this place you now know as Temeku. Here they settled while everything was still in darkness (DuBois 1908)” (Masiel-Zamora 2013:2). A traditional Luiseño story tells of a great flood, and the people went to higher ground, where they were saved. The San Luis Rey Band say that this higher ground where the people were saved is Morro Hill, located about six miles northeast of the project area. Some Luiseño informants indicated the place in this story is a hill just east of Highway 395 in the San Luis Rey River Valley (Cupples and Hedges 1977).

The San Luis Rey River valley is of cultural significance to the Luiseño people, due to the presence of a number of village sites, the valley’s use as a travel network/corridor over thousands of years, the presence of traditional ceremonial and gathering locations, and other cultural factors.

## 2.2.3 Historical Background

### 2.2.3.1 Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. It was that year that the Royal Presidio of San Diego was founded on a hill overlooking Mission Valley. The Mission San Diego de Alcalá was constructed in its current location five years later. The Spanish Colonial period lasted until 1821 and was characterized by religious and military institutions bringing Spanish culture to the area and attempting to convert the Native American population to Christianity. Mission San Diego was the first mission founded in Southern California. In 1798, the Mission San Luis Rey de Francia was founded in northern San Diego County.

Covering almost 950,400 acres, the Mission raised about 26,000 cattle, as well as other livestock (Young and Levick 1988). In the years that followed its establishment, the population of the Luiseño people declined rapidly due to disease (Lightfoot 2004).

### **2.2.3.2 Mexican Period**

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

Rancho Santa Margarita y Las Flores was granted to brothers Andres and Pio Pico in the early 1840s by Governor Juan Alvarado. The southern border of the rancho is approximately one mile from the project area, coinciding with the boundary of current day Marine Corps Base Camp Pendleton. Juan Forster, who married Pico's sister, received title to the rancho after paying off Pico's debts. Forster expanded the ranch house and lived there from 1864 until his death in 1882.

Rancho Guajome, located less than three miles northeast of the project area, was a Mexican land grant established in 1845. Governor Pio Pico granted the land to Andrés and José Manuel, and it was one of the few ranchos granted to Indigenous people, with both brothers being Luiseño (Hoffman 1862). Before being a rancho, and before the Mission Period, this area was the location of a Luiseno Indian village that had several ponds as well as a lake. The Manuel brothers sold the Rancho to Abel Sterns, who proceeded to give it to Ysidora Bandini and Cave Coutts in 1851 as a wedding gift. Only two years later, Coutts was appointed as sub-agent for the San Luis Rey Indians, and he took advantage of that position to use the local Indigenous population as labor to improve the property, as well as that of Rancho Buena Vista and Rancho Vallecitos de San Marcos (Magliari 2004). This development included the construction of the Guajome Adobe, which is a California Historic Landmark registered in 1981. There are some who argue that Rancho Guajome was the inspiration for the famous novel "Ramona" by Helen Hunt Jackson, which had an immense impact on the culture and image of Southern California and was integral in creating the tourist boom of California, as well as the Mission Revival architectural style (Goodman 1894).

### **2.2.3.3 American Period**

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican-American War. A great influx of settlers to California and the San Diego region occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and increased the rate of population decline among Native American communities.

While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who

were granted ownership of ranchos by the Mexican government. The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued throughout the following years. As noted above, in the general vicinity of the project, both Rancho Santa Margarita y Las Flores and Rancho Guajome grew and gained prominence during the American period.

The city of Oceanside grew out of several factors. In the early 1870s, a township known as San Luis Rey was established west of the Mission San Luis Rey. By 1884, the township had a post office, a hotel, stores, and a weekly paper. In 1883, the land surrounding modern-day Oceanside was granted to Andrew Jackson Meyers, a storekeeper who lived in the San Luis Rey township. J. Chauncey Hayes sold the town lots and would later petition for a post office for the town called "Oceanside" (City of Oceanside n.d.; Oceanside Chamber of Commerce 2021).

The city experienced a population boom due in part to the construction of the railroad linking Los Angeles to San Diego. This continued through the 1920s, when a highway was paved between San Diego and Los Angeles. While the city appeared to flourish during this time it was, like much of the Nation, suffering through the Great Depression (City of Oceanside n.d.). This suffering was short lived, however, as World War II and the construction of Marine Corps Base Camp Pendleton on the northern edge of the city caused the demand for houses and municipal services to exceed supply. The population of Oceanside grew rapidly over the course of the following decades, thanks in part to boosters that painted the city as comparable in beauty to Spain (City of Oceanside n.d.; Pourade 1977).

## 2.2.4 Project Vicinity

Mission San Luis Rey is located approximately one mile east-northeast of the project area. Sparkman (1908) lists *Keish* as the name his Luiseño informants gave for San Luis Rey. Kelsey indicated that the Luiseño name for the village in the area of Mission San Luis was *Tacayme*, "although Pablo Tac recalls that the people called the area *Quechla*, the Indian name for the stone found there" (Kelsey 1990:26). Hudson (1964) noted that *Keish*, *Qee'sh*, and *Quechla* are all orthographic variants of the same village or place name (Franklin and Carrico 1978:19). The rancherias at San Luis Rey became integral parts of the Mission, supplying laborers as well as converts (Carrico 1977; Hewes and Hewes 1958). Kroeber (1925: Plate 57) noted several villages along the San Luis Rey River in addition to *Keish*, including one at the coast (*Wiawio*), two a short distance east of San Luis Rey (*Wiasamai* and *Wahaumai*), and two between this area and Pala (*Kwalam* and *Tomkav*). Kroeber (1925: Plate 57) also shows a village called *Ikaimai* (Carrico 1977 lists it as *Ikalmal*) at San Luis Rey.

When it came time to establish a mission between San Diego and San Juan Capistrano, the site on the San Luis Rey River was chosen, and a mission was established there on June 13, 1798 (Engelhardt 1921:8). Father Antonio Peyri was founder of the Mission San Luis Rey and guided its construction. The site selected for the Mission had been a thriving Indian community and continued to be so during the mission period. The Luiseño village of San Luis Rey was tallied as a separate entity in the 1860 census, containing 20 dwellings, with a population of 106. "[I]t is not certain whether the village listed between Visitation Numbers 175 and 194 was located in the immediate vicinity of the mission, in the vicinity of CA-SDI-5133/H...or scattered somewhere in between" (Swanson 1994:4:20). CA-SDI-5133/H is part of the Wanis complex addressed below.

The Wanis site complex, located on the northwest side of the San Luis Rey River and within the records search radius for the project, probably represents the archaeological manifestation of the village of San Luis Rey or *Keish*. This site includes a La Jolla period component, with radiocarbon samples yielding

dates between  $5310 \pm 60$  BP and  $6090 \pm 90$  BP (Quillen et al. 1984). Late Prehistoric use of the site has also been documented, and the site was occupied into the nineteenth century (see Moratto et al. 1994; Robbins-Wade 2000). Human remains have been found at the Wanis site complex as well. A number of archaeological sites recorded in the San Luis Rey River valley are associated with the occupation of Mission San Luis Rey or with the Wanis complex.

Based on historic and archaeological evidence, Oxendine (1983) suggested the following sequence of settlement locations by the Indians associated with Mission San Luis Rey:

The sequence of San Luis Rey occupation may be as follows. Either SDi-6014 or SDi-5130, or perhaps both sites, could be the *rancheria* observed at the west end of San Luis Rey valley in 1769. Radiocarbon dates suggest that SDi-6014 was occupied at that time, and the deep midden observed by Franklin and Carrico at SDi-5130 suggest that it might also have a late occupation date. With the founding of Mission San Luis Rey in 1798, the Indians were moved from that village to the mission, and in 1827 were observed just north of it. In 1847, they were living at the site of SDi-5445, and in 1854, seem to have been at SDi-5130. They are reported to have been at SDi-5130 in 1873, at which date they moved to SDi-6009. By 1901, the Indians no longer lived in the vicinity of the mission [Oxendine 1983:115-116].

Following the Mission and Mexican periods, agricultural use of the valley by homesteaders began in the nineteenth century. Settlers included the Hubberts, Goldbaums, and Crouches (Corum 1991; Swanson 1994).

## 3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM

HELIX obtained a records search from the South Coastal Information Center (SCIC) on February 23, 2021 for the facility expansion area. The records search covered a one-mile radius around the project area and included locations and records for archaeological and historical resources, historic addresses, locations and citations for previous cultural resources studies, and a review of the state Office of Historic Preservation (OHP) historic properties directory. The records search summary and map are included as Appendix B (confidential, bound separately) to this letter report.

HELIX contacted the Native American Heritage Commission (NAHC) on February 16, 2021 to request a search of its Sacred Lands File and a list of Native American individuals and organizations that might have knowledge of, or concerns regarding, cultural resources within the project area. Correspondence with the NAHC is included as Appendix C (confidential, bound separately).

### 3.1 RECORDS SEARCH

#### 3.1.1 Previous Studies

The records search received in February 2021 indicated that the SCIC has a record of 112 reports within the one-mile search area, 11 of which intersect with the project area. The reports that overlap or intersect the project area are summarized in Table 1, *Previous Studies Overlapping the Project Area*. The complete list of previous studies within the search radius is included in Appendix D. Reports include archaeological surveys, testing programs, monitoring, and more general overview studies.

**Table 1**  
**PREVIOUS STUDIES OVERLAPPING THE PROJECT AREA**

Report No. (SD-)	Report Title	Author, Date
00273	Archaeological Field Check of San Luis Rey Villas	Bull, 1977
00577	Map for Highway Alternatives Study, 11-SD-76	Carrillo, 1982
01070	A Preliminary Reconnaissance for a Proposed Flood Control Project in the Lower San Luis Rey River Drainage	Franklin and Carrico, 1978
01579	Archaeological Monitoring of the Encina Gas Pipeline Project: Profiles of Subsistence Patterns along the Southern Shore of Agua Hedionda Lagoon	Wade and Hector, 1986
01677	A Cultural Resource Survey of the Loma Alta Creek Improvement Plan Area	Wade and Hector, 1989
02447	Phase II Archaeological Test Excavation at Site CA-SDI-5445	Corum, 1991
07657	Cultural Resource Test Sampling Program for a Proposed Flood Control Project in the Lower San Luis Rey River Drainage, Oceanside, California	WESTEC Services, Inc., and Franklin, 1979
08469	Cultural Resource Test Sampling Program for a Proposed Flood Control Project in the Lower San Luis Rey River Drainage, Oceanside, California	Carrico and Franklin, 1979
11090	Archaeological Resources Survey, Pavilion at Oceanside, Oceanside, San Diego County, California	Robbins-Wade and Giletti, 2007
14069	Cultural and Historical Resource Study for the City of Oceanside General Plan – Circulation Element Update Program Environmental Impact Report (PEIR)	Ní Ghabhláin, 2011
18214	Pure Water Oceanside Project, Oceanside, California, Cultural Resources Assessment Report	Courtney et al., 2018

### 3.1.2 Previously Recorded Resources

Twenty-four cultural resources with Primary numbers and/or trinomials were identified within the search radius, all of which are archaeological resources, as well as nine historic addresses (buildings that range in age of construction from the late nineteenth century to the mid-twentieth century). Of these resources, none are located within the main project area (MBGPF); however, the well location adjacent to Oceanside Fire Station 7 and the pipeline alignments are within the mapped location of site CA-SDI-5445 (P-37-005445) (Figure 6, *Location of P-37-005445*; contained in Confidential Appendix E), which is described below. The archaeological resources identified within the search area are summarized in Table 2, *Previously Recorded Resources Within One Mile of the Project Area*.

**Table 2**  
**PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF THE PROJECT AREA**

Resource Number (P 37-#)	Resource Number (CA-SDI-#)	Description	Recorder, Date
000241	241	Mission San Luis Rey de Francia.	ABE, 1952; Dominici, 1989; Spindrift, 2016
001246	1246	Multi-component site comprised of a prehistoric habitation site with ground stone, lithics, discoidals, shell beads, and faunal remains, as well as intruding historic refuse.	Kerns, 1971; Dominici, 1989; Robbins-Wade, Giletti, Meriwether, and Mojado, 2011; Roy, Villalobos, and Pati, 2019
001280	1280	Prehistoric lithic quarry/resource processing site.	Kerns, 1971
005130	5130	Extensive, multi-component habitation site, encompassing CA-SDI-5133H and CA-SDI-6015. The prehistoric portion consists of burials, hearths, specialized activity area, ceramics, lithics, and faunal remains. The historic portion consists of a late nineteenth century refuse pit, a scatter of ladrillo and tejas tiles, ceramics, glass, ceramics, metal, and faunal remains.	Drover, 1977; Gibson, Sandler, and Colombo, 1990; Gallegos and Schroth, 1991
005131	5131	Historic residence with melted adobe building, burned wood house, and cement and rock foundation, with associated metal and ceramic refuse	Drover, 1977
005132	5132	Prehistoric lithic and shell scatter	Drover, 1977
005133	5133	Multi-component habitation site, associated with CA-SDI-5130. The historic portion consists of a concentration of structural materials (ladrillos and tejas) along with domestic refuse, and a refuse pit from the late nineteenth century. Prehistoric component consists of a concentration of ground stone, lithics, and faunal remains in midden soil.	Drover, 1977; Colombo, 1990
005445	5445	Multicomponent site. The large prehistoric site consists of a shell midden, with fire-affected rock, lithic tools, and debitage, while the historic component consists of glass beads, ceramics, and adobe ladrillo fragments, and tejas.	Norwood, 1977; Carrico, 1978; Dominici, 1989; Hunt, 2002; Giletti, Sivba, and Murray, 2006
006009	6009	Multi-component site comprised of lithics, ground stone, Tizon Brown Ware, porcelain, glass, and faunal remains.	Franklin, 1978
006010	6010	Prehistoric shell midden with associated lithic tools and debitage.	Franklin, 1978; Pigniolo, 1988; Pigniolo and Collins, 1990

Resource Number (P 37-#)	Resource Number (CA-SDI-#)	Description	Recorder, Date
006014	6014	Multi-component site. The historic component is comprised of building foundations, landscaping, fences, outhouse, well, roads, and associated refuse, associated with the Ben Hubbert residence. The prehistoric component consists of a light midden deposit with projectile points, debitage, and ground stone.	Franklin, 1978; Gibson, Sandler, and Colombo, 1990
006015	6015	Prehistoric midden with debitage. Associated with CA-SDI-5130.	Franklin, 1978; Gibson, Sandler, and Colombo, 1990; Robbins-Wade, Giletti, Anderson, and Mojado, 2000
006023	6023	Large, light prehistoric artifact scatter with lithic tools, debitage, ground stone, and faunal remains.	Franklin, 1978; Cordova, 2014
006136	6136	Prehistoric midden with ground stone and debitage.	Rhodes, 1978
006141	6141	Small prehistoric shell midden with Tizon Brown Ware, and lithics.	Franklin and Rhodes, 1978
007787	7787	Small prehistoric midden site with lithic tools, debitage, fire-affected rock, and ground stone.	Goldberg, 1979; Dominici, 1989
011461	011461	Historic site comprised of an adobe wall with shell temper.	Dominici, 1989
011462	011462	Historic cemetery with Tizon Brown Ware identified on surface.	Dominici, 1989
011687	11687	Small prehistoric habitation/processing site with ground stone, lithic tools, and debitage.	Rosen, 1990; Comeau, 2009
012562	12562	Prehistoric midden with a hearth. Combined with CA-SDI-12563.	Strudwick and McIntosh, 1992; Robbins-Wade, 2016
012563	12563	Prehistoric midden with ground stone, lithic tools, and debitage. Combined with CA-SDI-12562.	Strudwick and McIntosh, 1992; Sivba, Knabb, and Robbins-Wade, 2005; Robbins-Wade, 2016
012564	012564	Small prehistoric shell midden.	McIntosh, 1992
015694	014410	Historic ranch site including bunkhouse, barn, and gas station, along with a refuse-filled well. Two demolished historic buildings were also previously recorded on the site, consisting of a residence and barn.	Scott, 1990; Jones, 1996
031804	022819	Small, sparse, prehistoric artifact scatter, consisting of lithic artifacts, debitage, and a glass bead. P-37-031805 and P-37-031806 combined with this site.	Giletti and Meriwether, 2011; Roy, Villalobos, and Pati, 2019; Roy and Villalobos, 2019; Roy, Villalobos, Rolland, and Chavez, 2019



### 3.1.2.1 CA-SDI-5445 (P-37-005445)

Resource CA-SDI-5445 (P-37-005445) is a large, significant cultural resource site located just west of the main project area and including the additional well site and the pipeline alignments (see Figure 6). CA-SDI-5445 is over 100 acres in size and has been the subject of a number of surveys, testing, data recovery, and monitoring programs covering various portions of the site. A history of work at this site is included in the archaeological study for the Mission Cove project (Robbins-Wade 2012) and is not repeated here. The most salient details regarding this site are that an extensive subsurface deposit was recorded and excavated in conjunction with development of SR 76. Despite the large amount of cultural material recovered, the site was determined not to be NRHP-eligible due to the high degree of disturbance over many years, which served to drastically affect the integrity of the resource (Corum 1991).

A second locus (Locus B) was identified at CA-SDI-5445 in 2002 and assessed as significant, due to the apparent presence of intact subsurface deposits below the plow zone, which extended to about 70 centimeters (Tuma and Guerrero 2002). A hearth feature was identified at a depth of approximately one meter during backhoe trenching for the Mission Cove project, but few artifacts were observed; the deposit was mainly shell (Robbins-Wade 2012).

A data recovery program was undertaken at Locus B; the report is in progress. During monitoring in conjunction with the Mission Cove project, additional subsurface features were encountered, and shell and artifact deposits were found beneath Mission Road to a depth of eight feet in some places. A human cranial fragment was identified in bone that was collected during the Caltrans excavation, and a small amount of bone recovered during the data recovery program at Mission Cove was identified as possibly human. During monitoring for the private development project just west of the current project area, north of SR 76, significant cultural deposits and additional human remains were encountered. Based on this, the site is assumed eligible for the CRHR and NRHP, although it has not been formally evaluated after these finds. The site is of importance to the Luiseño community. Although not addressed in the site records, CA-SDI-5445 is part of the Luiseño village of San Luis Rey.

## 3.2 OTHER ARCHIVAL RESEARCH

Various additional archival sources were also consulted, including historic topographic maps and aerial imagery. These include historic aerials from 1938, 1946, 1953, 1964, 1967, 1980, and 1990 (NETR Online 2020) and several historic USGS topographic maps, including the 1901 San Luis Rey (1:125,000) and the 1948, 1968, and 1975 San Luis Rey (1:24,000) topographic maps. The purpose of this research was to identify historic structures and land use in the area.

The 1901 San Luis Rey map shows the project area near the San Luis Rey river, which lies to the northwest. The project area lies outside the Oceanside City Limits in the 1948 San Luis Rey topographic map; the 1968 and 1975 topographic maps show the presence of the drive-in theater north of Mission Avenue, as well as the presence of three wells along Mission Avenue to the south.

The aerial photographs show the development of the areas surrounding the project along Mission Avenue to the south. As seen in the 1938 aerial photograph, the area south of Mission Avenue appears to have been used for agricultural purposes. The project area appears to have been cleared for agricultural uses prior to the 1964 aerial photograph; by the 1967 aerial photograph, the current

drive in theater had been constructed. This theater expanded to house four screens by 1980 (NETR Online 2020).

### **3.3 NATIVE AMERICAN CONTACT PROGRAM**

HELIX contacted the NAHC on February 16, 2021 for a Sacred Lands File search and list of Native American contacts for the project area. The NAHC indicated in a response dated March 1, 2021 that the Sacred Lands File search was positive and recommended contacting the La Jolla Band of Mission Indians and the San Luis Rey Band of Mission Indians. HELIX solicited input from the San Luis Rey Band to adequately assess cultural sensitivity of the project area and identify potential impacts to tribal cultural resources from the project. No additional tribal outreach was undertaken as part of the current study. Native American outreach and consultation will be undertaken by the City under AB 52. Correspondence with the NAHC is included as Appendix C (confidential, bound separately).

## **4.0 SURVEY AND MONITORING**

### **4.1 SURVEY**

#### **4.1.1 Survey Methods**

The expansion area and potential well locations adjacent to the existing MBGPF were surveyed for cultural resources by HELIX archaeologist Dominique Diaz de Leon and tribal monitor Cami Mojado of Saving Sacred Sites (San Luis Rey Band) on February 10, 2021. The survey area was walked in 10-meter parallel transects where possible; meandering was needed in areas of very dense vegetation where only patches of ground visibility were observed. The survey area outside the MBGPF was later removed from the project.

Another potential well location (Well 12) was added later, and the parcel of land surrounding Oceanside Fire Station 7 was surveyed for cultural resources on July 29, 2022 by Mary Villalobos of HELIX and Logovi'i Sialo'i of Saving Sacred Sites. The parcel was surveyed using three-meter transect intervals except in the area of the existing fire station and its driveways and associated hardscape, which were not surveyed, as no ground surface was exposed.

#### **4.1.2 Survey Results**

During the February 2021 survey, ground visibility was quite poor in some areas due to dense grass and other vegetation, as well as thick, dried grasses and weeds. In other areas, ground visibility was excellent. No cultural material was observed during the field survey. A small, light density shell scatter consisting of approximately 10 pieces of marine shell was noted at the base of a power pole, in an area that was quite disturbed; the shell appeared to be in fill soil, and no artifacts were observed in association with it. One fragment of large mammal bone was observed just outside the survey area. Due to the presence of human remains at sites in the vicinity, Ms. Mojado asked that the bone be examined by forensic anthropologist Dr. Madeleine Hinkes. Dr. Hinkes examined a photograph of the bone and indicated there were no features about it that appeared human.

The parcel adjacent to Fire Station 7, located southwest of the main project area, has been highly disturbed by development of the existing fire station and buried utilities, as well as roadway

infrastructure—the parcel is bordered by SR 76 on the north and Mission Road on the south (see Figures 2 and 3). Road gravel covers the far eastern ground surface of the parcel, and modern trash was observed throughout the survey area. The soil consists of medium brown silty sand. Visibility in the eastern section is between 30 and 45 percent, while visibility in the remainder of the property is between zero and 40 percent.

A scattering of marine shells and one granitic mano fragment were observed in the western edge of the eastern section of the parcel, near the sewer box. Although this area is within the archaeological site CA-SDI-5445, given the high degree of past disturbance, the provenience for the cultural material here is suspect, and the integrity of this portion of CA-SDI-5445 is poor.

## **4.2 MONITORING**

HELIX archaeologists and tribal cultural monitors from Saving Sacred Sites monitored geotechnical testing (sonic drilling) at potential well sites within the main project area and the parcel adjacent to Oceanside Fire Station 7, as described below.

### **4.2.1 Monitoring Methods**

Ms. Diaz de Leon and Ms. Mojado observed sonic drilling at the proposed Well E location on February 10, 2021, and at the proposed Well F location on February 15, 2021. Drilling was observed to a depth of 30 feet for Well E and to 50 feet for Well F, due to the depth of alluvium and the potential for encountering buried cultural deposits. Ms. Diaz de Leon and Logovi'i Sialo'i of Saving Sacred Sites observed sonic drilling at the proposed Well G location on December 15, 2021 and December 16, 2021. Drilling was observed to a depth of 56 feet for Well G.

On July 29, 2022, Ms. Villalobos and Mr. Sialo'i monitored boring of holes to a depth of approximately 15 feet and collection of soil samples within the parcel adjacent to Oceanside Fire Station 7.

### **4.2.2 Monitoring Results**

Three geotechnical borings for well sites E, F, and G were observed to depths of 30 feet, 50 feet, and 56 feet, respectively. Soils observed within well sites E and F consisted of a light brown grayish clayey sand, followed by gray sand. Soils observed within Well Site G consisted of a grayish brown loamy soil, fill with gravel and basalt, and silty sand. No cultural material was observed in these borings. The soils observed in borings within the parcel adjacent to Oceanside Fire Station 7 consisted of medium brown silty sand. No cultural material was observed in the borings.

## **5.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS**

A study was undertaken to identify cultural resources that are present in the Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project area and to determine the effects of the project on historical resources, as defined by CEQA, and historic properties, per the NHPA. The cultural resources survey did not identify any archaeological resources within the main project area (MBGPF). The well site adjacent to Oceanside Fire Station 7 is within the significant cultural resource CA-SDI-5445, as are the pipeline alignments.

Although this portion of CA-SDI-5445 is highly disturbed and has very poor integrity, there is a potential for pockets of intact cultural deposits to be present, as there are within the recently graded private development on the north side of SR 76. As previously noted, this resource is assumed to be CRHR and NRHP eligible, due to the culturally important deposits and the presence of human remains, although formal evaluation has not been conducted. Based on this, there is a potential for the project to affect historical resources/historic properties (i.e., significant cultural resources).

City staff will undertake tribal outreach and consultation under AB 52 to address potential effects to TCRs/TCPs.

## **5.1 MANAGEMENT RECOMMENDATIONS**

Based on the high degree of cultural sensitivity of the project area, the presence of known cultural resources, and the potential for buried cultural resources, it is recommended that an archaeological and Native American monitoring program be implemented for ground-disturbing activities, to include the measures outlined below. Specific measures for CA-SDI-5445 are detailed in Cul-3.

Should the project limits change to incorporate new areas of proposed disturbance, archaeological survey of these areas will be required.

### **5.1.1 Mitigation Measures**

**Cul-1** Cultural resource mitigation monitoring shall be conducted to provide for the identification, evaluation, treatment, and protection of cultural resources that are affected by or may be discovered during the construction of the proposed project. The monitoring shall consist of the presence of a Qualified Archaeologist and a Luiseño Native American Monitor for, but not limited to, tree removal, demolition and/or removal of infrastructure, grading, trenching, excavation, or other ground-disturbing or altering activities. Other tasks of the monitoring program shall include the following:

- The requirement for cultural resource mitigation monitoring shall be noted on applicable construction documents, including demolition plans, grading plans, etc.
- The Qualified Archaeologist and Luiseño Native American Monitor shall attend applicable pre-construction meetings with the Contractor and/or associated Subcontractors.
- The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during ground-disturbing or altering activities, as identified above.
- The Qualified Archaeologist and/or Luiseño Native American monitor may halt ground-disturbing activities if archaeological artifact deposits or cultural features are discovered. In general, ground-disturbing activities shall be directed away from these deposits for a short time to allow a determination of potential significance, the subject of which shall be determined by the Qualified Archaeologist and the Luiseño Native American monitor. Ground-disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the Luiseño Native American

monitor, deems the cultural resource or feature has been appropriately documented and/or protected. At the Qualified Archaeologist's discretion, the location of ground-disturbing activities may be relocated elsewhere on the project site to avoid further disturbance of cultural resources.

- The avoidance and protection of discovered unknown and significant cultural resources and/or unique archaeological resources is the preferable mitigation for the proposed project. If avoidance is not feasible a Data Recovery Plan may be authorized by the City as the Lead Agency under CEQA. If data recovery is required, then the Luiseño Native American monitor shall be notified and consulted in drafting and finalizing any such recovery plan.

**Cul-2** Prior to the issuance of a Grading Permit, the City shall retain a Qualified Archaeologist and a Luiseño Native American Monitor to implement the monitoring program, as described in the pre-excavation agreement.

**Cul-3** During the monitoring program, all ground disturbance (trenching/excavation/drilling) occurring within the boundaries of CA-SDI-5445 should be monitored full-time by an archaeologist and a Luiseño Native American monitor, with screening of a sample of the soils occurring. The monitors will direct the pace of excavation within the archaeological site to allow sufficient time to thoroughly examine the soils and the trench sidewalls. In addition, to minimize impacts to cultural resources, it is recommended that trench widths be kept as narrow as feasible to accommodate the new or replacement pipelines.

**Cul-4** Following completion of the monitoring program, a Monitoring Report and/or Evaluation Report, which describes the results, analysis, and conclusions of the cultural resource mitigation monitoring efforts (such as, but not limited to, a Research Design, Data Recovery Program, etc.) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City for approval.

**Cul-5** The City shall relinquish ownership of cultural resources collected during the cultural resource mitigation monitoring conducted during ground-disturbing activities, and from previous archaeological studies or excavations on the project site to the San Luis Rey Band for respectful and dignified treatment and disposition in accordance with the Tribe's cultural and spiritual traditions. Cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98.

**Cul-6** As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Medical Examiner's office by telephone. No further excavation or disturbance of the discovery or nearby area reasonably suspected to overlie adjacent remains (as determined by the Qualified Archaeologist and/or the Luiseño Native American monitor) shall occur until the Medical Examiner's office has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the Qualified

Archaeologist and/or the Luiseño Native American monitor), and consultation and treatment could occur as prescribed by law. As further defined by State law, the Medical Examiner would determine within two working days of being notified if the remains are subject to his or her authority. If the Medical Examiner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would decide as to the Most Likely Descendent. If Native American remains are discovered, the remains shall be kept in situ (“in place”), or in a secure location near where they were found, and the analysis of the remains shall only occur on-site in the presence of a Luiseño Native American monitor.

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# Appendix A

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Resumes of Key Personnel

### Summary of Qualifications

Ms. Robbins-Wade has 41 years of extensive experience in both archaeological research and general environmental studies. She oversees the management of all archaeological, historic, and interpretive projects; prepares and administers budgets and contracts; designs research programs; supervises personnel; and writes reports. Ms. Robbins-Wade has managed or participated in hundreds of projects under the California Environmental Quality Act (CEQA), as well as numerous archaeological studies under various federal jurisdictions, addressing Section 106 compliance and National Environmental Policy Act (NEPA) issues. She has excellent relationships with local Native American communities and the Native American Heritage Commission (NAHC), as well as has supported a number of local agency clients with Native American consultation under State Bill 18 and assistance with notification and Native American outreach for Assembly Bill 52 consultation. Ms. Robbins-Wade is a Registered Professional Archaeologist (RPA) and meets the U.S. Secretary of the Interior's Professional Qualifications for prehistoric and historic archaeology.

### Selected Project Experience

**12 Oaks Winery Resort.** Project Manager/ Principal Investigator for a cultural resources survey of approximately 650 acres for a proposed project in the County of Riverside. Oversaw background research, field survey, site record updates, Native American coordination, and report preparation. Met with Pechanga Cultural Resources staff to discuss Native American concerns. Worked with applicant and Pechanga to design the project to avoid impacts to cultural resources. Work performed for Standard Portfolio Temecula, LLC.

**28th Street between Island Avenue and Clay Avenue Utilities Undergrounding Archaeological Monitoring.** Project Manager/Principal Investigator for a utilities undergrounding project in a historic neighborhood of East San Diego. Responsible for project management; coordination of archaeological and Native American monitors; coordination with forensic anthropologist, Native American representative/Most Likely Descendent, and City staff regarding treatment of possible human remains; oversaw identification of artifacts and cultural features, report preparation, and resource documentation. Work performed for the City of San Diego.

**Archaeological Testing F11 Project.** Project Manager for a cultural resources study for a proposed mixed-use commercial and residential tower in downtown San Diego. Initial work included an archaeological records search and a historic study, including assessment of the potential for historic archaeological resources. Subsequent work included development and implementation of an archaeological testing plan, as well as construction monitoring and the assessment of historic archaeological resources encountered. Work performed for the Richman Group of Companies.

### Education

Master of Arts,  
Anthropology, San  
Diego State  
University, California,  
1990

Bachelor of Arts,  
Anthropology,  
University of  
California, Santa  
Barbara, 1981

### Registrations/ Certifications

Caltrans,  
Professionally  
Qualified Staff-  
Equivalent Principal  
Investigator for  
prehistoric  
archaeology,  
, Bureau of Land  
Management  
Statewide Cultural  
Resource Use Permit  
(California), permit  
#CA-18-35,  
, Register of  
Professional  
Archaeologists  
#10294, 1991  
County of San Diego,  
Approved CEQA  
Consultant for  
Archaeological  
Resources, 2007  
, Orange County  
Approved  
Archaeologist 2016

# Mary Robbins-Wade, RPA

## Cultural Resources Group Manager

**Blended Reverse Osmosis (RO) Line Project.** Project Manager/ Principal Investigator for cultural resources monitoring during construction of a 24-inch recycled water pipeline in the City of Escondido. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

**Buena Sanitation District Green Oak Sewer Replacement Project.** Project Manager/Principal Investigator for a cultural resources testing program in conjunction with a proposed sewer replacement project for the City of Vista. Oversaw background research, fieldwork, site record update, Native American coordination, and report preparation. Work performed for Harris & Associates, Inc., with the City of Vista as the lead agency.

**Cactus II Feeder Transmission Pipeline IS/MND.** Cultural Resources Task Lead for this project in the City of Moreno Valley. Eastern Municipal Water District proposed to construct approximately five miles of new 30-inch to 42 inch-diameter pipeline; the project would address existing system deficiencies within the City and provide supply for developing areas. Oversaw background research, field survey, and report preparation. Responsible for Native American outreach for cultural resources survey. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.

**Dale 2199C Pressure Zone Looping Pipeline Project.** Cultural Resources Task Lead for this project in Moreno Valley. Eastern Municipal Water District proposed construction of a new pipeline to connect two existing pipelines in the District's 2199C Pressure Zone. The pipeline would consist of an 18-inch-diameter pipeline between Kitching Street and Alta Vista Drive that would connect to an existing 12-inch-diameter pipeline in the northern end of Kitching Street and to an existing 18-inch-diameter pipeline at the eastern end of Alta Vista Drive. The project will improve reliability and boost the Dale Pressure Zone's baseline pressure and fire flow availabilities. Four potential alignments were under consideration; three of these bisect undeveloped land to varying degrees, while the other is entirely situated within developed roadways. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Work performed under an as-needed contract for Eastern Municipal Water District.

**Downtown Riverside Metrolink Station Track & Platform Project.** Cultural Resources Task Lead for this project involving changes to and expansion of the Downtown Riverside Metrolink Station. Overseeing records search and background information, archaeological survey, and report preparation. Responsible for coordination with Native American Heritage Commission, Riverside County Transportation Commission (RCTC), and Federal Transportation Authority (FTA) on Native American outreach. Work performed for Riverside County Transportation Commission as a subconsultant to HNTB Corporation.

**Emergency Storage Pond Project.** Project Manager/Principal Investigator for a cultural resources testing program in conjunction with the Escondido Recycled Water Distribution System - Phase 1. Two cultural resources sites that could not be avoided through project design were evaluated to assess site significance and significance of project impacts. Work included documentation of bedrock milling

# Mary Robbins-Wade, RPA

## Cultural Resources Group Manager

features, mapping of features and surface artifacts, excavation of a series of shovel test pits at each site, cataloging and analysis of cultural material recovered, and report preparation. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Work performed for the City of Escondido.

**Escondido Brine Line Project.** Project Manager/Principal Investigator for cultural resources monitoring during construction of approximately 2.3 miles of a 15-inch brine return pipeline in the City of Escondido. The project, which is part of the City's Agricultural Recycled Water and Potable Reuse Program, enables discharge of brine recovered from a reverse osmosis facility that is treating recycled water; it is one part of the larger proposed expansion of Escondido's recycled water distribution to serve eastern and northern agricultural land. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

**Hacienda del Mar EIR.** Senior Archaeologist for a proposed commercial development project for a senior care facility in Del Mar. Assisted in the preparation of associated permit applications and an EIR. Oversaw background research, updated records search and Sacred Lands File search, monitoring of geotechnical testing, coordination with City staff on cultural resources issues, and preparation of updated report. Prior to coming to HELIX, served as Cultural Resources Task Lead for the cultural resources survey for the project, conducted as a subcontractor to HELIX. Work performed for Milan Capital Management, with the City of San Diego as the lead agency.

**Lilac Hills Ranch.** Project Manager/Principal Investigator of a cultural resources survey and testing program for an approximately 608-acre mixed-use development in the Valley Center area. Oversaw background research, field survey, testing, recording of archaeological sites and historic structures, and report preparation. Responsible for development of the research design and data recovery program, preparation of the preservation plan, and Native American outreach and coordination. The project also included recording historic structures, development of a research design and data recovery program for a significant archaeological site, and coordination with the Native American community and the client to develop a preservation plan for a significant cultural resource. The project changed over time, so additional survey areas were included, and a variety of off-site improvement alternatives were addressed. Work performed for Accretive Investments, Inc. with County of San Diego as the lead agency.

**Moulton Niguel Water District Regional Lift Force Main Replacement.** Cultural Resources Task Lead/Principal Investigator for the replacement of a regional lift station force main operated by Moulton Niguel Water District (MNWD). The project comprises an approximately 9,200 linear foot alignment within Laguna Niguel Regional Park in Orange County, in an area that is quite sensitive in terms of cultural resources. HELIX is supporting Tetra Tech throughout the preliminary design, environmental review (CEQA), and final design, including permitting with applicable state and federal regulatory agencies. The cultural resources survey will inform project design, in order to avoid or minimize potential impacts to cultural resources. Oversaw background research and constraints analysis, Native American

# Mary Robbins-Wade, RPA

## Cultural Resources Group Manager

coordination, cultural resources survey, coordination with MNWD and Tetra Tech, and report preparation. Work performed for MNWD, as a subconsultant to Tetra Tech.

**Murrieta Hot Springs Road Improvements Project.** Principal Investigator/Cultural Resources Task Lead for cultural resources survey in support of an Initial Study/Mitigated Negative Declaration (IS/MND) for the widening of Murrieta Hot Springs Road in the City of Murrieta. The project would widen or restripe Murrieta Hot Springs Road between Winchester Road and Margarita Road from a 4-lane roadway to a six-lane roadway to improve traffic flow, as well as provide bike lanes in both directions along this segment. A new raised median, light poles, signage, stormwater catch basins, retaining walls, and sidewalks would also be provided on both sides of the roadway, where appropriate. The project area is in a location that is culturally sensitive to the Native American community. The cultural resources study included tribal outreach and coordination to address this cultural sensitivity.

**Park Circle - Cultural Resources.** Project Manager/Principal Investigator of a cultural resources survey and testing program for a proposed 65-acre residential development in the Valley Center area of San Diego County. The project is located along Moosa Creek, in an area that is culturally sensitive to the Luiseño people. Oversaw background research, historic study, field survey, testing, recording archaeological sites and historic structures, and report preparation. Responsible for Native American outreach and coordination. The cultural resources study included survey of the project area, testing of several archaeological sites, and outreach and coordination with the Native American community, as well as a historic study that addressed a mid-20th century dairy barn and a late 19th century vernacular farmhouse. Work performed for Touchstone Communities.

**Peacock Hill Cultural Resources.** Project Manager/Principal Investigator of a cultural resources study update for a residential development in Lakeside. Oversaw updated research, fieldwork, lab work, analysis by forensic anthropologists, report preparation, and Native American coordination. In the course of outreach and coordination with the Native American (Kumeyaay) community, possible human remains were identified, prompting additional fieldwork, as well as coordination with the Native American community and forensic anthropologists. Work performed for Peacock Hill, Inc.

**Sky Canyon Sewer Environmental Consulting.** Cultural Resources Task Lead for this project adjacent to the City of Murrieta in southwestern Riverside County. Eastern Municipal Water District (District) proposed to implement the Sky Canyon Sewer Main Extension Project to construct approximately 6,700 linear feet of new gravity-fed 36-inch-diameter sewer main to provide additional sewer capacity for planned development. The proposed 36-inch-diameter sewer main would extend the existing 36-inch-diameter French Valley Sewer at Winchester Road further downstream to Murrieta Hot Springs Road. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.



### Summary of Qualifications

Mr. Cooley has over 45 years of experience in archaeological resource management. He has directed test and data recovery investigations, monitoring programs, and archaeological site surveys of large and small tracts, and has prepared reports for various cultural resource management projects. He is well-versed in National Historic Preservation Act, National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA) regulations and processes. Mr. Cooley's experience also includes Native American consultation for monitoring of archaeological field projects, including some with human remains and reburial-related compliance issues.

### Selected Project Experience

**8016 Broadway Self Storage Project** (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Lemon Grove Self-Storage project located in the City of Lemon Grove, San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Summit Environmental Group, Inc.

**Briggs Road Walton Development Project (Assessor's Parcel Number 461-170-001)** (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Briggs Road Residential project located in Riverside County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

**Brown Field and Montgomery Field Airport Master Plans** (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory and pedestrian survey programs at the Brown Field Municipal Airport and the Montgomery-Gibbs Executive Airport, in the City of San Diego, in support of updating of the Airport Master Plan and its Programmatic Environmental Impact Report. Involvement included participation in the analysis of the results from the survey programs and co-authorship of the technical reports. Work performed as a subconsultant to C&S Companies, with the City of San Diego as the lead agency.

**Cubic Redevelopment Environmental Consulting** (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a 20-acre redevelopment project, located in the community of Kearny Mesa, City of San Diego. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for Cubic Redevelopment Environmental Consulting, with the City of San Diego as lead agency.

### Education

Master of Arts,  
Anthropology,  
California State  
University, Los  
Angeles, 1982

Bachelor of Arts,  
Anthropology,  
California State  
College, Long Beach,  
1970

### Registrations/ Certifications

Register of Professional  
Archaeologists #10621,  
2019

City of San Diego,  
Certified Principal  
Investigator for  
Monitoring Projects

County of Riverside,  
Certified Cultural  
Resources Consultant  
Principal Investigator

County of Orange,  
Certified Cultural  
Resources Consultant  
Principal Investigator

County of San Diego,  
Approved Consultant  
for Archaeological  
Resources

Los Angeles, Ventura,  
San Luis Obispo, and  
Santa Barbara  
Approved Consultant

# Theodore G. Cooley, RPA

## Senior Archaeologist

**French Valley 303 Project** (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the French Valley 303 Site residential development project, located in the French Valley area of unincorporated Riverside County. Involvement included participation in the analysis of the results from the monitoring program and co-authorship of the technical report. Work performed for Pulte Home Co., LLC.

**Hiser Property Project** (2019 - Present). Senior Archaeologist for a due diligence study prepared to summarize potential cultural resources constraints to the 9.2-acre Hiser Property development project, located in the Mission Gorge area of the City of Santee, San Diego County. The study consisted of background research including a record search and limited archival study, a field survey, and a review of the Sacred Lands File from the Native American Heritage Commission (NAHC). Involvement included participation in the analysis of the results and preparation of a summary letter report of the potential cultural resources-related constraints to the planned development. Work performed for KB Home.

**Ponto Hotel Technical Studies** (2019 - Present). Senior Archaeologist for a cultural resources assessment study for the Ponto Hotel development project in the City of Carlsbad, San Diego County, California. Involvement included participation in the analysis of the results from the assessment program and preparation of the technical report. Work performed for Kam Sang Company, with the City of Carlsbad as the lead agency.

**R.M. Levy Water Treatment Plant Sewer Replacement** (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a water treatment plant, sewer pipeline, replacement project, located in the community of Lakeside, San Diego County. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for HELIX Water District.

**Salt Bay District Specific Plan EIR** (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program in support of the 46.6-acre Salt Bay Design District Specific Plan mixed-use wholesale/retail shopping and light industrial development project, in the cities of San Diego and Chula Vista. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for M. & A. Gabae, with the City of San Diego as lead agency.

**San Jacinto Property Project** (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the 214 residential project located in Riverside County. Involvement included participation in the analysis

# Theodore G. Cooley, RPA

## Senior Archaeologist

of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

**San Elijo Joint Powers Authority Roadway and Trail Addendum and Permitting** (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory, pedestrian survey, and resource testing at the San Elijo Water Reclamation Facility adjacent to San Elijo lagoon, in San Diego County, in support of the preparation by the San Elijo Joint Powers Authority of a Roadway and Trail Addendum for upgrades to the facility requiring verification of Nationwide Permit authorization from the U.S. Army Corps of Engineers (USACE). Involvement included participation in the analysis of the results from the survey and testing program and co-authorship of the technical report. Work performed as a subconsultant to Kimley-Horn & Associates, with the San Elijo Joint Powers Authority as lead agency.

**Sycamore & Watson Project** (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the Sycamore & Watson residential development project, located in City of Vista, San Diego County. Involvement included participation in the analysis of the results from the monitoring program and preparation of the technical report. Work performed for Meritage Homes.

**Sycamore Canyon/Goodan Ranch Public Access Plan IS/MND** (2019 - 2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Parks Department of a Public Access Plan for the Sycamore Canyon/Goodan Ranch Preserve located in coastal foothills of unincorporated west-central San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

**Sycuan/Sloane Canyon Trail IS/MND** (2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Department of a Parks and Recreation for the Sycuan/Sloane Canyon Trail project located in the coastal foothills of unincorporated southwestern San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

**The Enclave at Delpy's Corner Project** (2019 - Present). Senior Archaeologist for a cultural resources monitoring and data recovery program in support of a proposed 124-unit townhome development project, in the City of Vista, San Diego County. Involvement included participation in the analysis of the prehistoric lithic artifacts and preparation of technical report sections containing the results of these analyses. Work performed for CalAtlantic Homes.

### Summary of Qualifications

Ms. Villalobos serves as a field archaeologist on a number of cultural resource projects in southern California, including surveys, testing programs, and monitoring. She has also served as a laboratory assistant for major universities, museums, and archaeological centers. She has expertise in cultural resource surveying, cataloging site excavation data, and monitoring. Ms. Villalobos' experience includes international work for a key archaeological project in Peru focused on a temple excavation.

### Selected Project Experience

#### **1125 S. Cleveland Street -Cultural & Native American Monitoring (2016).**

Archaeological monitor for a housing project in the City of Oceanside, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Hallmark Communities. Lead agency was City of Oceanside.

**12 Oaks Winery Resort (2015 - 2018).** Field Archaeologist for survey of an approximately 600-acre project near Temecula in Riverside County, CA. Responsibilities included identification of cultural material during field survey. Work performed for Standard Portfolio Temecula, LLC, with County of Riverside as the lead agency.

**28th Street between Island Avenue and Clay Avenue Archaeological Monitoring (2016 - 2018).** Archaeological Monitor for a utilities undergrounding project in a historic neighborhood of East San Diego, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of San Diego.

**4th & J Project (2017).** Archaeological monitor for a residential project in a historic neighborhood in the City of San Diego, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Legacy Partners, lead agency is City of San Diego.

**Oceanside As-Needed Environmental Consulting Services (2015 - 2016).** Archaeological Monitor for construction of a new facility at the Mission Basin Desalting Facility near the San Luis Rey River, in the City of Oceanside, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Oceanside.

### Education

Bachelor of Arts,  
Anthropology,  
concentration in  
Archaeology,  
University of  
California San Diego,  
CA, 2013

### Registrations/ Certifications

Technical Safety  
Institute, HAZWOPER  
40 Hour, Issue No.  
F183292: Hazardous  
Waste Operations  
and Emergency  
Response, 2018

# Mary Villalobos

## Staff Archaeologist

**City of San Diego As-Needed Permitting Assistance for O & M Activities and Emergencies** (2016 - 2016). Archaeological monitor for the removal of sediment at culvert outlets at Hotel Circle, in the City of San Diego, CA, to help alleviate flooding in the area. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of San Diego

**Storage Buildings Construction Monitoring, San Marcos Campus** (2017). Archaeological monitor for the construction of storage facilities on the campus of Palomar College in the City of San Marcos, California. Cultural resources are located near the project area. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Palomar College.

**Cemetery Area Water Pipeline Replacement** (2015 - 2016). Archaeological Monitor for a water pipeline replacement project in eastern Escondido, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Escondido.

**Da Vinci** (2018). Archaeological monitor during potholing to find existing utilities for the construction of a telecommunication tower. Responsible for field monitoring, coordination with construction crew, identification of artifacts and cultural features, and daily monitoring notes. Work performed for Terracon. Lead agency is Verizon.

**DePratti, Inc. Telespan Lake Wohlford** (2017). Field archaeologist for a testing program to determine the northern extent of an important archaeological site near Lake Wohlford in the community of Bear Valley in the County of San Diego, California. Responsibilities included excavation of test units, identification of cultural material, and preparation of field notes. Work performed for DePratti, Inc. Lead agency is County of San Diego.

**El Camino Real Road Widening-Archaeological Monitoring** (2016). Archaeological Monitor for a road widening project in an area with archaeological and cultural sensitivity in the City of Carlsbad, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Carlsbad.

**Magnolia Trails** (2016). Archaeological Monitor for a residential development in the City of El Cajon, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for KB Home. Lead agency was City of El Cajon.

## Appendix D

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List of Reports within Records Search  
Radius

## Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-00273	NADB-R - 1120273; Voided - BULL 37	1977	Bull, Charles S.	Archaeological Field Check of San Luis Rey Villas.	RECON	
SD-00577	NADB-R - 1120577; Other - 11821-159021; Voided - CARRILLO14	1982	Carrillo, Charles	Map for Highway Alternatives Study 11-SD-76 0.012.9 11821-159021	CALTRANS	
SD-01070	NADB-R - 1121070; Other - DACW09-78-M-1701; Voided - FRANKLIN01	1978	Franklin, Randy and Richard L. Carrico	A Preliminary Archaeological Reconnaissance for a Proposed Flood Control Project in the Lower San Luis Rey River Drainage.	Westec Services, Inc.	37-005131, 37-005133, 37-005422
SD-01579	NADB-R - 1121579; Voided - WADE 09	1986	Wade, Sue A. and Susan M. Hector Ph.D.	Archaeological Monitoring of the Encina Gas Pipeline Project Profiles of Subsistence Patterns Along the South Shore of Agua Hedionda Lagoon	RECON	37-006132, 37-006133, 37-006134, 37-006830, 37-008303
SD-01677	NADB-R - 1121677; Voided - WADE 26	1989	Wade, Sue A. and Susan M. Hector	A Cultural Resource Survey of the Loma Alta Creek Improvement Plan Area	RECON	
SD-02447	NADB-R - 1122447; Voided - CORUM 59	1991	CORUM, JOYCE	PHASE II ARCHAEOLOGICAL TEST EXCAVATION AT SITE CA-SDI-5445	CALTRANS	37-005445
SD-07657	NADB-R - 1127657; Voided - WESTEC 81	1979	WESTEC SERVICES, INC and R.L. FRANKLIN	CULTURAL RESOURCE TEST SAMPLING PROGRAM FOR A PROPOSED FLOOD CONTROL PROJECT IN THE LOWER SAN LUIS REY RIVER DRAINAGE, OCEANSIDE, CALIFORNIA	WESTEC SERVICES, INC	
SD-08469	NADB-R - 1128469; Voided - CARRICO264	1979	CARRICO, RICHARD L. and R.L. FRANKLIN	CULTURAL RESOURCE TEST SAMPLING PROGRAM FOR A PROPOSED FLOOD CONTROL PROJECT IN THE LOWER SAN LUIS REY RIVER DRAINAGE, OCEANSIDE, CA	WESTEC SERVICES	
SD-11090	NADB-R - 1131090; Voided - ROBBINS198	2007	ROBBINS-WADE, MARY and ANDREW GILETTI	ARCHAEOLOGICAL RESOURCES SURVEY, PAVILION AT OCEANSIDE, OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA	AFFINIS	37-005445
SD-14069	NADB-R - 1134069; Voided - NIGHAS94	2011	NI GHABHLAIN, SINEAD	CULTURAL AND HISTORICAL RESOURCE STUDY FOR THE CITY OF OCEANSIDE GENERAL PLAN- CIRCULATION ELEMENT UPDATE PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR)	ASM AFFILIATES, INC.	37-005130, 37-005508, 37-011687, 37-014227, 37-015694, 37-027452, 37-028351

# Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-18214	NADB-R - 1138214	2018	COURTNEY, MICHELLE, HANNAH HAAS, CHRISTOPHER DURAN, BREANA CAMPBELL, and KEVIN HUNT	PURE WATER OCEANSIDE PROJECT, OCEANSIDE, CALIFORNIA, CULTURAL RESOURCES ASSESSMENT REPORT	RINCON CONSULTANTS, INC.	