Initial Study/
Mitigated Negative Declaration

Los Osos Creek Wetland Restoration

Prepared by the Coastal San Luis Resource Conservation District

Lead Agency Pursuant to Section 21082.1

of the California Environmental Quality Act

November 2020

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I. Mitigated Negative Declaration

A. Project Summary

Document Purpose + Organization

The purpose of this Initial Study is to provide a preliminary analysis of the proposed Los Osos Creek Wetland Restoration Project (the Project) to determine what type of environmental review will be required, and to allow for modification of the project to mitigate adverse impacts. This Initial Study has been prepared by the Coastal San Luis Resource Conservation District (District).

The Initial Study for this proposed Mitigated Negative Declaration is available for review online at coastalrcd.org and at the District office at 1203 Main Street, Suite B, in Morro Bay Ca. Questions or comments regarding this proposed Mitigated Negative Declaration may be addressed to the Lead Agency point of contact listed below.

Lead Agency

The CEQA Guidelines (14 CCR §15000 et seq.) establish the District as the lead agency. The lead agency is defined in CEQA Guidelines Section 15367 as "the public agency which has the principal responsibility for carrying out or approving a project." The lead agency decides whether an Environmental Impact Report (EIR) or Negative Declaration is required for the project and is responsible for preparing the appropriate environmental review document.

The contact person for the lead agency is:

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B. Project Description

Location and Environmental Setting

The Project is located on lower Los Osos Creek at the confluence with Warden Creek, in the Morro Bay watershed, San Luis Obispo County, California. The project area sits in a broad, low-gradient valley at the outlet of the mountain front, producing a discontinuity in valley confinement, channel gradient, and the capacity of flow to move sediment. Consequently, an alluvial fan occurs where Los Osos Creek enters Los Osos Valley. The presence of the fan and associated sediment deposition results in higher elevations at the west end of Los Osos Valley, where the project is located, and lower elevation at the east end of the valley. The site is positioned in a location where sediment delivered from the Los Osos Creek watershed would naturally deposit prior to entering the Morro

Bay estuary, however land use changes and channel modification have disconnected the creek from its natural floodplain and hydrology.

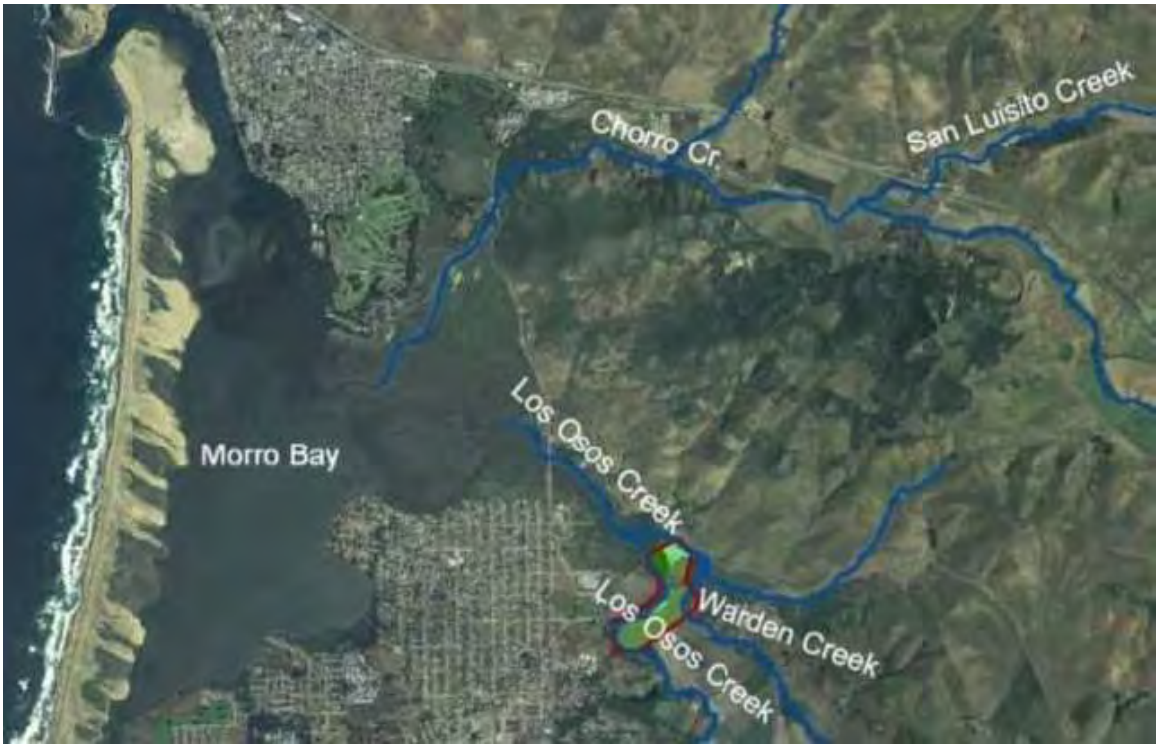


Figure 1. Los Osos Creek Watershed

The historic channel and floodplain most likely consisted of a series of active channels, flood channels, and abandoned channels with backwater wetlands that spread across the entire site. The active channel was likely an ephemeral feature, shifting from one location to another based on sediment deposition, debris jams, or other obstructions. The channel system was likely braided, hydraulically very rough, and sandy. This type of channel and floodplain form was historically not unique throughout the region, although much of this habitat type was impacted by development of agriculture. Remnants of these habitat types still occur along some of the coastal drainages where they were once widespread. Despite these conditions, aquatic species such as steelhead persisted, although the lower gradient lowland valley was likely a migration reach between upstream spawning and rearing habitat and the productive estuarine habitat that existed in tidally-influenced areas.

Los Osos Creek enters at the western end of the property confined by a levee that provides protection to active farmland to the south (Figure 2). The levee extends northward onto the property for some distance before disappearing into the adjacent grades due to high amounts of sedimentation that has occurred along the former flow path. Warden Creek enters on the eastern side of the property where sedimentation has caused backwatering and ponding until the confluence of the two creeks. Flow is conveyed through the access road via three 36-inch CMP culverts. Under high flow conditions, excess water is conveyed over the road, and Los Osos and Warden Creeks both share the unconfined floodplain area. Downstream of the culverts, Warden Creek and a portion of Los Osos Creek flow eastward and are confined by the dirt access road to the

south and an unmaintained levee to the north. At the eastern margin of the site, Warden Creek turns northward and heads toward the tidal estuary and Morro Bay. The Project footprint includes 56 acres of wetland and upland habitat within the larger 82-acree parcel owned by the District. The 56-acre footprint is comprised of 40 acres of declining palustrine wetlands (including 0.5 miles of designated critical habitat for the federally threatened south central California coast steelhead trout and 9 acres of critical habitat for the federally endangered tidewater goby) and 16 acres of upland dunes scrub. Other sensitive species, such as Morro shoulderband snail, California red-legged frog (CRLF), and various plant species also persist at the site.

During the planning phase of this project, a cultural resources study was completed by Applied Earthworks (AE) that included both archaeological resources and historic built-environment elements. The resulting findings report (appendix F) found that the man-made structures on the property were not considered eligible for listing under the National Register of Historic Places or the California Register of Historical Resources. The report also indicates that a previously identified prehistoric archaeological site, CA-SLO-31, extends into the western boundary of the project area. The report identified each of the proposed project components and an assessment of potential effects of those activities on the archaeology site. This is discussed in more detail in the Cultural resources section of this document.

The property is located in Supervisorial District 2, within the Estero Planning Area and the Coastal Zone. The parcel is designated as a Flood Hazard Area (FHA) and a Sensitive Resource Area (SRA). Its Coastal Designations include Wetland and Archeologically Sensitive Areas. The Land Use Category (LU) and Primary zoning is Agriculture (AG). Adjacent land uses are primarily agricultural, with some commercial / residential to the southwest including Los Osos middle school

Project Background and Purpose

The property where the project is located was acquired by the District in 2015 using State Coastal Conservancy (SCC) and the US Fish and Wildlife Service (USFWS) National Coastal Wetlands Program funding, and is considered a strategic and highly prioritized location for sediment capture, protecting the estuary from sedimentation and resulting habitat and water quality degradation.

Three primary studies of the Morro Bay watershed (1989 Soil Conservation Service (SCS) sediment assessment, 1998 Tetra Tech assessment, 2003 Swanson assessment) indicate that approximately 14% of the sediment loads entering the Morro Bay estuary originate from Los Osos creek and its tributaries. The studies go on to determine that those sediment loads negatively impact the steelhead populations in the watershed and have resulted in the listing of Morro Bay and its tributaries as impaired water bodies. As a result, the Central Coast Regional Water Quality Control Board (CCRWQCB) adopted a Total Maximum Daily Load (TMDL) for the watershed for sediment in 2002.

In 2000, the Morro Bay National Estuary Programs (MBNEP) Comprehensive Conservation Management Plan indicated that sediment deposition should be encouraged and facilitated along Los Osos Creek to ensure the health and function of the estuary, identifying specifically the Project area as high priority for this activity.

Acquisition of the property and subsequent development of a restoration plan is considered phase I of the Los Osos Creek Wetland Restoration project, while design and permitting, and implementation round out phases II and III, respectively.

Land use impacts over the past century have caused severe incision along much of Los Osos Creek, resulting in high rates of sediment transport from eroding bed and bank material. Portions of the project footprint were actively farmed until at least 1995, resulting in legacy impacts associated with past landscape manipulation, including grading activities, addition of levees, creation/maintenance of access roads, utilities (overhead power lines), irrigation infrastructure, shared well easements, homestead buildings (house and barn), vehicles embedded in the banks of the creek channel, transient/ homeless encampments, and extensive presence of non-native vegetation. A road providing well access to adjacent landowners and access to the homestead, includes creek crossings considered in-channel barriers to fish passage, and constrains the creek, impairing the hydrologic and ecosystem function throughout the site.

The Los Osos groundwater basin is a high priority basin subject to critical conditions of overdraft; In this basin the groundwater is found in alluvium, dune sand and the Paso Robles Formation. Both the alluvium and dune sands are primarily recharged via stream channels, particularly Los Osos Creek (Swanson, 2003). Both surface water and underflow in Los Osos Creek contribute to this recharge.

The project area is home to a wide variety of sensitive plant and animal species, including the federally threatened South-Central Steelhead Trout (Oncorhynchus mykiss iridous), the federally endangered Tidewater Goby (Eucyclogobius newberryi), the federally endangered Morro shoulderband snail (Helminthoglypta walkeriana), the federally endangered Morro Manzanita (Arctostaphylos morroensis), and the federally threatened California Red-legged frog(CRLF) (Rana aurora draytonii).

The project will restore 40 acres of declining palustrine coastal wetlands and 16 acres of upland coastal dune scrub habitat in order to enhance and increase habitat for sensitive species and reduce sediment loading in the Morro Bay Estuary. Project outcomes include restoration of hydrologic creek function, by reestablishing historic floodplains, reduced volume of sediment entering Morro Bay, improved water quality through wetland filtration, and restored habitat for Steelhead, Tidewater goby, CRLF, and Morro shoulderband snail.

Project Components and Tasks

The proposed project includes the following components, as seen in figure 2:

1. Restore native coastal dune habitat by decommissioning the upland homestead access road and demolishing existing upland infrastructure.
2. Improving fish passage by removing three perched culverts and managing invasive vegetation.
3. Reconnect and protect historic floodplain and wetland habitat by breaching portions of levee, decommissioning homestead well, and realigning power lines.

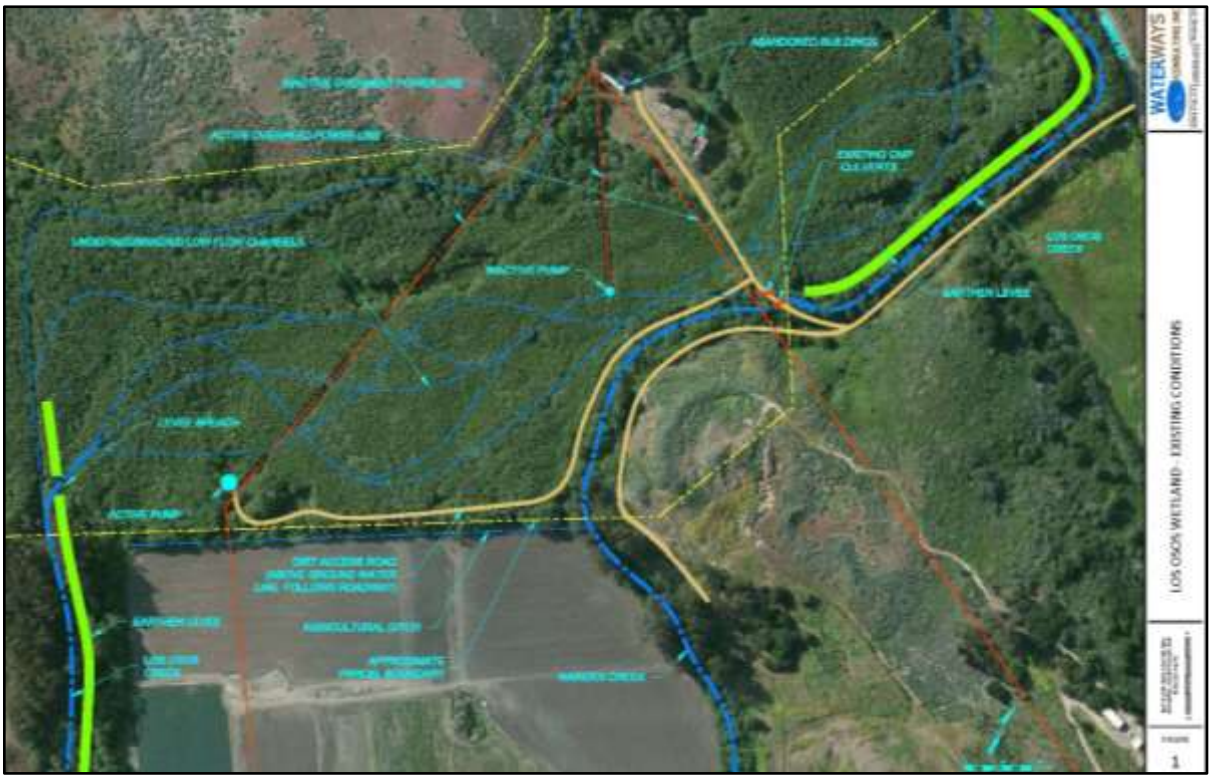


Figure 2. Project Footprint

1. Restore native coastal dune habitat by decommissioning the upland homestead access road and demolishing existing upland infrastructure.

Decommission Access Road

The dirt access road leading from the homestead to the rock ford crossing will be removed once the homestead restoration actions are completed. Historically, soil from the homestead was brought down the hill and used to fill in the floodplain for road access. This road fill will be graded and relocated in the upland homestead area. The removed road would then be seeded with native vegetation.

Asbestos Removal and Demolition of Single Family Residence

An inspection of the single-family residence and barn for materials containing asbestos was conducted by West Coast Safety Consultants on October 3, 2015. The consultants collected samples of suspect "asbestos containing building material" (ACBM) using sampling protocols specified by the Environmental Protection Agency (EPA). Laboratory results indicated that the texture on the front entryway walls and the roof shingles of the house both contained asbestos. These materials must be removed before the rest of the structure can be removed safely. No asbestos was detected in the barn. A licensed asbestos abatement contractor will be contracted to properly remove and dispose of the materials containing asbestos prior to demolition of the residence. Approval from the Air Pollution Control District will not be required because the building is a single-family residence and a City permit will not be required because the project is small and is in the County.

The single-family residence will be demolished and materials hauled off site and disposed of according to local regulations. Underground pipes and any subsurface footings or piers will be left in place and demolition activities will minimize ground disturbance in an effort to protect potentially significant native american cultural resources.

Remove Wooden Barn and Outbuilding

A large wooden barn and outbuilding located on the upland partition of the property are in disrepair and are considered an attractive nuisance . The structures have both dirt flooring and a concrete pad. A Phase 1 Environmental Site Assessment (ESA) was completed by Stantec Consulting Services, Inc. on November 3, 2014 that made the following finding:

> *Several small areas of darkened stained soil were observed on the dirt floor of the abandoned barn and may represent motor oil or hydraulic fluid. The small areas of stained soil within the barn are considered de minimis conditions in that they are not considered to present a material risk to human health and would not likely be subject to enforcement action if brought to the attention of governmental agencies.*

The barn and outbuilding structures will be removed and disposed of appropriately. In order to minimize ground disturbance of potentially significant Native American cultural resources, the concrete pad, any subsurface footings, and darkened soil identified in the EAS will remain in place.

Decommission Septic System

The residence is still connected to an abandoned septic tank which must be properly decommissioned for safety reasons and to avoid contamination of soil, groundwater and surface water. A licensed septic hauler will pump out any residual wastewater and sludge. The tank will then be filled in with sand or soil to prevent injuries to people or animals from falling into the tank. Pipes leading from the residence to the abandoned septic will be left in place and all demolition activities will minimize ground disturbance in an effort to protect potentially significant Native American cultural resources.

Vehicle Removal:

A Phase 1 Environmental Site Assessment (ESA), completed by Stantec Consulting Services, Inc. on November 3, 2014, identified three abandoned vehicles embedded in the slope above the creek channel.

> *The abandoned vehicles represent improper disposal of solid waste and could also impact surface water quality due to leakage or leaching or automotive chemicals. Due to their location adjacent to a creek channel or tributary, they may seasonally come into contact with surface water runoff. The dense riparian vegetation and limited viewpoints makes it difficult to determine their exact location in relation to the Property boundary.*

Vehicles will be removed from their current location using a winch or pulley system. Activities will be undertaken in such a way that minimizes ground disturbance and is protective of potentially significant Native American cultural resources. If the removal of the vehicles is determined to be too damaging to Native American cultural resources or the stability of the hillside, the District will leave the vehicles in place and remove all hazardous substances (i.e. batteries).

Placement of Fill Material and Revegetation with Native Species

Approximately 2,570 cubic yards of fill material from the breached levee and decommissioned access road will be placed in a 1.5' layer across the upland area once demolition activities are complete. The fill will protect Native American cultural resources. Native coastal dunes species such as Morro Manzanita, coyote brush, California sagebrush, buckwheat and yarrow, will be planted. Temporary irrigation infrastructure will be installed until plants are established.

2. Improve fish passage by removing three perched culverts and managing invasive vegetation.

Three old corrugated metal pipe culverts will be removed along primary access road and replaced with a seasonal, rocked ford crossing to improve fish passage while allowing for access to the irrigation pump. Flows will be diverted and the channel de-watered during construction activities. All in-channel work will follow CDFW guidelines for in-channel work and will be monitored by a certified biologist. Invasive vegetative species including Himalayan Blackberry and Cape Ivy will be removed. The area will be revegetated using native riparian and wetland species.

3. Reconnect and protect historic floodplain and wetland habitat by breaching portions of levee, decommissioning homestead well, and realigning power lines.

The levee that constricts Warden creek through the property along the access from Turri Road will be breached in four locations allowing the creek to reconnect to its historic floodplain. Removal of vegetation and use of heavy equipment in the channel will be minimized to the extent possible. All impacts will be mitigated on site.

An abandoned residential well located within the floodplain will be properly decommissioned in order to eliminate safety hazards and threats to groundwater quality. A licensed well driller will be retained to remove all associated pumping equipment, disinfect, backfill and seal the well. A temporary access road will be cleared to get vehicles and equipment to the site.

Pacific Gas and Electric (PG&E) utility lines connect the homestead and agricultural and domestic wells to the adjacent properties. The lines connecting the homestead and domestic well are now redundant. Additionally, the lines are located in the wetland and floodplain habitat, making the maintenance of the infrastructure increasingly challenging for PG&E. The District will coordinate with PG&E to remove and realign the utility infrastructure. Poles located on the upland portion of the property will be removed in such a way that is protective of Native American cultural resources and minimizes ground disturbance.

Related Projects

Two similar restoration projects have been completed in the Morro Bay watershed, both on Chorro Creek. A number of sediment studies and watershed assessments, referenced above, indicated that the majority of sediment entering Morro Bay comes from Chorro Creek, and that floodplain reestablishment is the most effective way to prevent sediment loading. These studies

were the basis and justification for the projects described below.

CSLRCD acquired the 120-acre Chorro Flats property in 1991 with coastal conservancy funds and the objective of reducing sediment loads to Morro Bay by reconnecting Chorro Creek to its original floodplain. Restoration included breaching portions of a levee and allowing Chorro Creek to reestablish its historic flood plan, in addition to planting riparian vegetation to reduce velocities of storm flows. Restoration activities on the property were completed in 1997, and in the first 3 years the project captured approximately 198,000 cubic yards of sediment. Chorro Flats, now nearing 25 years, continues to effectively and passively capture sediment loads from the upper Chorro Creek watershed, and also provides exceptional habitat for CRLF, steelhead and a number of other species, as well as water quality benefits as a result of wetland filtration.

The Morro Bay National Estuary Program (MBNEP) completed the Chorro Creek Ecological Reserve (CCER) Floodplain Restoration Project in 2020. Located approximately 1 mile upstream from Chorro Flats, the CCER project reestablished floodplain along 1,000 linear feet of Chorro Creek and created side channels for additional stream function and flood protection.

Required Permits and Approvals

Table 1 lists the requisite permits and approvals for the Project:

Regulatory Agency	Permit/Approval
Central Coast Regional Water Quality Control Board (CCRWQCB)	410 Water Quality Certification or Small Habitat Restoration Program permit
US Army Corps of Engineers (USACE)	Nationwide Permit 27: Aquatic Habitat Restoration, Establishment, and Enhancement Activities
US Fish and Wildlife Service (USFWS)	Section 7 Endangered Species Act Consultation
Ca Dept of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement
County of San Luis Obispo Planning + Building Dept	Major grading Permit
	Coastal Development permit
SLO Co Air Pollution Control Board	Air Quality Review and Emission Permit
Native American Tribes	Consultation

Table 1. Required Permits and Approvals

Summary of Findings

The proposed activities involved in the project would result in less than significant environmental effects to the resources listed in Table 1, however compliance with regulatory requirements and

implementation of avoidance and mitigation measures will reduce all significant adverse impacts to less than significant levels. Pursuant to Section 15070, the District has determined a Mitigated Negative Declaration is the appropriate environmental review document for the project. This conclusion is supported by the following findings:

1. The proposed project would have no effect related to Aesthetics, Agricultural Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation or Utilities.

2. The proposed project would have a less than significant impact on Air Quality, Hydrology and water Quality, and Noise.

3. Mitigation is required to be implemented in order to reduce potentially significant impacts related to Biological Resources, Cultural Resources, Geology and Soils, and Hazardous Materials.

4. The upland portion of the project was found to contain cultural resources that might be disturbed by project work. Mitigation has been developed that addresses the potential for discovering and protecting archaeological resources, paleontological resources as well as human remains during the execution of this project.

5. It is anticipated that this project will enhance habitat for sensitive species, including California red-legged frog, South Central Steelhead, Morro shoulderband snail, tidewater goby, Morro Manzanita, and Mash sandwort.

6. It is anticipated that this project will help to attain the TMDL for the Morro Bay Estuary by capturing sediment loads before entering the estuary.

7. The project would not achieve short-term environmental improvement to the disadvantage of long-term environmental improvement.

8. The project would not have environmental effects that are individually limited but cumulatively considerable.

9. The project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

10. The project incorporates all applicable mitigation measures, as listed below and described in the initial study.

11. The mitigated negative declaration reflects the independent judgment of the lead agency.

Summary Document Preparation

Pursuant to Section 21082.1 of CEQA, the District has independently reviewed and analyzed the Initial Study for the Project and finds that these documents reflect the independent judgment of the

District. The District, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Mitigated Negative Declaration.

Neil Havlik
District Board President

Hallie Richard
Conservation Programs Manager

Avoidance and Mitigation Measures

The following mitigation measures will be implemented by the District to avoid or minimize environmental impacts. Implementation of these mitigation measures would reduce the environmental impacts of the proposed project to a less-than-significant level.

A. California red-legged frog:

A-1. Only Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

A-2. Ground disturbance would not begin until written approval is received from the Service that project biologist(s) are qualified to conduct the work.

A-3. A Service-approved biologist would survey the project site no more than 48 hours before the onset of work activities.

A-4. Before any activities begin on a project, a Service-approved biologist would conduct a training session for all construction personnel.

A-5. A Service-approved biologist will be present at the work site until all ground-disturbing activities are completed. After this time, the Service-approved biologist will monitor the project area for compliance with all avoidance and minimization measures, or the Service-approved biologist will designate a person to monitor the project area for compliance with all avoidance and minimization measures if the Service-approved biologist will not be present. The Service-approved biologist will ensure that this monitor receives sufficient training in the identification of California red-legged frogs. The designated monitor must have experience and a background in natural resources. The Service-approved biologist or designated monitor will be given full authority to stop work if the avoidance and minimization measures are not being followed. If work is stopped, the Service will be notified immediately.

A-6. If work must occur during the breeding season, the project proponent would implement the following measures as well:

a. No work would occur during or 24 hours after any rain event to minimize impacts to dispersing and breeding California red-legged frogs. A rain event is considered any precipitation resulting in 0.2" or greater of precipitation. A Service-approved biologist would survey the project site immediately before resuming project activities.

b. The project proponent would conduct project activities no earlier than 30 minutes after sunrise and no later than 30 minutes before sunset each day.

c. The project proponent would survey the project area daily before activities begin and monitor all project activities using a Service-approved biologist

A-7. Unless approved by the Service, the project proponent would not impound water in the course of project activities in a manner that may attract California red-legged frogs.

A-8. A Service-approved biologist would permanently remove any individuals of non-native species, such as bullfrogs (Rana catesbeiana), signal and red swamp crayfish (Pacifastacus leniusculus; Procambarus clarkii), and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist would be responsible for ensuring his or her activities comply with the California Fish and Game Code.

A-9. To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the biologists would follow the fieldwork code of practice developed by the Declining Amphibian Populations Task Force at all times.

B. South Central Steelhead:

B-1. Work shall not begin until a) the NOAA RC and/or Corps has notified the permittee that the requirements of the ESA and Clean Water Act have been satisfied and that the activity is authorized and b) all other necessary permits and authorizations are finalized.

B-2. The general construction season shall be from June 1 to November 30. Restoration, construction, fish relocation and dewatering activities within any wetted or flowing stream channel shall occur only within this period. If precipitation sufficient to produce runoff is forecast to occur while construction is underway, work will cease and erosion control measures will be put in place sufficient to prevent significant sediment runoff from occurring.

B-3. Prior to construction, the land manager and each contractor shall be provided with the specific protective measures to be followed during implementation of the project.

B-4. If the thalweg of the stream has been altered due to construction activities, efforts shall be undertaken to reestablish it to its original configuration.

B-5. In those specific cases where it is deemed necessary to work in a flowing stream/creek, the work area shall be isolated and all the flowing water shall be temporarily diverted around the work site to maintain downstream flows during construction.

B-6. Exclude fish from reentering the work area by blocking the stream channel above and below the work area with fine-meshed net or screens. Mesh will be no greater than 1/8-inch diameter.

B-7. Prior to dewatering, determine the best means to bypass flow through the work area to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic vertebrates (as described more fully below under General Conditions for Fish Capture and Relocation). Bypass stream flow around the work area, but maintain the stream flow to channel below the construction site.

B-8. Coordinate project site dewatering with a qualified biologist to perform fish and amphibian relocation activities.

B-9. Prior to dewatering a construction site, qualified individuals will capture and relocate fish and amphibians to avoid direct mortality and minimize take. This is especially important if listed species are present within the project site.

B-10. When construction is completed, the flow diversion structure shall be removed as soon as possible in a manner that will allow flow to resume with the least disturbance to the substrate. Cofferdams will be removed so surface elevations of water impounded above the cofferdam will not be reduced at a rate greater than one inch per hour. This will minimize the risk of beaching and stranding of fish as the area upstream becomes dewatered.

B-11. Fish relocation and dewatering activities shall only occur between June 1 and November 30 of each year. If precipitation sufficient to produce runoff is forecast to occur while construction is underway, work will cease and erosion control measures will be put in place sufficient to prevent significant sediment runoff from occurring.

B-12. A qualified fisheries biologist shall perform all seining, electrofishing, and fish relocation activities.

B-13. All electrofishing will be conducted according to NMFS' Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act (NMFS 2000), including modifications for South Central and Southern California streams

B-14. A minimum of three passes with the seine shall be utilized to ensure maximum capture probability of steelhead within the area.

B-15. All captured fish shall be processed and released prior to each subsequent pass with the seine.

B-16. The seine mesh shall be adequately sized to ensure fish are not gilled during capture and relocation activities.

B-17. Fish shall not be overcrowded into buckets, allowing no more than 150 0+ fish (approximately six cubic inches per 0+ individuals) per 5-gallon bucket and fewer individuals per bucket for larger/older fish.

B-18. Every effort shall be made not to mix 0+ steelhead with larger steelhead, or other potential predators, that may consume the smaller steelhead. Have at least two containers and segregate young-of-year (0+) fish from larger age-classes. Place larger amphibians in the container with larger fish.

B-19. Salmonid predators, including other fishes and amphibians, collected and relocated during electrofishing or seining activities shall not be relocated so as to concentrate them in one area.

B-20. All captured steelhead shall be relocated, preferably upstream, of the proposed construction project and placed in suitable habitat. Captured fish shall be placed into a pool, preferably with a depth of greater than two feet with available instream cover.

B-21. Minimize handling of steelhead. However, when handling is necessary, always wet hands or nets prior to touching fish. Handlers will not wear insect repellants containing the chemical N,N-Diethyl-meta-toluamide (DEET).

B-22. If more than 3 percent of the steelhead captured are killed or injured, the project permittee shall contact NMFS (Anthony Spina, (562) 980-4045 or via email, anthony.spina@noaa.gov and CDFW (Mary Larson, (562) 342-7186 or via email, mary.Larson@wildlife.ca.gov).

C. Marsh sandwort:

C-1. A qualified botanist will conduct a pre-construction survey to confirm absence of marsh sandwort and Gambel's watercress prior to commencing ground disturbance activities in the project area. If the plants are found during pre-construction surveys, including any Gambel's watercress hybrids, the botanist will flag the area and inform all workers of the need to stay out of the flagged area.

C-2. Prior to the onset of activities that could affect listed plant habitat, a qualified biologist will conduct a training session for all personnel. At a minimum, the training will include a description of relevant plants and its habitat and AMMs that should be implemented. The training session will be repeated for any new personnel.

D. General Protection of Riparian, Aquatic and Wetland Habitats

D-1. Project proponents would re-vegetate project sites with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. The project proponent would use locally collected plant materials to the extent practicable.

D-2. If the project proponent or sponsoring agency determines the use of herbicides is necessary for their project, they would coordinate further with the Service to develop suitable avoidance and minimization measures for herbicide use for their project

D-3. Construction will occur between June 1 and November 30. Revegetation activities, including soil preparation, may extend beyond November 30, if necessary, to better ensure successful plant establishment during the onset of winter precipitation.

D-4. Debris, soil, silt, excessive bark, rubbish, creosote-treated wood, raw cement/ concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from projected related activities, shall be prevented from contaminating the soil and/or entering the waters of the State.

D-5. Where feasible, the construction shall occur from the bank, or on a temporary pad underlain with filter fabric. No mechanized equipment (e.g. internal combustion hand tools) will enter wetted
channels.

D-6. Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires crossing a rocky or cobbled substrate, a rubber tire loader/backhoe is the preferred vehicle

D-7. The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the state (Fish and Game Code 5650).

D-9. Prior to use, clean all equipment to remove external oil, grease, dirt, or mud. Wash sites must be located in upland locations so wash water does not flow into the stream channel or adjacent wetlands.

D-10. All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. Oil absorbent and spill containment materials shall be located on site when mechanical equipment is in operation with 100 feet of the proposed watercourse crossings.

D-11. To minimize further disturbance to the work area, crew size will be limited, and number of vehicles and equipment to the maximum extent feasible.

D-12. Removal of any vegetation will be minimized to the extent feasible.

D-13. Depending on determinations made by the ACOE, compensatory mitigation will be completed at the requisite ratio to impacts.

D-14. No fill or dredge material will be placed within a designated wetland.

E. Morro Shoulderband Snail

E-1. Only biologists approved by the Ventura Fish and Wildlife Office may conduct *any* activities related to Morro shoulderband snails. The possession of a section 10(a)(1)(A) permit does not take the place of the required approval.

E-2. Prior to any site disturbance (e.g. vegetation removal, grading), an approved biologist will develop and deliver training to all project-related personnel.

E-3. Construction areas will be clearly marked with high-visibility flagging or barrier fencing. Construction equipment and personnel will be restricted to areas within the marked areas.

E-4. Prior to the start of any site disturbance activities an approved biologist will conduct surveys for Morro shoulderband snail.
E-5. An approved permitted biologist will be present daily during the site preparation (e.g. vegetation removal, ground-disturbance, grading) to monitor for the presence of Morro shoulderband snail. Any live individuals of any life stage detected during these monitoring events will be captured and moved out of harm's way or relocated to a Service-approved site by the biologist.

E-6. The Federal Action Agency should encourage the Permittee to collect information on the survival of Morro shoulderband snails captured and relocated as part of this project in order to provide an understanding of the efficacy of this practice as a minimization measure.

E-7. The Federal Action Agency should encourage the Permittee to prepare and seek publication of an article describing all of those habitat types or conditions in which Morro shoulderband snails are found during the course of the project to provide a greater understanding of the species.

Cultural Resources:

CR-1. Avoidance. If feasible, avoidance of direct impacts is the preferred measure for mitigating effects on NRHP/CRHR-eligible archaeological sites.

CR-2. Fill. If direct disturbance of the resources cannot be avoided, placement of chemically neutral, nonreactive fill on top of CA-SLO-31 on the knoll, rather than cutting into the cultural deposits, is another treatment option to avoid direct impacts.

CR-3. For all ground disturbing construction activities, the applicant shall retain a county-approved archaeologist to monitor these activities. The applicant shall install any necessary protective field measures, as directed by the archaeologist, and shall keep them in good working order during construction. Upon discovery, the applicant shall take immediate remedial actions should corrective actions be needed. If any significant archaeological resources or human remains are found during monitoring, work shall stop within the immediate vicinity of the resource until such time as the resources can be evaluated by an archaeologist and any other appropriate individuals.

CR-4. Pursuant to RGP78 and in accordance to 36 C.F.R section 800.13, in the event of any discovery during construction of human remains, archaeological deposits, or any other type of historic property, the project manager shall notify the USACS archaeological staff within 24 hours.

Construction work shall be suspended immediately and shall not resume until USACE re-authorizes project construction

CR-5 If it becomes impossible to implement the project at a worksite without disturbing cultural or paleontological resources, then activity at that worksite shall be discontinued.

Sediment and Erosion Control Measures:

Sed-1. When appropriate, isolate the construction area from flowing water until project materials are installed and erosion protection is in place.

Sed -2. Effective erosion control measures shall be in place at all times during construction. Do not start construction until all temporary control devices (straw bales with sterile, weed free straw, silt fences, etc.) are in place downslope or downstream of the project site within the riparian area. The devices shall be properly installed at all locations where the likelihood of sediment input exists.

Sed-3. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground to a minimum depth of 12 cm, and only sterile, weed-free straw shall be utilized. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.

Sed-4. Sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters the stream network or an aquatic resource area.

Sed-5. The contractor/project applicant is required to inspect and repair/maintain all practices prior to and after any storm event, at 24-hour intervals during extended storm events, and a minimum of every two weeks until all erosion control measures have been completed.

Sed-6. Immediately after project completion and before the close of the seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets. Remove all artificial erosion control devices after the project area has fully stabilized. All exposed soil present in and around the project site shall be stabilized within 7 days. Erosion control devices such as coir rolls or erosion control blankets will not contain plastic netting of a mesh size that would entrain reptiles and amphibians.

Sed-7. All bare and/or disturbed slopes (larger than 10’ x 10’ of bare mineral soil) will be treated with erosion control measures such as straw mulching, netting, fiber rolls, and hydroseed as permanent erosion control measures.

Sed-8. Where straw, mulch, or slash is used as erosion control on bare mineral soil, the minimum coverage shall be 95% with a minimum depth of two inches.

Sed- 9. The project proponent would limit the number of access routes, size of staging areas, and the total area of the activity to the minimum necessary to achieve the project goals.

Hazardous Materials

Asbestos removal and disposal protocol: See Appendix D

II. Initial Study

A. Environmental Checklist + Responses

Summary

Project Title	Los Osos Creek Wetland Restoration
Lead Agency	**Coastal San Luis Resource Conservation District**
Address	1203 Main Street, Ste B, Morro Bay CA 93433
Contact	Hallie Richard, (805)772-4391
Project Location	**Los Osos Creek, Morro Bay Watershed**
Responsible Agency	**State Coastal Conservancy**
Address	1515 Clay St, 10th Floor, Oakland Ca, 94612
Contact	Tim Duff, SCC Project Manager
Existing Land Use	Conservation Easement
Project Description	The project will restore 40 acres of wetland habitat and 16 acres of upland habitat for the purpose of reducing sediment loading in Morro Bay estuary, improved fish passage, and enhanced habitat for Morro Shoulderband snail, Steelhead, California red-legged frog, Tidewater goby, Marsh sandwort, and Morro manzanita
Project Location	35.325484, -120.812369. Property is accessed via Turri Rd, in Los Osos Ca.
Native American Tribes Affiliated with the Project Area?	The Northern Chumash Tribe. Consultation has not yet been initiated.
Public Agencies Whose Approval is Required	Permits and agreements are required from the US Army Corps of Engineers (USACE), the California Department of fish and Wildlife (CDFW), the Regional Water Quality Control Board (RWQCB), the US Fish and Wildlife Service (USFWS), and the County of San Luis Obispo (SLO Co.)

Table 2. Project Information

Environmental Factors Potentially Affected

The environmental factors listed below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist below. A significant effect on the environment is defined in regulation as

> "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant (14 CCR section 15382)."

Additionally, CEQA Section 15064 states that

> "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

	Aesthetics		Mineral Resources
	Agriculture		Noise
	Air Quality		Population and Housing
X	Biological Resources		Public Services
X	Cultural Resources		Recreation
X	Geology and Soils		Transportation/Traffic
X	Hazards and Hazardous Materials		Utilities
X	Hydrology + Water Quality		Mandatory Findings of Significance
	Land Use and Planning		

Table 3. Initial Study Checklist

Determination

On the basis of this initial evaluation, the Lead Agency finds that:

☐ The proposed project COULD NOT have a significant effect on the environment and the project qualifies for a categorical exemption.

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Hallie Richard	Coastal San Luis Resource Conservation District
Printed Name	For

B. Analysis of Potential Environmental Impacts

1. Aesthetics

The project is situated within the Morro Area Scenic Resource Area (SRA); however, project components are not visible outside of the property and either occur below grade, or remove existing dilapidated infrastructure. Minimal vegetation removal is required, and revegetation will increase the number of native species in the project area.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Have a substantial adverse effect on a scenic vista?				X
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
Substantially degrade the existing visual character or quality of the site and its surroundings?				X
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

Conclusion

This project will have no significant impact on aesthetics. Implementation of this project will not substantially damage scenic resources within a state scenic highway. This project will not substantially degrade the existing visual character or quality of the site or its surroundings, nor will it create a new source of light or glare. Implementation of this project will increase native vegetation, thereby enhancing the visual character of the site. No mitigation measures will be required.

Reference

- Estero Area Plan, 2009
- California Department of Transportation (Caltrans). 2017. California Scenic Highway Mapping System. Officially Designated Scenic Highway Routes.

https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a

2. Agriculture

The project area, historically cultivated for annual crops, was recorded under 2 conservation easements in 1995, after which time agricultural use was phased out. No farmland will be converted to non-agricultural use.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
Result in the loss of forest land or conversion of forest land to non-forest use?				X
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Conclusion

The Project will not impact Agriculture. Based on the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) and the San Luis Obispo County Important Farmland Map (FMMP 2018), the project area contains Farmlands of potential (Lands having the potential for farmland, which have Prime or Statewide characteristics and are not cultivated), however the property has been recorded under a conservation easement for conservation in perpetuity, and will therefore not convert prime farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use. Therefore, no potential impacts would occur.

The Project will not conflict with existing zoning for agricultural use, or a Williamson Act contract. The property is recorded under 2 conservation easements, and the project components are not in conflict with Williamson Act. The property is zoned as open space. Therefore, no potential impacts would occur.

The project area does not include any forested areas and therefore will have no impacts on forestry resources nor conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No impacts would occur.

The project restores fallow farmland, which has been retired under a Williamson Act contract, to historic wetland hydrology and function. No project activities will take place outside to the conservation easement footprint. The project would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use, therefore no impacts would occur.

References

- San Luis Obispo County. 2009. Coastal Zone Land Use Ordinance, Title 23 of the San Luis Obispo County Code. Revised January 2009.
- California Department of Conservation: important farmland finder: https://maps.conservation.ca.gov/DLRP/CIFF/

3. Air Quality

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality. The U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) are the federal and state agencies charged with maintaining air quality in the nation and state, respectively. The USEPA delegates much of its authority over air quality to CARB. CARB has geographically divided the state into 15 air basins for the purposes of managing air quality on a regional basis. The Project area lies within San Luis Obispo County in the South-Central Coast Air Basin (SCCAB). The SCCAB covers all of San Luis Obispo County, Santa Barbara County, and Ventura County. The San Luis Obispo County Air Pollution

Control District (SLOAPCD) is the local agency charged with preserving air quality. In 2001, the SLOAPCD adopted its 2001 Clean Air Plan, which addresses ozone and particulate matter emissions, and identifies the control measures necessary to attain air quality standards.

San Luis Obispo County is in non-attainment status for ozone (O3) and respirable particulate matter (PM10) under the California Air Resource Board (CARB) standards. The County is in attainment status for all other applicable CARB standards. Most recent exceedances of the state ozone standard in the last decade in the county have been measured at monitoring stations in Paso Robles or Atascadero.

The APCD's CEQA Handbook establishes thresholds of significance for construction activities. According to the handbook, a project with grading in excess of 4.0 acres and/or a project that will move 1,200 cubic yards of earth per day can exceed the construction threshold for respirable particulate matter (PM10). In addition, a project with the potential to generate 137 lbs per day of ozone precursors (ROG + NOx) or diesel particulates in excess of 7 lbs per day can result in a significant impact.

The APCD's CEQA Handbook provides screening criteria based on the size of different types of projects that would normally exceed the operational thresholds of significance for greenhouse gases and ozone precursors. However, operational impacts are focused primarily on the indirect emissions associated with motor vehicle trips associated with development. For example, a project consisting of 99 single family residences generating 970 average daily vehicle trips would be expected to exceed the 25 lbs./day operational threshold for ozone precursors. The APCD has also estimated the number of vehicular round trips on an unpaved roadway necessary to exceed the 25 lbs./day threshold of significance for the emission of particulate matter (PM10). According to the APCD estimates, an unpaved roadway of one mile in length carrying 6.0 round trips would likely exceed the 25 lbs./day PM10 threshold.

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants, such as the elderly, children, asthmatics, and others who are at a heightened risk of negative health outcomes due to exposure to air pollution. Some land uses are considered more sensitive to changes in air quality than others, due to the population that occupies the uses and the activities involved. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residences. The significance criteria established by the San Luis Obispo Air Pollution Control District (APCD) may be relied upon to make the following determinations. Specific mitigation measures will be implemented as applicable during project implementation.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Conflict with or obstruct implementation				X

of the applicable air quality plan?				
Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
Expose sensitive receptors to substantial pollutant concentrations?				X
Create objectionable odors affecting a substantial number of people?				X

Conclusion

The Project will have a less than significant impact on Air Quality. The project is located within the Coastal Zone portion of the Estero Planning area and zoned Open Space. Within San Luis Obispo County, the applicable air quality plan is the SLOAPCD's 2001 Clean Air Plan (Plan) (SLOAPCD 2001). The Plan addresses attainment and maintenance of state and federal ambient air quality standards (SLOAPCD 2001, page 1-1); however, the Plan "primarily addresses the [County's] ozone nonattainment problem" (SLOAPCD 2001, page 1-2). The proposed Project does not involve changes in land use or stationary sources that would emit substantial amounts of pollutants and would therefore not conflict with or obstruct implementation of the Plan.

The project is consistent with the general level of development anticipated and projected in the 2001 Clean Air Plan. The project will not conflict with, or obstruct implementation of SCCAB air quality plans, therefore no impact is anticipated.

The project will impact approximately 5 acres for no longer than 50 days which is less than the SLOAPCD threshold. The project would result in Construction equipment including an excavator, backhoe, dump trucks and would not cause or substantially contribute to a violation of an ozone or other air quality standard grader. Project emissions from vehicle trips and the use of heavy equipment are higher than those of the current land use. The intermittent and short-term temporary nature of these combustion emission sources, construction dust associated with demolition, grading, and excavation would be minimal. Given that construction related emissions would be below applicable thresholds and long-term operational emissions would be negligible, the project would have a less than cumulatively considerable effect on air quality.

The project would not be within close proximity to any serpentine rock outcrops and/or soil formations which may have the potential to contain naturally occurring asbestos. Equipment will be staged in upland areas and travel between .25 and .5 miles on private access roads. Two residential homes are approximately .35 miles from the project, and Los Osos Middle school is approximately .45 miles from the project site. Standard erosion and dust control methods will be used as necessary. Therefore, CZLUO 23.05.050 (Construction Procedures) shall be implemented to ensure impacts to sensitive receptors will be less than significant.

Equipment operation, land moving, grading, and vegetation removal inherent to the project has the potential to cause objectionable odors in the immediate project area. The generation of odors during the construction period would be temporary, would be consistent with odors commonly associated with typical construction equipment and activities, and would dissipate within a short distance from the active work area. The project site is almost entirely surrounded by annual cropland and rangeland and no significant long-term operational emissions or odors would be generated by the project. Therefore, impacts related to other emissions adversely affecting a substantial number of people would be less than significant

References

- San Luis Obispo County Air Pollution Control District (SLOAPCD). 2001. Clean Air Plan San Luis Obispo County. San Luis Obispo County, CA. December 2001.
- 2012a. Strategic Action Plan 2013 - 2017. San Luis Obispo, CA. November 2012.
- 2012b. CEQA Air Quality Handbook: A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review. San Luis Obispo, CA. April 2012.

4. Biological Resources

Regulatory Setting

In addition to CEQA, other federal and state laws apply to the biological resources identified in this report. Each of these laws is identified and discussed below.

Federal Endangered Species Act (FESA) FESA establishes a broad public and federal interest in identifying, protecting, and providing for the recovery of threatened or endangered species. The Secretary of the Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their critical habitat, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on listed species. The USFWS and the National Marine Fisheries Service (NMFS) are charged with implementing and enforcing FESA. USFWS has authority over terrestrial and continental aquatic species, and NMFS has authority over species that spend all or part of their life cycle at sea, such as salmonids

Section 9 of FESA prohibits the unlawful "take" of any listed fish or wildlife species. Take, as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such action." The USFWS's regulations define harm to mean "an act which actually kills or injures wildlife." Such an act "may include "significant

habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR § 17.3). Take can be permitted under FESA pursuant to sections 7 and 10. Section 7 provides a process for take permits for federal projects or projects subject to a federal permit, and Section 10 provides a process for incidental take permits for projects without a federal nexus. FESA does not extend the take prohibition to federally listed plants on private land, other than prohibiting the removal, damage, or destruction of such species in violation of state law.

The Clean Water Act of 1972 (Section 404)

The United States does not have a federal, comprehensive law protecting wetlands. However, through the regulation of activities in "waters of the United States," the Clean Water Act of 1972 is the main federal law used to protect wetlands. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into "waters of the United States," which includes traditional navigable waters, interstate waters, certain tributaries of any of these waters, and wetlands that meet these criteria or that are adjacent to any of these waters. In 1987, the USACE published a manual for the delineation wetlands, those that are regulated by Section 404, and generally defined wetlands as requiring the following three characteristics: hydrology, hydric soils, and hydrophytes (plants adapted to living in saturated soils).

The USACE also regulates activities in waters of the United States under the federal Rivers and Harbors Act. Section 10 of the Rivers and Harbors Act requires permits for any work or structures in navigable waters of the United States, including wetlands within or adjacent to these waters. Both dredging and filling are regulated activities under the Act. Navigable waters are defined as those waters that are subject to the ebb and flow of the tide, or that presently have been, or may be used for transport of interstate or foreign commerce.

The Migratory Bird Treaty Act of 1918 (MBTA)

Under the MBTA, it is unlawful to "pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not." In short, under the MBTA it is illegal to disturb a nest that is in active use, since this could result in killing a bird or destroying an egg. The USFWS oversees implementation of the MBTA.

California Endangered Species Act (CESA)

Provisions of CESA protect state-listed threatened and endangered species. The Fish and Game Commission is charged with establishing a list of endangered and threatened species. CDFW regulates activities that may result in "take" of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code, but CDFW has interpreted "take" to include the killing of a member of a species which is the proximate result of habitat modification.

California Fish and Game Code Section 1602

Section 1602 of the California Fish and Game Code requires an entity to notify CDFG of any proposed activity that may substantially divert or obstruct the natural flow of, or substantially

change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing pavement where it may pass into any stream, river, or lake. CDFG uses the USFWS definition of wetlands when regulating these activities. The project would require Section 1602 authorization from CDFG.

Fish and Game Code Section 3503, 3503.5, and 3505

Pursuant to Fish and Game Code section 3503, it is unlawful to "take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." Sections 3503.5 and 3505 provide similar protection specifically to raptors and their nests and to egrets, respectively. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFW.

Species of Special Concern and Fish and Game Code Fully Protected Species

CDFW maintains lists of animal Species of Special Concern (CSSC) that serve as "watch lists." A CSSC is not subject to the take prohibitions of CESA. The CSSC are species that are declining at a rate that could result in listing under FESA or CESA and/or have historically occurred in low numbers, and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals and is intended to focus attention on the species to help avert the need for costly listing under federal and state endangered species laws. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

Four sections of the Fish and Game Code list 37 fully protected species (Fish and Game Code §§ 3511, 4700, 5050, and 5515). Fully protected species may generally not be taken or possessed except for scientific research. Incidental take of species that are designated as fully protected may be authorized via development of a natural community conservation plan (NCCP; Fish and Game Code § 2800 et seq.).

Environmental Setting

The project footprint encompasses the confluences and adjacent wetland and historic floodplains of Los Osos and Warden Creeks, approximately .5 miles upstream of the mouth of the Morro Bay Estuary. Los Osos Creek emanates from Clark Valley, within the San Luis Range, where the native sedimentary rock material is severely incised along much of its reach, resulting in high rates of sediment transport from eroding bed and bank material. The site is positioned in a location where sediment delivered from the Los Osos Creek watershed would naturally deposit prior to entering the Morro Bay estuary.

The historic channel and floodplain most likely consisted of a series of active channels, flood channels, and abandoned channels with backwater wetlands that spread across the entire site. The active channel was likely an ephemeral feature, shifting from one location to another based on sediment deposition, debris jams, or other obstructions. The channel system was likely braided, hydraulically very rough, and sandy. This type of channel and floodplain form was historically not unique throughout the region, although much of this habitat type was impacted by development of

agriculture. Despite these conditions, aquatic species such as steelhead persist, although the lower gradient lowland valley was likely a migration reach between upstream spawning and rearing habitat and the productive estuarine habitat that existed in tidally-influenced areas.

The project will enhance and restore palustrine emergent, forested, and forested/scrub-shrub wetland types, identified in the table below. The palustrine wetland occupying the bulk of the parcel is maturing into a gallery riparian forest with a tall overhead canopy (50-70 feet) of cottonwoods, red willow, Sitka willow, and arroyo willow. Very little undergrowth is present under the high overhead canopy with occasional patches of emergent marsh plants. The shaded sandy banks of the central channel provide attractive habitat for the re-introduction of federally and state endangered marsh sandwort (Arenaria palucicola). Marsh sandwort has been successfully reintroduced in moist sand banks at Morro Coast Audubon Society's Sweet Springs Preserve in Los Osos, where the habitat of high overhead canopy and moist sandy substrate is similar to the project area.

Summary of Wetlands Enhanced or Restored		
Habitat type	No. of acres	Percentage of total
Total declining coastal wetlands to be **enhanced**	39.29	69%
Total declining coastal wetlands to be **restored**	.76	.01%
Total declining coastal wetlands enhanced / restored	40.05	70%
Sub-categories of Declining Wetlands Enhanced or Restored		
Total Palustrine wetlands	40.05	
Emergent wetlands		5.8
Forested wetlands		9.4
Scrub-shrub wetlands		0
Forested/Scrub-shrub wetlands		2.3
Scrub-shrub/Forested wetlands		23.95
Summary of Upland Dune Habitat		
Total Area	16.4	
Total upland dune habitat restored	16.4	
Total acreage Enhanced/Restored (wetland and upland)		**56.9**

Special-Status Species

Special-status species are those plants and animals that are legally protected or otherwise recognized as vulnerable to habitat loss or population decline by federal, state, or local resource conservation agencies and organizations. In this analysis, special-status species include:

- Species that are state and/or federally listed or proposed for listing as threatened or endangered
- Species considered as candidates for listing as threatened or endangered
- CDFW Species of Special Concern
- Fully protected species per California Fish and Game Code
- Plants considered by the California Native Plant Society (CNPS) and CDFW to be rare, threatened, or endangered [California rare plant ranked, (CRPR); e.g. CRPR 1B)

A list of those special-status species that have potential to occur in the project area is presented below. A comprehensive list of special status species is included in Appendix D.

- South-Central Steelhead (Oncorhynchus mykiss irideus), federally threatened
- California red-legged frog (Rana draytonii), federally threatened
- Tidewater goby (Eucyclogobius newberryi), federally endangered
- Marsh sandwort (Arenaria paludicola), federally threatened
- Morro Manzanita (Arctostaphylos morroensis), federally endangered
- Morro Shoulderband snail (Helminthoglypta walkeriana), federally endangered

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native			X	

resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Conclusions

The project will have less than significant impacts on Biological Resources with mitigation. The project is designed to be protective of sensitive species and to restore and enhance habitat essential to those species. Avoidance and mitigation measures are discussed above in section I of this MND and listed below.

The project will have less than significant impacts with mitigation, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service including the interference of any native resident or migratory fish or wildlife species. The project mitigates and avoids impacts on all listed species identified as a candidate, sensitive, or special status in the following ways:

Steelhead

The Project contains over 0.5 miles of stream, which is immediately adjacent to the Morro Bay Estuary - a critical migratory corridor for steelhead trout. Multiple life stages of steelhead have been observed within the project reach. Replacing 3 perched culverts with a rocked ford crossing will remove a barrier to fish passage on Warden creek, improving fish passage and habitat. The following mitigation and avoidance measures will be in place:

B-1. Work shall not begin until a) the NOAA RC and/or Corps has notified the permittee that the requirements of the ESA and Clean Water Act have been satisfied and that the activity is authorized and b) all other necessary permits and authorizations are finalized.

B-2. The general construction season shall be from June 1 to November 30. Restoration, construction, fish relocation and dewatering activities within any wetted or flowing stream channel shall occur only within this period. If precipitation sufficient to produce runoff is forecast to occur while construction is underway, work will cease and erosion control measures will be put in place sufficient to prevent significant sediment runoff from occurring.

B-3. Prior to construction, the land manager and each contractor shall be provided with the specific protective measures to be followed during implementation of the project.

B-4. If the thalweg of the stream has been altered due to construction activities, efforts shall be undertaken to reestablish it to its original configuration.

B-5. In those specific cases where it is deemed necessary to work in a flowing stream/creek, the work area shall be isolated and all the flowing water shall be temporarily diverted around the work site to maintain downstream flows during construction.

B-6. Exclude fish from reentering the work area by blocking the stream channel above and below the work area with fine-meshed net or screens. Mesh will be no greater than 1/8-inch diameter.

B-7. Prior to dewatering, determine the best means to bypass flow through the work area to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic vertebrates (as described more fully below under General Conditions for Fish Capture and Relocation). Bypass stream flow around the work area, but maintain the stream flow to channel below the construction site.

B-8. Coordinate project site dewatering with a qualified biologist to perform fish and amphibian relocation activities.

B-9. Prior to dewatering a construction site, qualified individuals will capture and relocate fish and amphibians to avoid direct mortality and minimize take. This is especially important if listed species are present within the project site.

B-10. When construction is completed, the flow diversion structure shall be removed as soon as possible in a manner that will allow flow to resume with the least disturbance to the substrate. Cofferdams will be removed so surface elevations of water impounded above the cofferdam will not be reduced at a rate greater than one inch per hour. This will minimize the risk of beaching and stranding of fish as the area upstream becomes dewatered.

B-11. Fish relocation and dewatering activities shall only occur between June 1 and November 30 of each year. If precipitation sufficient to produce runoff is forecast to occur while construction is underway, work will cease and erosion control measures will be put in place sufficient to prevent significant sediment runoff from occurring.

B-12. A qualified fisheries biologist shall perform all seining, electrofishing, and fish relocation activities.

B-13. All electrofishing will be conducted according to NMFS' Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act (NMFS 2000), including modifications for South Central and Southern California streams

B-14. A minimum of three passes with the seine shall be utilized to ensure maximum capture probability of steelhead within the area.

B-15. All captured fish shall be processed and released prior to each subsequent pass with the seine.

B-16. The seine mesh shall be adequately sized to ensure fish are not gilled during capture and relocation activities.

B-17. Fish shall not be overcrowded into buckets, allowing no more than 150 0+ fish (approximately six cubic inches per 0+ individuals) per 5-gallon bucket and fewer individuals per bucket for larger/older fish.

B-18. Every effort shall be made not to mix 0+ steelhead with larger steelhead, or other potential predators, that may consume the smaller steelhead. Have at least two containers and segregate young-of-year (0+) fish from larger age-classes. Place larger amphibians in the container with larger fish.

B-19. Salmonid predators, including other fishes and amphibians, collected and relocated during electrofishing or seining activities shall not be relocated so as to concentrate them in one area.

B-20. All captured steelhead shall be relocated, preferably upstream, of the proposed construction project and placed in suitable habitat. Captured fish shall be placed into a pool, preferably with a depth of greater than two feet with available instream cover.

B-21. Minimize handling of steelhead. However, when handling is necessary, always wet hands or nets prior to touching fish. Handlers will not wear insect repellants containing the chemical N,N-Diethyl-meta-toluamide (DEET).

B-22. If more than 3 percent of the steelhead captured are killed or injured, the project permittee shall contact NMFS and CDFW.

California Red-legged Frog

Surveys conducted in the Project area found presence of California red-legged frogs (CRLF). The USFWS programmatic biological opinion (BO) for CRLF will be applied to this project. The mitigation and avoidance measures included in the BO are listed below:

A-1. Only Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

A-2. Ground disturbance would not begin until written approval is received from the Service that project biologist(s) are qualified to conduct the work.

A-3. A Service-approved biologist would survey the project site no more than 48 hours before the onset of work activities.

A-4. Before any activities begin on a project, a Service-approved biologist would conduct a training session for all construction personnel.

A-5. A Service-approved biologist will be present at the work site until all ground-disturbing activities are completed. After this time, the Service-approved biologist will monitor the project area for compliance with all avoidance and minimization measures, or the Service-approved biologist will designate a person to monitor the project area for compliance with all avoidance and minimization measures if the Service-approved biologist will not be present. The Service-approved biologist will ensure that this monitor receives sufficient training in the identification of California red-legged frogs. The designated monitor must have experience and a background in natural resources. The Service-approved biologist or designated monitor will be given full authority to stop work if the avoidance and minimization measures are not being followed. If work is stopped, the Service will be notified immediately.

A-6. If work must occur during the breeding season, the project proponent would implement the following measures as well:

a. No work would occur during or 24 hours after any rain event to minimize impacts to dispersing and breeding California red-legged frogs. A rain event is considered any precipitation resulting in 0.2" or greater of precipitation. A Service-approved biologist would survey the project site immediately before resuming project activities.

b. The project proponent would conduct project activities no earlier than 30 minutes after sunrise and no later than 30 minutes before sunset each day.

c. The project proponent would survey the project area daily before activities begin and monitor all project activities using a Service-approved biologist

A-7. Unless approved by the Service, the project proponent would not impound water in the course of project activities in a manner that may attract California red-legged frogs.

A-8. A Service-approved biologist would permanently remove any individuals of non-native species, such as bullfrogs (Rana catesbeiana), signal and red swamp crayfish (Pacifastacus leniusculus; Procambarus clarkii), and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist would be responsible for ensuring his or her activities comply with the California Fish and Game Code.

A-9. To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the biologists would follow the fieldwork code of practice developed by the Declining Amphibian Populations Task Force at all times.

Marsh Sandwort

Previous surveys for Marsh Sandwort identified individuals in the project area. Surveys will be conducted prior to construction and individual sandwort plans will be flagged and avoided. The USFWS has identified the project area as a priority location for a pilot out planting location. Field staff will develop planting plots and monitor out planting success once the project is complete. The Project includes avoidance and minimization measures, discussed above and listed below, that would ensure that listed plant species would not be harmed by project activities.

C-1. A qualified botanist will conduct a pre-construction survey to confirm absence of marsh sandwort and Gambel's watercress prior to commencing ground disturbance activities in the project area. If the plants are found during pre-construction surveys, including any Gambel's watercress hybrids, the botanist will flag the area and inform all workers of the need to stay out of the flagged area.

C-2. Prior to the onset of activities that could affect listed plant habitat, a qualified biologist will conduct a training session for all personnel. At a minimum, the training will include a description of relevant plants and its habitat and AMMs that should be implemented. The training session will be repeated for any new personnel.

Morro shoulderband snail

The project will restore fragmented coastal scrub habitat, a primary cause of species decline, in order to extend a habitat corridor for Morro Shoulderband snail habitat identified in the Morro shoulderband recovery plan. The following mitigation and avoidance measures, also listed above in section I of this MND will be in place:

E-1. Only biologists approved by the Ventura Fish and Wildlife Office may conduct *any* activities related to Morro shoulderband snails. The possession of a section 10(a)(1)(A) permit does not take the place of the required approval.

E-2. Prior to any site disturbance (e.g. vegetation removal, grading), an approved biologist will develop and deliver training to all project-related personnel.

E-3. Construction areas will be clearly marked with high-visibility flagging or barrier fencing. Construction equipment and personnel will be restricted to areas within the marked areas.

E-4. Prior to the start of any site disturbance activities an approved biologist will conduct surveys for Morro shoulderband snail.

E-5. An approved permitted biologist will be present daily during the site preparation (e.g. vegetation removal, ground-disturbance, grading) to monitor for the presence of Morro shoulderband snail. Any live individuals of any life stage detected during these monitoring events will be captured and moved out of harm's way or relocated to a Service-approved site by the biologist.

E-6. The Federal Action Agency should encourage the Permittee to collect information on the survival of Morro shoulderband snails captured and relocated as part of this project in order to provide an understanding of the efficacy of this practice as a minimization measure.

E-7. The Federal Action Agency should encourage the Permittee to prepare and seek publication of an article describing all of those habitat types or conditions in which Morro shoulderband snails are found during the course of the project to provide a greater understanding of the species.

Morro Manzanita

Morro Manzanita specimens have historically occurred adjacent to the project area on property owned by State Parks. As part of the upland restoration component, RCD staff will collect seeds, propagate, and plant seedlings from the adjacent property to increase the density of this listed species.

Tidewater Goby

According to USFWS surveys, Tidewater Goby have been observed within the project reach. Levee breaching will create backwater habitat that benefits the species, protecting existing breeding, foraging, and refuge habitat and restoring the natural stream channel and floodplain. Removal of culverts on Warden creek will also benefit the species by improving fish passage. The project includes avoidance and minimization measures, discussed above, that would ensure that Tidewater Goby would not be harmed by project activities.

The project will have less than significant effects with mitigation on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. Project activities will minimize impacts on wetlands and riparian areas by conducting the majority of work from the access road. No wetlands or other waters of the U.S. would be permanently lost; temporary impacts would occur during the removal of culverts and construction of the rocked ford crossing, as well as during the levee breaching. Activities and all impacts will be mitigated for in the AMM, listed below and discussed above in Section I.

The project will have less than significant impacts with mitigation to federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Project activities include breaching a levee adjacent to wetlands, allowing a channelized creek to reconnect to historic floodplain and wetland, thus enhancing the wetland function. Equipment will breach the levee from the opposite bank, avoiding impacts to the wetland from equipment. Levee material will be relocated to the upland portion of the property, so no 'fill' will be left in the wetland. No material will be directly removed from or shifted in the wetland as part of this project resulting in hydrological interruption. Activities and all impacts will be mitigated for in the AMM, listed below and discussed above in Section I.

D-1. Project proponents would re-vegetate project sites with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. The project proponent would use locally collected plant materials to the extent practicable.

D-2. If the project proponent or sponsoring agency determines the use of herbicides is necessary for their project, they would coordinate further with the Service to develop suitable avoidance and minimization measures for herbicide use for their project

D-3. Construction will occur between June 1 and November 30. Revegetation activities, including soil preparation, may extend beyond November 30, if necessary, to better ensure successful plant establishment during the onset of winter precipitation.

D-4. Debris, soil, silt, excessive bark, rubbish, creosote-treated wood, raw cement/ concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from projected related activities, shall be prevented from contaminating the soil and/or entering the waters of the State.

D-5. Where feasible, the construction shall occur from the bank, or on a temporary pad underlain with filter fabric. No mechanized equipment (e.g. internal combustion hand tools) will enter wetted
channels.

D-6. Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires crossing a rocky or cobbled substrate, a rubber tire loader/backhoe is the preferred vehicle

D-7. The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the state (Fish and Game Code 5650).

D-9. Prior to use, clean all equipment to remove external oil, grease, dirt, or mud. Wash sites must be located in upland locations so wash water does not flow into the stream channel or adjacent wetlands.

D-10. All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. Oil absorbent and spill containment materials shall be located on site when mechanical equipment is in operation with 100 feet of the proposed watercourse crossings.

D-11. To minimize further disturbance to the work area, crew size will be limited, and number of vehicles and equipment to the maximum extent feasible.

D-12. Removal of any vegetation will be minimized to the extent feasible.

D-13. Depending on determinations made by the ACOE, compensatory mitigation will be completed at the requisite ratio to impacts.

D-14. No fill or dredge material will be placed within a designated wetland

The project will have less than significant impacts with mitigation on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Warden and Los Osos creeks will be temporarily de-watered during construction. Flows will be diverted in such a way that is protective of steelhead and other aquatic species. Biological surveys for steelhead and CRLF will be conducted prior to construction, and individuals will be relocated to pre identified locations by FWS-certified biologists. Monitors will be on-site daily during construction and will continue to relocate individuals as needed.

The project will not conflict with, and is aligned with local policies and ordinances protecting biological resources. There are no local tree preservation policies or ordinances in the area.

The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. A Habitat Conservation Plan (HCP) for Morro shoulderband snails was recently adopted for the community of Los Osos however the project area is not included in the HCP and therefore not subject to regulations included in the HCP. The project is aligned with the Estero Area Plan and Local Coastal Plan.

References

- California Natural Diversity Database. https://map.dfg.ca.gov/bios/?tool=cnddbQuick

- USFWS study, 2019

- Estero Area Plan, January 2009

- Coastal Zone Land Use Ordinance, Title 23

5. Cultural Resources

The Morro Bay watershed, and Los Osos valley are known for their rich cultural history. Many prehistoric archaeological sites and artifacts have been documented around the project area. Creeks are a focal area of concern for the purposes of cultural resource sensitivity due to the pre-history and historical activity that occurred along and extending from creeks. A study of the project area was conducted by Applied Earthworks in August 2020 that satisfied both CEQA and NEPA (Section 106) requirements. The study evaluated the man-made structures on the property, including the homestead, barn, shed and levees, and found that none of them are eligible for registration under the National Registry for Historic Places (NRHP) or the California Registry of Historic Resources (CRHR), based on extensive review criteria. The survey referenced the California Historical resources Information System (CHRIS) and Native American Heritage Commission (NAHC) for a Sacred Lands File Search and Native American Contact List. The CHRIS search indicated that 7 surveys had been conducted nearby, recording Native American cultural resources of significance. The surveys

indicate that one previously identified archaeological site in particular, CA-SLO-31, extends into the western boundary of the project area. The findings report associated with the AE survey considers each of the proposed project components and prescribed an Assessment of Effects of each of those activities. CSLRCD and AE have coordinated to reduce the ground disturbing impacts of project components in order to minimize effects to cultural resources. The remaining impacts will be mitigated for. Informal consultation with the local Native American tribes, identified by the Native American Contact List, was initiated, and one tribe responded. RCD staff will consult with that tribe.

A survey of the wetland portion of the project area was surveyed in August 2016 when the property was acquired by the RCD and recorded under the Wetland Reserve Program. The CHRIS search indicated that while 4 surveys had been conducted nearby, no surveys had been completed on the wetland portion of the property. Letters were sent to interested parties as identified by the NAHC, however no replies were received. The surveyor conducted a ground survey using 10m transects and determined that no new resources were identified and that planned activities in the wetland area would not impact resources previously identified by other surveys.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Disturb pre-historic resources?		X		
Disturb historic resources?			X	
Disturb paleontological resources?				X
Disturb any human remains, including those interred outside of formal cemeteries?		X		

Conclusion

The Project will have less than significant impacts on Cultural Resources with mitigation measures listed below will be in place:

CR-1. Avoidance. If feasible, avoidance of direct impacts is the preferred measure for mitigating effects on NRHP/CRHR-eligible archaeological sites.

CR-2. Fill. If direct disturbance of the resources cannot be avoided, placement of chemically neutral, nonreactive fill on top of CA-SLO-31 on the knoll, rather than cutting into the cultural deposits, is another treatment option to avoid direct impacts.

CR-3. For all ground disturbing construction activities, the applicant shall retain a county-approved archaeologist to monitor these activities. The applicant shall install any necessary protective field measures, as directed by the archaeologist, and shall keep them in good working order during construction. Upon discovery, the applicant shall take immediate remedial actions should corrective actions be needed. If any significant archaeological resources or human remains are found during monitoring, work shall stop within the immediate vicinity of the resource until such time as the resources can be evaluated by an archaeologist and any other appropriate individuals.

CR-4. Pursuant to RGP78 and in accordance to 36 C.F.R section 800.13, in the event of any discovery during construction of human remains, archaeological deposits, or any other type of historic property, the project manager shall notify the USACS archaeological staff within 24 hours. Construction work shall be suspended immediately and shall not resume until USACE re-authorizes project construction

CR-5 If it becomes impossible to implement the project at a worksite without disturbing cultural or paleontological resources, then activity at that worksite shall be discontinued.

The project will have less than significant impacts on pre-historic resources with mitigation. Based on the finding detailed above, pre-historic resources exist in the project area. Avoidance and mitigation measures, listed above, will be in place. Informal consultation with local Native American tribes was initiated, and project staff will work with those representatives to ensure that avoidance and minimization measures are acceptable. Efforts will be made to avoid or minimize ground disturbance where possible, and a tribal cultural resource specialist may be monitoring during all phases of construction.

The project will have less than significant impact on historic resources. Based on the finding detailed above, all identified structures in the project area are considered non-historic. In the event that an historic resource is discovered during construction, appropriate measures will be taken, including halting work until an archaeologist can review the discovery.

The project will have less than significant impact on paleontological resources. Based on the finding detailed above, no paleontological resources are anticipated to be discovered in the project area. In the event that an historic resource is discovered during construction, appropriate measures will be taken, including halting work until an archaeologist can review the discovery.

The project will have less than significant impacts on human remains, including those interred outside of formal cemeteries with mitigation. Based on the finding detailed above, pre-historic resources exist in the project area, however no human remains were identified. In the event that human remains are unearthed or discovered during any construction activities, construction should immediately stop. Construction activities shall not commence until a qualified professional

archaeologist reviews the site. If required an approved archaeologist may be monitoring during all phases of construction.

References

- Applied Earthworks Cultural Resources Survey and Report.
- NRCS Cultural Resources Inventory Report

6. Geology and Soils

The project area is located in the Morro Bay watershed, at the mouth of the Los Osos valley. The watershed consists of a mix of igneous, metamorphic, and sedimentary rock that is part of the Franciscan mélange, a rock unit composed of a mix of rock types brought together by warping, pressure, and tectonism occurring at the plate boundary. Also prominent in the watershed are the "Morros", a line of peaks composed of hard, igneous rocks, formed 25 million years ago as volcanic plugs intruded into softer overlying rocks. It is this line of peaks that separates the Chorro drainage from the Los Osos drainage. The highest elevation in the watershed is 2,763 feet on Tassajara Peak in the Santa Lucia Mountains. The landscape consists of flat alluvial valleys confined by steep, highly eroding mountains. Typically, shallow soils occur on the hillslopes in the mountainous areas of the watershed with very little capacity to hold water. Conversely, the flat alluvial valleys have deep, well-developed soils that hold significant quantities of groundwater. Land uses in the watershed are closely linked to these landscape characteristics. The flat alluvial valleys adjacent to the stream's channels have been historically dominated by agricultural uses. Recently, and in the future, these areas may become the primary land used for expansion of the suburban communities.

According to the USDA soil survey data, th**e** project area consists primarily of sandy clay loam located in the historic floodplain and wetland, characterized by 0-2% slopes, originating from alluvium. The natural drainage rating is considered somewhat poor, and ponding is infrequent. The soils do not meet hydric criteria; however, the USFWS wetland mapper considered this area a freshwater forested wetland. The farmland adjacent to the Lake and Creek consists of Camarillo Loam and Corralito's Sandy Loam, characterized by alluvial fans and floodplains, and part of the R014XD025CA coarse loamy flat ecological site.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other				X

similar hazards?				
Be within a CA Dept. of Mines & Geology Earthquake Fault Zone (formerly Alquist Priolo)?				X
Result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation or fill?			X	
Change rates of soil absorption, or amount or direction of surface runoff?			X	
Include structures located on expansive soils?				X
Change the drainage patterns where substantial on-or off-site sedimentation/ erosion or flooding may occur?		X		

Conclusion

The Project will have less than significant impacts on soil erosion and drainage with mitigation. Implementation of this project will not expose people or structures to potential substantial adverse effects due to landslides or earthquakes and is not located within a CA Dept. of Mines & Geology Earthquake Fault Zone. This project includes the implementation of erosion control structures and therefore will not result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation or fill, rates of soil absorption, or amount or direction of surface runoff. Breaching the levee, removing the breached culverts, and installing a rocked ford crossing will prevent future flooding on adjacent farmland. The project area is on stable soils that will not become unstable, slide laterally, subside, liquify, collapse or expand.

Avoidance and Mitigation measures, listed below and discussed in Section I of this MND, will be in place to mitigate on-or off-site sedimentation, erosion or flooding

Sed-1. When appropriate, isolate the construction area from flowing water until project materials are installed and erosion protection is in place.

Sed -2. Effective erosion control measures shall be in place at all times during construction. Do not start construction until all temporary control devices (straw bales with sterile, weed free straw, silt fences, etc.) are in place downslope or downstream of the project site within the riparian area. The devices shall be properly installed at all locations where the likelihood of sediment input

exists.

Sed-3. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground to a minimum depth of 12 cm, and only sterile, weed-free straw shall be utilized. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.

Sed-4. Sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters the stream network or an aquatic resource area.

Sed-5. The contractor/project applicant is required to inspect and repair/maintain all practices prior to and after any storm event, at 24-hour intervals during extended storm events, and a minimum of every two weeks until all erosion control measures have been completed.

Sed-6. Immediately after project completion and before the close of the seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets. Remove all artificial erosion control devices after the project area has fully stabilized. All exposed soil present in and around the project site shall be stabilized within 7 days. Erosion control devices such as coir rolls or erosion control blankets will not contain plastic netting of a mesh size that would entrain reptiles and amphibians.

Sed-7. All bare and/or disturbed slopes (larger than 10’ x 10’ of bare mineral soil) will be treated with erosion control measures such as straw mulching, netting, fiber rolls, and hydroseed as permanent erosion control measures.

Sed-8. Where straw, mulch, or slash is used as erosion control on bare mineral soil, the minimum coverage shall be 95% with a minimum depth of two inches.

Sed- 9. The project proponent would limit the number of access routes, size of staging areas, and the total area of the activity to the minimum necessary to achieve the project goals.

References

- USDA Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx
- SLO Watershed Project: http://slowatershedproject.org/watersheds/morro-bay/
- Earthquake assessment map: https://maps.conservation.ca.gov/cgs/EQZApp/app/

7. Hazards and Hazardous Materials

Restoration components included in the project include removal and demolition of a homestead site and associated infrastructure on the upland portion of the property. An Environmental Site Assessment was completed in 2014 that documented findings on the site related to hazardous materials.

- A remediated methamphetamine operation in the homestead had been remediated and certified by the CCRWQCB that no remnant hazardous materials remain from that operation.
- No pesticide or fertilizer containers, residues, or odors were identified on the property
- Several small areas of darkened stained soil on the dirt floor of the barn that may represent motor oil or hydraulic fluid'. The assessment recommends addressing the stained soil during demolition of the barn, and notes that it is not considered to present a material risk to human health.
- Three abandoned cars were located on the property, partially buried in the dense vegetation and roots along the creek bank. The ESA considers the vehicles to be improper disposal of solid waste and could also impact surface water quality due to leakage or leaching of automotive chemicals. Removal of the vehicles is a component of the restoration project.
- The Geotracker database identified the closed Los Osos Landfill located approximately 0.3 miles east of the Property. Although VOC-impacted groundwater is present beneath the closed landfill, ongoing landfill gas extraction and current sentry monitoring well locations indicate that the groundwater plume is stable and does not threaten the Property. The closed landfill is not considered to represent a hazardous concern.

Additionally, an asbestos assessment was completed on the homestead structures in 2015. Materials containing asbestos were found in 2 locations in the homestead structure, including in the entryway walls and top layer of roofing shingles. Removal and disposal of these materials is a component of this restoration project.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
Be located on a site which is included on a				X

list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Conclusion

The project will not routinely transport, use, or dispose of hazardous materials and therefore will not create a significant hazard to the public or the environment. Proper safety precautions will be put in place to ensure that no hazardous materials are released into the environment creating significant hazard to the public or the environment. Safety protocol for asbestos removal and disposal and soil remediation are included in Appendix D. There are no proposed or existing schools within .25 miles of the project area (SLO Co, 2020). The project area is not located on a site which is included on a list of hazardous materials sites (Stantec, 2014). The project is not located within an airport land use plan, within 2miles of a public airport, or in the vicinity of a private airstrip (SLO Co, 2020). The project is entirely within private property and will not impair or interfere with an emergency response or evacuation plan. The project will increase wetland habitat and remove abandoned wood structures; therefore, the project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires.

References

- https://www.sloairport.com/airport-land-use-commission-aluc/
- Stantec, Phase I Environmental Site Assessment, 1951 Turri Rd. 2014

8. Hydrology + Water Quality

The project area encompasses reaches of Los Osos and Warden Creeks. Both creeks have been channelized in levees built in the early 1970s to protect farmland from flooding. Prior to channelization and agricultural cultivation, the project area was the historic floodplain for both creeks. Agricultural cultivation ceased on the property in the mid-1990s, and the objective of this restoration project is to reestablish those historic floodplains. Restoration activities include breaching portions of the levee and removing 2 perched culverts, which will allow Los Osos creek to regain its natural hydrology and braided channel through the floodplain.

Water quality in Morro Bay and its tributaries are listed as impaired for sediment and the CCRWQCB adopted a TMDL for sediment for the watershed in 2002. The restoration activities that will be undertaken during this project will improve water quality by encouraging sediment deposition in the floodplain rather than in the bay. Enhanced wetland function will also filter out other pollutants from upstream activities such as pesticides, nutrients, and nitrates.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Violate any water quality standards or waste discharge requirements?		X		
Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	

Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
Otherwise substantially degrade water quality?				X
Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
Inundation by seiche, tsunami, or mudflow?				X

Conclusion

The Project will have less than significant impacts on water quality with mitigation. By implementing protection measures, installing sediment control structures, and conducting regular water quality monitoring during and after construction the project will not violate water quality standards or waste discharge requirements, nor will it substantially degrade water quality. Water quality protection measures are discussed above in section I and will be documented in the 401 Water Quality Certification for this project. Avoidance and mitigation measures listed below will be in place.

Sed-1. When appropriate, isolate the construction area from flowing water until project materials are installed and erosion protection is in place.

Sed -2. Effective erosion control measures shall be in place at all times during construction. Do not start construction until all temporary control devices (straw bales with sterile, weed free straw, silt fences, etc.) are in place downslope or downstream of the project site within the riparian area. The devices shall be properly installed at all locations where the likelihood of sediment input exists.

Sed-3. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground to a minimum depth of 12 cm, and only sterile, weed-free straw shall be utilized. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.

Sed-4. Sediment-laden water created by construction activity shall be filtered before it leaves the

right-of-way or enters the stream network or an aquatic resource area.

Sed-5. The contractor/project applicant is required to inspect and repair/maintain all practices prior to and after any storm event, at 24-hour intervals during extended storm events, and a minimum of every two weeks until all erosion control measures have been completed.

Sed-6. Immediately after project completion and before the close of the seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets. Remove all artificial erosion control devices after the project area has fully stabilized. All exposed soil present in and around the project site shall be stabilized within 7 days. Erosion control devices such as coir rolls or erosion control blankets will not contain plastic netting of a mesh size that would entrain reptiles and amphibians.

Sed-7. All bare and/or disturbed slopes (larger than 10' x 10' of bare mineral soil) will be treated with erosion control measures such as straw mulching, netting, fiber rolls, and hydroseed as permanent erosion control measures.

Sed-8. Where straw, mulch, or slash is used as erosion control on bare mineral soil, the minimum coverage shall be 95% with a minimum depth of two inches.

Sed- 9. The project proponent would limit the number of access routes, size of staging areas, and the total area of the activity to the minimum necessary to achieve the project goals.

The project addresses only surface flows directly. The Los Osos Groundwater Basin plan specifically identifies and supports the protection and restoration of wetland and open space areas such as the project area because they decrease the potential for development and further groundwater drawdown. The project will not impact groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The project will implement sediment control structures, reducing sedimentation and erosion both from short-term construction activities and long-term climate and agriculture impacts. Sediment control measures are listed above and discussed in section I.

The project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. The project will breach levees and allow the creeks to reestablish historic floodplain, which will reduce erosion and siltation off-site.

No storm drain infrastructure exists in the project sites; therefore, the project will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The nearest inhabited residential structures are approximately .25 miles from project area and project activities will not expose people or structures to a significant risk of loss, injury or death. The project will not implement levees or dams, or otherwise increase risk of Inundation by seiche, tsunami, or mudflow.

References

- https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Maps/Hazard-Maps/Dam-Failure-Inundation-Areas-Map.aspx

- Updated Basin Plan for The Los Osos Groundwater Basin January 2015

9. Land Use and Planning

The project area is zoned agricultural although it has been under a wetland reserve and conservation easement and has not been cultivated since the mid 1990's. Project activities are aligned with the conservation easement agreement. The project is located in the Coastal Zone, and is consistent with the Local Coastal Plan, certified by the California Coastal Commission. The project site is under the jurisdiction of several land use agencies that require permits, authorizations or certifications including the USACE (Nationwide Permit), the RWQCB (404 Certification), San Luis Obispo County (Coastal Development Permit), and CDFW (Streambed Alteration Agreement).

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Physically divide an established community?				X
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Conclusion

The Project will have no impact on Land Use and Planning. The Project is not in or near a community, therefore it will not physically divide an established community. The project is aligned with the Local Coastal Plan and does not conflict with policies adopted for the purpose of avoiding or mitigating an environmental effect. Permits will be secured for the project to ensure compliance with the Local Coastal Plan.

References

- California Coastal Commission (CCC). Coastal Development Permit Amendment 4-82-300-A5, issued May 2001.

- San Luis Obispo County. 2009. Coastal Zone Land Use Ordinance, Title 23 of the San Luis Obispo County Code. Revised January 2009.

10. Mineral Resources

The project will maintain the intended zoned use of the land.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Conclusion

The Project will have no impact on Mineral resources. No locally important mineral resources are designated at this site in the San Luis Obispo County General Plan. The Project would not affect any known mineral resources of regional or local importance.

References

- San Luis Obispo County. 2009. Coastal Zone Land Use Ordinance, Title 23 of the San Luis Obispo County Code. Revised January 2009

11. Noise

The County's Land Use Ordinance identifies maximum exterior noise standards as between 45 – 70 db. Noise sources associated with open space uses as listed in Section 22.06.030. Noise produced by the project will be temporary and related to equipment and are similar to other existing noise sources of the surrounding agricultural land use.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact

Would the Project Result in:				
Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	
A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Conclusion

Noise generated by the project will have less than significant impacts. Noise levels and ground borne noise levels will not be generated in excess of standards established in the local general plan or noise ordinance. Temporary or periodic increase in ambient noise levels in the project vicinity will be limited to avoid impacts to nesting and mating bird seasons. All field crew will have appropriate ear protection. The Project is not located within the vicinity of an airport land use plan.

Resources

- Estero Area Plan, 2009

12. Population and Housing

The Project does not include a housing component. The Project site is located approximately 2 miles from the community of Los Osos and approximately 4.25 miles from the city of Morro Bay. The Morro Dunes Preserve State Park is adjacent to the project area to the South West and is open

to limited public day use access. Other surrounding properties are used for agricultural cultivation and livestock grazing.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project Result in:				
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Conclusion

The Project will have no impact on Housing or Populations. This project will not significantly impact populations or housing. The project will not induce substantial population growth, displace substantial numbers of existing housing, or displace substantial numbers of people.

Resources

- Estero Area Plan, 2009

13. Public Services

Implementation of this project will not substantially impact any government facilities or require the expansion of government services.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project Result in:				

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection, Police protection, Schools, Parks, or Other public facilities?				X

Conclusion

Implementation of this project will not substantially impact any government facilities or require the expansion of government services.

References

- Estero Area Plan, 2009

14. Recreation

The project is for habitat conservation and does not include a recreation component.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Conclusion

The Project has no impact on recreation. The Project is not associated with recreational facilities and will have no impact on other regional parks. The Project scope does not include construction or expansion of recreational facilities.

References

- Estero Area Plan, 2009

15. Transportation/Traffic

The project is for habitat conservation and will not increase traffic. It is accessed by a private dirt road off of Turri Road. Traffic in this area is related to agricultural and residential land uses of the adjacent properties.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
Result in inadequate emergency access?				X
Result in inadequate parking capacity?				X

Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

Conclusion

The Project will have no impact on transportation. All motor vehicle activity associated with the project will occur on an interior dirt road and staging areas, with the exception of the initial mobilization and demobilization of equipment. Therefore, the project will not increase traffic, exceed a level of service standard established by the county, change in air traffic patterns, impact emergency access or parking. No plans for alternative transportation are in place in the area.

References

- Estero Area Plan, 2009

16. Utilities and Service Systems

The Project will not constrict or expand public utilities or services.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X

Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
Comply with federal, state, and local statutes and regulations related to solid waste?				x

Conclusion

The Project will have no impact on utilities and service systems. The project does not involve use of or changes to water or wastewater utilities. No water uses are proposed that would exceed wastewater treatment requirements. The project would not require construction of new or expanded water or wastewater treatment facilities. This project would not affect storm water drainage or facilities. No new water supplies or entitlements would be needed; there would be no expansion of existing water use associated with this project. The project would not result in new housing or businesses that would require permanent year-round garbage collection. Waste associated with project construction would be collected and disposed of properly by contractors. All waste collection and disposal would occur compliance with all federal, state, and local laws and statutes.

References

- Estero Area Plan, 2009

Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the Project:				
Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of		X		

a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Conclusion

The project includes many avoidance and minimization measures that are discussed above in section I. These measures are in pace to ensure that the project will minimize and avoid the substantial degradation of the quality of the environment, significantly impact fish or wildlife species or their habitat, adversely affect plant or animal communities, or affect historic or other cultural resources. Avoidance and mitigation measures are also in place to limit cumulatively considerable impacts associated with construction and post construction. Construction activities associated with the proposed project would be very short-term in duration. The project would not have environmental effects that would cause substantial adverse effects on humans, either directly or indirectly.

IV. References

Applied Earthworks Cultural Resources Survey and Report. 2020.

California Coastal Commission (CCC). Coastal Development Permit Amendment 4-82-300-A5. 2001.

California Department of Conservation: Important Farmland Finder, https://maps.conservation.ca.gov/DLRP/CIFF/

California Department of Transportation (Caltrans). California Scenic Highway Mapping System. Officially Designated Scenic Highway Routes. 2017. https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a

California Natural Diversity Database. https://map.dfg.ca.gov/bios/?tool=cnddbQuick

CEQA Air Quality Handbook: A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review. 2012.

Central Coast Regional Water Quality Control Board, Total Maximum Daily Load for Sediment in Morro Bay watershed, 2002.

Earthquake assessment map: https://maps.conservation.ca.gov/cgs/EQZApp/app/

Estero Area Plan. 2009

J Dvorsky. Steelhead Restoration Planning Project for the Morro Bay Watershed. 2003

Morro Bay National Estuary Program. Turning the Tide for Morro Bay: Comprehensive and Conservation Management Plan for Morro Bay. 2000

NRCS Cultural Resources Inventory Report for 1951 Turri Road Wetland Reserve Program Easement. 2015

San Luis Obispo County Air Pollution Control District (SLOAPCD). Clean Air Plan San Luis Obispo County. 2001.

San Luis Obispo County. Coastal Zone Land Use Ordinance, Title 23 of the San Luis Obispo County Code. 2009.

San Luis Obispo County Flood control Map: https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Maps/Hazard-Maps/Dam-Failure-Inundation-Areas-Map.aspx

San Luis Obispo County. Habitat Conservation Plan for Morro shoulderband snail, 2020

San Luis Obispo County. Title 23: Coastal Zone Land Use Ordinance, 2019

SLO Watershed Project: http://slowatershedproject.org/watersheds/morro-bay/

Stantec, Phase I Environmental Site Assessment, 1951 Turri Rd. 2014

Strategic Action Plan 2013 - 2017. San Luis Obispo, CA. November 2012.

Tetra Tech, Inc. Morro Bay Estuary Program Sediment Loading Study. 199

Updated Basin Plan For The Los Osos Groundwater Basin, 2015.

U.S. Department of Agriculture, Soil Conservation Service, Erosion and Sediment Study of the Morro Bay Watershed, 1989.

U.S. Department of Agriculture Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

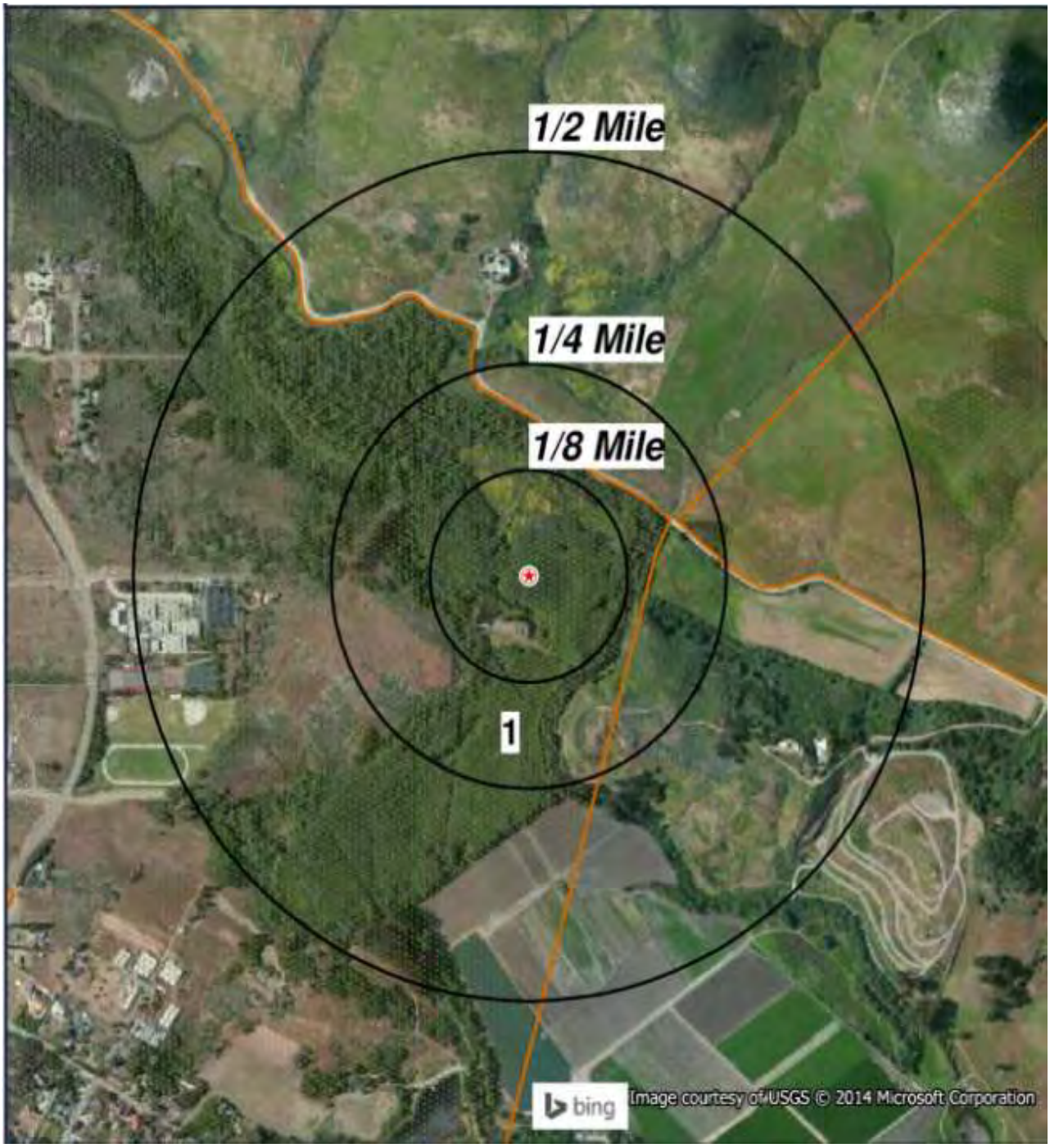
U.S. Fish & Wildlife Service, Morro Shoulderband Snail: Study Of Mss Populations And Habitat Associations For Nine Conserved Parcels. 2019

Tetra Tech, Inc. Morro Bay Estuary Program Sediment Loading Study. 1998

V. Appendices

Appendix A: Project Maps + Photos

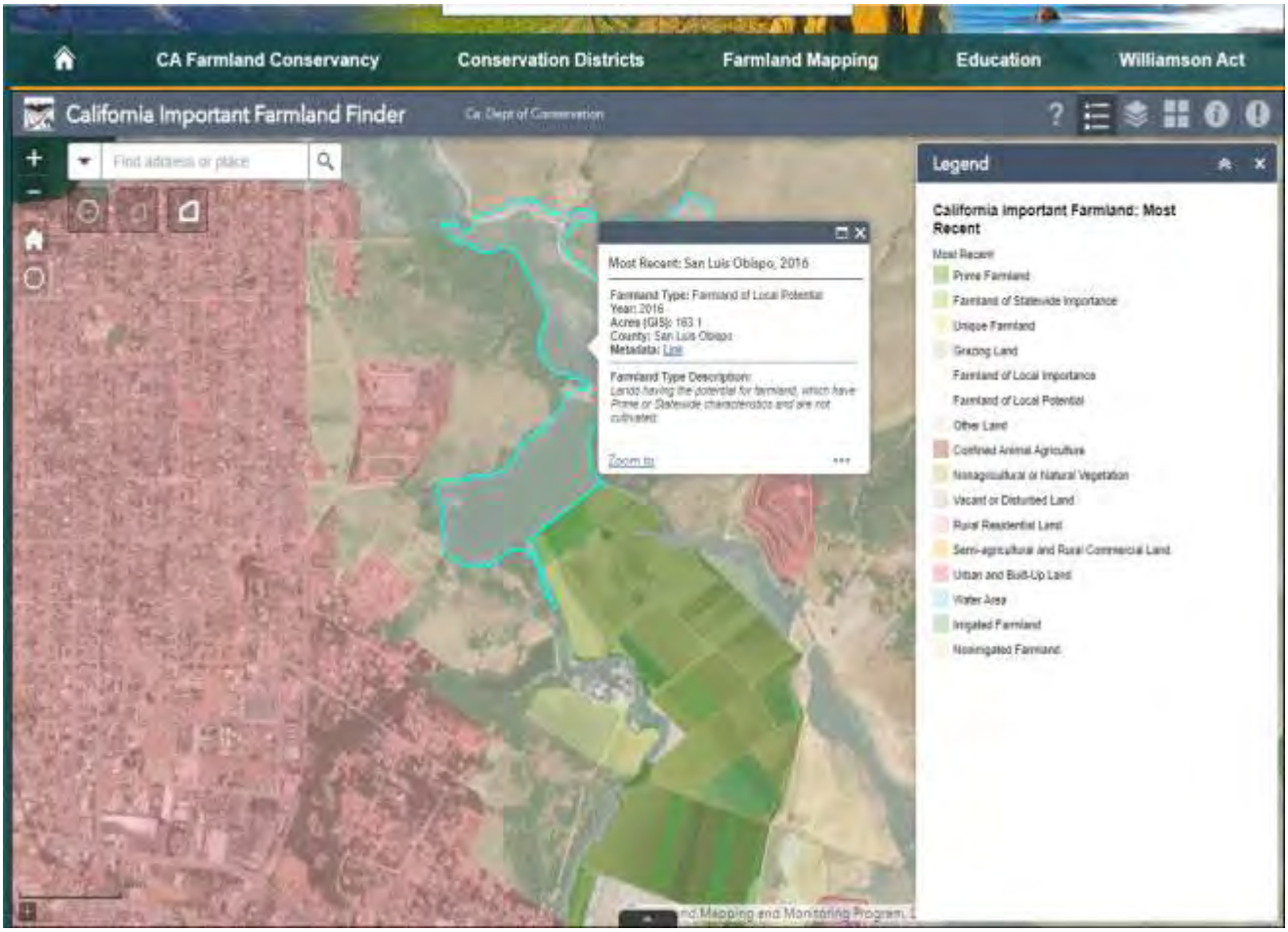
1. Vicinity Map



2. Location Map

3. USFWS Wetland Map

4. Prime Farmland



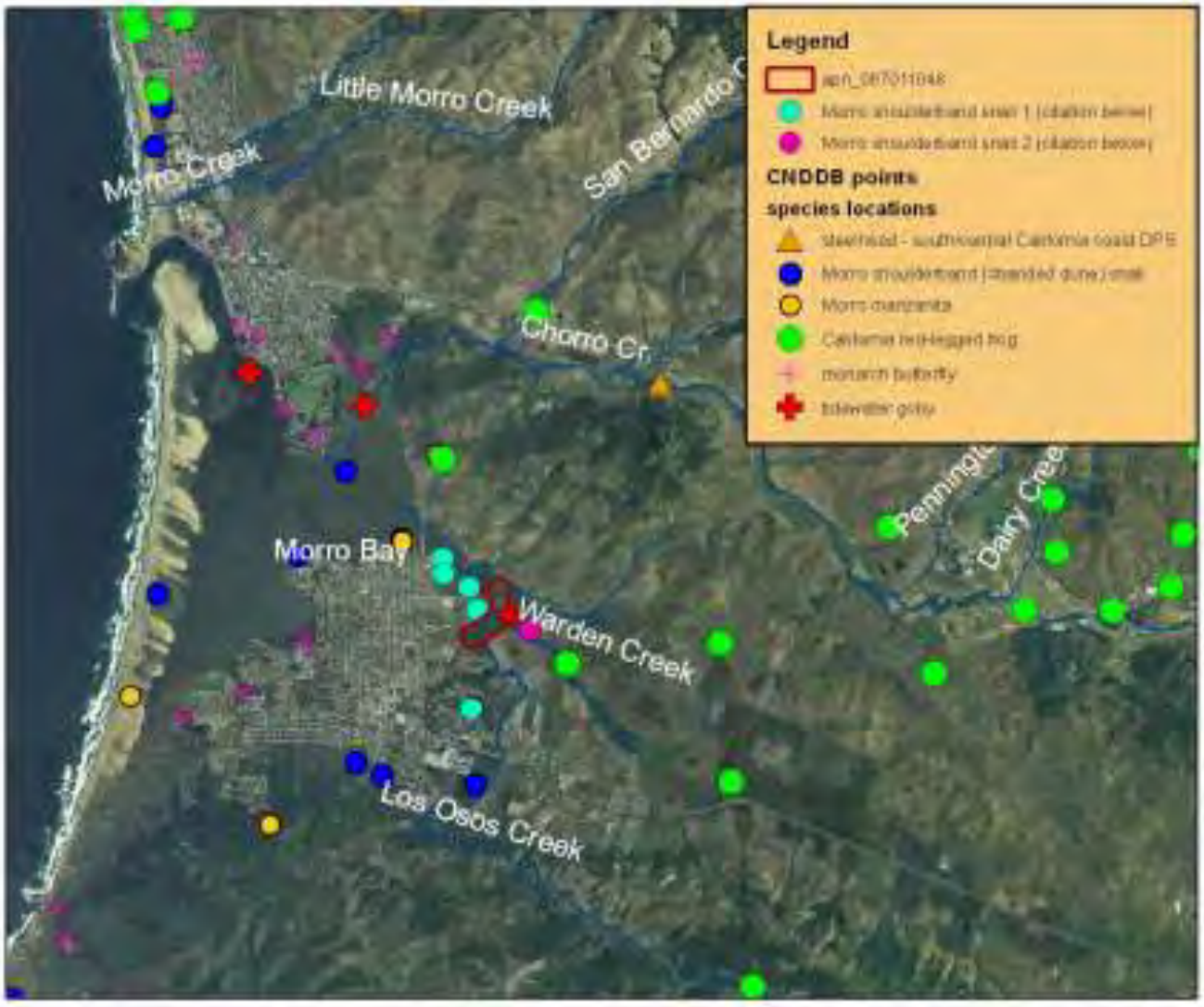
5. Soils Map

Map Unit Legend

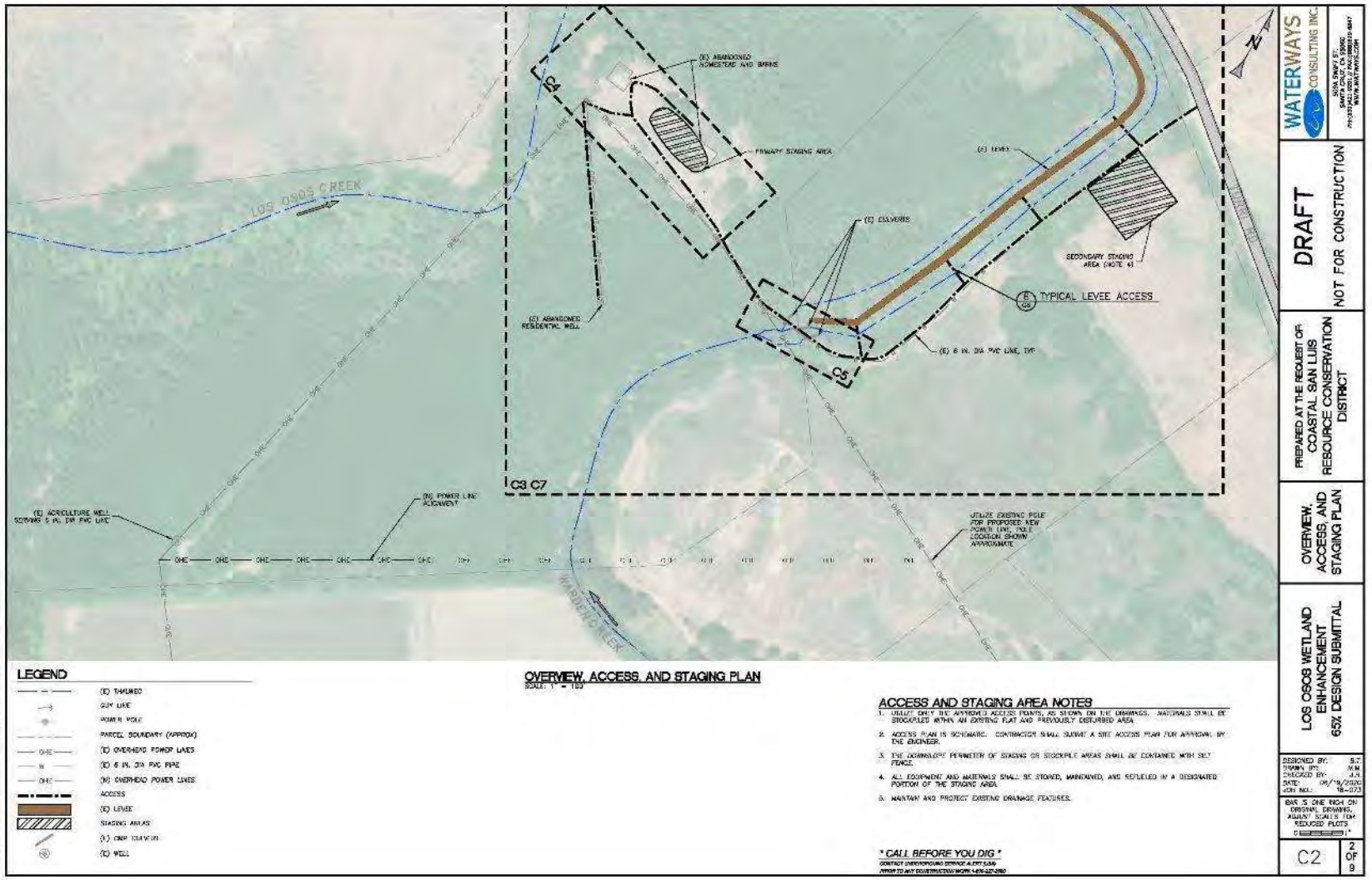
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
101	Aquolls, saline	1.8	1.0%
104	Baywood fine sand, 2 to 9 percent slopes	33.8	18.3%
105	Baywood fine sand, 9 to 15 percent slopes	26.7	14.6%
110	Briones-Tierra complex, 15 to 50 percent slopes	11.8	6.5%
128	Corralitos variant loamy sand	24.8	13.4%
131	Diablo and Cibo clays, 15 to 30 percent slopes	1.3	0.7%
159	Los Osos loam, 9 to 15 percent slopes	0.8	0.4%
169	Marimel sandy clay loam, occasionally flooded	79.8	43.7%
197	Salinas silty clay loam, 0 to 2 percent slopes, MLRA 14	2.8	1.4%
Totals for Area of Interest		182.7	100.0%

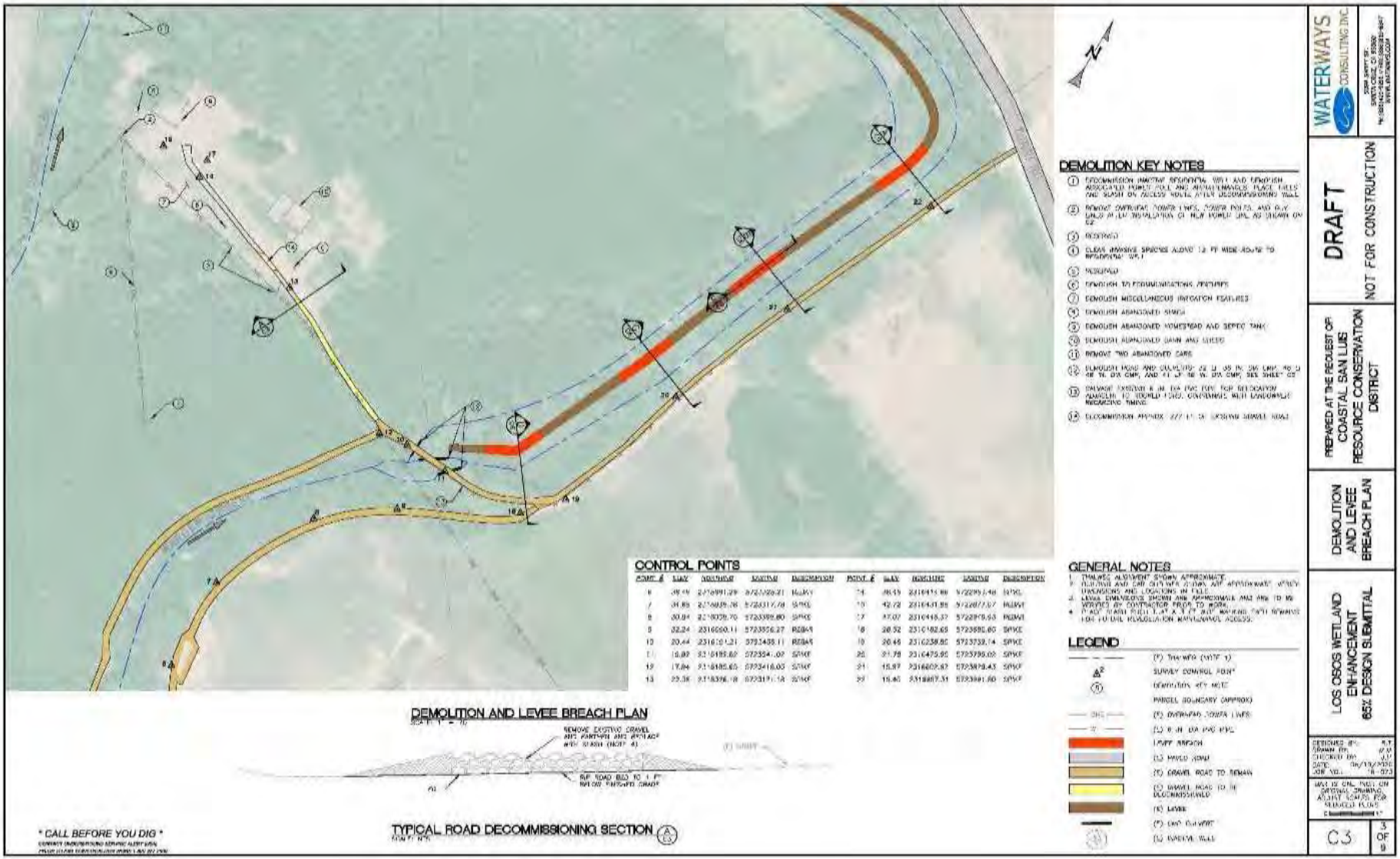
6. County of San Luis Obispo Zoning Map

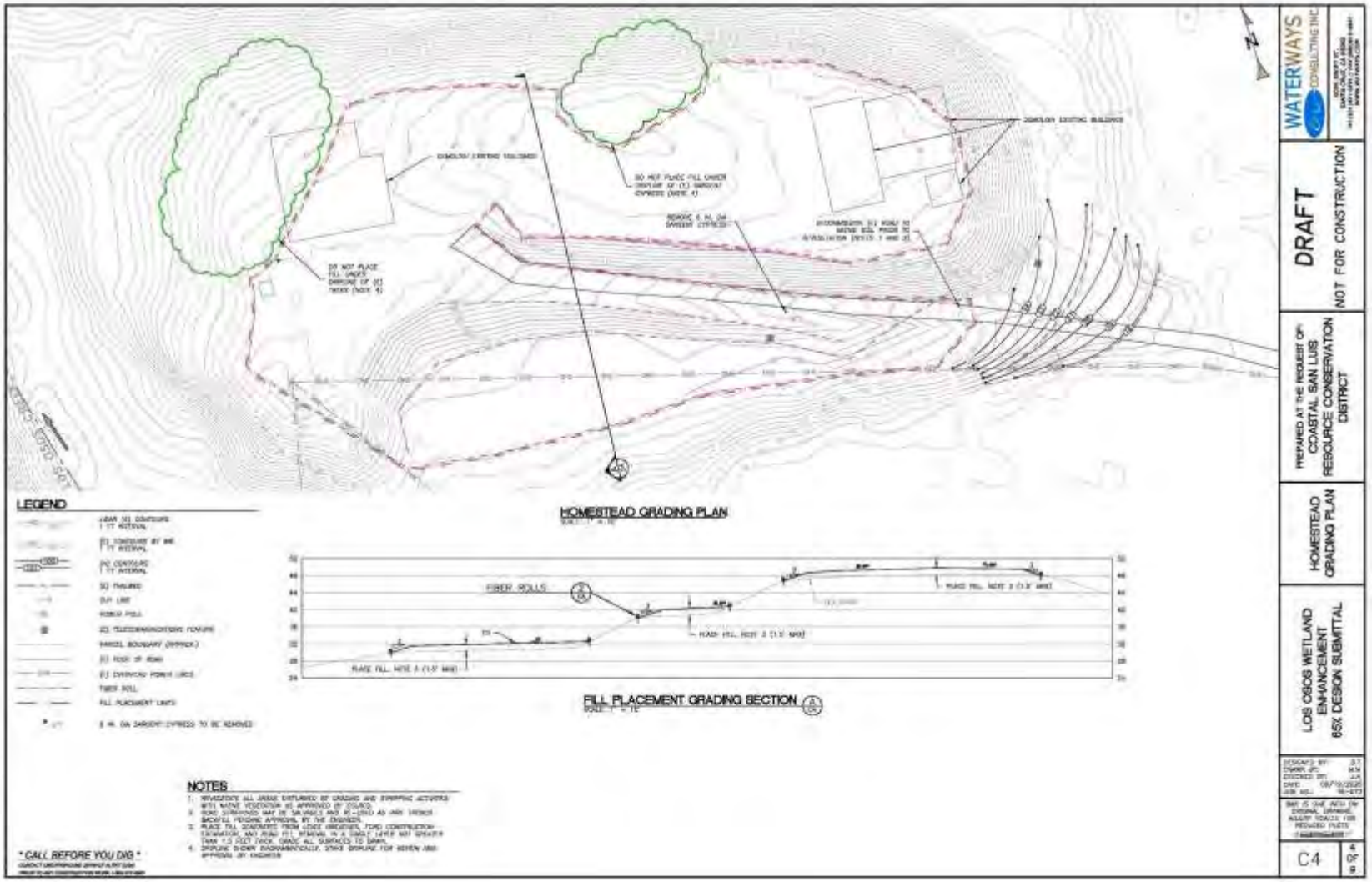
7. CNDDB Map

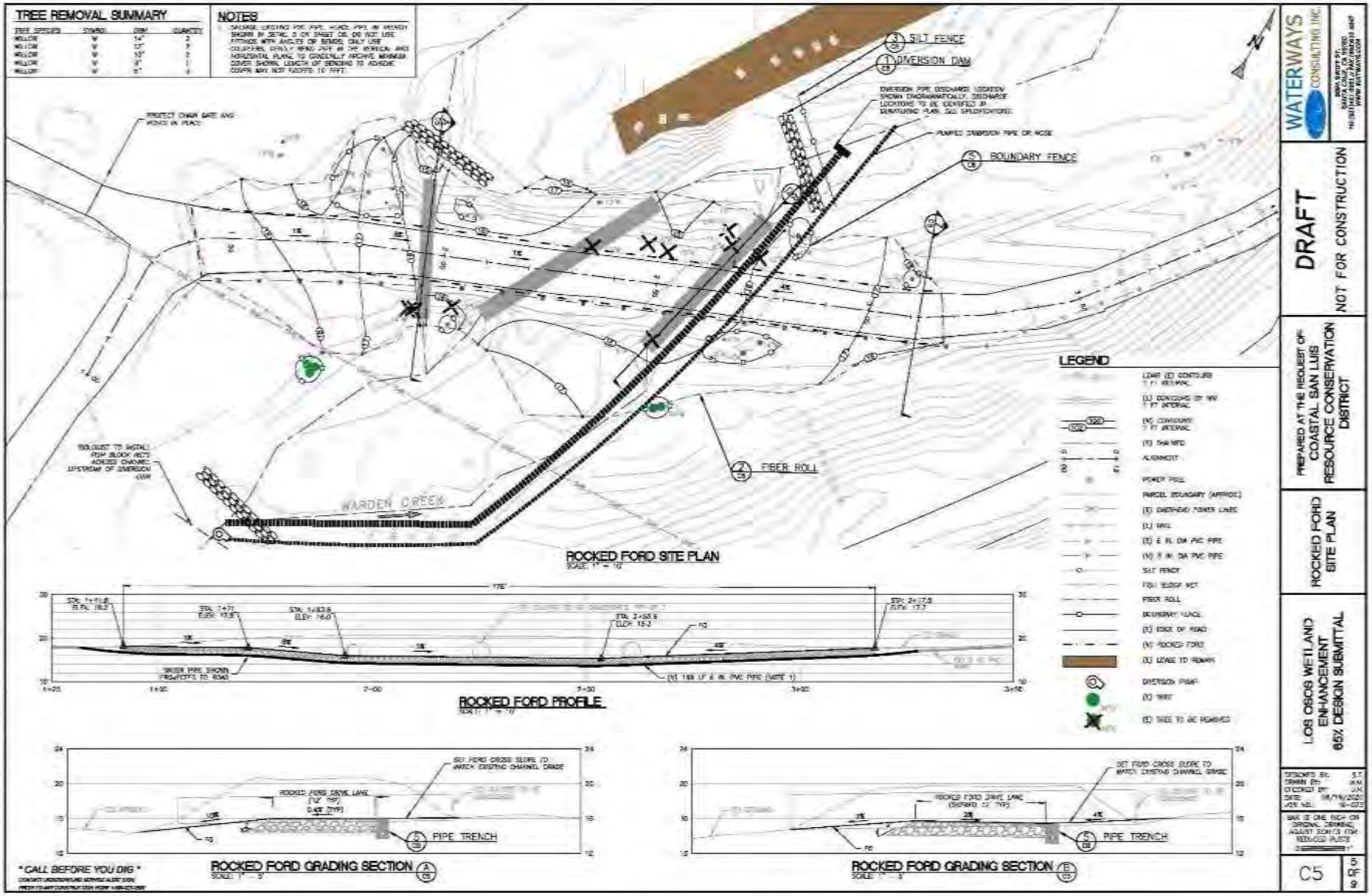

Legend
CNDDB points
species locations
Little Morro Creek
Morro Creek
Chorro Cr.
Morro Bay
Warden Creek
Los Osos Creek
Pennington
Dairy Creek

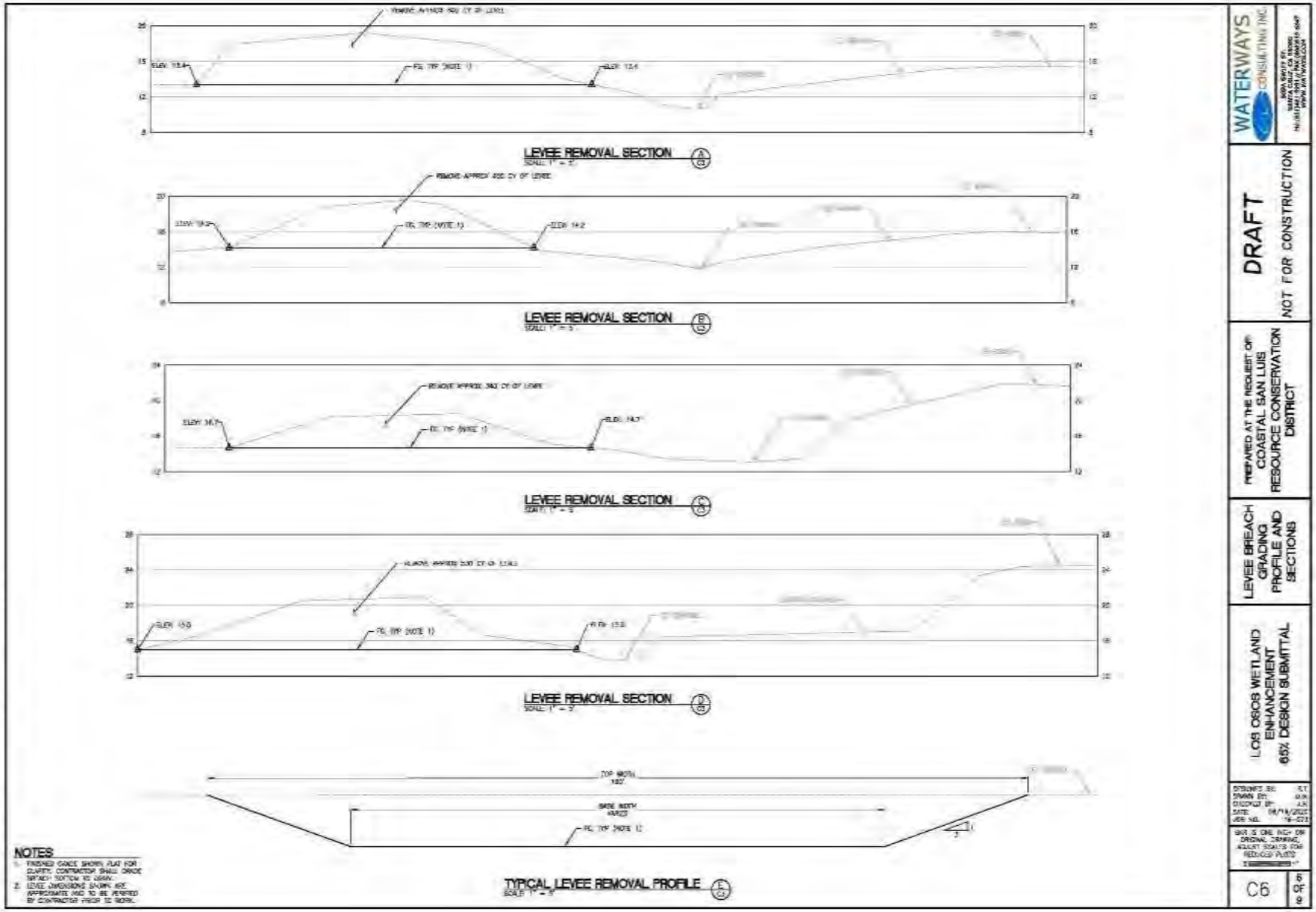
Appendix B: 65% Design Plans

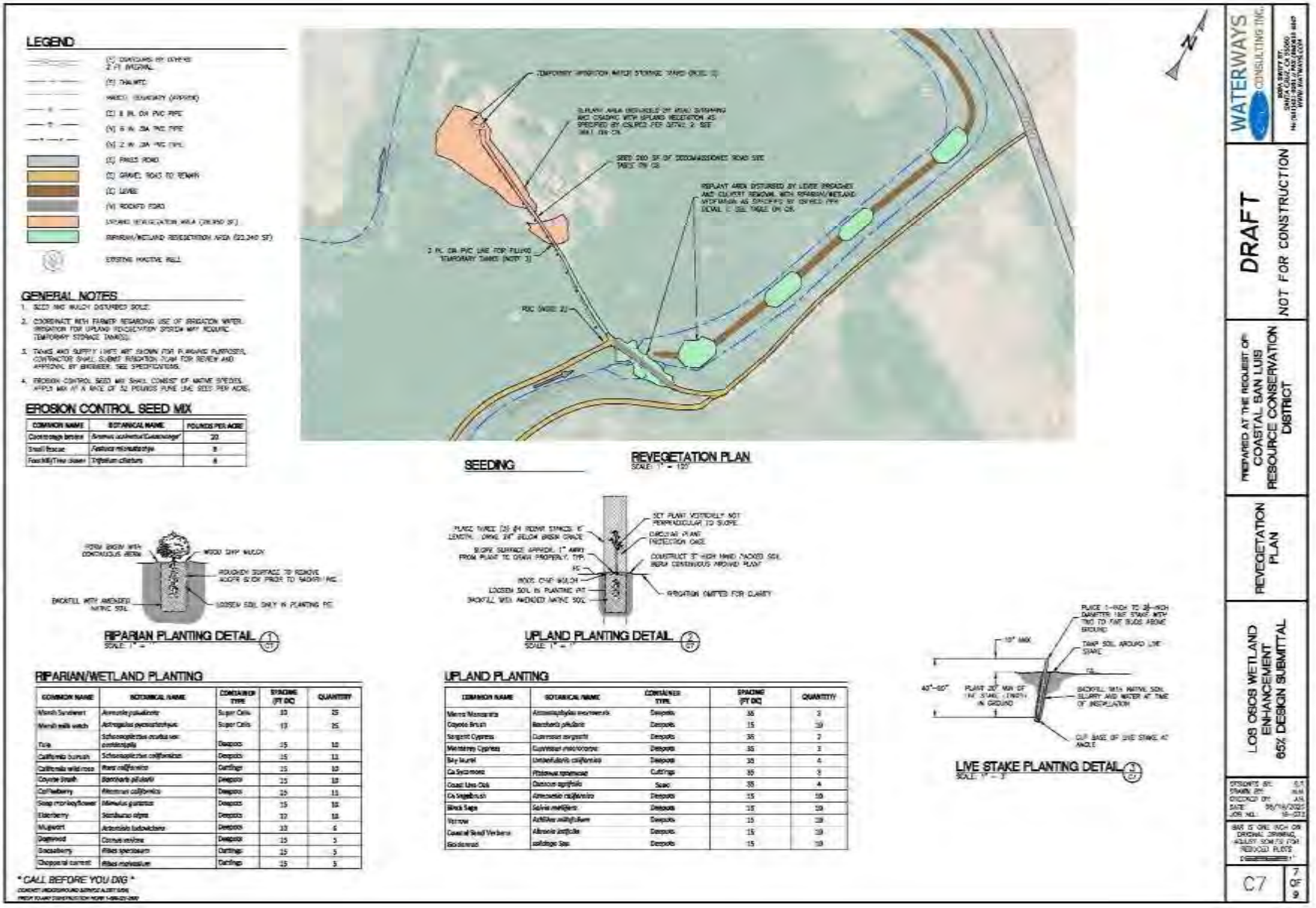


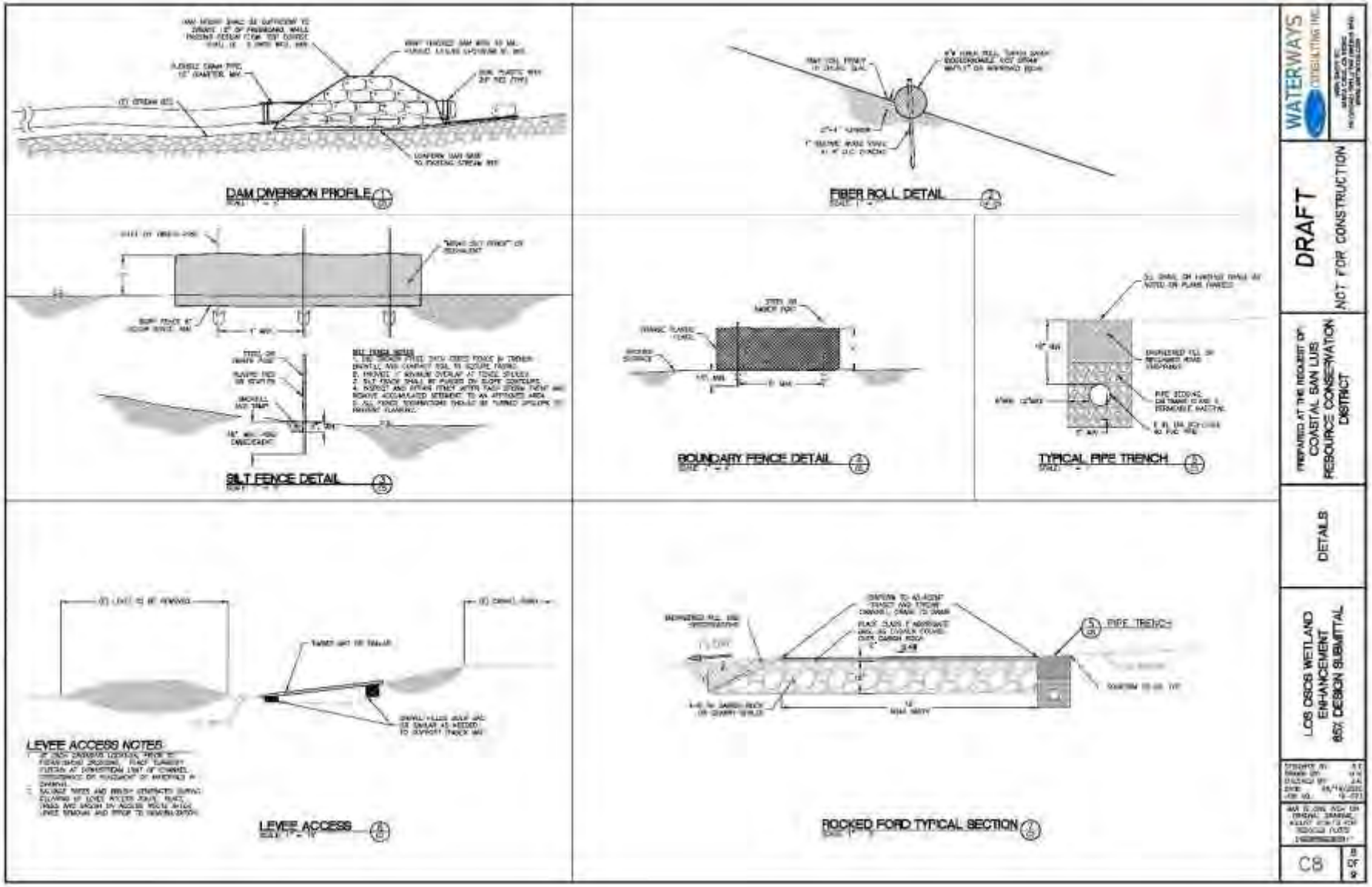

DEMOLITION KEY NOTES
CONTROL POINTS
GENERAL NOTES
LEGEND
DEMOLITION AND LEVEE BREACH PLAN
TYPICAL ROAD DECOMMISSIONING SECTION
* CALL BEFORE YOU DIG *
WATERWAYS CONSULTING INC.
DRAFT
NOT FOR CONSTRUCTION
PREPARED AT THE REQUEST OF COASTAL SAN LUIS RESOURCE CONSERVATION DISTRICT
DEMOLITION AND LEVEE BREACH PLAN
LOS OSOS WETLAND ENHANCEMENT
65% DESIGN SUBMITTAL
C3


HOMESTEAD GRADING PLAN
FILL PLACEMENT GRADING SECTION
LEGEND
NOTES
* CALL BEFORE YOU DIG *
WATERWAYS CONSULTING INC
DRAFT
NOT FOR CONSTRUCTION
PREPARED AT THE REQUEST OF: COASTAL SAN LUIS RESOURCE CONSERVATION DISTRICT
HOMESTEAD GRADING PLAN
LOS OSOS WETLAND ENHANCEMENT 65% DESIGN SUBMITTAL
C4


TREE REMOVAL SUMMARY
NOTES
SILT FENCE
DIVERSION DAM
BOUNDARY FENCE
FIBER ROLL
WARDEN CREEK
LEGEND
ROCKED FORD SITE PLAN
ROCKED FORD PROFILE
ROCKED FORD GRADING SECTION
ROCKED FORD GRADING SECTION
PIPE TRENCH
PIPE TRENCH
* CALL BEFORE YOU DIG *
WATERWAYS CONSULTING INC.
DRAFT
NOT FOR CONSTRUCTION
PREPARED AT THE REQUEST OF: COASTAL SAN LUIS RESOURCE CONSERVATION DISTRICT
ROCKED FORD SITE PLAN
LOS OSOS WETLAND ENHANCEMENT
65% DESIGN SUBMITTAL
C5


LEVEE REMOVAL SECTION
LEVEE REMOVAL SECTION
LEVEE REMOVAL SECTION
LEVEE REMOVAL SECTION
TYPICAL LEVEE REMOVAL PROFILE
NOTES
DRAFT
NOT FOR CONSTRUCTION
WATERWAYS CONSULTING INC.
PREPARED AT THE REQUEST OF: COASTAL SAN LUIS RESOURCE CONSERVATION DISTRICT
LEVEE BREACH GRADING PROFILE AND SECTIONS
LOS OSOS WETLAND ENHANCEMENT
65% DESIGN SUBMITTAL
C6


LEGEND
GENERAL NOTES
1. SEED AND MULCH DISTURBED SOILS.
2. COORDINATE WITH FARMER REGARDING USE OF IRRIGATION WATER. IRRIGATION FOR UPLAND REVEGETATION SYSTEM MAY REQUIRE TEMPORARY STORAGE TANK(S).
3. TANKS AND SUPPLY LINES ARE SHOWN FOR PLANNING PURPOSES. CONTRACTOR SHALL SUBMIT IRRIGATION PLAN FOR REVIEW AND APPROVAL BY ENGINEER. SEE SPECIFICATIONS.
4. EROSION CONTROL SEED MIX SHALL CONSIST OF NATIVE SPECIES. APPLY MIX AT A RATE OF 52 POUNDS PURE LIVE SEED PER ACRE.
EROSION CONTROL SEED MIX
SEEDING
REVEGETATION PLAN
RIPARIAN PLANTING DETAIL
UPLAND PLANTING DETAIL
LIVE STAKE PLANTING DETAIL
RIPARIAN/WETLAND PLANTING
UPLAND PLANTING
* CALL BEFORE YOU DIG *
WATERWAYS CONSULTING INC.
DRAFT
NOT FOR CONSTRUCTION
PREPARED AT THE REQUEST OF: COASTAL SAN LUIS RESOURCE CONSERVATION DISTRICT
REVEGETATION PLAN
LOS OSOS WETLAND ENHANCEMENT 65% DESIGN SUBMITTAL
C7


DAM DIVERSION PROFILE
FIBER ROLL DETAIL
SILT FENCE DETAIL
BOUNDARY FENCE DETAIL
TYPICAL PIPE TRENCH
LEVEE ACCESS NOTES
LEVEE ACCESS
ROCKED FORD TYPICAL SECTION
WATERWAYS CONSULTING INC.
DRAFT
NOT FOR CONSTRUCTION
PREPARED AT THE REQUEST OF: COASTAL SAN LUIS RESOURCE CONSERVATION DISTRICT
DETAILS
LOS OSOS WETLAND ENHANCEMENT 65% DESIGN SUBMITTAL
C8

GENERAL NOTES

EARTHWORK NOTES

DIVERSION NOTES

WATERWAYS

DRAFT

NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
COASTAL SAN LUIS
RESOURCE CONSERVATION
DISTRICT

GENERAL NOTES

LOS OSOS WETLAND ENHANCEMENT
65% DESIGN SUBMITTAL

Appendix C: CNDDB Species List

California Natural Diversity Database - QUAD Morro Bay South						A-
Los Osos Wetland Conservation Project						
	SCINAME	COMNAME	FEDSTATUS	CALSTATUS	DFGSTATUS	CNPSLIST
1	Rana draytonii	California red-legged frog	Threatened	None	SSC	
2	Accipiter cooperii	Cooper's hawk	None	None	WL	
3	Laterallus jamaicensis coturniculus	California black rail	None	Threatened	FP	
4	Rallus longirostris obsoletus	California clapper rail	Endangered	Endangered	FP	
5	Oncorhynchus mykiss irideus	steelhead - south/central California coast DI	Threatened	None	SSC	
6	Eucyclogobius newberryi	tidewater goby	Endangered	None	SSC	
7	Antrozous pallidus	pallid bat	None	None	SSC	
8	Nyctinomops macrotis	big free-tailed bat	None	None	SSC	
9	Dipodomys heermanni morroensis	Morro Bay kangaroo rat	Endangered	Endangered	FP	
10	Neotoma lepida intermedia	San Diego desert woodrat	None	None	SSC	
11	Taxidea taxus	American badger	None	None	SSC	
12	Anniella pulchra nigra	black legless lizard	None	None	SSC	
13	Anniella pulchra pulchra	silvery legless lizard	None	None	SSC	
14	Phrynosoma blainvillii	coast horned lizard	None	None	SSC	
15	Central Dune Scrub	Central Dune Scrub	None	None		
16	Central Maritime Chaparral	Central Maritime Chaparral	None	None		
17	Valley Needlegrass Grassland	Valley Needlegrass Grassland	None	None		
18	Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	None	None		
19	Coastal Brackish Marsh	Coastal Brackish Marsh	None	None		
20	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	None	None		
21	Cicindela hirticollis gravida	sandy beach tiger beetle	None	None		
22	Coelus globosus	globose dune beetle	None	None		
23	Plebejus icarioides moroensis	Morro Bay blue butterfly	None	None		
24	Danaus plexippus	monarch butterfly	None	None		
25	Helminthoglypta walkeriana	Morro shoulderband (=banded dune) snail	Endangered	None		
26	Tryonia imitator	mimic tryonia (=California brackishwater sn	None	None		
27	Cladonia firma	firm cup lichen	None	None		
28	Sulcaria isidiifera	splitting yarn lichen	None	None		
29	Cirsium fontinale var. obispoense	Chorro Creek bog thistle	Endangered	Endangered		1B.2

	SCINAME	COMNAME	FEDSTATUS	CALSTATUS	DFGSTATUS	CNPSLIST
30	Erigeron blochmaniae	Blochman's leafy daisy	None	None		1B.2
31	Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None	None		1B.1
32	Layia jonesii	Jones' layia	None	None		1B.2
33	Dithyrea maritima	beach spectaclepod	None	Threatened		1B.1
34	Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	None	None		1B.2
35	Arenaria paludicola	marsh sandwort	Endangered	Endangered		1B.1
36	Atriplex joaquinana	San Joaquin spearscale	None	None		1B.2
37	Chenopodium littoreum	coastal goosefoot	None	None		1B.2
38	Suaeda californica	California seablite	Endangered	None		1B.1
39	Calystegia subacaulis ssp. episcopalis	Cambria morning-glory	None	None		4.2
40	Dudleya abramsii ssp. bettinae	Betty's dudleya	None	None		1B.2
41	Dudleya abramsii ssp. murina	mouse-gray dudleya	None	None		1B.3
42	Dudleya blochmaniae ssp. blochmania	Blochman's dudleya	None	None		1B.1
43	Arctostaphylos cruzensis	Arroyo de la Cruz manzanita	None	None		1B.2
44	Arctostaphylos luciana	Santa Lucia manzanita	None	None		1B.2
45	Arctostaphylos morroensis	Morro manzanita	Threatened	None		1B.1
46	Arctostaphylos pechoensis	Pecho manzanita	None	None		1B.2
47	Arctostaphylos pilosula	Santa Margarita manzanita	None	None		1B.2
48	Arctostaphylos tomentosa ssp. daciticc	dacite manzanita	None	None		1B.1
49	Arctostaphylos osoensis	Oso manzanita	None	None		1B.2
50	Astragalus didymocarpus var. milesian	Miles' milk-vetch	None	None		1B.2
51	Eriodictyon altissimum	Indian Knob mountainbalm	Endangered	Endangered		1B.1
52	Monardella crispa	crisp monardella	None	None		1B.2
53	Monardella palmeri	Palmer's monardella	None	None		1B.2
54	Monardella frutescens	San Luis Obispo monardella	None	None		1B.2
55	Camissoniopsis hardhamiae	Hardham's evening-primrose	None	None		1B.2
56	Chorizanthe breweri	Brewer's spineflower	None	None		1B.3
57	Delphinium parryi ssp. eastwoodiae	Eastwood's larkspur	None	None		1B.2
58	Castilleja densiflora ssp. obispoensis	San Luis Obispo owl's-clover	None	None		1B.2
59	Chloropyron maritimum ssp. maritimu	salt marsh bird's-beak	Endangered	Endangered		1B.2
60	Carex obispoensis	San Luis Obispo sedge	None	None		1B.2
61	Calochortus obispoensis	La Panza mariposa-lily	None	None		1B.2
62	Fritillaria viridea	San Benito fritillary	None	None		1B.2

Appendix D. Asbestos removal and disposal Protocol

The following protocols are published by the Department of Industrial Relations and are designed to regulate asbestos exposure in all construction work as defined in section 1502.

(1) All Class I, II and III asbestos work shall be conducted within regulated areas. All other operations covered by this standard shall be conducted within a regulated area where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed a PEL. Regulated areas shall comply with the requirements of subsections (2), (3), (4), and (5) of this subsection.

(2) Demarcation. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs shall be provided and displayed pursuant to the requirements of subsection (k)(7) of this section.

(3) Access. Access to regulated areas shall be limited to authorized persons and to persons authorized by the Chief or Director.

(4) Respirators. All persons entering a regulated area where employees are required pursuant to subsection (h)(1) of this section to wear respirators shall be supplied with a respirator selected in accordance with subsection (h)(2) of this section.

(5) Prohibited activities. The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.

(6) Competent Persons. The employer shall ensure that all asbestos work performed within regulated areas is supervised by a competent person, as defined in subsection (b) of this section. The duties of the competent person are set out in subsection (o) of this section.

(f) Exposure assessments and monitoring.

(1) General monitoring criteria.

(A) Each employer who has a workplace or work operation where exposure monitoring is required under this section shall perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed.

(B) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee.

(C) Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for employees in each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30 minute exposures associated with operations that are most likely to produce exposures above the excursion limit for employees in each work area.

(2) Initial Exposure Assessment.

(A) Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the

initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly.

(B) Basis of Initial Exposure Assessment: Unless a negative exposure assessment has been made pursuant to subsection (f)(2)(C) of this section, the initial exposure assessment shall, if feasible, be based on monitoring conducted pursuant to subsection (f)(1)(C) of this section. The assessment shall take into consideration both the monitoring results and all observations, information or calculations which indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the employer which indicate the levels of airborne asbestos likely to be encountered on the job. For Class I asbestos work, until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of the PELs, or otherwise makes a negative exposure assessment pursuant to subsection (f)(2)(C) of this section, the employer shall presume that employees are exposed in excess of the TWA and excursion limit.

(C) Negative Exposure Assessment: For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria;

1. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or

2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the

processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or

3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

(3) Periodic monitoring.

(A) Class I and II operations. The employer shall conduct daily monitoring that is representative of the exposure of each employee who is assigned to work within a regulated area who is performing Class I or II work, unless the employer pursuant to subsection (f)(2)(C) of this section, has made a negative exposure assessment for the entire operation.

(B) All operations under the standard other than Class I and II operations. The employer shall conduct periodic monitoring of all work where exposures are expected to exceed a PEL, at intervals sufficient to document the validity of the exposure prediction.

(C) Exception: When all employees required to be monitored daily are equipped with supplied-air respirators operated in the pressure demand mode, or other positive pressure mode respirator, the employer may dispense with the daily monitoring required by this subsection. However, employees performing class I work using a control method which is not listed in subsection (g)(4)(A), (B), or (C) of this section or using a modification of a listed control method, shall continue to be monitored daily even if they are equipped with supplied-air respirators.

(4) Termination of monitoring.

(A) If the periodic monitoring required by subsection (f)(3) of this section reveals that employee exposures, as indicated by statistically reliable measurements, are below the permissible exposure limit and excursion limit the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

(B) Additional monitoring. Notwithstanding the provisions of subsections (f)(2), (f)(3), and (f)(4) of this section, the employer shall institute the exposure monitoring required under subsection (f)(3) of this section whenever there has been a change in process, control equipment, personnel or work practices that may result in new or additional exposures above the permissible exposure limit and/or excursion limit or when the employer has any reason to suspect that a change may result in new or additional exposures above the permissible exposure limit and/or excursion limit. Such additional monitoring is required regardless of whether a "negative exposure assessment" was previously produced for a specific job.

(5) Employee Notification of Monitoring Results.

(A) As soon as possible but not later than 5 working days following receipt of monitoring results required by this section, the employer shall notify affected employees of the monitoring results.

(B) The employer shall notify affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees.

(C) The written notification required by subsection (f)(5)(A) of this section shall include the corrective action being taken by the employer to reduce employee exposure to or below the PEL and/or excursion limit wherever monitoring results have indicated that the PEL and/or excursion limit has been exceeded.

(6) Observation of monitoring.

(A) The employer shall provide affected employees and their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section.

(B) When observation of the monitoring of employee exposure to asbestos requires entry into an area where the use of protective clothing or equipment is required, the observer shall be provided with and be required to use such clothing and equipment and shall comply with all other applicable safety and health procedures.

(g) Methods of compliance

(1) Engineering controls and work practices for all operations covered by this section. The employer shall use the following engineering controls and work practices in all operations covered by this section, regardless of the levels of exposure:

(A) Vacuum cleaners equipped with HEPA filters to collect all debris and dust containing ACM and PACM, except as provided in subsection (g)(8)(B) of this section in the case of roofing material.

(B) Wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provided in subsection (g)(8)(B) of this section; and

(C) Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in subsection (g)(8)(B) of this section apply.

(2) In addition to the requirements of subsection (g)(1) of this section, the employer shall use the following control methods to achieve compliance with the TWA permissible exposure limit and excursion limit prescribed by subsection (c) of this section;

(A) Local exhaust ventilation equipped with HEPA filter dust collection systems;

(B) Enclosure or isolation of processes producing asbestos dust;

(C) Ventilation of the regulated area to move contaminated air away from the breathing zone of employees and toward a filtration or collection device equipped with a HEPA filter;

(D) Use of other work practices and engineering controls that the Assistant Secretary can show to be feasible.

(E) Wherever the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the permissible exposure limit and/or excursion limit prescribed in subsection (c) of this section, the employer shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of subsection (h) of this section.

(3) Prohibitions. The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM or PACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

(A) High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.

(B) Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.

(C) Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM and PACM.

(D) Employee rotation as a means of reducing employee exposure to asbestos.

(4) Class I Requirements. In addition to the provisions of subsections (g)(1) and (2) of this section, the following engineering controls and work practices and procedures shall be used.

(A) All Class I work, including the installation and operation of the control system shall be supervised by a competent person as defined in subsection (b) of this section;

(B) For all Class I jobs involving the removal of more than 25 linear or 10 square feet of thermal system insulation or surfacing material; for all other Class I jobs, where the employer cannot produce a negative exposure assessment pursuant to subsection (f)(2)(C) of this section, or where employees are working in areas adjacent to the regulated area, while the Class I work is or being performed, the employer shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated area:

1. Critical barriers shall be placed over all the openings to the regulated area, except where activities are performed outdoors; or

2. The employer shall use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area surveillance during each work shift at each boundary of the regulated area, showing no visible asbestos dust; and perimeter area monitoring showing that clearance levels contained in 40 CFR Part 763, Subpart E, of the EPA Asbestos in Schools Rule are met, or that perimeter area levels, measured by Phase Contrast Microscopy (PCM) are no more than background levels representing the same area before the asbestos work began. The results of such monitoring shall be made known to the employer no later than 24 hours from the end of the work shift represented by such monitoring.

(h) A small walk-in enclosure which accommodates no more than two persons (mini-enclosure) may be used if the disturbance or removal can be completely contained by the enclosure with the following specifications and work practices.

a. The fabricated or job-made enclosure shall be constructed of 6 mil plastic or equivalent:

b. The enclosure shall be placed under negative pressure by means of a HEPA filtered vacuum or similar ventilation unit:

2. Work practices:

a. Before use, the mini-enclosure shall be inspected for leaks and smoke tested to detect breaches, and any breaches sealed.

b. Before reuse, the interior shall be completely washed with amended water and HEPA-vacuumed.

c. During use, air movement shall be directed away from the employee's breathing zone within the mini-enclosure.

(I) For removing roofing material which contains ACM the employer shall ensure that the following work practices are followed:

1. Roofing material shall be removed in an intact state to the extent feasible.

2. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards.

3. Cutting machines shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety.

4. When removing built-up roofs with asbestos-containing roofing felts and an aggregate surface using a power roof cutter, all dust resulting from the cutting operation shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along the cut line. When removing built-up roofs with asbestos containing roofing felts and a smooth surface using a power roof cutter, the dust resulting from the cutting operation shall be collected either by a HEPA dust collector or HEPA vacuuming along the cut line, or by gently sweeping and then carefully and completely wiping up the still-wet dust and debris left along the cut line. The dust and debris shall be immediately bagged or placed in covered containers.

5. Asbestos-containing material that has been removed from a roof shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane or hoist:

a. Any ACM that is not intact shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift. While the material remains on the roof it shall either be kept wet, placed in an impermeable waste bag, or wrapped in plastic sheeting.

b. Intact ACM shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift.

6. Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner so as to preclude the dispersion of dust.

7. Roof level heating and ventilation air intake sources shall be isolated or the ventilation system shall he shut down.

8. Notwithstanding any other provision of this section, removal or repair of sections of intact roofing less than 25 square feet in area does not require use of wet methods or HEPA vacuuming as long as manual methods which do not render the material nonintact are used to remove the material and no

visible dust is created by the removal method used. In determining whether a job involves less than 25 square feet, the employer shall include all removal and repair work performed on the same roof on the same day.

(J) When removing cementitious asbestos-containing siding and shingles or transite panels containing ACM on building exteriors (other than roofs, where subsection (g)(8)(B) of this section applies) the employer shall ensure that the following work practices are followed:

1. Cutting, abrading or breaking siding, shingles, or transite panels, shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release cannot be used.

2. Each panel or shingle shall be sprayed with amended water prior to removal.

3. Unwrapped or unbagged panels or shingles shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed in an impervious waste bag or wrapped in plastic sheeting and lowered to the ground no later than the end of the work shift.

4. Nails shall be cut with flat, sharp instruments.

(K) Signs.

1. Warning signs that demarcate the regulated area shall be provided and displayed at each location where a regulated area is required to be established by subsection (e) of this section. Signs shall be posted at such a distance from such a location that an employee may read the signs and take necessary protective steps before entering the area marked by the signs.

2. The warning signs required by subsection (k)(7) of this section shall bear the following information:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

Appendix E. Mitigation, Monitoring, Reporting Plan

Mitigation, Monitoring, Reporting Plan for the Los Osos Wetland Restoration Project

This Mitigation, Monitoring, Reporting Plan (Plan) has been prepared for use in implementing the mitigation measures identified in the Mitigated Negative Declaration (MND) for the Los Osos Wetland Restoration Project (project). This Plan has been prepared by the Coastal San Luis Resource Conservation District (District) in compliance with State law to ensure that adopted mitigation measures are implemented (Section 21081.6 of the Public Resources Code).

Section I. Mitigation and Avoidance Measures

Section 21081.6 of the California Public Resources Code and Section 15091(d) and 15097 of the State CEQA Guidelines require public agencies "to adopt a reporting or monitoring program for changes to the project which it has adopted or made conditions of project approval in order to mitigate or avoid significant effects on the environment." An MMRP is required for the project because the MND for the project identified potentially significant adverse impacts related to project restoration components, and mitigation measures have been identified to reduce those impacts to a less-than significant-level. This Plan is to be used by the District to ensure that adopted mitigation measures identified in the MND are implemented and that implementation is documented. The Plan contains the following information:

Mitigation Measures: Provides the text of the mitigation measures (by issue area), as provided in the IS/MND, each of which has been adopted and incorporated into the project.

Time Frame for Implementation: Identifies the timing of implementation of the mitigation measure.

Responsible Party: Identifies the party responsible for implementation of the mitigation measure.

Avoidance, Minimization, or Mitigation Measure	Time Frame for Implementation	Responsible Party
Biological Resources: California red-legged frog		
A-1. Only Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.	Pre-construction	Service-approved biologists
A-2. Ground disturbance would not begin until written approval is received from the Service that project biologist(s) are qualified to conduct the work.		Contractor
A-3. A Service-approved biologist would survey the project site no more than 48 hours before the onset of work activities.		Service-approved biologists
A-4. Before any activities begin on a project, a Service-approved biologist would conduct a training session for all construction personnel.		Service-approved biologists
A-5. A Service-approved biologist will be present at the work site until all ground-disturbing activities are completed. After this time, the Service-approved biologist will monitor the project area for compliance with all avoidance and minimization measures, or the Service-approved biologist will designate a person to monitor the project area for compliance with all avoidance and minimization measures if the Service-approved biologist will not be present. The Service-approved biologist will ensure that this monitor receives sufficient training in the identification of California red-legged frogs. The designated monitor must have experience and a background in natural resources. The Service-approved biologist or designated monitor will be given full authority to stop work if the avoidance and minimization measures are not being followed. If work is stopped, the Service will be notified immediately.	During Construction	Service-approved biologists
A-6. Unless approved by the Service, the project proponent would not impound water in the course of project activities in a manner that may attract California red-legged frogs.		District (permittee)
A-7. A Service-approved biologist would permanently remove any individuals of non-native species, such as bullfrogs (Rana catesbeiana), signal and red swamp crayfish (Pacifastacus leniusculus; Procambarus clarkii), and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist would be responsible for ensuring his or her activities comply with the California Fish and Game Code.		Service-approved biologist

A-9. To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the biologists would follow the fieldwork code of practice developed by the Declining Amphibian Populations Task Force at all times.		Service-approved biologist
Biological Resources: Steelhead		
Avoidance or Mitigation Measure	**Time Frame**	**Responsible Party**
B-1. Work shall not begin until a) the NOAA RC and/or Corps has notified the permittee that the requirements of the ESA and Clean Water Act have been satisfied and that the activity is authorized and b) all other necessary permits and authorizations are finalized.	Pre-construction	District (permittee)
B-2. The general construction season shall be from June 1 to November 30. Restoration, construction, fish relocation and dewatering activities within any wetted or flowing stream channel shall occur only within this period. If precipitation sufficient to produce runoff is forecast to occur while construction is underway, work will cease and erosion control measures will be put in place sufficient to prevent significant sediment runoff from occurring.	During Construction	District (permittee)
B-3. Prior to construction, the land manager and each contractor shall be provided with the specific protective measures to be followed during implementation of the project.	Pre-construction	Contractor/ Biologist/ District
B-4. If the thalweg of the stream has been altered due to construction activities, efforts shall be undertaken to reestablish it to its original configuration.	During Construction	Contractor
B-5. In those specific cases where it is deemed necessary to work in a flowing stream/creek, the work area shall be isolated and all the flowing water shall be temporarily diverted around the work site to maintain downstream flows during construction.	Pre-construction	CCC
B-6. Exclude fish from reentering the work area by blocking the stream channel above and below the work area with fine-meshed net or screens. Mesh will be no greater than 1/8-inch diameter.		CCC
B-7. Prior to dewatering, determine the best means to bypass flow through the work area to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic vertebrates (as described more fully below under General Conditions for Fish Capture and Relocation). Bypass stream flow around the work area, but maintain the stream flow to channel below the construction site.		CCC/Biologist/Contractor/ District

B-8. Coordinate project site dewatering with a qualified biologist to perform fish and amphibian relocation activities.		Biologist/CCC
B-9. Prior to dewatering a construction site, qualified individuals will capture and relocate fish and amphibians to avoid direct mortality and minimize take. This is especially important if listed species are present within the project site.		Service-approved biologist
B-10. When construction is completed, the flow diversion structure shall be removed as soon as possible in a manner that will allow flow to resume with the least disturbance to the substrate. Cofferdams will be removed so surface elevations of water impounded above the cofferdam will not be reduced at a rate greater than one inch per hour. This will minimize the risk of beaching and stranding of fish as the area upstream becomes dewatered.	Post Construction	CCC
B-11. Fish relocation and dewatering activities shall only occur between June 1 and November 30 of each year. If precipitation sufficient to produce runoff is forecast to occur while construction is underway, work will cease and erosion control measures will be put in place sufficient to prevent significant sediment runoff from occurring.	Pre-Construction	Service-approved biologist
B-12. A qualified fisheries biologist shall perform all seining, electrofishing, and fish relocation activities.		Service-approved biologist
B-13. All electrofishing will be conducted according to NMFS' Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act (NMFS 2000), including modifications for South Central and Southern California streams		Service-approved biologist
B-14. A minimum of three passes with the seine shall be utilized to ensure maximum capture probability of steelhead within the area.		Service-approved biologist
B-15. All captured fish shall be processed and released prior to each subsequent pass with the seine.		Service-approved biologist
B-16. The seine mesh shall be adequately sized to ensure fish are not gilled during capture and relocation activities.		Service-approved biologist
B-17. Fish shall not be overcrowded into buckets, allowing no more than 150 0+ fish (approximately six cubic inches per 0+ individuals) per 5-gallon bucket and fewer individuals per bucket for larger/older fish.		Service-approved biologist

B-18. Every effort shall be made not to mix 0+ steelhead with larger steelhead, or other potential predators, that may consume the smaller steelhead. Have at least two containers and segregate young-of-year (0+) fish from larger age-classes. Place larger amphibians in the container with larger fish.		Service-approved biologist
B-19. Salmonid predators, including other fishes and amphibians, collected and relocated during electrofishing or seining activities shall not be relocated so as to concentrate them in one area.		Service-approved biologist
B-20. All captured steelhead shall be relocated, preferably upstream, of the proposed construction project and placed in suitable habitat. Captured fish shall be placed into a pool, preferably with a depth of greater than two feet with available instream cover.		Service-approved biologist
B-21. Minimize handling of steelhead. However, when handling is necessary, always wet hands or nets prior to touching fish. Handlers will not wear insect repellents containing the chemical N,N-Diethyl-meta-toluamide (DEET).		Service-approved biologist
B-22. If more than 3 percent of the steelhead captured are killed or injured, the project permittee shall contact NMFS and CDFW.		Biologist/District (permittee)
Biological Resources: Marsh sandwort		
Avoidance or Mitigation Measure	**Time Frame**	**Responsible Party**
C-1. A qualified botanist will conduct a pre-construction survey to confirm absence of marsh sandwort and Gambel's watercress prior to commencing ground disturbance activities in the project area. If the plants are found during pre-construction surveys, including any Gambel's watercress hybrids, the botanist will flag the area and inform all workers of the need to stay out of the flagged area.	Pre-construction	Service-approved biologist
C-2. Prior to the onset of activities that could affect listed plant habitat, a qualified biologist will conduct a training session for all personnel. At a minimum, the training will include a description of relevant plants and its habitat and AMMs that should be implemented. The training session will be repeated for any new personnel.		Service-approved biologist/CCC/ Contractor/ District
Biological Resources: Morro shoulderband snail		
Avoidance or Mitigation Measure	**Time Frame**	**Responsible Party**

E-1. Only biologists approved by the Ventura Fish and Wildlife Office may conduct *any* activities related to Morro shoulderband snails. The possession of a section 10(a)(1)(A) permit does not take the place of the required approval.	Pre/During/Post Construction	Service-approved biologist
E-2. Prior to any site disturbance (e.g. vegetation removal, grading), an approved biologist will develop and deliver training to all project-related personnel.	Pre Construction	Service-approved biologist
E-3. Construction areas will be clearly marked with high-visibility flagging or barrier fencing. Construction equipment and personnel will be restricted to areas within the marked areas.		Service-approved biologist
E-4. Prior to the start of any site disturbance activities an approved biologist will conduct surveys for Morro shoulderband snail.		Service-approved biologist
E-5. An approved permitted biologist will be present daily during the site preparation (e.g. vegetation removal, ground-disturbance, grading) to monitor for the presence of Morro shoulderband snail. Any live individuals of any life stage detected during these monitoring events will be captured and moved out of harm's way or relocated to a Service-approved site by the biologist.	During Construction	Service-approved biologist
E-6. The Federal Action Agency should encourage the Permittee to collect information on the survival of Morro shoulderband snails captured and relocated as part of this project in order to provide an understanding of the efficacy of this practice as a minimization measure.	Post Construction	Service-approved biologist
E-7. The Federal Action Agency should encourage the Permittee to prepare and seek publication of an article describing all of those habitat types or conditions in which Morro shoulderband snails are found during the course of the project to provide a greater understanding of the species.		Service-approved biologist
Biological resources: General Protection of Riparian, Aquatic and Wetland Habitats		
Avoidance or Mitigation Measure	**Time Frame**	**Responsible Party**
D-1. Project proponents would re-vegetate project sites with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. The project proponent would use locally collected plant materials to the extent practicable.	Post Construction	CCC
D-2. If the project proponent or sponsoring agency determines the use of herbicides is necessary for their project, they would	During Construction	District (permittee)

coordinate further with the Service to develop suitable avoidance and minimization measures for herbicide use for their project		
D-3. Construction will occur between June 1 and November 30. Revegetation activities, including soil preparation, may extend beyond November 30, if necessary, to better ensure successful plant establishment during the onset of winter precipitation.	Post Construction	CCC
D-4. Debris, soil, silt, excessive bark, rubbish, creosote-treated wood, raw cement/ concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from projected related activities, shall be prevented from contaminating the soil and/or entering the waters of the State.	During Construction	Contractor
D-5. Where feasible, the construction shall occur from the bank, or on a temporary pad underlain with filter fabric. No mechanized equipment (e.g. internal combustion hand tools) will enter wetted channels.		
D-6. Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires crossing a rocky or cobbled substrate, a rubber tire loader/backhoe is the preferred vehicle		
D-7. The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the state (Fish and Game Code 5650).		
D-8. Prior to use, clean all equipment to remove external oil, grease, dirt, or mud. Wash sites must be located in upland locations so wash water does not flow into the stream channel or adjacent wetlands.		
D-9. All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. Oil absorbent and spill containment materials shall be located on site when mechanical equipment is in operation with 100 feet of the proposed watercourse crossings.		
D-11. To minimize further disturbance to the work area, crew size will be limited, and number of vehicles and equipment to the maximum extent feasible.		
D-12. Removal of any vegetation will be minimized to the extent feasible.		Contractor/CCC

D-13. Depending on determinations made by the ACOE, compensatory mitigation will be completed at the requisite ratio to impacts.		District (permittee)
D-14. No fill or dredge material will be placed within a designated wetland		Contractor

Cultural Resources

Avoidance or Mitigation Measure	Time Frame	Responsible Party
CR-1. For all ground disturbing construction activities, the applicant shall retain a county-approved archaeologist to monitor these activities. The applicant shall install any necessary protective field measures, as directed by the archaeologist, and shall keep them in good working order during construction. Upon discovery, the applicant shall take immediate remedial actions should corrective actions be needed. If any significant archaeological resources or human remains are found during monitoring, work shall stop within the immediate vicinity of the resource until such time as the resources can be evaluated by an archaeologist and any other appropriate individuals.	During Construction	District (permittee)
CR-2. Pursuant to RGP78 and in accordance to 36 C.F.R section 800.13, in the event of any discovery during construction of human remains, archaeological deposits, or any other type of historic property, the project manager shall notify the USACS archaeological staff within 24 hours. Construction work shall be suspended immediately and shall not resume until USACE re-authorizes project construction		
CR-3 If it becomes impossible to implement the project at a worksite without disturbing cultural or paleontological resources, then activity at that worksite shall be discontinued.		

Geology and Soils

Avoidance or Mitigation Measure	Time Frame	Responsible Party
Sed-1. When appropriate, isolate the construction area from flowing water until project materials are installed and erosion protection is in place.	Pre Construction	CCC
Sed -2. Effective erosion control measures shall be in place at all times during construction. Do not start construction until all temporary control devices (straw bales with sterile, weed free	During Construction	CCC/ District (permittee)/ Contractor

straw, silt fences, etc.) are in place downslope or downstream of the project site within the riparian area. The devices shall be properly installed at all locations where the likelihood of sediment input exists.		
Sed-3. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground to a minimum depth of 12 cm, and only sterile, weed-free straw shall be utilized. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.		District (permittee)
Sed-4. Sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters the stream network or an aquatic resource area.		CCC/ District (permittee)
Sed-5. The contractor/project applicant is required to inspect and repair/maintain all practices prior to and after any storm event, at 24-hour intervals during extended storm events, and a minimum of every two weeks until all erosion control measures have been completed.		District (permittee)/ Contractor
Sed-6. Immediately after project completion and before the close of the seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets. Remove all artificial erosion control devices after the project area has fully stabilized. All exposed soil present in and around the project site shall be stabilized within 7 days. Erosion control devices such as coir rolls or erosion control blankets will not contain plastic netting of a mesh size that would entrain reptiles and amphibians.	Post Construction	CCC
Sed-7. All bare and/or disturbed slopes (larger than 10’ x 10’ of bare mineral soil) will be treated with erosion control measures such as straw mulching, netting, fiber rolls, and hydroseed as permanent erosion control measures.		CCC/ District (permittee)
Sed-8. Where straw, mulch, or slash is used as erosion control on bare mineral soil, the minimum coverage shall be 95% with a minimum depth of two inches.		CCC/ District (permittee)
Sed- 9. The project proponent would limit the number of access routes, size of staging areas, and the total area of the activity to the minimum necessary to achieve the project goals.		District (permittee)

Hazards and Hazardous Materials		
Avoidance or Mitigation Measure	**Time Frame**	**Responsible Party**
ASB-1. All Class I, II and III asbestos work shall be conducted within regulated areas. All other operations covered by this standard shall be conducted within a regulated area where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed a PEL. Regulated areas shall comply with the requirements of subsections (2), (3), (4), and (5) of this subsection.	During Construction	Asbestos Contractor
ASB-2. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs shall be provided and displayed pursuant to the requirements of subsection (k)(7) of this section.		
ASB-3. Access to regulated areas shall be limited to authorized persons and to persons authorized by the Chief or Director.		
ASB-4. All persons entering a regulated area where employees are required pursuant to subsection (h)(1) of this section to wear respirators shall be supplied with a respirator selected in accordance with subsection (h)(2) of this section.		
ASB-5. Prohibited activities. The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.		
ASB-6. Competent Persons. The employer shall ensure that all asbestos work performed within regulated areas is supervised by a competent person, as defined in subsection (b) of this section		
Hydrology + Water Quality		
Avoidance or Mitigation Measure	**Time Frame**	**Responsible Party**
Sed-1. When appropriate, isolate the construction area from flowing water until project materials	Pre Construction	CCC

are installed and erosion protection is in place.		
Sed -2. Effective erosion control measures shall be in place at all times during construction. Do not start construction until all temporary control devices (straw bales with sterile, weed free straw, silt fences, etc.) are in place downslope or downstream of the project site within the riparian area. The devices shall be properly installed at all locations where the likelihood of sediment input exists.	During Construction	CCC/ District (permittee)/ Contractor
Sed-3. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground to a minimum depth of 12 cm, and only sterile, weed-free straw shall be utilized. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.		District (permittee)
Sed-4. Sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters the stream network or an aquatic resource area.		CCC/ District (permittee)
Sed-5. The contractor/project applicant is required to inspect and repair/maintain all practices prior to and after any storm event, at 24-hour intervals during extended storm events, and a minimum of every two weeks until all erosion control measures have been completed.		District (permittee)/ Contractor
Sed-6. Immediately after project completion and before the close of the seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets. Remove all artificial erosion control devices after the project area has fully stabilized. All exposed soil present in and around the project site shall be stabilized within 7 days. Erosion control devices such as coir rolls or erosion control blankets will not contain plastic netting of a mesh size that would entrain reptiles and amphibians.	Post Construction	CCC
Sed-7. All bare and/or disturbed slopes (larger than 10’ x 10’ of bare mineral soil) will be treated with erosion control measures such as straw mulching, netting, fiber rolls, and hydroseed as permanent erosion control measures.		CCC/ District (permittee)
Sed-8. Where straw, mulch, or slash is used as erosion control on		CCC/ District

bare mineral soil, the minimum coverage shall be 95% with a minimum depth of two inches.		(permittee)
Sed- 9. The project proponent would limit the number of access routes, size of staging areas, and the total area of the activity to the minimum necessary to achieve the project goals.		District (permittee)

Section II. Monitoring and Reporting

The District, as the permittee, shall meet each of the reporting requirements described below:

Obligations of the Permittee
The District shall have primary responsibility for monitoring compliance with all measures in theis Plan. Measures must be implemented within the time periods indicated above and the reporting program listed below.
The District shall ensure that implementation of the measures in this Plan and shall monitor the effectiveness of the measures.
Reporting
The District shall submit all requisite documents and plans to each regulatory agency involved in the Project prior to commencing project activities
A Service-approved biologist will convene a training session for all field staff. The District shall submit the sign-in sheet from that training session to CDFW within one week of the training
The District shall submit results of the pre-activity surveys to each regulatory agency involved in the Project at least one week prior to commencing construction.
The District shall provide a list of Biologists approved to handle CRLF and Steelhead to CDFW prior to the start of Project activities
The District shall provide results of nesting bird surveys if any project activities are scheduled during the the avian nesting season, submitted to CDFW within one week of project activities
The District shall submit an Emergency Response Plan to each regulatory agency involved in the Project at least two weeks prior to commencing construction.
The District shall provide final designs of dewatering activities to each regulatory agency involved in the Project at least two weeks prior to commencing construction.
The District shall provide a planting plan to CDFW least two weeks prior to starting implementation
The District shall provide an annual report of compensatory plantains to CDFW by December 31 of each year.

The District shall provide a seed mix to be used for erosion control to CDFW for approval prior to application
The District shall provide a final project report within 30 days after the completion of the project to each regulatory agency involved in the Project.

Appendix F: Cultural Resource Findings Report

Cultural Resource Study for the Los Osos Creek Restoration Project, Los Osos, San Luis Obispo County, California

Amber Long, Erin Enright, and Philip Clarkson

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November 2020
draft

USGS Morro Bay South 7.5-minute topographic quadrangle; T30S, R11E
81.7 acres
CA-SLO-31, CA-SLO-214, CA-SLO-1274
Keywords: Canada de Los Osos y Pecho y Islay Land Grant

MANAGEMENT SUMMARY

At the request of the Coastal San Luis Resource Conservation District (CSLRCD), Applied EarthWorks, Inc. (*Æ*) completed a cultural resource study for 1951 Turri Road, Assessor's Parcel Number 067-011-048, near the confluence of Los Osos and Warden creeks, in Los Osos, San Luis Obispo County, California. CSLRCD proposes the removal of all nonessential man-made infrastructure including extant buildings and utilities in order to restore the natural hydrologic functions of the creeks and reestablish their historic channels and floodplains (Project). Activities will include breaching levees, grading stream channels, and improving road crossings. The Project requires permits and authorizations from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the County of San Luis Obispo.

In support of the Project, *Æ* conducted a cultural resource study that included both archaeological resources and historic built-environment elements. To inventory and assess archaeological resources and historic buildings, *Æ*'s study included a records search from the CCIC, an in-house records search, and review of documents provided by CSLRCD. Fieldwork included a pedestrian survey over accessible portions of the parcel to document both archaeological and historic building and features. Additionally, due to the sensitivity for prehistoric materials, *Æ* initiated Native American tribal communication.

Results of background research and the pedestrian survey identified historic built-environment features (residence, barn, and shed) are present within prehistoric archaeological site, CA-SLO-31. As a result of *Æ*'s field survey, the recorded boundary of CA-SLO-31 was extended to include an additional 3 acres within the Project area. A collapsed accessory building behind the barn was not recorded or evaluated due to safety concerns and levees along Warden Creek were not evaluated because there were not 50 years old. In addition, two other previously recorded archaeological sites (CA-SLO-1404 and -2535) are present on the boundary of the study area but were not evaluated as they are not within areas where impacts will occur.

The historic-era buildings were evaluated for their eligibility on the NRHP/CRHR and none were found eligible. As it was not feasible to conduct archaeological testing at CA-SLO-31 to determine its NRHP/CRHR eligibility, for the purpose of this Project/undertaking CA-SLO-31 is assumed to be eligible and is considered a "historic property."

The potential Project impacts to CA-SLO-31 were assessed by reviewing each Project component. CSLRCD revised the Project design to reduce ground disturbance and avoid impacts. The material removed from the levees at Warden Creek will be used as fill to cap CA-SLO-31 to prevent impacts during demolition activities. However, several Project components have the potential to adversely impact CA-SLO-31, therefore, *Æ* recommends avoidance, use of fill, and construction monitoring to address potential impacts to the deposit at CA-SLO-31.

Field notes, maps, and a complete set of photographs from the current investigation are on file at *Æ*'s office in San Luis Obispo, California. A copy of the final version of this report will be

submitted to the CCIC of the California Historic Resources Information System at the University of California, Santa Barbara.

CONTENTS

APPENDICES

FIGURES

FIGURES (CONTINUED)

TABLES

1
INTRODUCTION

At the request of the Coastal San Luis Resource Conservation District (CSLRCD), Applied EarthWorks, Inc. (*Æ*) completed a cultural resource study for 1951 Turri Road, Assessor's Parcel Number 067-011-048, near the confluence of Los Osos and Warden creeks, in Los Osos, San Luis Obispo County, California (Figure 1-1). The 81.7-acre parcel is in an unsectioned portion of Township 30 South, Range 11 East of the Cañada de Los Osos y Pecho y Islay Land Grant as depicted on the U.S. Geological Survey (USGS) Morro Bay 7.5-minute topographic quadrangle (Figures 1-2 and 1-3).

1.1 PURPOSE OF INVESTIGATION

CSLRCD proposes the removal of all nonessential man-made infrastructure including extant buildings and utilities to restore the natural hydrologic functions of the creeks and reestablish their historic channels and floodplains (Project). Activities will include breaching levees, grading stream channels, and improving road crossings. The Project requires permits and authorizations from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the County of San Luis Obispo (County).

Due to the requirement for Federal permits, the Project is considered a "federal undertaking" and is subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 Code of Federal Regulations 800. The Project will also require permits from the County and is therefore subject to the requirements of the California Environmental Quality Act (CEQA).

In support of the Project, *Æ* conducted a cultural resource study that included both archaeological resources and historic built-environment elements. To properly inventory and assess archaeological resources and historic buildings, *Æ*'s study included a records search from the Central Coast Information Center (CCIC) of the California Historical Resources Information System (CHRIS) at the University of California, Santa Barbara, an in-house records search, and review of documents provided by CSLRCD. Fieldwork consisted of a pedestrian survey over accessible portions of the parcel to document both archaeological and historic buildings and features. Additionally, due to the sensitivity for prehistoric materials, *Æ* initiated Native American tribal communication.

This document provides a summary of the background research, study methods, summary of archaeological sites and overall sensitivity for prehistoric cultural materials in the Project vicinity, description and evaluation of the built-environment features, assessment of potential Project effects, and recommendations.

1.2 PROJECT LOCATION AND STUDY AREA

The Project area includes 81.7 acres of APN 067-011-048. At this time, the Area of Potential Effects has not been formally defined by the lead federal agency; therefore, for the purposes of this study, the Project area is referred to as the study area or parcel (Figure 1-4). Los Osos and

Figure 1-1 Project vicinity in San Luis Obispo County, California.

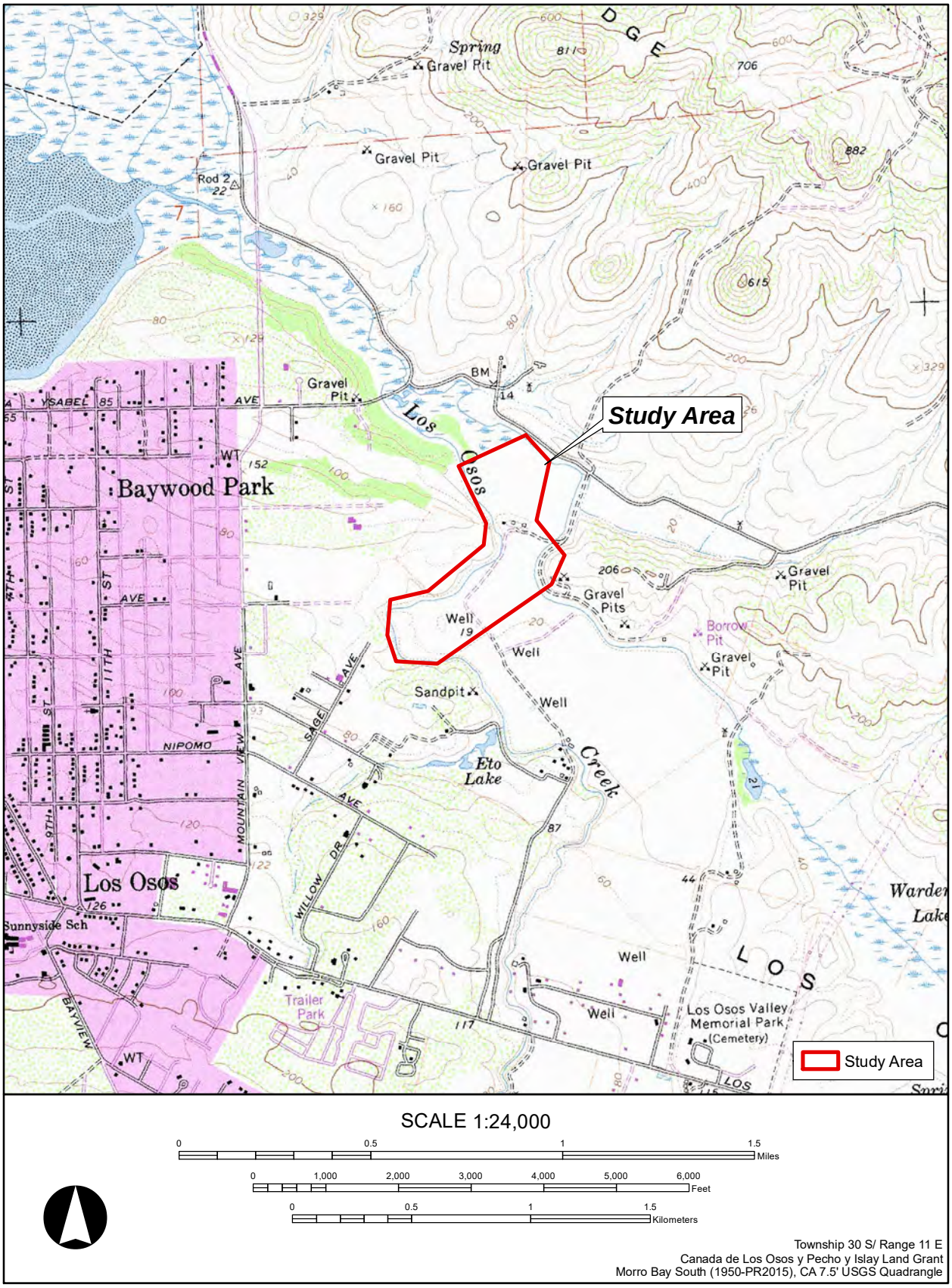

Figure 1-2 Study area on the USGS Morro Bay South 7.5-minute quadrangle.

Figure 1-3 Aerial view of the study area.

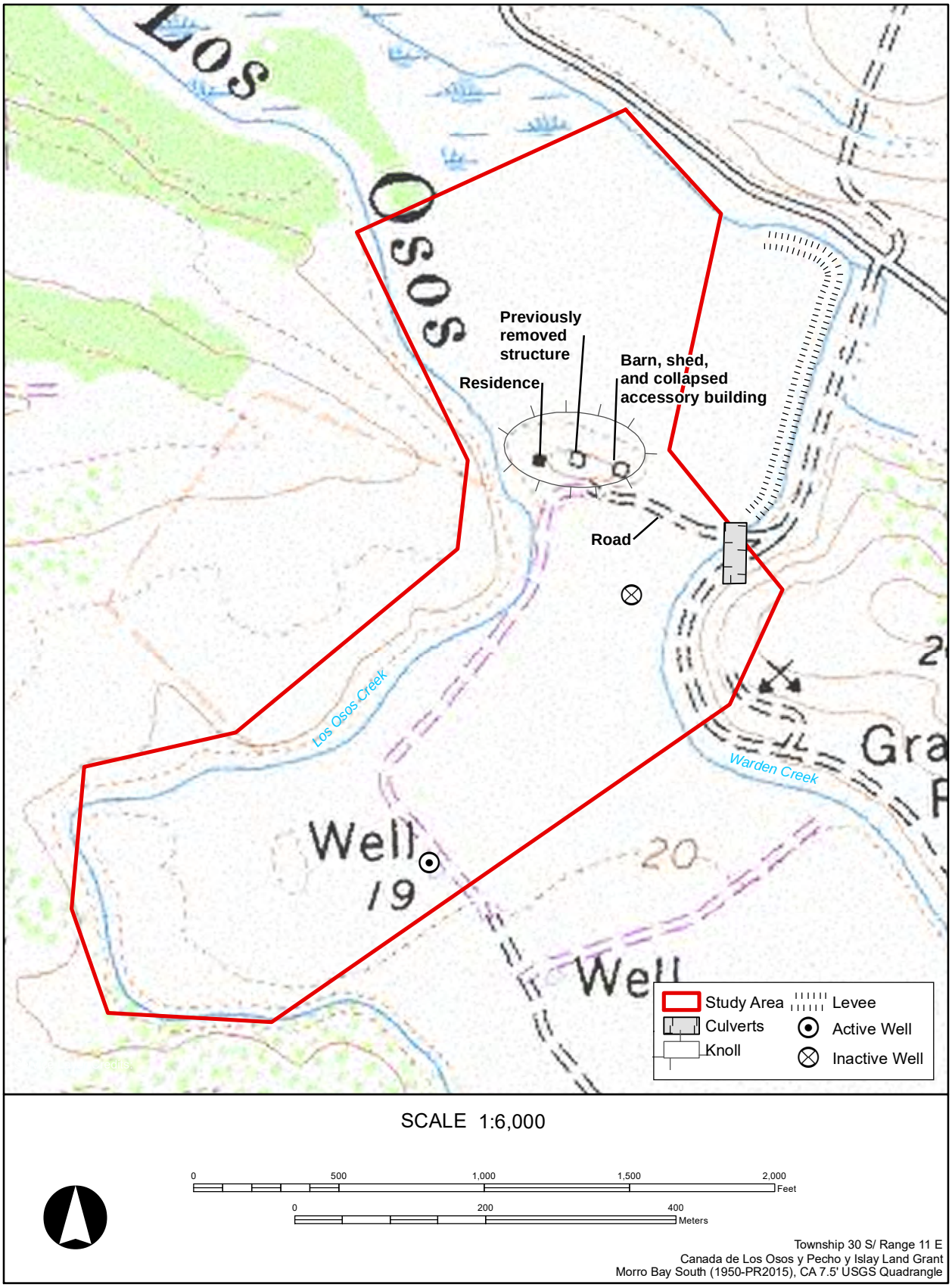

Figure 1-4 Components within the study area.

Warden creeks run through the property and an earthen levee is present west of Warden Creek in the north part of the parcel. There are culverts where Warden Creek meets the access road to the high knoll, close to the center of the study area. A single-family residence, barn, shed, and collapsed accessory building are extant on the knoll. An inactive domestic well and an active agricultural well are also present on the parcel. The parcel was historically used as a homestead and ranch with agriculture as the primary activity. In 2015, the parcel was donated to the CSLRCD and allowed to naturally revegetate. A large portion of the proposed work will occur on the knoll.

Of note, when Æ requested records search from the CCIC the study area had not been fully defined. As a result, the records search covered the study area and neighboring parcels. Later CSLRCD refined the study area to only include APN 067-011-048. Therefore, the CCIC records search results include information on resources and reports that are more than 0.25 mile from the study area. In this document, Æ focused on only the resources inside or within 0.25 mile of the revised study area. Records search results are provided in Appendix A.

1.3 NATIVE AMERICAN COMMUNICATION

Æ contacted the Native American Heritage Commission (NAHC) to determine whether any cultural resources recorded in the Commission's Sacred Lands File occurred in or near the study area. The NAHC responded to Æ's information request on June 18, 2020 noting that its search of the Sacred Lands File indicated the presence of Native American traditional sites/places in the immediate study area. The NAHC provided a contact list of local Native American individuals and groups and suggested Æ request more information from these contacts. Æ sent notification letters on June 23, 2020 to individuals on the NAHC list informing them of the nature and intent of the Project and soliciting comments or concerns. Follow-up phones calls were initiated on July 24, 2020. Table 1-1 identifies each individual or group on the list that was contacted and provides the responses to the request for information. Tribal communication is provided in Appendix B.

Table 1-1
Native American Communication Results

Name	Tribe/Group	Comments
Patrick Tumamait	Barbareno/Ventureno Band of Mission Indians	Letter sent 6/23/2020. Phone conversation on 6/30/2020. Recommends monitoring of all earth-moving activities and an Extended Phase 1 study.
Elenor Arrellanes	Barbareno/Ventureno Band of Mission Indians	Letter sent 6/23/2020. Message left 7/24/2020.
Julie Tumamait-Stenslie	Barbareno/Ventureno Band of Mission Indians	Letter sent 6/23/2020. Message left 7/24/2020.
Raudel Banuelos	Barbareno/Ventureno Band of Mission Indians	Letter sent 6/23/2020. Message left 7/24/2020.
Julio Quair	Chumash Council of Bakersfield	Letter sent 6/23/2020. Called 7/24/2020, no voice messaging system set-up.
Mariza Sullivan	Coastal Band of the Chumash Nation	Letter sent 6/23/2020. Phone conversation on 7/24/2020, will review letter and comment later.
Fred Collins	Northern Chumash Tribal Council	Letter sent 6/23/2020. Message left 7/24/2020.

Table 1-1 (continued)
Native American Communication Results

Name	Tribe/Group	Comments
Fredrick Segobia	Salinan Tribe of Monterey and San Luis Obispo Counties	Letter sent 6/23/2020. Phone conversation on 7/24/2020, deferred to Patti Dunton. Pattie Dunton requests formal consultation under AB 52.
Mark Vigil	San Luis Obispo County Chumash Council	Letter sent 6/23/2020. Called 7/24/2020, phone is disconnected.
Kenneth Kahn	Santa Ynez Band of Chumash Indians	Letter sent 6/23/2020. Phone call with Freddie Romero on 7/20/2020 deferring to Mona Tucker.
Donna Haro	Xolon-Salinan Tribe	Letter sent 6/23/2020. Called 7/24/2020, voicemail is full.
Karen White	Xolon-Salinan Tribe	Letter sent 6/23/2020. Phone conversation 7/24/2020, no concerns.
Mona Tucker	*yak tityu tityu yak tilhini* Northern Chumash Tribe	Letter sent 6/23/2020. Phone conversation on 7/24/2020. Requests formal consultation.

1.4 PERSONNEL QUALIFICATIONS

Æ Principal Archaeologist Erin Enright (M.A., Registered Professional Archaeologist 16575) served as principal investigator, co-authored, and provided technical review of this document. *Æ* Senior Architectural Historian Amber Long (M.A.) served as project manager, project architectural historian, conducted a built environment field survey, and co-authored the report. *Æ* Staff Archaeologist Philip Clarkson (B.A.) conducted the archaeological field survey, communicated with Native American representatives, initiated records searches at the NAHC Sacred Lands Inventory and the CCIC, and contributed to the report.

1.5 REPORT ORGANIZATION

This report was prepared in accordance with *Archaeological Resource Management Reports: Recommended Contents and Format* published by the California Office of Historic Preservation (Office of Historic Preservation 1990). This document consists of seven chapters. Following this introduction, Chapter 2 describes the environmental and cultural setting of the study area. Chapter 3 presents *Æ*'s methods for the study, including background research and field investigations. Results of the research and archaeological investigations are discussed in Chapter 4, while Chapter 5 discusses the results of the built environment investigations. Chapter 6 contains a summary, provides an assessment of effects, and provides recommendations. A complete listing of references cited is provided in Chapter 7. Appendix A presents the results of the records search and Appendix B contains the documentation of communication with the NAHC and local tribal representatives. Appendix C contains updated Department of Parks and Recreation (DPR) forms.

2
ENVIRONMENTAL AND CULTURAL CONTEXT

2.1 NATURAL SETTING

The parcel lies within San Luis Obispo County in the southern extent of the Coast Ranges geologic province. The Coast Ranges were formed by pressure between the North American and Pacific plates, which folded the North American Plate into a series of northwest-southeast trending ridges and valleys and raised the coastline. Coastal terraces were formed through tectonic uplift and periodic fluctuations in sea levels, while rivers and streams flowing from the mountains cut through these terraces, creating coastal valleys (Pletka and Pletka 2004).

The local Mediterranean climate is typically warm and dry in the summer and cool and wet in the winter. Most of the county's rivers, creeks, and streams remain dry during the summer months. Temperatures near the coast are generally moderated by the proximity of the Pacific Ocean. Average annual temperatures in Los Osos range from 43 to 70 degrees Fahrenheit, with August being the warmest month and December and January being the coldest. Precipitation occurs primarily as winter rain between November and March, with the wettest month usually being January. Mean annual precipitation in Los Osos is 18 inches (BestPlaces 2020).

Native habitats include densely vegetated riparian zones and flood plains with blackberry bushes, poison oak, oak trees, and willows. The eastern part of the study area consists of chaparral communities situated on a hill.

2.2 PREHISTORY

Early attempts at regional cultural chronology by Rogers (1929) and Olson (1930) divided prehistory into three periods. However, extensive archaeological studies since then and development of more precise dating methods have allowed many refinements to the San Luis Obispo cultural sequences. Currently, the most common chronological system—based on work by Erlandson and Colten (1991), Jones and Ferneau (2002), Jones et al. (2007), King (1990), and Jones et al. (2015)—divides Central Coast prehistory into six periods (Table 2-1).

Table 2-1
Regional Chronology of the Central Coast

Period	Years B.C./A.D.	Calibrated Years B.P.
Paleo-Indian	pre-8000 B.C.	pre-10,000
Early Archaic	8000–3500 B.C.	10,000–5500 B.P.
Early	3500–600 B.C.	5500–2600 B.P.
Middle	600 B.C.–A.D. 1000	2600–950 B.P.
Middle-Late Transition	A.D. 1000–1250	950–700 B.P.
Late	A.D. 1250–1769	700 B.P.–Historic

2.2.1 Paleo-Indian Period (Pre-10,000 cal B.P.)

The Paleo-Indian Period represents the earliest human occupations in the region, which began prior to 10,000 years ago. Paleo-Indian sites throughout North America are known by the representative fluted projectile points, crescents, and large bifaces used as tools as well as flake cores and a distinctive assemblage of small flake tools. Only three fluted points have been reported from Santa Barbara and San Luis Obispo counties, and all are isolated occurrences unassociated with larger assemblages of tools or debris (Erlandson et al. 1987; Gibson 1996; Mills et al. 2005). More evidence of Paleo-Indian sites on the mainland is slowly being discovered, however, and recent work on Vandenberg Air Force Base (AFB) uncovered a late Paleo-Indian site (CA-SBA-1547) with a robust artifact assemblage (Lebow et al. 2015). Data recovery work at this location has documented a dense single-component shell midden dating to approximately 10,725 calibrated years before present (cal B.P). Data from this site, also known as the Sudden Flats Site, point to an early culture that utilized a unique tool assemblage exhibiting traits derived from Alaska/Beringia (Lebow et al. 2015).

Interestingly, early sites on San Miguel and Santa Rosa islands have yielded numerous radiocarbon dates of older Paleo-Indian age than the Sudden Flats Site. Additionally, these sites do not contain fluted points or other notable artifacts typically associated with Paleo-Indian adaptations (Agenbroad et al. 2005; Erlandson et al. 1996). Nonetheless, both offshore and mainland sites provide clear evidence of watercraft use by California's earliest colonizers, and also offer tantalizing evidence of pre-Clovis occupations. Overall, inhabitants of the Central Coast during the Paleo-Indian Period are thought to have lived in small groups with a relatively egalitarian social organization and a forager-type land-use strategy (Erlandson 1994; Glassow 1996; Greenwood 1972; Moratto 1984)

2.2.2 Early Archaic Period (10,000-5500 cal B.P.)

Additional evidence of human occupation has been found at sites dating to the Early Archaic. A growing number of Early Archaic, components have been identified, most located in coastal or pericoastal settings. Two such components, at CA-SLO-2 (Diablo Canyon) and CA-SLO-1797 (the Cross Creek Site), are radiocarbon dated between 10,300 and 8500 cal B.P., providing the earliest evidence for the widespread California Milling Stone adaptive pattern (Greenwood 1972; Jones et al. 2008). The most common artifacts in these assemblages are the eponymous milling slabs and handstones used to grind hard seeds and process other foodstuffs. Choppers, core tools, and large bifaces also are common, while side-notched dart points, pitted stones, simple bone awls, bipointed bone gorges, and possible eccentric crescents occur in lesser frequencies. Population density likely remained low, although settlements may have been semipermanent. Subsistence activities appeared to be aimed broadly at a diverse spectrum of terrestrial and marine resources.

During this time, people appear to have subsisted largely on plants, shellfish, and some vertebrate species using a seemingly simple and limited tool technology. Sites of this age are notable for the prevalence of handstones and milling slabs and less abundant flaked tools and projectile points (Jones et al. 2007). Archaeological components from central California show substantial regional variability. Differences in site location, artifact assemblages, and faunal remains suggest that populations were beginning to establish settlements tethered to the unique

characteristics of the local environment and adopt subsistence practices responsive to local conditions. Obsidian from several of these components originated on the east side of the Sierra Nevada, suggesting that long-distance trade networks were also established during this era. Glassow (1990, 1996) infers that occupants of sites in the Vandenberg area during this time were sedentary and had begun using a collector-type (i.e., logistically mobile) land-use strategy; however, others have argued for a broader and less permanent subsistence base as overexploitation of coastal resources pushed human residents towards the interior (Jones and Richman 1995).

2.2.3 Early Period (5500-2600 cal B.P.)

An important adaptive transition occurred along the Central Coast around 5500 cal B.P. (Jones et al. 2007; Price et al. 2012). Technological changes marking the transition into the Early Period include an abundance of contracting-stemmed, Rossi square-stemmed, large side-notched, and other large projectile points (Jones et al. 2007:138). Mortars and pestles were introduced and gradually replaced manos and milling slabs as the primary plant processing tools, indicating expansion of the subsistence base to include acorns (Glassow and Wilcoxon 1988). Shell beads and obsidian materials indicate that trade between regions expanded (Jones et al. 1994). Site occupants appear more settled with more limited mobility, and they increasingly used sites for resource procurement activities such as hunting, fishing, and plant material processing (Jones et al. 1994:62; Jones and Waugh 1995:132). Farquhar et al. (2011:14) argue that cultural changes during this period are the result of population circumscription and economic intensification. Echoing Rogers (1929), Price et al. (2012:36–37) suggest such constraints might have been prompted by the arrival of new populations or adoption of new social norms in the region.

2.2.4 Middle Period (2600-950 cal B.P.)

The Middle Period is defined by continued specialization in resource exploitation and increased technological complexity. Contracting-stemmed points still existed, while square-stemmed and large side-notched variants disappeared (Rogers 1929). The use of mortars and pestles also increased. Additionally, expansion of trade is evident in the increased quantity of obsidian, beads, and sea otter bones (Farquhar et al. 2011:15). Circular shell fishhooks, which facilitated an increase in exploitation of fishes, appeared for the first time (Glassow and Wilcoxon 1988). The appearance of small leaf-shaped projectile points toward the end of the period is evidence for the arrival of bow and arrow technology (Jones et al. 2007:139).

2.2.5 Middle-Late Transition Period (950-700 cal B.P.)

The Middle-Late Transitional Period represents a rapid change in artifact assemblages as large numbers of arrow points appeared and most stemmed points disappeared (Jones et al. 2007:139). Hopper mortars also made their first entry in the archaeological record (Farquhar et al. 2011:16). At the same time, some evidence points to population decline and interregional trade collapse. Obsidian is not found in sites dating to this period (Jones et al. 1994). Settlement shifted away from the coast and people relocated to more interior settings (Jones 1995:215). Marine resources appear to have been largely dropped from the diet, and instead people relied more on terrestrial resources such as small mammals and acorns (Farquhar et al. 2011:16). These changes may have been caused by an environmental shift that increased sea and air temperatures, resulting in

decreased precipitation and overexploitation of resources (Arnold 1992; Graumlich 1993; Kennett et al. 1997; Pisias 1978; Stine 1990).

At the same time it appears that social complexity became more noticeable during the transition between the Middle and Late periods. It is during this time that craft specialization and social ranking developed (Arnold 1992). The *tomol* (plank canoe), which was utilized by the Chumash south of Point Conception where ocean conditions were more favorable, allowed for a greater reliance on marine resources, particularly fish, for food. However, these changes are again more noticeable south of Point Conception, and may have been due, in part, to environmental changes occurring at that time.

2.2.6 Late Period (700 cal B.P.-Historic)

Populations on the Central Coast expanded in the Late Period (Farquhar et al. 2011:17; Glassow 1996). More sites were occupied during this period than ever before (Jones et al. 2007:143). It appears that the inhabitants of the Central Coast used a range of subsistence strategies depending on the available local ecology. Some studies have found that Late Period residents did not increase maritime subsistence activities but instead continued to demonstrate a terrestrial focus with occasional forays to the coastal zone to procure marine products (Farquhar et al. 2011:17; Jones et al. 2007:140; Price 2005; Price et al. 1997:4.13–14.14). However, archaeological investigations at Late Period coastal sites along the Central Coast show evidence of intensification of marine resource use and overall expansion of the subsistence base (Codding et al. 2013; Enright 2010; Joslin 2010; Moratto et al. 2009). Analysis of assemblages from two Late Period sites on the San Simeon Reef (Joslin 2010) and excavations at Tom's Pond (CA-SLO-1366/H) on the Pecho Coast (Codding et al. 2013) demonstrate that some human populations responded to climate shifts and associated impacts to terrestrial faunal communities with an increased use of the marine subsistence base. This same trend is visible to the south, along the Vandenberg AFB coast where analysis of faunal assemblages from CA-SBA-694 and -695 found that Late Period inhabitants used coastal sites as camps for exploitation of marine resources, especially shellfish and fish (Enright 2010; Moratto et al. 2009).

Artifact assemblages from the Late Period within San Luis Obispo County contain an abundance of arrow points, small bead drills, bedrock mortars, hopper mortars, and a variety of bead types (Price 2005). More shell and stone beads appeared in the Late Period and became a more standardized and common form of exchange (Jones et al. 2007:140, 145). The use of handstones and milling slabs continued during this period, but pestles and mortars occurred in greater proportions (Jones and Waugh 1995:121). There are few records of Spanish encounters with the Chumash north of Point Conception (Glassow 1990). However, in San Luis Obispo County it appears that the absence of the *tomol* and a lower population density contributed to a different social and political organization than their neighbors to the south. Moreover, the absence of imported obsidian after 900 cal B.P. suggests a change in trade relationships that is likely associated with the shift in settlement patterns (Jones et al. 1994).

2.3 ETHNOGRAPHY

The study area lies within the ethnographic territory of the Chumash, one of the most populous and socially complex Native American groups in California. Chumash is a name derived from

traditional Barbareño Chumash language that is used by anthropologists to refer to several closely related groups of Native Americans that spoke seven similar languages (Milliken 2010). The Chumash people lived between Malibu in Los Angeles County and the Monterey County line, on the northern Channel Islands, and east as far as the edge of Kern County.

Ethnographically, the Chumash people lived in large villages along the Santa Barbara Channel coast, with less dense populations in the interior regions, on the Channel Islands, and in coastal areas north of Point Conception. Population density was unusually high for a nonagricultural group; some villages may have had as many as 1,000 people (Keeley 1988). Subsistence was focused on fishing, hunting, and gathering native plants, particularly acorns, although many animals and dozens of plants were used for food. Chumash people engaged in craft and occupational specialization, and they maintained regional trade and religious systems that tied many villages together. Leadership was hereditary, and some chiefs had influence over several villages, indicating a simple chiefdom level of social organization (Arnold 1992; Johnson 1988).

The Chumash were hunter-gatherer-fishers who relied on a variety of resources for subsistence and raw materials. There was considerable seasonal and regional variability in land use, settlement, and subsistence practices across Chumash territory—people who lived near the coast focused animal procurement activities on the marine environment, while those north of Point Conception and in the interior regions were more terrestrially focused and are thought to have had lower population densities and greater seasonal mobility than coastal groups (Landberg 1965). Trade or acquisition of various resources through expeditions was a regular occurrence, and animal remains, and lithic raw materials are often found in archaeological sites at some distance from their sources.

The study area lies within the ethnohistoric territory of the Northern (Obispeño) Chumash (Milliken 2010). Disagreements exist regarding the boundaries of this geographic and linguistic subarea; however, most researchers believe Northern Chumash territory extended from the Santa Maria Valley in the south to Cayucos in the north and east to the Carrizo Plain (Greenwood 1978; Jones et al. 2012; Lichtenstein et al. 2014).

2.4 REGIONAL HISTORY

European exploration of the coast began with the expedition of Juan Rodriguez Cabrillo. He sailed the California coast in 1542, seeing the areas now known as Estero Bay and Morro Bay. It was not until 1769 and the overland expedition of Gaspar de Portolá, that long-term contact between the Northern Chumash and Europeans was initiated. As a result of this expedition, two missions were established in Northern Chumash territory: San Luis Obispo de Tolosa in 1772 and San Miguel Arcángel in 1797. These missions had significant and direct impacts on the indigenous people, who suffered the combined effects of forced acculturation, disease, and outright conflict (Jones et al. 2015).

California became a Mexican territory in 1822. Mexican authorities opened California's door to foreign trade and immigration. The beneficiaries of this policy were predominantly the missions, which could legally expand their hide and tallow trade to foreign merchants (Hoover et al. 1990). The Colonization Act of 1824 and the Supplemental Regulations of 1828 afforded private individuals—both Mexican nationals and immigrants—the right to obtain title to land, although

mission lands were not available. Immigrant-friendly laws directly contributed to the migration and eventual permanent presence of Anglo-Americans in California. The Secularization Act of 1833 officially ended the church's monopoly of prime California lands and redistributed the mission estates to private individuals in the form of land grants.

During the 1840s, the former mission lands of San Luis Obispo County were carved up into large ranchos, each totaling several thousand acres (Robinson 1957:14–16). Governor Juan Bautista Alvarado granted Rancho Cañada de Los Osos to Victor Linares in 1842. Linares was a retired soldier and alcalde, or mayor, of San Luis Obispo. Captain John Wilson, a Scottish shipmaster, bought the rancho from Linares in 1844 with his business partner James Scott. In 1845, the rancho was combined with Rancho Pecho y Islay to the south, forming the 32,430-acre Rancho Cañada de Los Osos y Pecho y Islay. That same year, Governor Pio Pico granted Wilson and Scott the 3,167-acre Rancho Cañada del Chorro, bordering Rancho Cañada de Los Osos on the north. During Wilson's time, Los Osos Valley was used for pasturing his 12,000 to 14,000 long-horned Spanish cattle and a large herd of Spanish horses (County of San Luis Obispo 2009).

The Bear Flag Revolt of 1846 resulted in California's independence from Mexico and control of the territory soon fell to the United States (Krieger 1988). Rancho owners had to defend their land titles in U.S. courts, a process that would last over a decade for some petitioners, pushing many into financial hardship. When California achieved statehood in 1850, immigrants were primarily drawn to the riches found in the gold fields of the Sierra Nevada. Others, however, travelled south in search of public lands to farm and homestead. The remoteness of the region was responsible for the slow growth of the area. The 1850 census listed 336 residents and the population of the County remained relatively unchanged throughout the 1850s (Miller 1985). Following Captain Wilson's death in 1861, the severe and widespread drought of 1863–1864 resulted in the loss of all the Wilson family's cattle and horses (Angel 1883). The family gradually sold off the estate to pay their debts. Land was inexpensive in the post-drought years, and sheep herders and dairymen brought their livestock to the region (JRP Historical Consulting 2008).

Development of the transportation network spurred growth in the County. In 1870, Franklin Riley founded Morro Bay on his 160-acre homestead and built an embarcadero that encouraged steamship traffic along the coast (Hammond 2010). The same year the first county road connected San Luis Obispo to San Simeon, and a road over Cuesta Pass was constructed in 1877 (Krieger 1988:75–76). In the 1880s steam powered locomotives and narrow-gauge railways were constructed in parts of the County, but the steep Cuesta Pass prevented the railroad lines from connecting (Best 1992). The rugged terrain of the Central Coast meant that by the 1890s, the area was still relatively isolated from the rest of the state. Access to coastal communities such as Los Osos, Morro Bay, Cayucos, or San Simeon were challenging due to poor roads, stream crossings and frequent flooding. In turn, this prevented the early growth of those communities particularly after the decline of trade from steam ships. The Southern Pacific Railroad completed a line through the Cuesta Pass in 1901 and established a continuous line between San Francisco and Los Angeles (Best 1992).

2.5 HISTORY OF LOS OSOS

The emerging dairy industry in the Los Osos Valley prompted the establishment of El Moro in 1889, which is today Baywood Park. News that the Southern Pacific Railroad might build a new line along the coast prompted speculative land development, creating new towns like El Moro in the hopes of capitalizing on the new rail line. A handful of buildings were built on what is now Second Street in Baywood Park and land was cleared for a boat landing. Lots were surveyed, and a "hotel reserve" was staked off. The Southern Pacific Railroad reached the City of San Luis Obispo in 1894 but bypassed the coast entirely. Ultimately, the El Moro development failed, and the town remained virtually unused for another 30 years (La Vista 1973).

Walter Redfield, a real estate agent for the Atascadero Colony, revived the subdivision in 1919. Three thousand 25 by 125 foot lots within El Moro were made available at $1 apiece. Though many investors considered the land unsuitable for agriculture or ranching because it was rough and overgrown with brush, he took options on all available lots and sought financing. His bid for a loan was turned down, but he eventually raised the necessary funds on his own by advance selling 285 lots at $10 each and gained control of the subdivision (JRP Historical Consulting 2008; Sullivan 2006). Between 1921 and 1922, Richard Otto obtained financial backing to purchase lots in El Moro (Sullivan 2006). He changed the name to Baywood Park and begin developing it in 1924 (John F. Rickenbach Consulting 2020)

The onset of World War II prompted construction of the Morro Bay Naval Station in 1941, at the north end of Morro Bay. The U.S. Army established large infantry training bases at Camp Roberts and Camp San Luis Obispo. The beaches and inland areas between the navy base and Camp San Luis Obispo became a training area of approximately 740 acres (Krieger 1988). Between 1942 and 1945, the military practiced amphibious landings and assaults on these sand dunes southwest of Cuesta-by-the-Sea. In 1943, U.S. Army acquired 8,910 acres of public and private land to create the Baywood Park Training Area that was used until 1946 as a training and camping site for troops stationed at Camp San Luis Obispo and Morro Bay Naval Station (U. S. Army Corps of Engineers 2020). In addition, portions of the hills directly east of the beach, in Los Osos, were used for an artillery range. Following the war, military activities in the immediate area ceased (Singer 1992). During the post-war era and into the modern period, Los Osos has continued to grow and is now primarily a residential area with some tourism. The area surrounding the study area has remained rural with some agricultural use.

2.6 PROPERTY SPECIFIC HISTORY

The parcel was originally part of Rancho Cañada de Los Osos. The rancho was subdivided as shown in Stratton's 1868 map (Figure 2-1). The modern-day parcel was carved out of Lots 29 and 79 (Figure 2-2). The town of El Moro (Baywood Park) and modern-day Los Osos occupy most of Lot 79. Early land ownership records provide land descriptions in historic survey terms, making it difficult to determine who owned portions of Lots 29 and 79 within the parcel versus the remainder of the lots, after Captain Wilson's family sold off the land. An 1880 map indicates the Nelson family owned the southern half of the parcel within Lot 79 (Ward 1880).

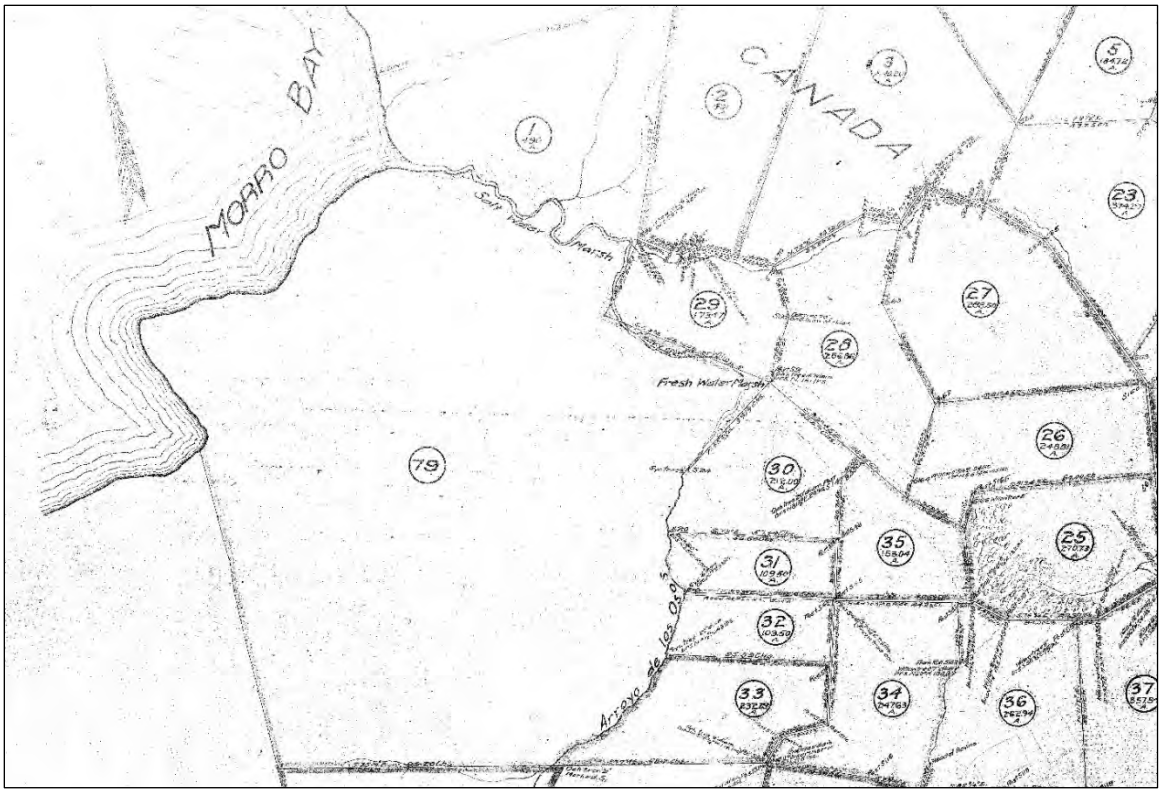

Figure 2-1 **A section of the map of the subdivisions of Ranchos Cañada de Los Osos and La Laguna, 1868. On file at the San Luis Obispo County Surveyor's Office.**

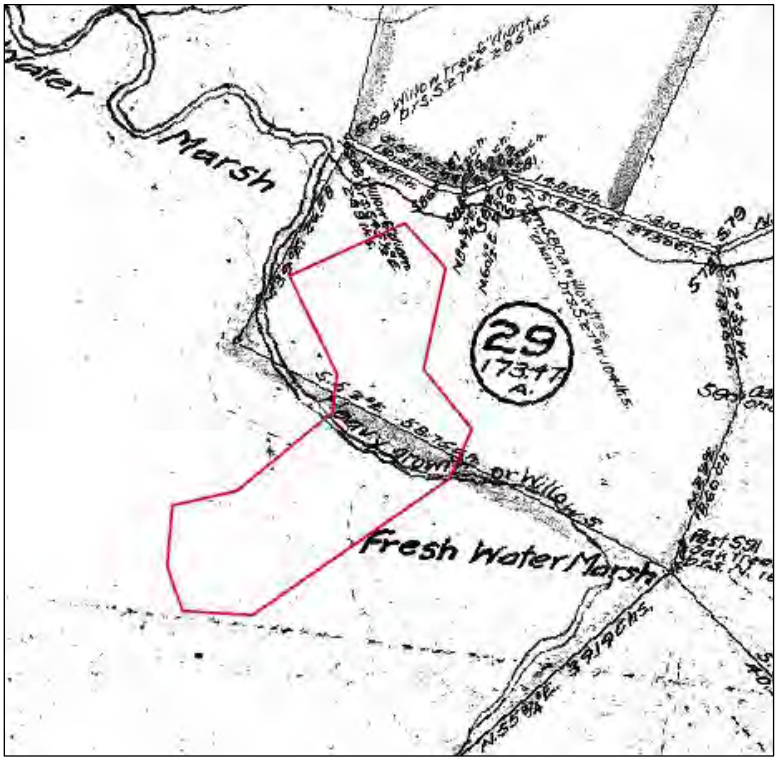

Figure 2-2 **Study area (red) on Stratton's 1868 map.**

Title records indicate several families owned land in Lots 29 and 79, including the Wood and Souza families (First American Title Company 2020). Wood sold land within the parcel to Antonio Souza in 1898. Souza was a Portuguese immigrant who came to the United States from the Azores Islands in 1873 (Ancestry.com 2020). The Central Coast was home to a significant Portuguese population, many that farmed grain and hay, and raised dairy cows, which followed the regional trend towards dairy farming after the drought in the 1860s (Tornatzky 2016). Others Portuguese immigrants were part of a thriving fishing community in Morro Bay and north to San Simeon (Angel 1883; Historic Resources Group 2013; Tornatzky 2016). Souza went on to purchase other ranches near San Luis Obispo including Prefumo Canyon and near Bishop's Peak (Joan Sullivan, personal communication). Antonio's son, George Souza, purchased the parcel from his mother after his father passed in 1935. George worked the ranch but lived in San Luis Obispo (Joan Sullivan, personal communication). At some point the ranch house burned down (Tornatzky 2016). The land was used primarily for agriculture and remained in the Souza family until 1985 when it was sold to George and Ann Martines. In 1999, the parcel was purchased by the Marla Kathrena Morrissey Trust, and the CSLRCD was given the parcel in 2015.

3
METHODS

Æ completed several tasks for the archaeological and built environment portions of this cultural resource study. Æ obtained a records search from the CCIC of the CHRIS, performed an in-house records search of Æ's library, and reviewed reports provided by CSLRCD. Æ also performed an archaeological and built environment survey of the property and evaluated cultural resources for eligibility for listing on the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). Methods for each of these tasks is described in greater detail below.

3.1 RECORDS SEARCH

The CCIC conducted a records search on July 16, 2020. Through examination of maps, site records, and archaeological reports, the records search identified previous archaeological surveys and previously recorded cultural resources within the study area and within 0.25 mile of the parcel. Additionally, the State Historic Property Data Files, NRHP, National Register of Determined Eligible Properties, California Points of Historic Interest, California Office of Historic Preservation Archaeological Determinations of Eligibility, and Æ's in-house files were reviewed (Appendix A). Additionally, Æ reviewed previous reports and parcel specific documentation provided by CSLRCD. Further, Æ's in-house records and site location GIS database were reviewed to assist with understanding the prehistoric sensitivity of the study area.

3.2 ARCHAEOLOGICAL AND BUILT ENVIRONMENT STUDY

Æ Staff Archaeologist Philip Clarkson and Æ Senior Architectural Historian Amber Long conducted an archaeological and architectural resources survey of the 81.7-acre parcel on July 17, 2020. Disturbances were documented in the field with a survey area sketch, historical buildings were documented, and digital photographs were taken.

Due to the creek beds and abundant dense vegetation within the study area, a targeted survey approach was adopted and covered approximately 28 acres. Clarkson thoroughly surveyed areas with high probability of cultural material, while creek beds and areas with dense riparian vegetation were not. Areas considered to have high probability of cultural material included knolls, hills, clearings, and areas that were within proximity of previously recorded sites (Figure 3-1). Special attention was given to rodent burrow push piles for evidence of subsurface deposits.

Prior to the survey Long conducted archival research and an architectural survey to document the buildings in the study area. She consulted property and building records at the County of San Luis Obispo Assessor's office, aerial photographs, USGS topographical maps, and local histories to prepare a property specific context. In the field Long recorded the buildings on the California DPR Primary Record (523A) and Building, Structure, and Object Record (523B). Once the buildings were documented, historical significance evaluations were

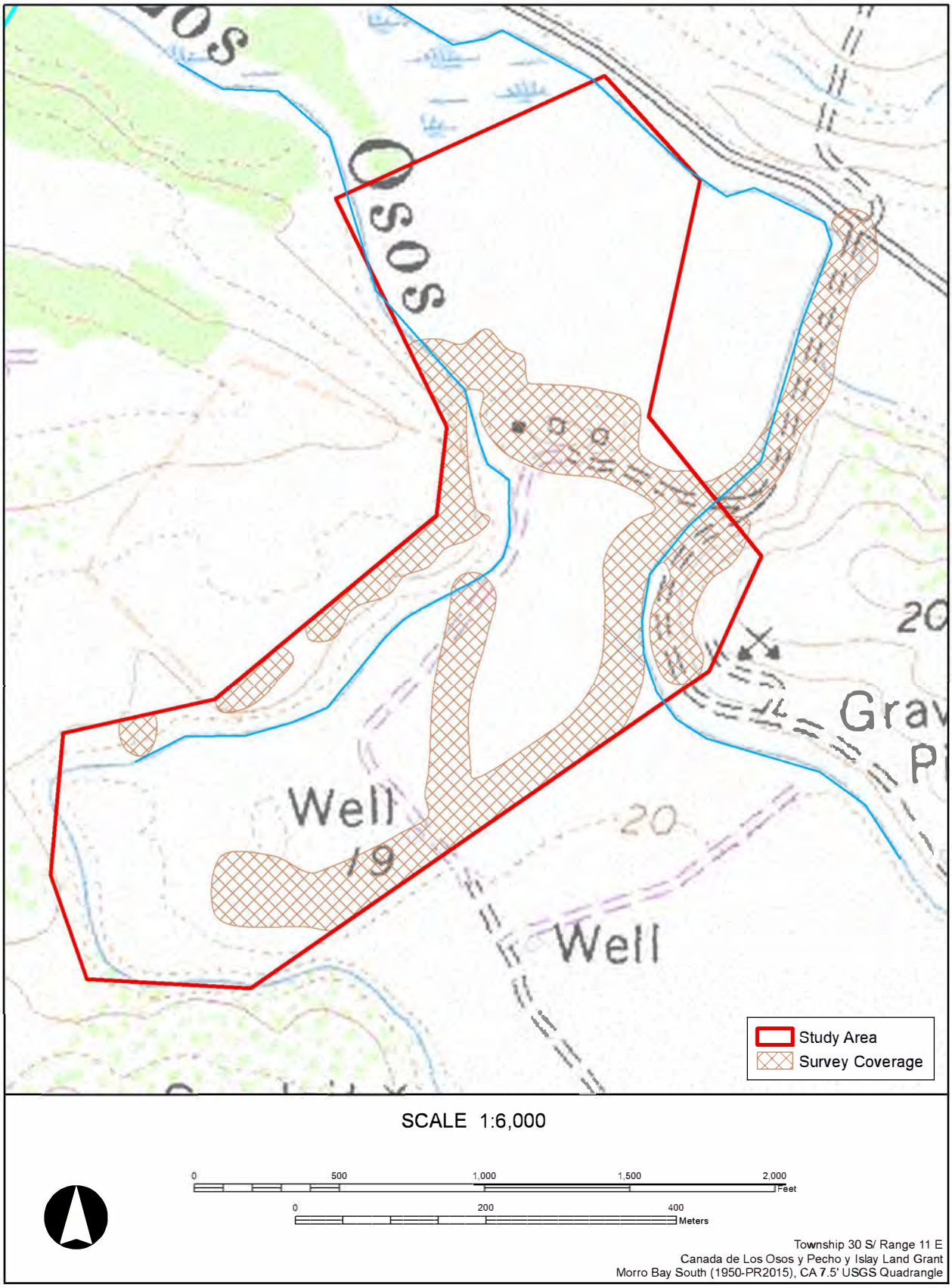

Figure 3-1 Survey coverage of the study area.

completed for each building were completed. As part of this study Æ updated the California DPR 523 Series forms for CA-SLO-31 to describe the architectural features and summarize the evaluation of significance of each building (Appendix C).

3.3 NATIONAL AND CALIFORNIA REGISTERS CRITERIA

The cultural resources in the study area were evaluated for listing on the NRHP using the following four criteria for historical significance (National Park Service 1997).

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
B. That are associated with the lives of persons significant in our past; or
C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. That have yielded, or may be likely to yield, information important in prehistory or history.

For this study, the cultural resources were also evaluated for listing on the CRHR using the following four criteria for historical significance (California Office of Historic Preservation 2020):

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

A resource must also, except in rare circumstance, be 50 years old or older. In addition, the resource must retain enough of its historic character to convey the reason for its significance. This is assessed by examining seven aspects of integrity, which are defined as follows (National Park Service 2002:Part VIII):

1. Location is the place where the historic property was constructed or the place where the historic event occurred;
2. Design is the combination of elements that create the form, plan, space, structure, and style of a property;
3. Setting is the physical environment of a historic property;
4. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
5. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

6. Feeling is a property's expression of the aesthetic or historic sense of a particular period of time;
7. Association is the direct link between an important historic event or person and a historic property.

"Integrity is based on significance: why, where, and when a property is important" (National Park Service 2002:Part VIII). Only after significance is fully established is the issue of integrity addressed. Ultimately, the question of integrity is answered by whether or not the property retains the identity for which it is significant.

4
ARCHAEOLOGICAL FINDINGS

4.1 PREVIOUS CULTURAL RESOURCE STUDIES

Æ's records search of the CCIC, in-house records search, and documents provided by the CSLRCD identified 7 previous cultural resource investigations within the study area and 23 previous cultural resource investigations within the 0.25-mile search radius. (Table 4-1, Appendix A).

Table 4-1
Previous Cultural Resource Studies within 0.25 mile of the Study Area

Report No.	Date	Author	Title
SL-00059	1973	Hoover, Robert	*Archaeological Component of the Draft Environmental Statement for South Bay Boulevard Extension*
SL-00468	1984	Hoover, Robert	*An Archeological Surface Reconnaissance for the Proposed Drain from 17th Street at El Morro Avenue to South Bay Boulevard*
SL-00469	1984	Spanne, L.	*Report on Archaeological Field Survey of Proposed Wastewater Treatment Plant and Percolation Pond Sites in San Luis Obispo Service Area No. 9*
SL-00498	1985	Singer, Clay	*Cultural Resources Survey, Impact Assessment, and Mitigation Proposals for the CSA 9 Wastewater Treatment Facilities EIR, Los Osos-Baywood Park, SLO County*
SL-00928	1989	Singer, Clay, and John Atwood	*Cultural Resources Survey and Impact Assessment for Two Lots on Hollister Lane in Los Osos, San Luis Obispo County, California*
SL-01345	1988	Breschini, G., and T. Harversat	*Preliminary Cultural Resources Reconnaissance of the Orchid House Parcel in Los Osos, San Luis Obispo, California*
SL-01360	1989	Runnings, A., and Harversat, T.	*Preliminary Cultural Resources Reconnaissance of a 66-acre Parcel in Los Osos, San Luis Obispo, California*
SL-01528	1990	Anastasio, R., and Banet, A.	*A Cultural Resources Assessment of the Seven Siters 5 Home Residential Development, Town of El Moro, Baywood Park, San Luis Obispo County, CA*
SL-01947	1991	Dills, Charles	*Archaeological Potential of James Home Construction Project, East Side of Sage, Los Osos (0791)*
SL-02115	1984	Gibson, Robert	*Results of Archaeological Surface Survey on the 90-acre Powell Property East of South Bay Boulevard, Los Osos, CA.*
SL-02313	1992	Parker, John	*Archaeological Monitoring of the Tom and Penny Attias Parcel, San Luis Ave., Los Osos, California*
SL-02321	1985	Gibson, Robert	*Report of Archaeological Subsurface Testing at the Powell Shell Locus, SLO-214, Los Osos, California*
SL-02710	1994	Bertando, Ethan	*Cultural Resource Investigation of the Powell Parcel APN #067-011-024, 067-011-033*
SL-02952	1995	Bertando, Ethan	*Cultural Resources Investigation of the Powell Parcel ANP# 038-711-010 El Moro Avenue, Los Osos, CA*
SL-03198	1997	Maki, Mary, and John Romani	*A Phase II Archaeological Investigation at CA-SLO-347, and an Extended Phase I Archaeological Investigation at CA-SLO-1792 for the CSA 9 Wastewater Treatment Facilities Project Los Osos*

Table 4-1 (continued)
Previous Cultural Resource Studies within 0.25 mile of the Study Area

Report No.	Date	Author	Title
SL-03227	1997	Bertrando, Ethan	*Cultural Resource Subsurface Evaluation (Phase 2) of the Powell Parcel (CA-SLO-214) APN: 038-711-010) (B.1) El Morro Avenue, Los Osos, CA*
SL-03497	1998	Conway, Thor	*A Phase 1 Cultural Resources Survey of the Atman Property, San Ysabel Avenue, Los Osos, San Luis Obispo County, California*
SL-03962	2000	Parker, J.	*Cultural Resource Resurvey of the Proposed Alignments of the MFS Globenet/Worldcom Fiber Optic Project*
SL-04566	2001	Bertrando, Ethan	*Cultural Resource Inventory of the Powell and James Parcels (APN 067-011-045, 067-011-053, 038-7214-024)*
SL-04921	2002	USDA Natural Resources Conservation	*Cultural Resources Investigations of the Eto Sediment Removal Project, Los Osos Creek in San Luis Obispo County, California*
SL-05054	2003	Conway, Thor	*An Archaeological Surface Survey at 1548 Hollister Lane, Los Osos, San Luis Obispo County, California*
SL-05780	2005	Conway, Thor	*An Archaeological Surface Survey at 1787 Sage Avenue, Los Osos, San Luis Obispo County, California*
SL-05978	2006	Singer, Clay	*Cultural Resources Survey and Impact Assessment for a Residential Property at 1596 Hollister Lane in Los Osos, San Luis Obispo, California (APN 074-282-007)*
SL-06089	2006	Lober, Allison	*Archaeological Survey of +/-15 acres on Turri Road, Los Osos, San Luis Obispo County, California*
SL-06353	2008	Singer, Clay	*Cultural Resources Survey and Impact Assessment for a Residential Property at 1798 Sage Avenue in the Community of Los Osos, San Luis Obispo County, California (APN 074-282-001)*
SL-06507	2008	Jones, Deborah, and Patricia Mikkelsen	*Archaeological Survey Report and Sensitivity Study for Proposed Projects and Alternative for the Los Osos Wastewater Project, San Luis Obispo County, California*
SL-07115	2016	Skinner, Craig, and Jennifer Thatcher	*Archaeological Investigations for the Los Osos Wastewater Project and Appendices*
SL-07417	2015	Bertrando, Ethan	*Cultural Resource Inventory of the Schoenstein Property 1532 Hollister Lane (APN: 074-282-009) Los Osos, CA*
In-house search	1977	Hoover, Robert, and W.B. Sawyer	*Los Osos Junior High School Site 4-SLO-214*
From client	2016	Grijalva, Daniel	*Cultural Resources Inventory Report, United States Department of Agriculture, Natural Resources Conservation Service*

Thirty archaeological surveys and investigations have been conducted within or near the study area. In 2016, the United States Department of Agriculture, Natural Resource Conservation Service completed background research and a Phase 1 survey (Grijalva 2016). This study identified several previously recorded resources within or near the study area; however, they were not able to find any resources during their survey due to dense vegetation and restricted access. Several other studies have covered portions of the study area including a Phase 1 surface survey by Robert Gibson (1984) on the western parcel boundary that resulted in rerecording of CA-SLO-214 and -347. Runnings and Haversat (1989) conducted a Phase 1 surface survey of 66 acres on the western parcel boundary and reidentified CA-SLO-31 and -347. Allison Lober

(2006) conducted a Phase 1 surface survey of 15 acres on the eastern parcel boundary and recorded CA-SLO-2535. Ethan Bertrando (2001) conducted a Phase 1 surface survey along the western portion of the parcel and reidentified CA-SLO-347. Deborah Jones and Patricia Mikkelsen (2008) conducted an extensive Phase 1 survey that covered the entire parcel in support of the Los Osos Wastewater Project and did not identify any cultural resources within the parcel.

4.2 PREVIOUSLY RECORDED RESOURCES

Background research identified three previously recorded sites within the parcel (CA-SLO-31, -1404, and -2535), four sites adjacent to the parcel (CA-SLO-214, -347, -1274, and -1405) and four additional sites mapped within a 0.25 mile radius (CA-SLO-464, -1186, -1792, and -2017) (Table 4-2; Figure 4-1).

Table 4-2
Previously Recorded Cultural Resources within 0.25 mile radius of the study area

Primary No.	Trinomial	Date	Type	Recorded By
P-40-000031	CA-SLO-31	1948	Prehistoric habitation debris	Pilling, Arnold R.
P-40-000214	CA-SLO-214	1967	Prehistoric habitation debris	Hoover, Robert
P-40-000347	CA-SLO-347	1965	Prehistoric	Wadhams, H., and L. Wadhams
P-40-000464	CA-SLO-464	1969	Prehistoric habitation debris	Dills, Charles
P-40-001186	CA-SLO-1186	1989	Prehistoric lithic scatter and bedrock mortars	Woodward, Jim, Tom Wheeler, Phil Hines, Betty Rivers
P-40-001274	CA-SLO-1274	1990	Prehistoric lithic scatter	Anastsio, R.
P-40-001404	CA-SLO-1404	1991	Prehistoric	Dills, Charles
P-40-001405	CA-SLO-1405	1991	Prehistoric	Dills, Charles
P-40-001792	CA-SLO-1792	1996	Prehistoric lithic scatter	Maki, M., and L. Carbone
P-40- 002017	CA-SLO-2017	2000	Prehistoric habitation debris	Parker, J.
P-40-002535	CA-SLO-2535	2006	Prehistoric lithic scatter	Lowgren, Chris

The high density of prehistoric resources within the records search area is not unexpected as Los Osos has been home to human populations for 10,000 years. Prehistoric sites in the area range from sparse midden deposits, special resource processing areas, rock art, and cemeteries along with large habitation areas. Many of the sites in Los Osos were recorded between 1930 and the early 1990s, prior to accurate Global Positioning System tools, leading to confusion of site boundaries. Additionally, many were recorded in association with projects where only a portion of the sites were formally recorded. This led to issues such as overlapping boundaries and inconsistencies in where resources are located. Therefore, Æ has tried to summarize what is known about these sites and separate them into three main groups: sites associated with the large Los Osos Middle School Site, sites on the southern edge of the study area, and resources on the eastern boundary of the study area.

4.2.1 Los Osos Middle School Site (CA-SLO-31, -214, -1274)

Results of the records search found that several sites within or near the parcel may be part of a single resource known as the Los Osos Middle School Site. CA-SLO-31, -214, and -1274 all

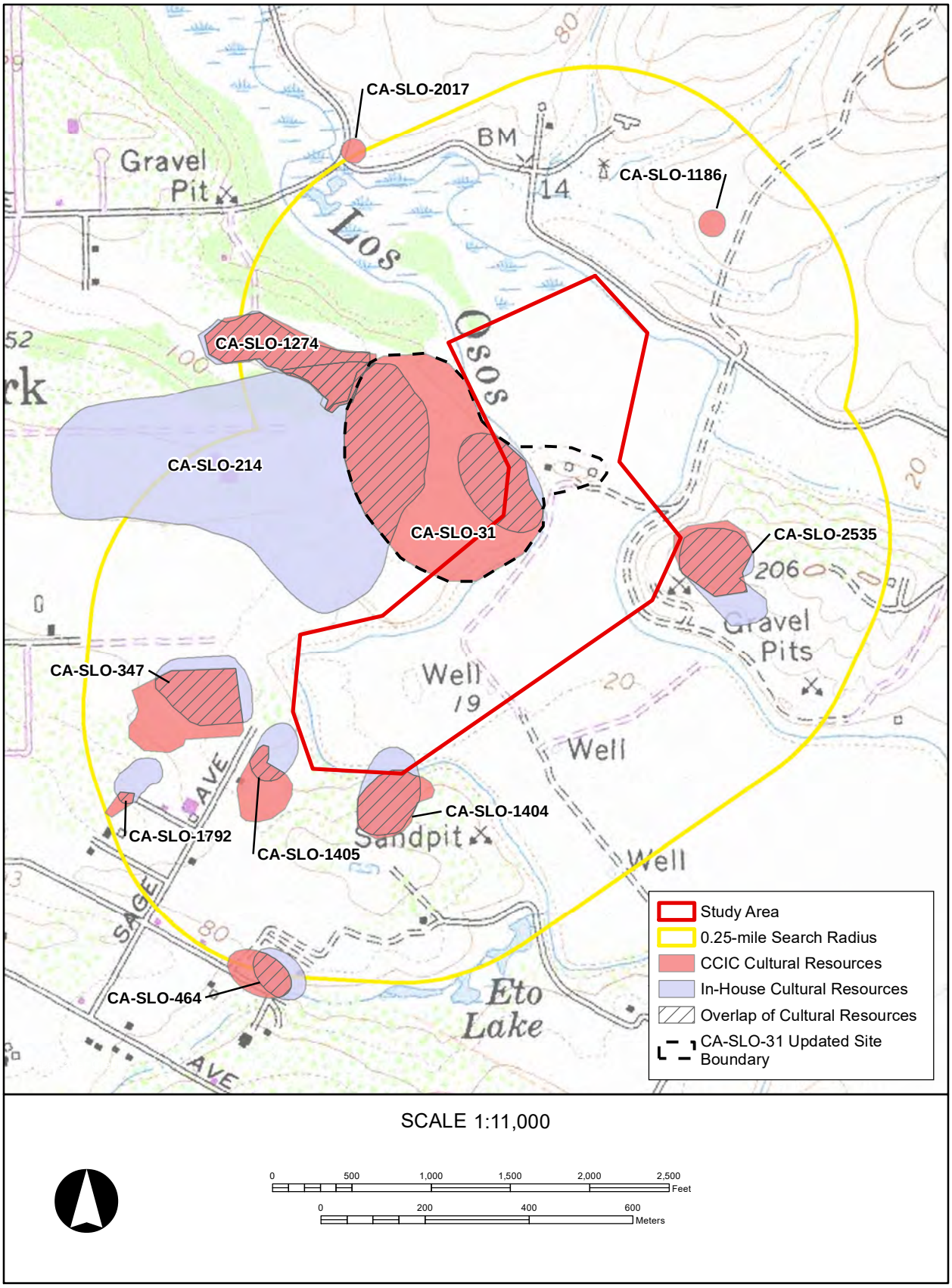

Figure 4-1 Previously recorded cultural resources within the study area and 0.25 mile search radius.

likely represent a large habitation area that covers approximately 80 acres (323,749 square meters). Recorded as the easternmost section of the Los Osos Middle School Site, CA-SLO-31 was recorded in 1948. At that time, Los Osos Creek was south of the site boundary and the landform that contained the site was a large dune that continued west. By 1959 Los Osos Creek had been rerouted north of the site with extensive excavation necessary to complete the task (Pilling 1948).

The bulk of the Los Osos Middle School Site, and the most studied portion is CA-SLO-214, was first recorded in 1967 as a midden site with hearth circles extending 2,500 feet east from Baywood Park water tank (Hoover 1967). In 1977 subsurface testing was conducted on the site and found CA-SLO-214 contains substantial habitation deposits with built terraces, house circles, numerous hearths, bead production areas, midden, and burials (Hoover and Sawyer 1977). The site boundary was extended to 4,000 feet, almost doubling the original site boundary; however, the site record was not updated leading to inaccurate information at the CCIC.

On the north edge of CA-SLO-214, CA-SLO-1274 appears to be an extension of the Los Osos Middle School Site. It was first recorded in 1990 as dense shell midden containing lithic debitage and fire-altered rock. Shell types are consistent with CA-SLO-214. It is noted that there is a 500-foot break from the site and CA-SLO-214, but hand-drawn maps place it with overlapping site boundaries (Anastsio 1990).

Overall, upon reviewing the site literature it appears that CA-SLO-31, -214 and -1274 have overlapping boundaries and likely are all part of one larger resource. There also appears to be continuity in the types of materials observed, leading to high probability that they are in fact one continuous site. Materials documented include dense marine shell midden with the predominant species being oyster and Pismo clam. The abundance of both species suggests a long occupation in which the coast transitioned from a rocky coastline that could support oyster populations to a sandy coastline where Pismo clam populations could survive (Hoover and Sawyer 1977). Additionally, CA-SLO-31 and -214 contain stone drills associated with bead production, manos, contracting stem projectile points, ground stone, and fire-altered rock. However, it is important to note that there is no record of radiocarbon dating of samples from these sites, therefore, periods of occupation have not been determined. It also appears that none of these resources have been formally evaluated for the NRHP or CRHR. The eastern extent of this resource (CA-SLO-31) crosses into the study area.

4.2.2 Southern Boundary Sites (CA-SLO-347, -1404, and -1405)

Three additional prehistoric sites are recorded along the southern and southwestern end of the parcel. These resources, CA-SLO-347, -1404, and -1405 are all prehistoric middens sites. Some evidence suggests that CA-SLO-347 may also be part of the larger Los Osos Middle School Site but portions that connect the resources have been destroyed. CA-SLO-347 was first recorded in 1965 as a very heavy shell deposit with numerous bird points and burials. Its site dimensions are only classified as “very large.” The site was resurveyed in 1996 in association with the Los Osos Sewer Project. Archaeologists noted that cultural constituents were consistent with CA-SLO-214. Phase 2 testing found that the tested portion of the site represents a temporary and specialized use site where shellfish was processed (Maki and Romani 1997). Based on current mapping of CA-SLO-347, it does not extend into the current study area.

Originally recorded by Dills (1991a, 1991b) CA-SLO-1404 and -1405 are recorded as small prehistoric midden sites. It does not appear that either resource has undergone testing, formal evaluation studies, or have updated site records. CA-SLO-1404 may extend into the Project parcel. It appears that none of these resources have been formally evaluated for the NRHP or CRHR.

4.2.3 Eastern Boundary (CA-SLO-2535)

CA-SLO-2535 is recorded as containing marine shell, faunal bone, Monterey and Franciscan chert flakes and formal tools on top of a hill that may extend into the eastern parcel boundary (Lowgren 2006). It appears that this resource has not been tested or evaluated for NRHP or CRHR.

4.3 ARCHAEOLOGICAL INSPECTION

Æ Staff Archaeologist Philip Clarkson conducted a targeted pedestrian survey of approximately 28 acres within the study area on June 17, 2020. The effort focused on areas with high potential of cultural material including knolls, hills, areas that are within proximity to known sites, and areas that are known to have had historic uses (Figure 4-2). The access road to the parcel from Turri Road, via the neighboring parcel, was also surveyed.

Previously, the parcel was used primarily for agricultural and has been disturbed. Evidence of this can be seen in a 1959 historic aerial photo (Mark Hurd Aerial Surveys 1959). The area has been allowed to revegetate and is overgrown with riparian vegetation including blackberry bushes, poison oak, and willows. Most of the survey area had to 0 to 5 percent ground visibility due to dense vegetation (Figure 4-3). The knoll in the middle of the parcel had 25 to 100 percent ground visibility and showed evidence of historic use (Figure 4-4). The western terrace of Los Osos Creek had 25 to 100 percent ground visibility and showed no evidence of ground-disturbing activities. The hill on the eastern parcel boundary had 25 percent to 50 percent ground visibility with chaparral communities at the top of the hill impeding ground visibility and access.

Archaeological Resources

As mentioned, in Section 4.2.1, the eastern portion of the Los Osos Middle School Site (CA-SLO-31, -214, and -1274) extends into the study area. CA-SLO-31 represents the eastern extent and Æ found that site deposits are present on the knoll that contains a historic residence, barn, and shed. Very dark brown midden (Figure 4-5) with marine shell and chert debitage was observed on the knoll along with one contracting stem projectile point base (Figure 4-6). During the field effort, Clarkson found evidence of the midden within an exposed soil profile seen at the base of a makeshift homeless structure on the knoll, south of the residence. The area had been excavated to approximately 70 centimeters and observed sediments are dark middens soils with marine shell and lithic materials seen in the matrix (Figure 4-7). Some historic debris was identified around the structures, but most debris is modern. Æ found the prehistoric component of CA-SLO-31 extends to include the knoll, increasing the site by 3 acres. An updated DPR site form with the new site boundary is in Appendix C.

Figure 4-2 Surface visibility within the riparian zones, facing southwest.

Figure 4-3 Survey visibility on knoll with residence in background, facing northwest.

Figure 4-4 Midden with marine shell and chert on the surface of the knoll.

Figure 4-5 Contracting stem projectile point base.

Figure 4-6 Subsurface soil profile showing midden deposit.

On the southern end of the parcel, an attempt was made to determine if CA SLO-1404 extends into the study area. Vegetation in this area was extremely dense and therefore, no surface exposures were visible. An attempt was made to locate CA-SLO-2535 on the hill on the eastern side of the parcel. Dense chaparral and fallen willow trees prevented access to the site; however, fragments of Pismo clam shells were observed on the side of the hill. No ground disturbance is anticipated in these areas.

4.4 SUMMARY AND EVALUATION

Based on records search results and the archaeological inspection, *Æ* finds that the main knoll in the study area contains a portion of CA-SLO-31, a part of the larger Los Osos Middle School Site complex. *Æ* has extended the CA-SLO-31 site boundary to include the knoll. Outside of the knoll area, CA-SLO-1404 and -2535 are mapped along the boundary of the study area. Neither resource was found during the current field effort due to heavy vegetation; however, the proposed undertaking will not affect these areas of the parcel, so no further assessment of CA-SLO-1404 and -2535 is required.

As mentioned above *Æ* believes that CA-SLO-31, -214 and -1274 all represent a single archaeological deposit; however, for the current effort *Æ* has only updated CA-SLO-31 to include the prehistoric materials observed on the knoll within the study area. Previous investigations of the Los Osos Middle School Site (Hoover and Sawyer 1977) show that it contains dense prehistoric midden materials that include habitation debris, bead manufacturing, specialize shellfish processing areas along with human remains.

Under Section 106 and for the purpose of CEQA, archaeological sites need to be evaluated to determine if they meet criteria of significance and if so, assess if a resource is eligible and considered a “historic property” (see Section 3.3). For the current study, formal testing to determine eligibly of CA-SLO-31 within the study area was not possible due to lack of funding. Therefore, based on the known information regarding the larger Los Osos Middle School Site (Hoover and Sawyer 1977) and observations by Æ during the current field effort, Æ recommends that CA-SLO 31 meets the criteria of significance and is assumed eligible for listing on the NRHP/CRHR under Criterion D/4 for the purposes of the current undertaking. An assessment of potential effects on CA-SLO-31 within the study area are presented in Chapter 6.

5
BUILT ENVIRONMENT EVALUATIONS

A historic-era single-family residence, barn, and shed are on the knoll within the study area. A review of materials used in the construction of the buildings indicates they are over 50 years old and require evaluation for eligibility for listing on the NRHP and CRHR. The following sections provide a physical description of each building and evaluations. The buildings were recorded on DPR forms as a site update to CA-SLO-31 (Appendix A). A collapsed accessory building and earthen levees are also within the study area but were not recorded or evaluated. The collapsed building was a safety hazard on the east edge of the knoll, before a severe drop. It could not be safely observed, therefore a materials analysis was not possible to determine a build date. The build date of the levees are unknown; however, neighbors believe they were built in the 1970s and therefore are not old enough to be evaluated (CSLRCD, personal communication). The property specific history is found in Section 2.6.

5.1 STRUCTURAL DESCRIPTIONS

5.1.1 Residence

The building is an abandoned vernacular, single-story residence with an irregular rectangular floorplan on a pier-and-beam foundation (Figure 5-1). A small addition was constructed on the north end of the building. Vertical board-and-batten siding covers the original section of the primary elevation (west), while the siding on the addition is smooth. The original roof is a low-pitched gable with overhanging eaves, and the addition has a flat roof. The primary entrance is recessed into the building with a wide porch overhang. The windows are gone but there are openings for two double-hung windows. The secondary access door is on the addition and has an opening for a vertical sliding window.

The northern elevation is clad in smooth siding (Figure 5-2). The middle section of wall is missing and is flanked on both sides by small, square sliding windows. One window is missing entirely. An interior wall that divides the original building and the addition can been seen through the missing section of the exterior wall, and also has board-and-batten siding and a partially covered window opening, indicating that was the original northern elevation.

The rear, or west elevation, is similar to the primary elevation (Figure 5-3). The original part of the building is clad in vertical board-and-batten siding, and the siding on the addition is smooth. There are two square openings for sliding windows, and one for a double-hung window. There is an opening for a back door on the addition, and an opening in the wall of the original residence. A utility shed was added to the northwest corner with a wood door and shed style roof.

The south elevation is also clad in vertical board-and-batten siding with three window openings. Two double-hung window openings have been converted to entrances and the remaining window is a small square sliding window.

The building is in extremely poor condition, having been abandoned and likely used by homeless populations. Most of the interior wood plank flooring and subfloor are damaged or missing, the

interior walls are damaged or repaired with large unpainted plywood boards, and structural framing is exposed.

Figure 5-1 Primary elevation of the residence with the addition on the right, view facing west.

Figure 5-2 North elevation of the residence, view facing south.

Figure 5-3 West elevation of the residence with addition on the left, view facing east.

Figure 5-4 South elevation of the residence, view facing north.

The build date of the residence is unknown. County Assessor's records show that a residence was built around 1934 and a small addition constructed at an unknown date (San Luis Obispo County 1949–1973). The existing residence is similar in shape and size; however, the foundation is more modern, suggesting this residence may have built following a fire. Some of the exposed exterior vertical wall planks and foundation materials date to the late nineteenth century. Late nineteenth century and early twentieth century materials present include circular-sawn wood boards, sash-type milled boards, and cut nails. The presence of the older materials indicates they

may have been purchased as salvage or reused from remnants of earlier buildings on the property. Based on the building materials, the house was mostly likely built between 1940–1960 (NAHB Research Center Inc. 2001).

5.1.2 Barn

The barn is also abandoned and in exceptionally poor condition. Based on the remaining structural components, it was likely a Western Prairie style barn with a monitor style roof (Figure 5-5). The barn is made of timber framing and vertical wood planks, characteristic of the Western Prairie style. The center gabled area of the barn would likely have been enclosed but may have been open on one or both ends as a breezeway. The crib areas either side of the center section would likely have housed animals. The gable likely housed a loft for storage. The interior of the south crib is covered in sheets of painted plywood which are not original to the structure (Figure 5-6). The interior of the north crib is partially collapsed but the remaining materials show that it was a wood frame structure with a corrugated metal roof (Figures 5-7 and 5-8).

Western Prairie style barns were common throughout the western United States during the nineteenth and early twentieth centuries. They were rustic and built by settlers as quickly and simply as possible. The barn has circular-sawn wood boards, sash-type milled boards, and cut nails that date to the late nineteenth and early twentieth centuries (Williams 2008). The modern nails throughout the barn appear to be a mix of contemporary and early machine-made wire nails that also date to the late nineteenth and early twentieth centuries. An exact build date for the barn is not known. Based on the barn type, condition, and building materials, it was mostly likely built between 1890–1930 (Auer 1989).

Figure 5-5 West elevation of the barn, view facing east. View obscured by vegetation.

Figure 5-6 Crib on south side of barn interior, view facing east.

Figure 5-7 Crib on north side of barn interior, view facing east. Unknown collapsed building in the background.

Figure 5-8 View from south crib barn interior, across barn, to north crib. View facing north.

5.1.3 Shed

The shed is vernacular and utilitarian with vertical board-and-batten siding, low-pitched hipped roof with shallow eaves, and a concrete slab foundation (Figure 5-9). It is a single room with doorways on the east and west elevations; the western door is rusted and still attached (Figures 5-10 and 5-11). Two windows are on the south elevation, and interior walls are drywalled. One of the windows has been boarded over from the inside with wood, and the other window was covered with a sheet of corrugated metal that has fallen off and into the interior. The roof and its framing are entirely exposed on the interior. Both the drywall and exposed concrete slab are cracked.

The shed has the same board-and-batten siding as the residence. Other materials used for the shed appear more modern than the residence, as no circular-sawn wood boards, sash-type milled boards, and cut nails were observed. The shed also has a concrete slab foundation, which became widespread after World War II (Gaudette and Slaton 2007). An exact build date for the shed is not known but based on the building materials, the shed was likely built between 1940–1960, but after the residence was constructed (Nelson 1963; Williams 2008).

Figure 5-9 Shed exterior. View facing southeast.

Figure 5-10 Shed interior. View facing east.

Figure 5-11 Shed interior. View facing west.

5.2 EVALUATION

The buildings on the parcel were evaluated by applying the four criteria of the NRHP/CRHR, detailed in Section 3.5.

5.2.1 Residence, circa 1940–1960

Criterion A/1. Historic topographic maps indicate a residence was on the property as early as the late nineteenth century and aerial photographs show that the property was used primarily for agriculture. The precise build date of the existing residence is unknown; however, materials analysis indicate it was built sometime between 1940 and 1960, therefore, the original residence is no longer extant. Without a precise date, the residence cannot be tied to a specific important event in history. The only association to a time is based on the materials used in the existing residence, which date from 1940 to 1960. Due the lack of sufficient data, the residence is not associated with any specific events or trends of historical significance; therefore, it is not considered significant under Criterion A/1.

Criterion B/2. The builder and architect of the residence is unknown. George Sousa owned the property during the time it could have been built, but no information is available to determine that he was the builder. No archival information suggests that Sousa was influential or that would

elevate him to a level of importance to be considered a person of importance to our past. Therefore, the residence is not associated with any person of historical significance and is not considered significant under Criterion B/2.

Criterion C/3. The residence is a vernacular single-family home with a small addition. The build date is unknown, but based on the materials used in its construction, can be narrowed to 1940 to 1960. It was likely built in part by using scraps found on the ranch. The building does not embody the distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, or possess high artistic value. Therefore, the residence is not significant under Criterion C/3.

Criterion D/4. This criterion is most relevant for archaeological sites, but it can be applied to built-environment resources if further study has the potential to yield information that cannot be obtained from other sources. Historical information about vernacular style residences is prevalent, and further study of the residence would not add any new information to the historic record. Therefore, the residence is not considered significant under Criterion D/4.

Integrity. Integrity of a resource is only assessed when a resource is determined significant under one of the criteria above. The residence is not significant under any of the NRHP/CRHR criteria; therefore, integrity will not be addressed. The residence is not recommended eligible for listing on the NRHP/CRHR.

5.2.2 Barn, circa 1890–1930

Criterion A/1. The Western Prairie style barn was constructed sometime between 1890 and 1930 based on the materials still present in the dilapidated barn. This style of barn was common during this time across California. The style was versatile and could have been used to house animals and store hay or crops. Due to the versatile nature of the barn it is difficult to associate it with a specific event or pattern in history; therefore, it is not considered significant under Criterion A/1.

Criterion B/2. The builder and architect of the barn is unknown. The Sousa family owned the property from 1898 to 1985 so it is likely the barn was built during their tenure. No archival information suggests that the Sousa family was influential or that would elevate the family to a level of importance to be considered a person(s) of importance to our past. Therefore, the barn is not associated with any person of historical significance and is not considered significant under Criterion B/2.

Criterion C/3. The barn is indicative of Western Prairie style barns, which are common in California. The building does not embody the distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, or possess high artistic value. Therefore, the barn is not significant under Criterion C/3.

Criterion D/4. This criterion is most relevant for archaeological sites, but it can be applied to built-environment resources if further study has the potential to yield information that cannot be obtained from other sources. Historical information about Western Prairie barns is prevalent, and further study of the barn would not add any new information to the historic record. Therefore, the barn is not considered significant under Criterion D/4.

Integrity. Integrity of a resource is only assessed when a resource is determined significant under one of the criteria above. The barn is not significant under any of the NRHP/CRHR criteria; therefore, integrity will not be addressed. The barn is not recommended eligible for listing on the NRHP/CRHR.

5.2.3 Shed, circa 1940–1960

Criterion A/1. The vernacular, utilitarian shed is typical of an agricultural outbuilding. Based on the materials to build the shed, it likely dates from 1940 to 1960, but after construction of the exiting residence, due to the presence of the concrete foundation. Due the lack of sufficient data, the shed is not associated with any specific events or trends of historical significance; therefore, it is not considered significant under Criterion A/1.

Criterion B/2. The builder and architect of the shed is unknown. George Sousa owned the property during the time it could have been built, but no information is available to determine that he was the builder. No archival information suggests that Sousa was influential or that would elevate him to a level of importance to be considered a person of importance to our past. Therefore, the shed is not associated with any person of historical significance and is not considered significant under Criterion B/2.

Criterion C/3. The shed is a vernacular structure, likely built with some of the same materials as the residence. The build date is unknown, but the existence of a concrete foundation suggests it was built later than the residence. The building does not embody the distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, or possess high artistic value. Therefore, the shed is not significant under Criterion C/3.

Criterion D/4. This criterion is most relevant for archaeological sites, but it can be applied to built-environment resources if further study has the potential to yield information that cannot be obtained from other sources. Historical information about vernacular style outbuildings is prevalent, and further study of the shed would not add any new information to the historic record. Therefore, the shed is not considered significant under Criterion D/4.

Integrity. Integrity of a resource is only assessed when a resource is determined significant under one of the criteria above. The shed is not significant under any of the NRHP/CRHR criteria; therefore, integrity will not be addressed. The shed is not recommended eligible for listing on the NRHP/CRHR.

None of the buildings on the knoll meet the criteria for listing on the NRHP/CRHR and are not recommended eligible. As a result, they are not considered historical resources and the proposed demolition of the buildings will not constitute an adverse effect or significant impact under CEQA or Section 106 of the NHPA.

6
SUMMARY AND RECOMMENDATIONS

CSLRCD proposes the removal of all nonessential man-made infrastructure including extant buildings and utilities in order to restore the natural hydrologic functions of the creeks and reestablish their historic channels and floodplains. Activities will include breaching levees, grading stream channels, and improving road crossings. The Project requires permits and authorizations from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the County of San Luis Obispo. In support of the Project, Æ conducted a cultural resource study that included both archaeological resources and historic built-environment elements.

6.1 SUMMARY

To inventory and assess archaeological resources and historic buildings, Æ's study included a records search from the CCIC, an in-house records search, and review of documents provided by CSLRCD. Fieldwork included a pedestrian survey over accessible portions of the parcel to document both archaeological and historic buildings and features. Additionally, due to the heightened sensitivity for prehistoric materials, Æ initiated Native American tribal communication.

Results of background research and the pedestrian survey identified historic built-environment features (residence, barn, and shed) are present within prehistoric archaeological site, CA-SLO-31. In addition, two other previously recorded archaeological sites (CA-SLO-1404 and -2535) are present on the boundary of the study area.

The historic-era buildings were evaluated and found not eligible for listing on the NRHP/CRHR. As it was not feasible to conduct archaeological testing at CA-SLO-31 to determine its NRHP/CRHR eligibility, based on known information regarding the larger Los Osos Middle School Site (Hoover and Sawyer 1977) and observations by Æ during the current field effort, Æ recommends that CA-SLO 31 meets the criteria of significance and is assumed eligible for listing on the NRHP/CRHR under Criterion D/4 for the purposes of the current undertaking. Therefore, the potential effects of the Project on CA-SLO-31 are considered below.

6.2 ASSESSMENT OF EFFECTS

CSLRCD has identified 12 Project components with the potential to cause ground disturbance in the study area. Each component is described below including the expected ground disturbance and an assessment of the potential effects to "historic properties" from the Project components. In order to reduce potential effects CA-SLO-31, CSLRCD has proposed to cover the knoll with 18 inches of fill from the levees that will be breached and previously deposited fill from the roadway that will be removed. The following analysis of effects assumes that the fill will be placed on the knoll prior to other actions being completed.

Remove portions of levee on Warden Creek. In order to return Warden Creek to its natural hydrologic flow patterns the levees near Turri Road will be breached. Vegetation will also be removed, and slash laid in the creek channel to reduce impacts to the creek bed from heavy

equipment. An excavator will be used to remove the earthen levee and the removed material will be deposited on top of the knoll. CSLRCD anticipates moving 1,870 cubic yards of material that will be spread on the knoll in an 18-inch-deep cap. One thousand linear feet of the creek bed will be temporarily impacted. The levees are not 50 years old so they were not evaluated or considered a historic resource.

While removal of the levee itself will not impact historic properties, the Project plans include using this material to create a fill cap on the knoll which is part of CA-SLO-31, therefore there is the potential for an adverse effect on surface materials associated with CA-SLO-31. While capping may cause some minor impacts, the goal is to protect the site from additional impacts from the other Project elements.

Decommission access road to knoll. The dirt access road leading to the knoll from the rock ford crossing will be removed and deposited on the knoll to create the 18-inch-deep fill cap. Historically, soil from the knoll was brought down the hill and used to fill in the floodplain for road access. This material must be removed to allow the flow of Warden Creek to assume its natural path. The road material will be hauled using dump truck or excavator, then distributed using a spreader. During Æ's current field survey, shell scatter was observed on the access road, deposited there when dirt was brought from the knoll to raise the roadbed to prevent the road from washing out. This material will be returned to the knoll.

This Project component will deposit material on the knoll which is part of CA-SLO-31, therefore it may have an adverse effect on CA-SLO-31.

Remove culverts. Two outdated corrugated metal pipe culverts will be removed along the primary access road to the parcel and replaced with a seasonal, rocked ford crossing to improve fish passage while allowing for access to the irrigation pump. A temporary creek diversion will be installed, and a section of the creek channel will be dewatered. An excavator will excavate an 80-foot length of roadway, remove the culverts, and reshape the creek crossing using engineered streambed material and rock. Disturbed areas will be stabilized and revegetated. Once complete, the diversion will be removed and flows will return to the channel. This area was surveyed during the 2016 survey (Grijalva 2016) and no cultural materials were present.

This Project component will not have an adverse effect on historic properties.

Asbestos abetment and demolition of residence. The residence contains asbestos roof shingles and a texturized material on the front entryway. Removal of asbestos by a licensed contractor must be completed before demolition. Following proper abatement, the residence will be demolished down to the foundation. Any infrastructure below ground including the pier blocks and utilities will be left in place to minimize ground disturbance.

Vehicles and heavy equipment will be driving on the knoll during the abatement and demolition process. Prior to these activities, fill from the levees should be deposited on the knoll to prevent ground disturbance of CA-SLO-31. The residence is not eligible for the CRHR/NRHP and not considered a historic property.

If fill from the levees is placed on the knoll as described above, this Project component will not have an adverse effect on historic properties.

Demolish barn and shed and remove accessory building. The barn and shed will be demolished down to their foundations to discourage occupation by transients. Any infrastructure below ground including pier blocks and concrete slabs will be left in place to minimize ground disturbance. Debris from the collapsed accessory building behind the barn will be removed and any remaining structural supports will be demolished down to their foundations, leaving any in-ground infrastructure in place. Bulldozers and dump trucks will be used during demolition and removal of debris could cause 3 to 5 inches of ground disturbance.

Vehicles and heavy equipment will be driving on the knoll during the demolition and removal process. Prior to these activities, fill from the levees should be deposited on the knoll to prevent ground disturbance of CA-SLO-31. The barn, shed, and collapsed accessory building are not eligible for the CRHR/NRHP and not considered historic properties.

If fill from the levees is placed on the knoll as described above, this Project component will not have an adverse effect on CA-SLO-31.

Decommission septic system. The residence is connected to a wood-framed septic tank that must be properly decommissioned. Excavation above the septic tank will be required to access the system. The excavated dirt may contain cultural materials and will be stockpiled nearby during the work on the system. A licensed septic hauler will pump out any residual wastewater and sludge. The tank will then be filled in with clean sand or soil to prevent injuries to people or animals from falling into the tank. The stockpiled dirt will be replaced and then covered with 18-inches of fill from the levee. Pipes leading from the residence to the abandoned septic will not be removed.

Excavation is required to decommission the septic system; therefore, this Project component will have an adverse effect on CA-SLO-31.

Vehicle removal. Three abandoned cars are partially embedded in the upper bank of the Los Osos Creek channel, approximately 10 feet above the channel and 15 feet below the top of the knoll, northwest of the abandoned residence. Batteries and other toxic or corrosive materials will be removed from the vehicles, while the vehicles themselves remain in place. It is anticipated that removal of the batteries and other toxic or corrosive materials will be done on foot and no heavy equipment of vehicles will be needed to access the vehicles. Once removed, the toxic material will be properly disposed of offsite.

This Project component will not have an adverse effect on historic properties.

Decommission domestic well. A domestic well that served the residence on the knoll will be decommissioned by a licensed well driller to eliminate safety hazards and threats to groundwater quality. All associated pumping equipment will be removed and the well be disinfected, backfilled, and sealed. The well is in the upland wetland area and a temporary access road will be needed for vehicles and equipment. Vegetation removal will be required. Well casing will be left in situ and no excavation will be required.

This area was not surveyed during the pedestrian field survey due to dense vegetation, however, it is not within the boundaries of any known sites. Therefore, this Project component will not have an adverse effect on historic properties.

Remove and realign power poles. CSLRCD and Pacific Gas & Electric Company (PG&E) are coordinating the removal of power poles on the knoll and realignment of remaining poles on the parcel. Multiple poles connect the knoll, domestic well, agricultural well, and adjacent properties. The realignment will remove redundant lines, maintain connection to the agricultural well, and connection to adjacent properties.

PG&E is the lead agency for this Project component and will be responsible for conducting the appropriate surveys, securing appropriate permits, and complying with regulations. Therefore, potential effects to historic properties cannot be determined at this time.

Dirt pit. A dirt pit was dug out of the knoll by unauthorized occupants to make a makeshift dwelling, southwest of the residence. The sidewall of the pit revealed evidence of archaeological deposits associated with CA-SLO-31. To protect further disturbances to CA-SLO-31, the pit will be filled with the fill material from the levee during the deposition of the 18-inch-deep cap.

This Project component requires the deposition of fill material on the knoll which is part of CA-SLO-31, therefore there is the potential for an adverse effect on CA-SLO-31. While capping may cause some impacts, the goal is to protect the site from additional impacts from the other Project elements.

Revegetation. Following the conclusion of activities on the knoll, native trees, shrubs, and grasses will be planted by hand in the 18-inch-deep fill. Plantings will range from seeds and plugs to 5-gallon potted plants. Temporary irrigation will also be installed.

If revegetation activities and irrigation do not cause ground disturbance below 18 inches, this Project component will not have an adverse effect on historic properties.

Fiber roll. To help control erosion 8-inch-diameter fiber rolls will be placed on top of the knoll. The fiber rolls will then be staked with 18-inch-long stakes for stabilization.

If the fiber roll and stakes do not cause ground disturbance below 18 inches, this Project component will not have an adverse effect on historic properties.

Table 6-1
Project Components and Assessment of Effects

Project Component	Ground Disturbance	Potential for Effects
Breach levee that constricts Warden Creek	Yes	Yes
Decommission access road to knoll	Yes	Yes
Remove culverts	Yes	No
Asbestos abatement/demolish residence	Yes	No
Demolish barn/shed, remove accessory building	Yes	No
Decommission septic system	Yes	Yes
Vehicle removal	No	No
Decommission domestic well	No	No
Remove/realign power poles	TBD	TBD
Fill dirt pit	Yes	Yes

Table 6-1 (cntinued)
Project Components and Assessment of Effects

Project Component	Ground Disturbance	Potential for Effects
Revegetation of knoll	Yes	No
Install fiber roll	Yes	No

6.3 RECOMMENDATIONS

Only a single prehistoric site, CA-SLO-31, is within the study area and considered a historic property for the purpose of the proposed Project. Above, several potential adverse impacts are identified. This section provides treatment or mitigation options to treat the adverse effects/impacts to CA-SLO-31. Based on the above plan, Æ recommends avoidance and/or use of fill and construction monitoring to address potential impacts to the deposit at CA-SLO-31. At this point, as ground disturbance will be minimal, therefore, no data recovery excavations are recommended at this time. If Project plans change, then additional treatment/mitigation measures may be necessary.

6.3.1 Avoidance

If feasible, avoidance of direct impacts is the preferred measure for mitigating effects on NRHP/CRHR-eligible archaeological sites. The CSLRCD has already designed their Project to have minimal amounts of ground disturbance. Foundations and underground elements will be left in place and a 18-inch-deep fill cap will be placed on CA-SLO-31 to protect the resource from vehicle traffic and shallow revegetation activities. Exclusion fencing can also be used to protect areas on the knoll where Project work in not required. Fencing types can include exclusionary fencing, lath, flagging tape, or some other combination of material that is highly visible, durable, and which construction and management personnel can recognize as marking an exclusion zone where no earth disturbance or other activity should occur. Exclusion zones should be inspected periodically by the project archaeologist to ensure that they are being honored and that the markers remain effective and in place.

6.3.2 Fill

If direct disturbance of the resources cannot be avoided, placement of chemically neutral, nonreactive fill on top of CA-SLO-31 on the knoll, rather than cutting into the cultural deposits, is another treatment option to avoid direct impacts. CSLRCD already plans to use fill from dirt road removal. The dirt access road leading to the knoll from the rock ford crossing will be removed and deposited on the knoll to create the 18-inch-deep fill cap. Historically, soil from the knoll was brought down the hill and used to fill in the floodplain for road access. This material must be removed to allow the flow of Warden Creek to assume its natural path. The road material will be hauled using dump truck or excavator, then distributed using a spreader across the knoll. All earth disturbances associated with placement of the fill should be monitored by a qualified professional archaeologist and a local tribal consultant.

6.3.3 Cultural Resource Monitoring

Cultural resource monitoring also may be considered as a treatment option. Monitoring involves inspection of any construction disturbance for all Project elements, including those both on and off the knoll. The purpose for monitoring is twofold. First, to protect artifacts or features that may occur to CA-SLO-31 during capping or Project-related work. If features, human remains, or intact deposits are found construction work should immediately halt, then cultural materials must be properly documented and recorded before work can proceed. Second, as surface visibility was poor during all surface survey efforts, monitors should be present for all Project-related ground disturbance to ensure that if cultural materials are encountered they are assessed and documented properly.

If buried cultural materials are discovered by archaeologists or construction personnel, work in the immediate area of the find would be diverted until the discovery is evaluated and any necessary plans are developed for treatment of the find(s) or mitigation of adverse effects.

Prior to construction it would be appropriate to provide worker education regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources, during construction. Such training should provide construction personnel with direction regarding the procedures to be followed in the unlikely event that previously unidentified archaeological materials, including Native American burials, are discovered during construction. Training would also inform construction personnel that exclusion zones must be avoided and unauthorized collection or disturbance of artifacts or other cultural materials is not allowed.

7
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APPENDIX A

Records Search

California
Archaeological
Inventory

SAN LUIS OBISPO AND
SANTA BARBARA COUNTIES

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
PHONE (805)-893-2474
FAX (805)-893-8707
EMAIL ccic@anth.ucsb.edu

7/16/2020

Philip Clarkson
Applied EarthWorks Inc.
811 El Capitan Way, Suite 100
San Luis Obispo, CA 93401

Re: Los Osos Wetland Restoration

The Central Coast Information Center received your record search request for the project area referenced above, located on the Morro Bay South USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a one quarter mile radius:

As indicated on the data request form, the locations of reports and resources are provided in the following format: ■ custom GIS maps ☐ shapefiles ☐ hand-drawn maps ☐ none

Resources within project area:	CA-SLO-31, 1404, 2535
Resources within ¼ mile radius:	9; see list
Reports within project area:	10; see list
Reports within ¼ mile radius:	19; see list

Resource Database Printout (list):	■ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	■ not requested	☐ nothing listed
Resource Digital Database Records:	■ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (list):	■ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	■ not requested	☐ nothing listed
Report Digital Database Records:	■ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	■ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	■ not requested	☐ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☐ not requested	■ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	■ nothing listed

The following sources of information are available at **http://ohp.parks.ca.gov/?page_id=28065**. Some of these resources used to be available through the CHRIS but because they are now online, they can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through the sources listed below.

California State Lands Commission Shipwreck Database	*Caltrans Historic Bridge Inventory*
U.S. Geological Survey Historic Topographic Maps	*Rancho Plat Maps*
National Park Service National Register of Historic Places Nominations	*Natural Resource Conservation Service Soil Survey Maps*
US Bureau of Land Management General Land Office Records	*California Historical Landmarks Listing (by county)*
Five Views: An Ethnic Historic Site Survey for California (1988)	*Historical Soil Survey Maps*

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of California Historical Resources Information System (CHRIS) data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the CHRIS.

Sincerely,

Brian Barbier, M.A.
Assistant Coordinator

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SL-00059		1973	Robert L. Hoover	Archaeological Component of the Draft Environmental Statement for South Bay Boulevard Extension	none given	40-000214
SL-00468		1984	Hoover, R.	An Archaeological Surface Reconnaissance for a Proposed Drain from 17th Street at El Morro Avenue to South Bay Boulevard.	None given	
SL-00469		1984	Spanne, L.	Report on Archaeological Field Survey of Proposed Wastewater Treatment Plant and Percolation Pond Sites in San Luis Obispo County Service Area No.9.	LAURENaw. SPANNE, M.A. ARCHAEOlOGICAL CONSULTANT	
SL-00498		1985	Singer, C.	Cultural Resources Survey, Impact Assessment, and Mitigation Proposals for the CSA 9 Wastewater Treatment Facilities EIR, Los Osos-Baywood Park, SLO County. 35 pgs, 3 maps, plus appendices.	None given	40-000004, 40-000014, 40-000025, 40-000214, 40-000458, 40-000463, 40-000467, 40-000626, 40-000714, 40-000812, 40-000978, 40-001066, 40-001081, 40-001093, 40-001121, 40-001127
SL-00928		1989	Singer, Clay A. and John E. Atwood	Cultural Resources Survey and Impact Assessment for two lots on Hollister Lane in Los Osos, San Luis Obispo County, California.	Singer & Associates	40-000464
SL-01345		1988	Breschini, G. and T. Haversat	Preliminary cultural resources reconnaissance of the Orchid House parcel at Sage Avenue, Los Osos, San Luis Obispo County, California.	ARCHAEOLOGICAL CONSULliNG	40-000031, 40-000214, 40-000347
SL-01360		1989	Runnings, A. and Haversat, T.	Preliminary cultural resources reconnaissance of a 66 acre parcel in Los Osos, San Luis Obispo County, California.	ARCHAEOLOGICAL CONSULliNG	40-000002, 40-000014, 40-000031, 40-000347
SL-01528		1990	Anastasio, R. and Banet, A.	A cultural resources assessment of the Seven Sisters 5 home residential development, town of El Moro, Baywood Park, San Luis Obispo County, CA	J.H. Edwards Co.	40-000214
SL-01947		1991	Dills, Charles E.	Archaeological Potential of James Home Construction Project, E side of Sage, Los Osos (0791)	none given	
SL-02115		1984	Gibson, R.	Results of Archaeological Surface Survey on the 90-acre Powell Property East of South Bay Boulevard, Los Osos, CA	none given	40-000214, 40-000347
SL-02313		1992	Parker, John	Archeological Monitoring of the Tom and Penny Attias Parcel, San Luis Ave., Los Osos	Parker and Associates	40-000464

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SL-02321		1985	Gibson, Robert O.	Report of Archaeological Subsurface Testing at the Powell Shell Locus, SLO-214, Los Osos, California	none given	40-000214
SL-02710		1994	Bertrando, Ethan	Cultural Resource Investigation of the Powell Parcel APN #067-011-024, 067-011-033.	Bertrando & Bertrando Research Consultants	40-000347
SL-02952		1995	Bertando, Ethan	Cultural resource investigation of the Powell Parcels APN #038-711-010 El Moro Avenue, Los Osos, Ca.	Bertrando & Bertrando Research Consultants	40-000214, 40-001274
SL-03033		1996	Maki, Mary	Phase 1 Cultural Resource Survey of 30 Acres for the Pismo and Nipomo Properties for the Los Osos (CA #9) Sewer Project Los |Osos, San Luis Obispo California	Fugro West, Inc.	40-000347, 40-000465, 40-001089
SL-03198		1997	Mary Maki and John Romani	A Phase II Archaeological Investigation At CA-SLO-347, and an Extended Phase I Archaeological Investigation at CA-SLO-1792 For The CSA 9 Wastewater Treatment Facilities Project Los Osos	County of SLO Department of Planning and Building	40-000347, 40-001792
SL-03227		1997	Bertrando, Ethan	Cultural Resource Subsurface Evaluation (Phase 2) of the Powell Parcel (CA-SLO-214) APN: 038-711-010 (B.1) El Morro Avenue, Los Osos, CA	Bertrando & Bertrando Research Consultants	40-000214
SL-03497		1998	Conway, Thor	A phase 1 cultural resources survey of the Atman property, Santa Ysabel Avenue, Los Osos, San Luis Obispo County, California	Heritage Discoveries	40-001274
SL-03962		2000	Parker, J.	Cultural Resource Resurvey of the Proposed Alignments of the MFS Globenet/Worldcom Fiber Optic Project	Parker & Associates	40-000004, 40-001251, 40-001512, 40-001795, 40-002014, 40-002015, 40-002016, 40-002017
SL-04566		2001	Bertrando, Ethan	Cultural Resource Inventory of the Poweel and James Parcels (APN 067-011-045, 067-011-053, 038-7214-024)	BBRC	40-000347, 40-001405, 40-001792
SL-04921		2002	USDA Natural Resources Conservation	Cultural Resources Investigations of the Eto Sediment Removal Project, Los Osos Creek in San Luis Obispo County, California	Natural Resources Conservation Service	
SL-05054		2003	Thor Conway	An Archaeological Surface Survey at 1548 Hollister Lane, Los Osos, San Luis Obispo County, California	Heritage Discoveries Inc.	40-000464
SL-05780		2005	Conway, T.	An Archaeological Surface Survey at 1787 Sage Avenue, Los Osos, San Luis Obispo County, California	Heritage Discoveries Inc.	40-000023, 40-000214, 40-000347, 40-000458, 40-000463, 40-000812, 40-001066, 40-001274

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SL-05978		2006	Singer, C.A.	Cultural resourecs Survey and Impact Assessment for a Residential Property at 1596 Hollister Lane in Los Osos, San Luis Obispo County, California [APN 074-282-007]	C.A. SINGER &ASSOCIATES, Inc.	40-000464
SL-06089		2006	Lober, Allison	Archaeological Survey of +/-15 Acres on Turri Road, Los Osos, San Luis Obispo County, California	Cultural Resource Management Services	40-002535
SL-06353		2008	Singer, Clay A.	Cultural resources survey and impact assessment for a residential property at 1798 Sage Avenue in the community of Los Osos, San Luis Obispo County, California [APN 074-282-001]	C.A. Singer & Associates, Inc.	40-000464, 40-001121
SL-06507		2008	Jones, Deborah and Mikkelsen, Patricia	Archaeological Survey Report and Sensitivity Study for Proposed Projects and Alternatives for the Los Osos Wastewater Project, San Luis Obispo County, California	Far Western Anthropological Research Group, Inc.	40-000004, 40-000462, 40-001212, 40-001512, 40-002016, 40-002569, 40-002570, 40-002571, 40-002573, 40-002574
SL-07115		2016	none given	Archaeological Investigations for the Los Osos Wastewater Project	Far Western Anthropological Research Group, Inc.	40-000014, 40-000023, 40-000457, 40-000458, 40-000626, 40-000812, 40-001125, 40-002788
SL-07115A		2016	None given	Appendix A: Summary of all Los Osos Wastewater Project Sites	Far Western	
SL-07115B		2016	Craig E. Skinner and Jennifer J. Thatcher	Appendix B: X-Ray Fluorescence Analysis and Obsidian Hydration Mesurement of Artifact Obsidian from CA-SLO-23, CA-SLO-458, and CA-SLO-812	Northwest Research Obsidian Studies Laboratory	
SL-07115C		2014	Darden Hood	Appendix C: Radiocarbon Studies	Beta Analytic	
SL-07115D		2016	None given	Appendix D: Catalogue	Far Western	
SL-07115E		2016	None given	Appendix E: Flaked Stone Analysis; Appendix F: Ground and Battered Stone Analysis; Appendix G: Bead Analysis; Appendix H: Modified Bone and Bone Tool Analysis; Appendix I: Mammal, Bird, and Reptile Remains Analysis; Appendix J: Fish Remains Analysis; Appendix K: Shellfish Remains Analysis; Appendix L: Site Records (removed)	Far Western	
SL-07417		2015	Ethan Bertrando	Cultural Resource Inventory of the Schoenstein Property 1532 Hollister Lane (APN: 074-282-009) Los Osos, CA.	Bertrando & Bertrando Research Consultants	40-000464, 40-001121

Los Osos Wetland Restoration

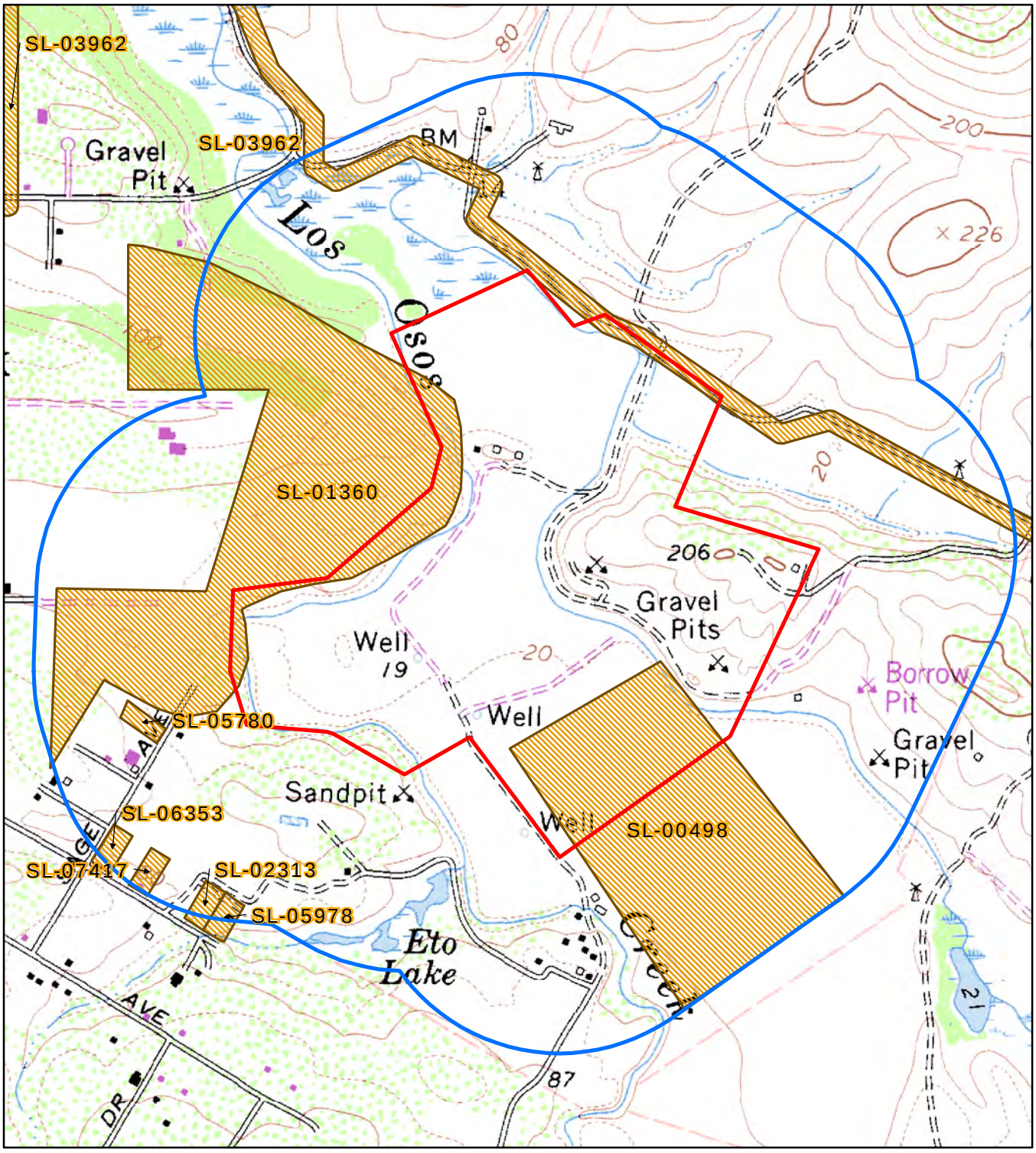
Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 1

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

N

0 100 200 400 600 800 Meters



Los Osos Wetland Restoration

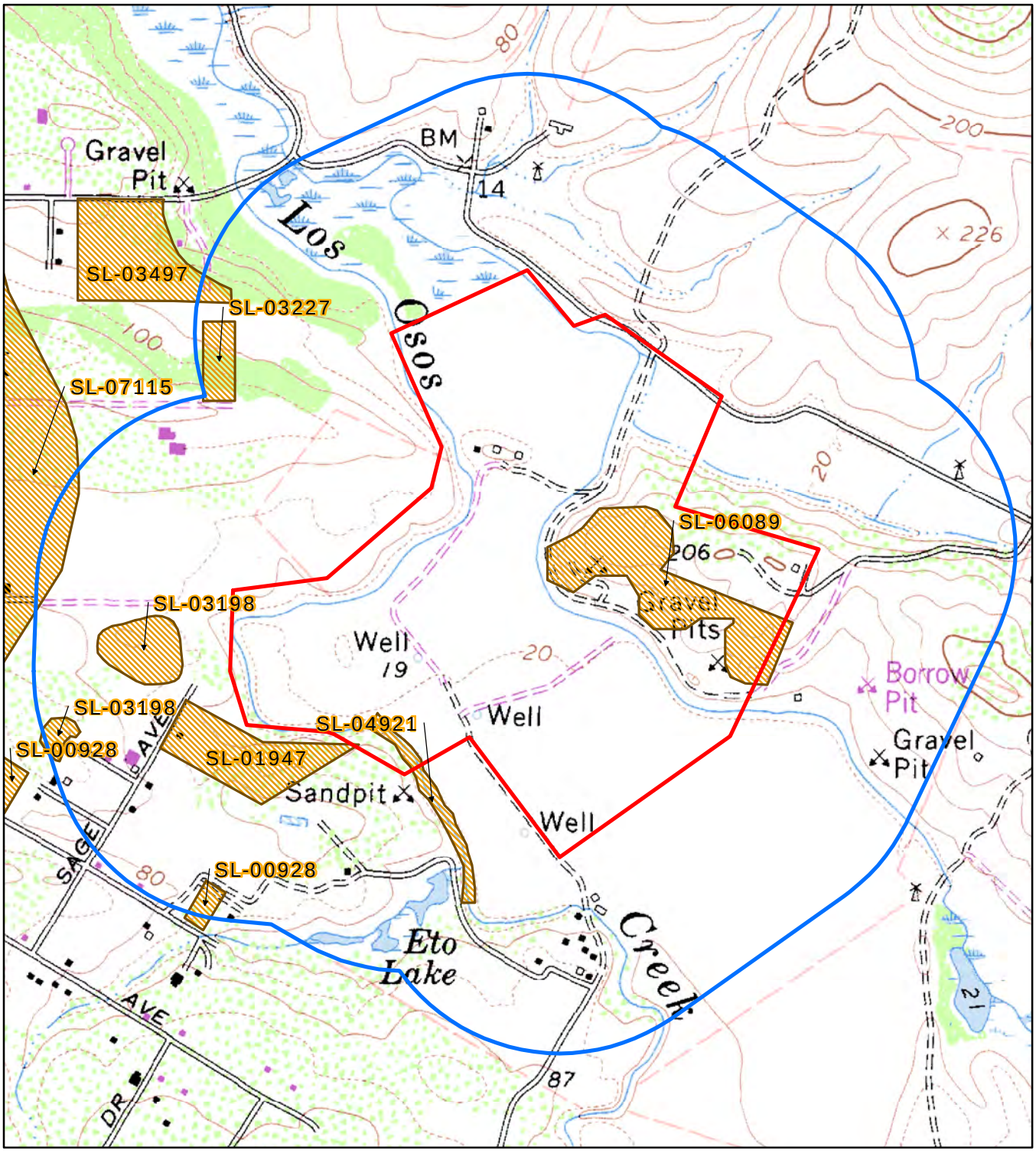
Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 2

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

N

0 100 200 400 600 800 Meters



Los Osos Wetland Restoration

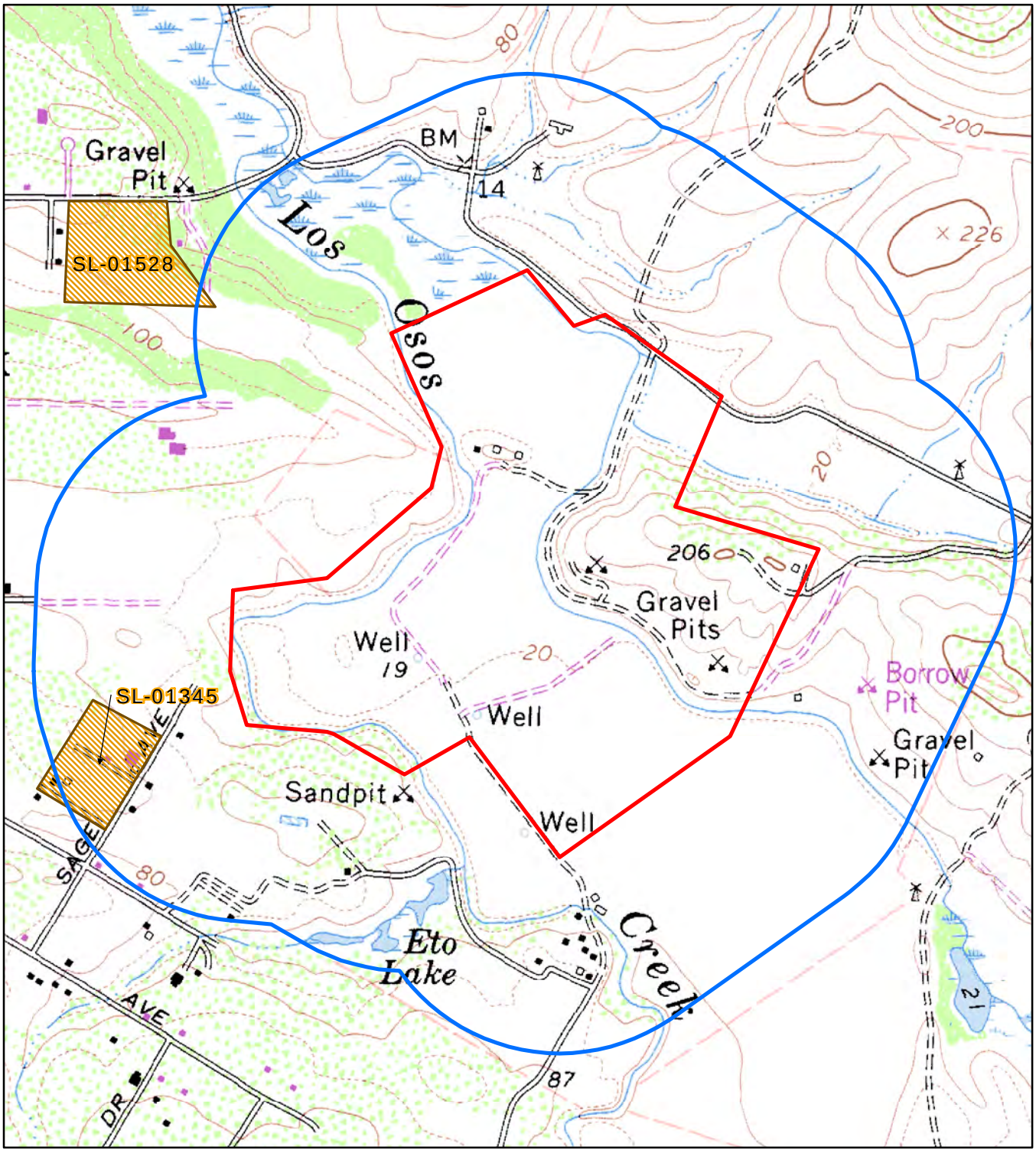
Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 3

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

N

0 100 200 400 600 800 Meters



Los Osos Wetland Restoration

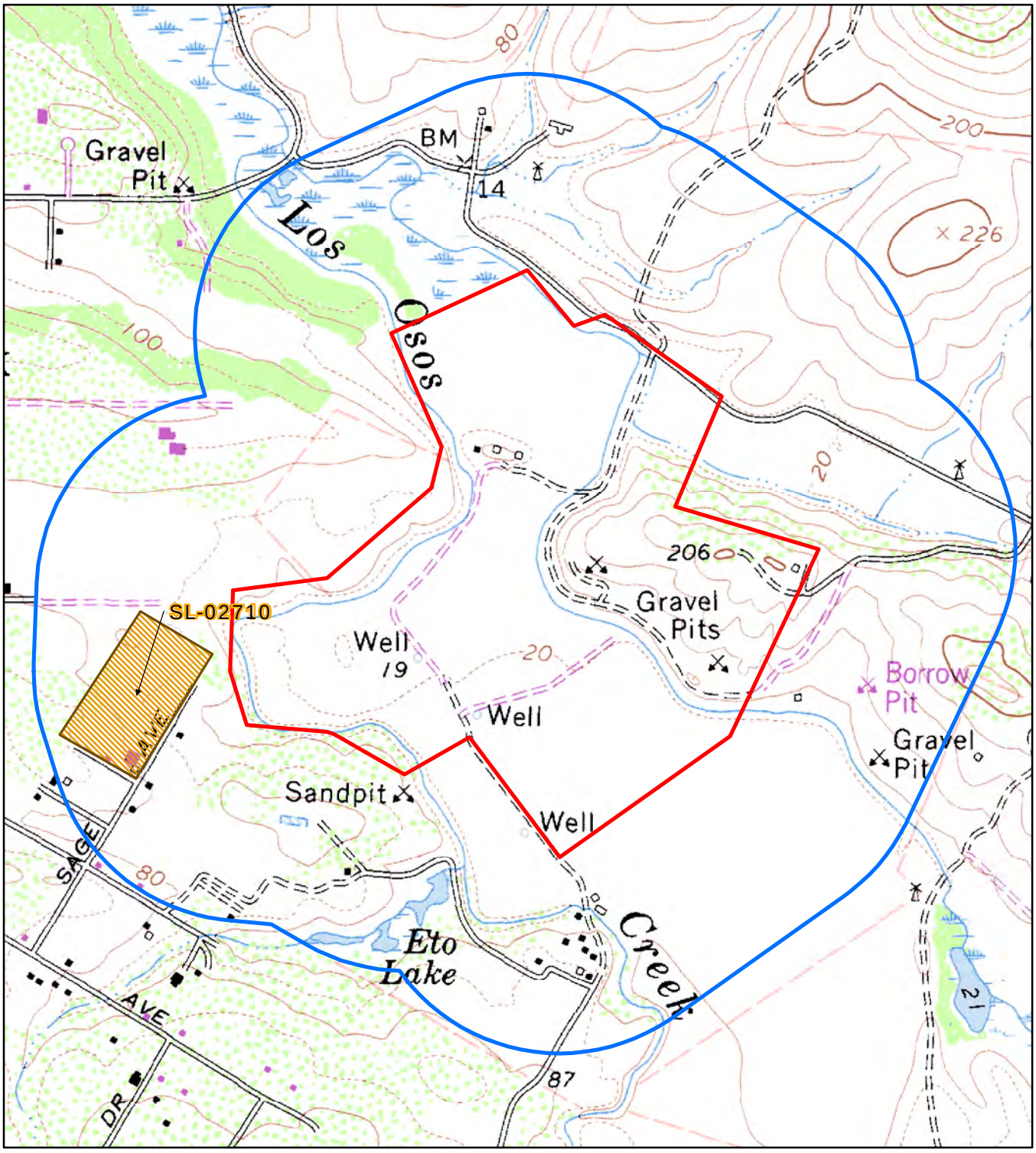
Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 4

Project Location
One Quarter Mile Buffer

N

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

0 100 200 400 600 800 Meters



Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 5

Project Location
One Quarter Mile Buffer

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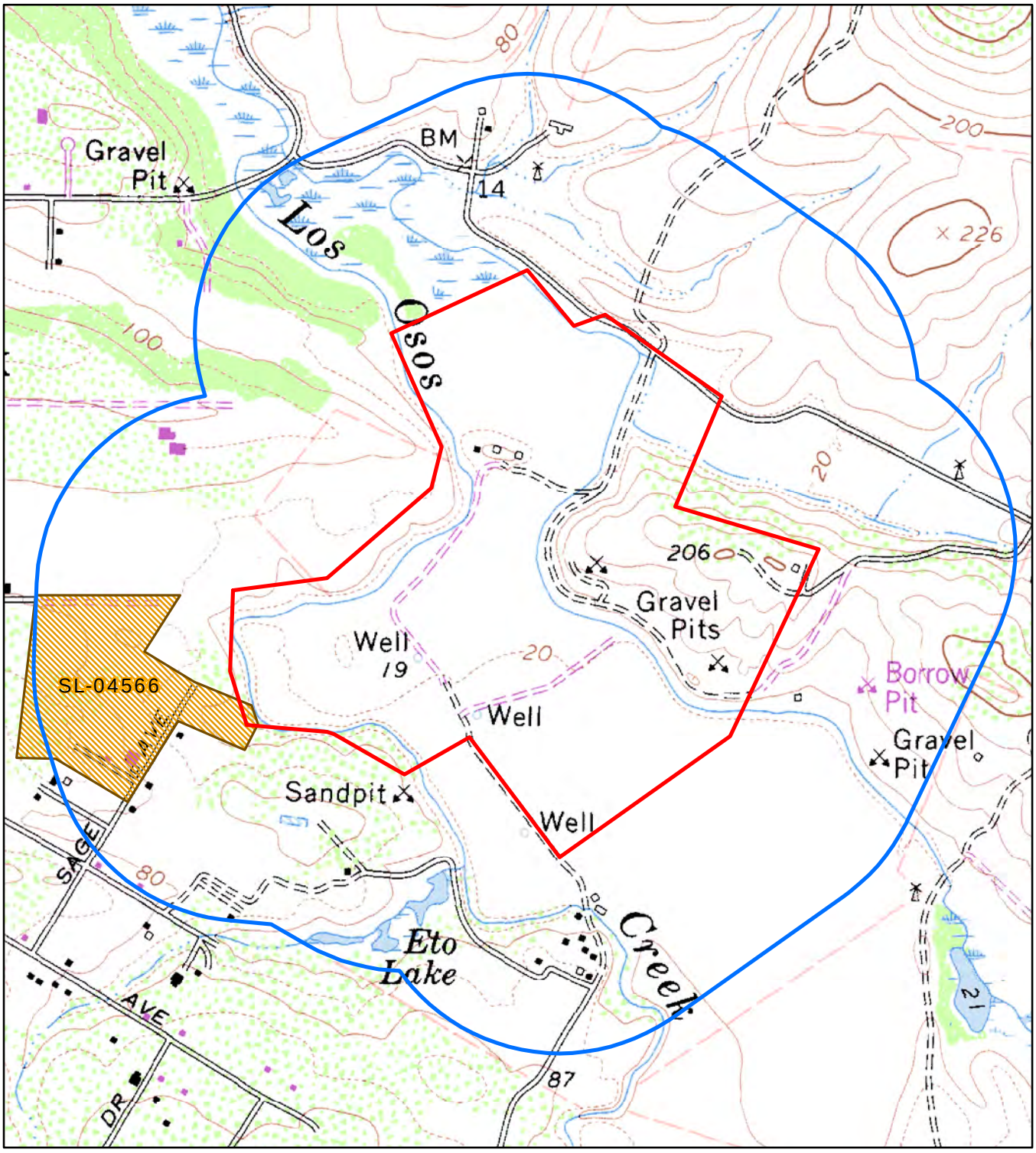
Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

0 100 200 400 600 800 Meters



Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 6

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

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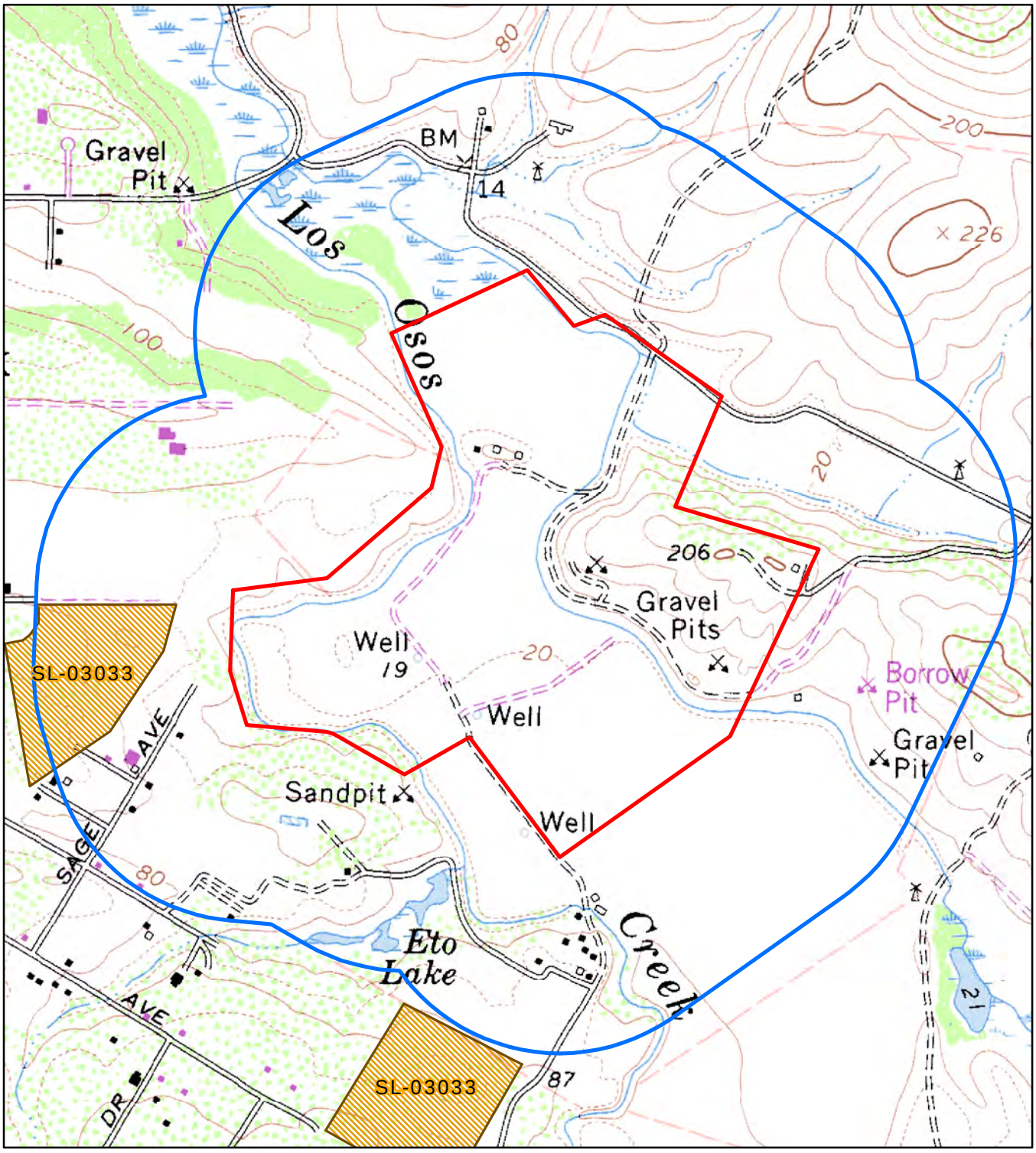

Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 7

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

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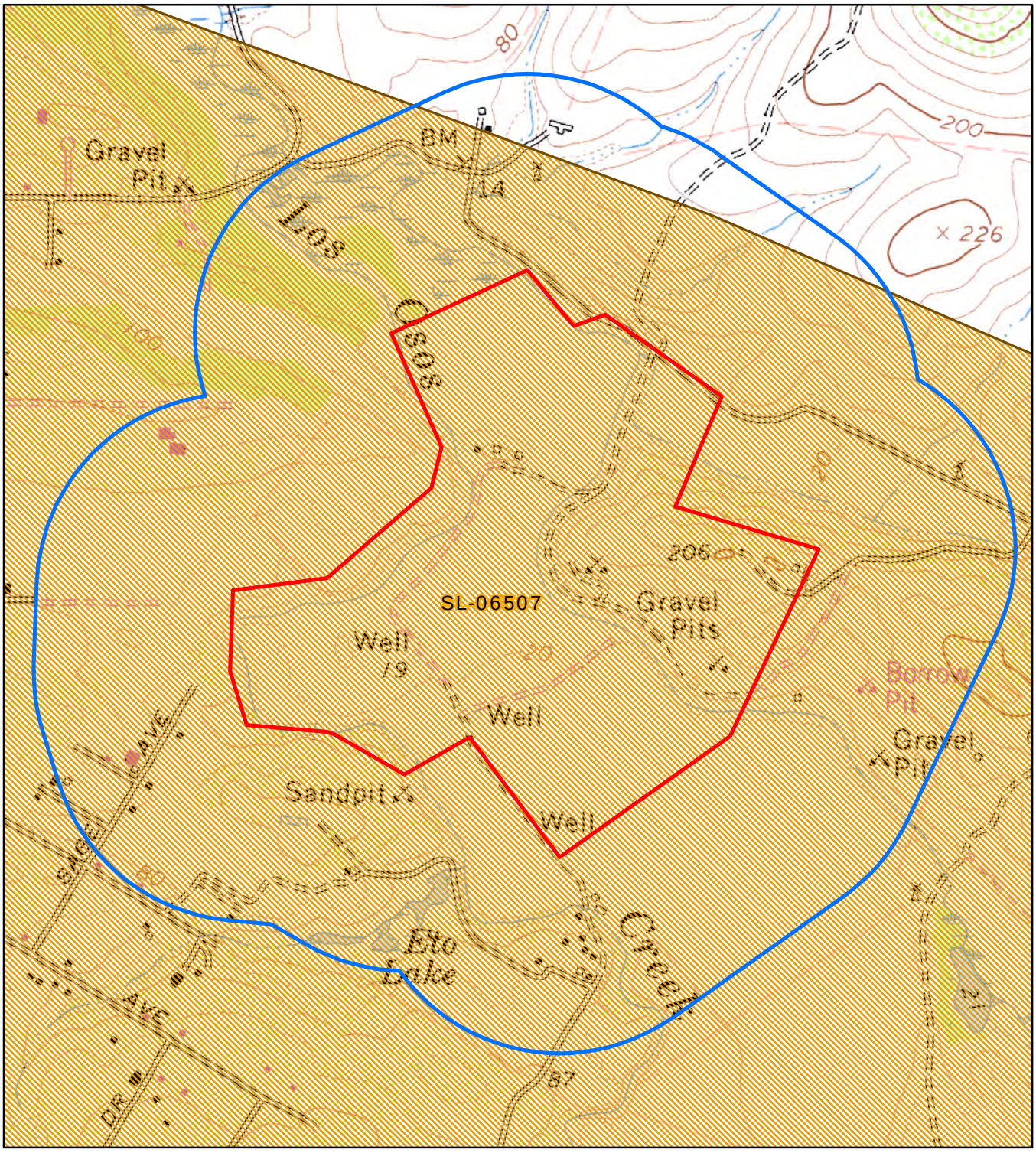
Project Location
One Quarter Mile Buffer



Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 8

Project Location
One Quarter Mile Buffer

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Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

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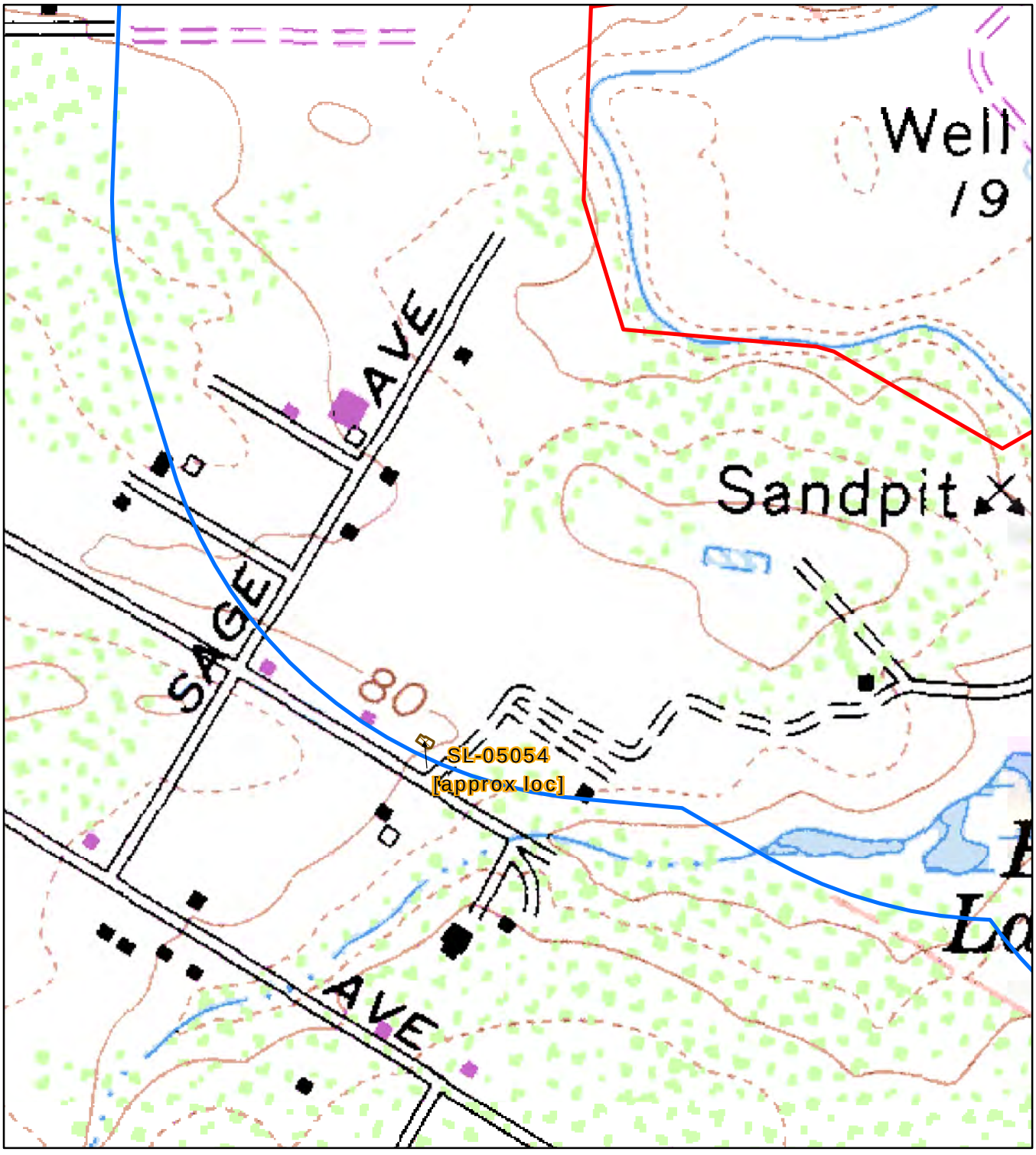

Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 8

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Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

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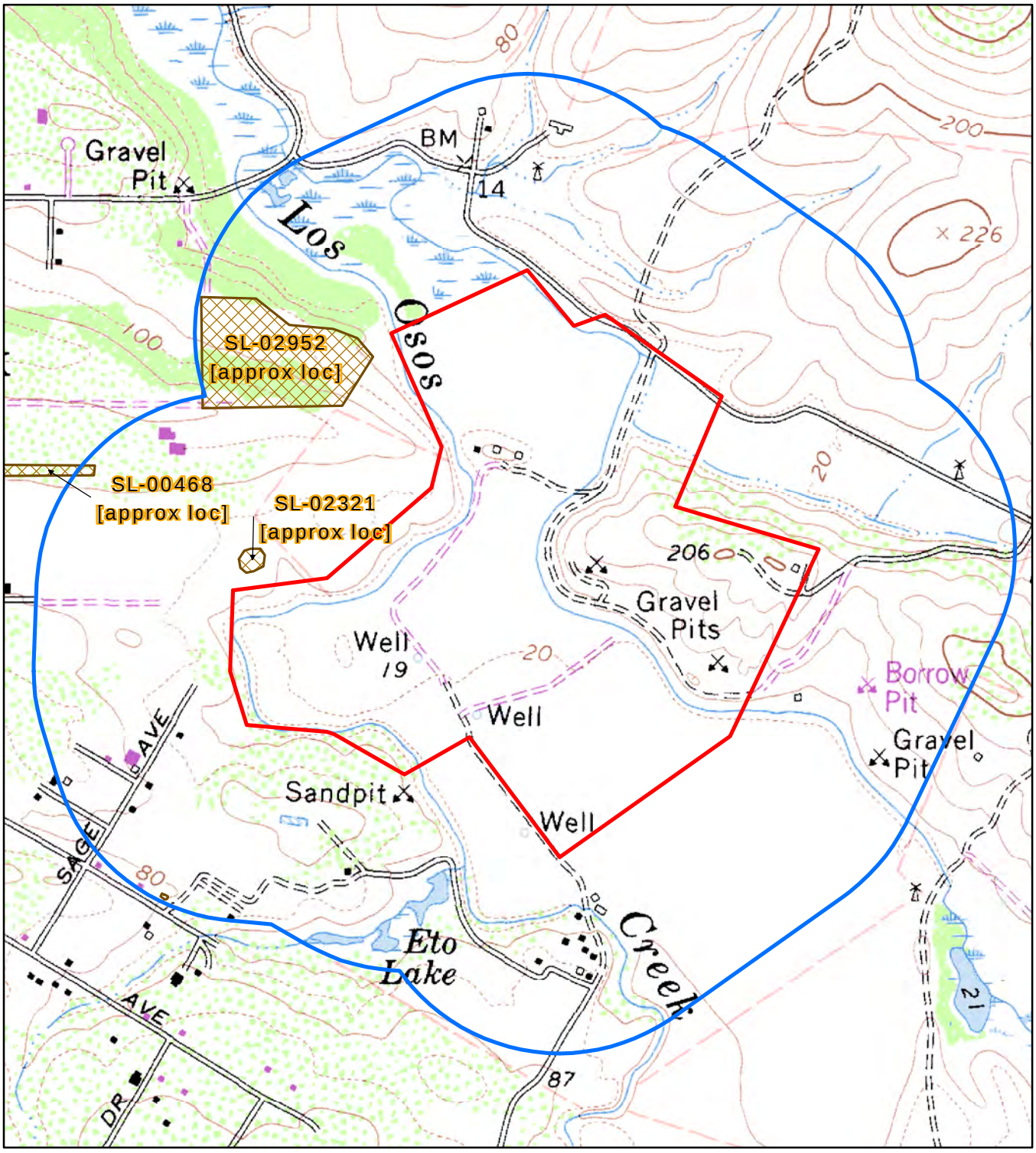

Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 9

Project Location
One Quarter Mile Buffer

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Central Coast Information Center
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University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

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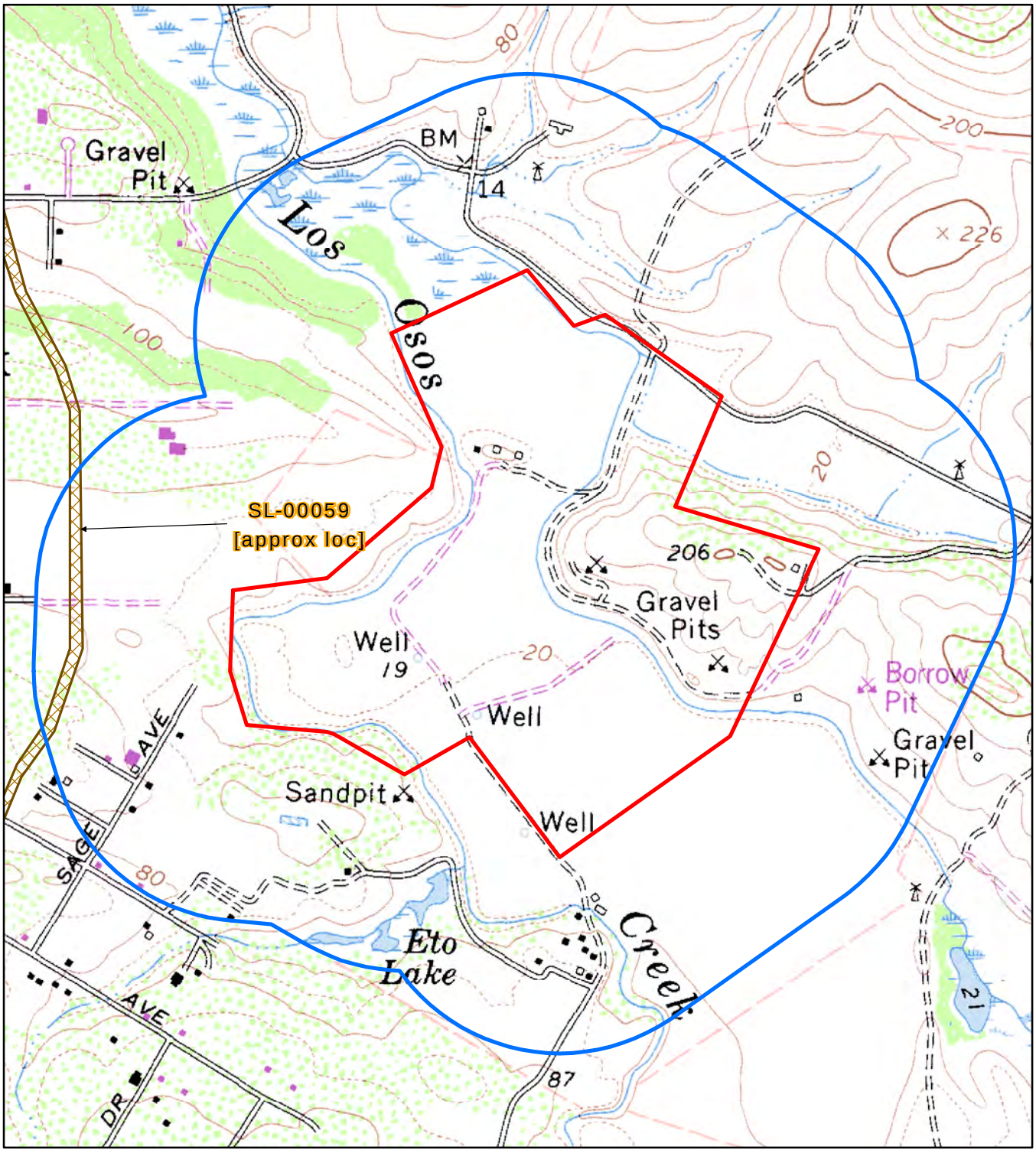

Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Reports Map 10

Central Coast Information Center
Department of Anthropology
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

N

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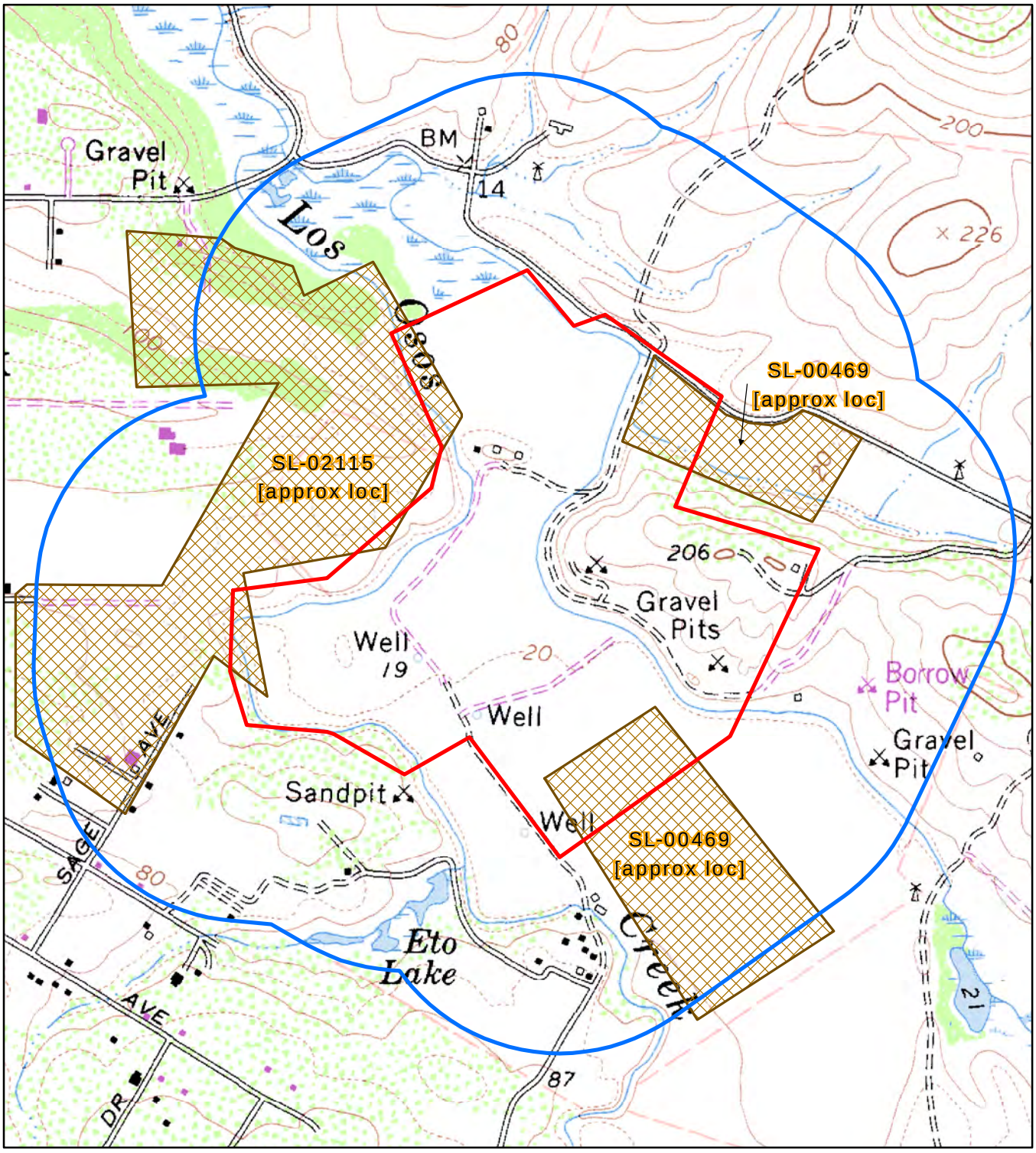

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-40-000026	CA-SLO-000026	Other - SLO 26; Other - Eto; L-26; Other - UCB 26	Site	Prehistoric	AP09; AP16	1947 (Pilling, none given)	SL-02954, SL-06877
P-40-000031	CA-SLO-000031	Other - SLO-31; Other - Baywood Park I; Other - Jones' site at S end of Morro Bay; Other - UCLA 31	Site	Prehistoric	AP15; AP16	1948 (A.R. Pilling, none given)	SL-00049, SL-01345, SL-01360, SL-06877
P-40-000347	CA-SLO-000347	Other - 4-SLO-347	Site	Prehistoric, Protohistoric	AP16	1965 (H. L Wadhams and L. D. Wadhams, University of California); 1996 (M. Maki and L. Carbone, Fugro West, Inc.); 1997 (M. Maki and J. Romani, ENSR)	SL-00049, SL-01345, SL-01360, SL-02115, SL-02710, SL-03033, SL-03198, SL-04566, SL-05587, SL-05780
P-40-000464	CA-SLO-000464	Other - CA-SLO-AS-464	Site	Prehistoric	AP15	1969 (C.E. Dills, San Luis Obispo County Archaeological Society)	SL-00538, SL-00928, SL-00929, SL-02313, SL-02396, SL-02510, SL-05054, SL-05434, SL-05978, SL-06353, SL-07417
P-40-001186	CA-SLO-001186	Other - Baptista Ranch no. 2	Site	Prehistoric	AP02; AP04	1986 (Jim Woodward, Tom Wheeler, Phil Hines, Betty Rivers, Cultural Heritage Section, California Department of Parks and Rec.)	
P-40-001274	CA-SLO-001274		Site	Prehistoric	AP02	1990 (R. L. Anastsio, Basin Research Associates)	SL-02952, SL-03138, SL-03497, SL-03732, SL-05587, SL-05780, SL-06675
P-40-001404	CA-SLO-001404	Other - 4-SLO-AS-5146	Site	Prehistoric	AP16	1991 (C. E. Dills, SLOCAS)	
P-40-001405	CA-SLO-001405	Other - 4-SLO-AS-5145	Site	Prehistoric	AP16	1991 (C. E. Dills, SLOCAS)	SL-04566
P-40-001792	CA-SLO-001792	Other - FW-1	Site	Prehistoric	AP02; AP16	1996 (M. Maki and L. Carbone, Fugro West, Inc.); 1997 (M. Maki and J. Romani, ENSR)	SL-03198, SL-04566
P-40-002016	CA-SLO-002016	Other - SITE #3	Site	Historic	AP15	2000 (J. Parker, Parker & Associates); 2008 (D. Jones, Far Western)	SL-03962, SL-06507, SL-06515

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-40-002017	CA-SLO-002017		Site	Prehistoric	AP15	2000 (J. Parker, Parker & Associates)	SL-03962
P-40-002535	CA-SLO-002535	Other - Warden Creek Site	Site	Prehistoric	AP02	2006 (Cris Lowgren, CRMS)	SL-06089

Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Resources Map 1

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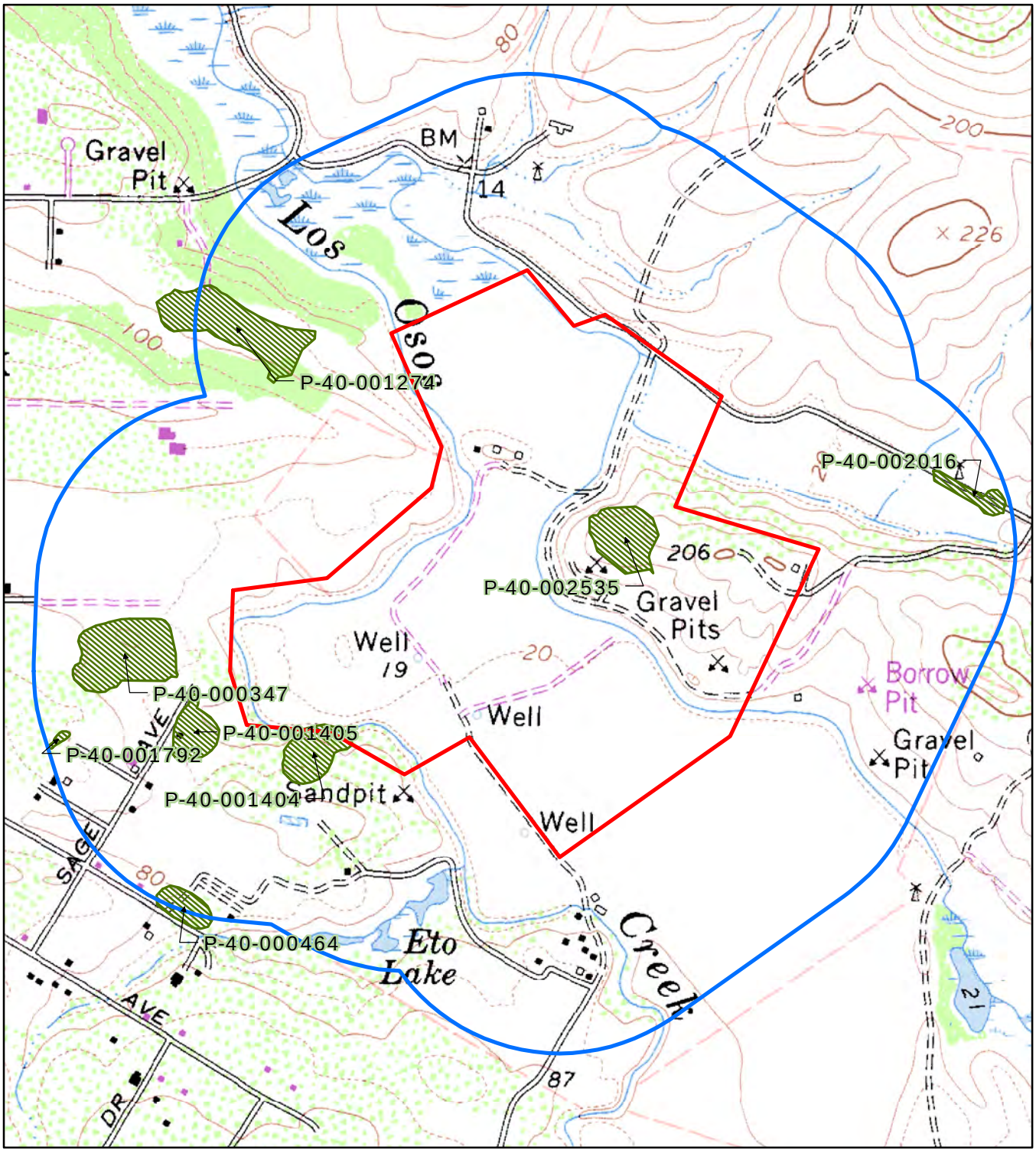
University of California
Santa Barbara, CA 93106-3210
(805) 893-2474
(805) 893-8707 FAX

Project Location
One Quarter Mile Buffer

N

0 100 200 400 600 800 Meters



Los Osos Wetland Restoration

Customer Name: Philip Clarkson - Applied EarthWorks Inc.
Project Location: Morro Bay South
Resources Map 2

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Department of Anthropology
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Santa Barbara, CA 93106-3210
(805) 893-2474
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Project Location
One Quarter Mile Buffer

N

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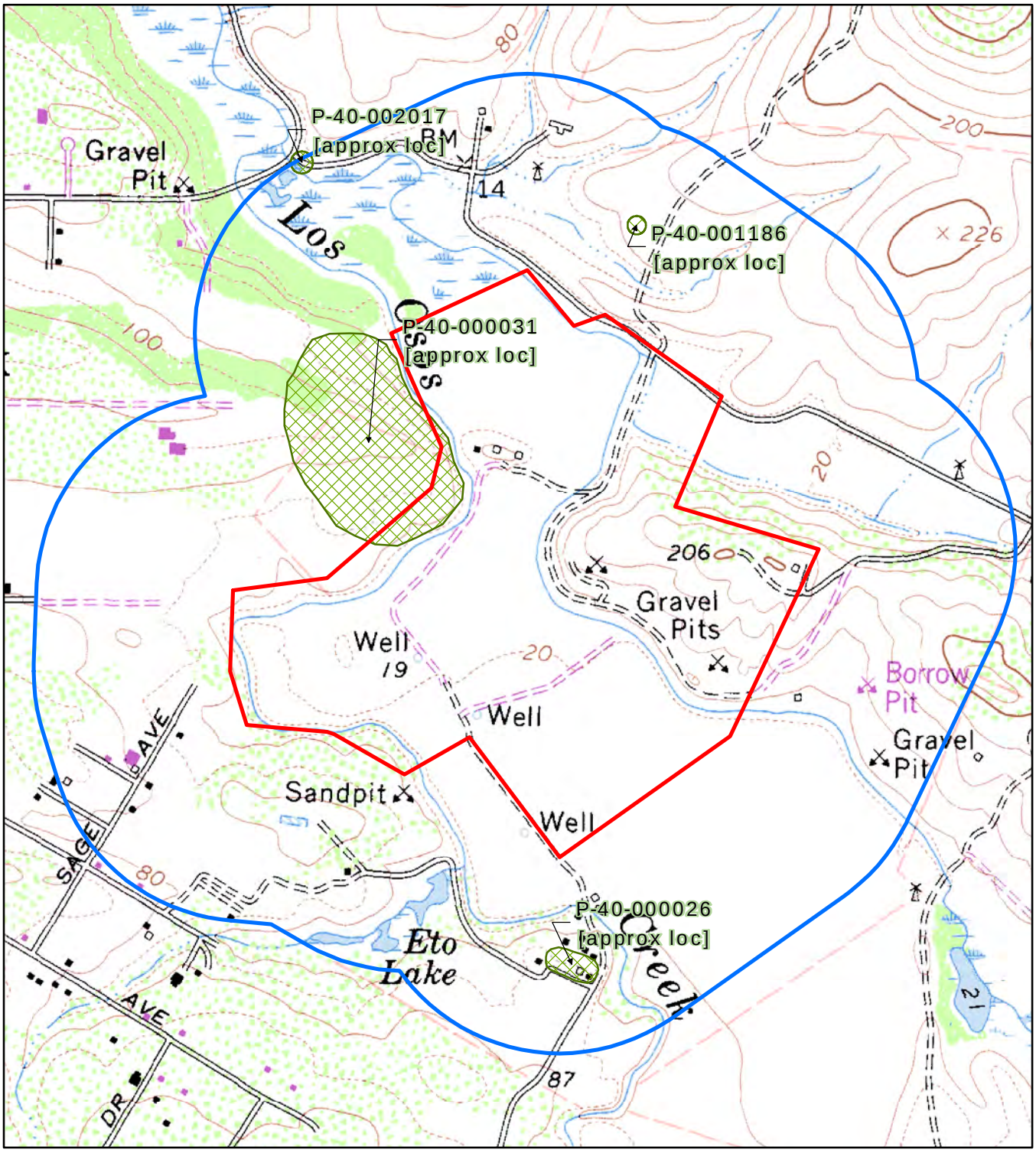


APPENDIX B

Native American Outreach

Applied EARTHWORKS Inc.

811 El Capitan Way Suite 100
San Luis Obispo, CA 93401
O: (805) 594-1590 | F: (805) 5941577

June 11, 2020

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

Re: Phase 1 Cultural Resource Study for Los Osos Wetland Restoration Project, San Luis Obispo, California.

To Whom it May Concern:

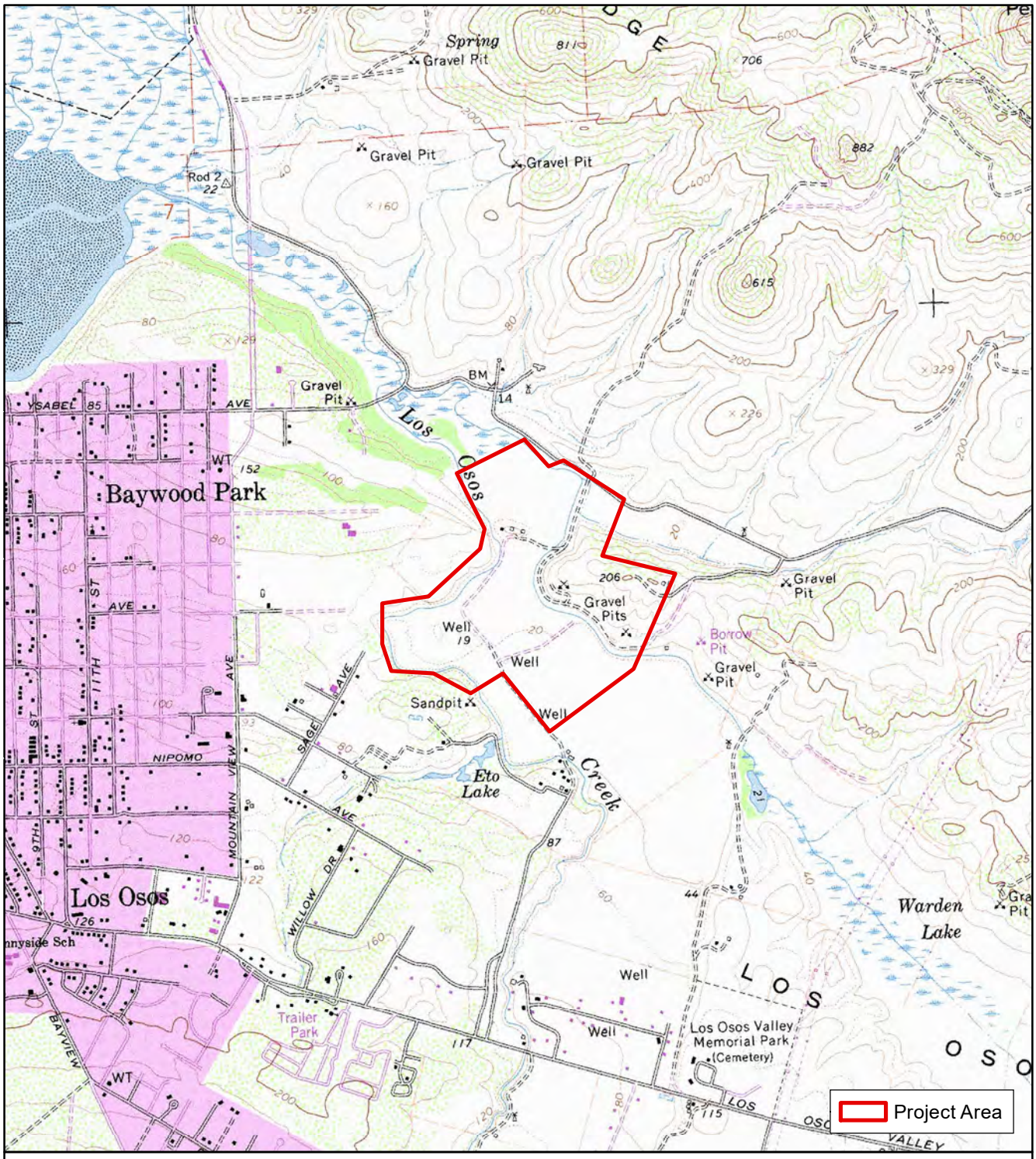
Applied EarthWorks, Inc. is conducting a cultural resource study for a 81-acre creek restoration project at 1951 Turri Road in Los Osos, California. The Project area is depicted on the attached copy of the Morro Bay South, CA 7.5' Quadrangle Map and is within an unsection portion of the Canada De Los Osos y Pecho y Islay Land Grant.

This letter is being submitted to formally request your agency to conduct a search of its *Sacred Lands Inventory File*. Your information will aid us in determining if any other cultural properties are present within the general vicinity of the proposed Project, thereby assisting us in our environmental analysis. In addition, we are requesting the names, addresses, and phone numbers of officially recognized tribal representatives in the Project area.

Please fax the results to (805) 594-1577 and do not hesitate to call me at (805) 594-1590 if you have any questions or require additional information. Thank you for your time and consideration in this matter.

Sincerely,

Philip Clarkson,
Staff Archaeologist
Applied EarthWorks, Inc.
pclarkson@appliedearthworks.com



Township 30 S/ Range 11 E
Canada de Los Osos y Pecho y Islay Land Grant
Morro Bay South (1950-PR2015), CA 7.5' USGS Quadrangle

Location map for the *Los Osos Creek Restoration Project - AE4186*.

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

June 18, 2020

Philip Clarkson, Staff Archaeologist
Applied EarthWorks, Inc.

Via Email to: pclarkson@appliedearthworks.com

Re: Phase I Cultural Resource Study for Los Osos Wetland Restoration Project, San Luis Obispo County

Dear Mr. Clarkson:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the San Luis Obispo County Chumash Council on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Sarah.Fonseca@nahc.ca.gov.

Sincerely,

Sarah Fonseca
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Luis Obispo County
6/18/2020

Barbareno/Ventureno Band of Mission Indians
Julie Tumamait-Stenslie, Chairperson
365 North Poli Ave — Chumash
Ojai, CA, 93023
Phone: (805) 646 - 6214
jtumamait@hotmail.com

Barbareno/ Ventureno Band of Mission Indians
Patrick Tumamait,
992 El Camino Corto — Chumash
Ojai, CA, 93023
Phone: (805) 216 - 1253

Barbareno/ Ventureno Band of Mission Indians
Raudel Banuelos,
331 Mira Flores — Chumash
Camarillo, CA, 93012
Phone: (805) 427 - 0015

Barbareno/ Ventureno Band of Mission Indians
Eleanor Arrellanes,
P. O. Box 5687 — Chumash
Ventura, CA, 93005
Phone: (805) 701 - 3246

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street — Chumash
Bakersfield, CA, 93307
Phone: (661) 322 - 0121
chumashtribe@sbcglobal.net

Coastal Band of the Chumash Nation
Mariza Sullivan, Chairperson
P. O. Box 4464 — Chumash
Santa Barbara, CA, 93140
Phone: (805) 665 - 0486
cbcntribalchair@gmail.com

Northern Chumash Tribal Council
Fred Collins, Spokesperson
P.O. Box 6533 — Chumash
Los Osos, CA, 93412
Phone: (805) 801 - 0347
fcollins@northernchumash.org

Salinan Tribe of Monterey, San Luis Obispo Counties
Fredrick Segobia, Tribal Representative
7070 Morro Road, Suite A — Salinan
Atascadero, CA, 93422
Phone: (831) 385 - 1490
info@salinantribe.com

San Luis Obispo County Chumash Council
Mark Vigil, Chief
1030 Ritchie Road — Chumash
Grover Beach, CA, 93433
Phone: (805) 481 - 2461
Fax: (805) 474-4729

Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
P.O. Box 517 — Chumash
Santa Ynez, CA, 93460
Phone: (805) 688 - 7997
Fax: (805) 686-9578
kkahn@santaynezchumash.org

Xolon-Salinan Tribe
Karen White, Chairperson
P. O. Box 7045 — Salinan
Spreckels, CA, 93962
Phone: (831) 238 - 1488
xolon.salinan.heritage@gmail.com

Xolon-Salinan Tribe
Donna Haro, Tribal Headwoman
P. O. Box 7045 — Salinan
Spreckels, CA, 93962
Phone: (925) 470 - 5019
dhxolonaakletse@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Phase I Cultural Resource Study for Los Osos Wetland Restoration Project, San Luis Obispo County.

yak tityu tityu yak tiłhini – Northern Chumash Tribe
Mona Tucker, Chairperson
660 Camino Del Rey
Arroyo Grande, CA, 93420
Phone: (805) 748 - 2121
olivas.mona@gmail.com

Chumash

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Phase I Cultural Resource Study for Los Osos Wetland Restoration Project, San Luis Obispo County.

Applied EARTHWORKS Inc.

811 El Capitan Way, Suite 100
San Luis Obispo, CA 93401-8943
O: (805) 594-1590 | F: (805) 594-1577

June 23, 2020

Dona Haro
Xolon-Salinan Tribe,
P.O. Box 7045
Spreckels, CA, 93962

Re: Phase 1 Cultural Resource Study for Los Osos Wetland Restoration Project, San Luis Obispo, California.

Dear Ms. Haro:

Applied EarthWorks, Inc. is conducting a cultural resource study for an 81-acre creek restoration project at 1951 Turri Road in Los Osos, California. The project area is depicted on the attached copy of the Morro Bay South, CA 7.5' Quadrangle Map and is within an unsectioned portion of the Canada De Los Osos y Pecho y Islay Land Grant.

Your name and address were provided to us by the Native American Heritage Commission (NAHC), which lists you as an individual with knowledge of Native American resources in San Luis Obispo County. This letter is being submitted to formally request any information you may have regarding Native American cultural resources within or adjacent to the project area. If you have information regarding the project area or have interest in the project, please call or send a letter to my attention. Your comments will be included in our cultural resources study report.

Please call me at (805) 594-1590 or email me at pclarkson@appliedearthworks.com if you have any questions or require additional information. Thank you for your time and consideration.
Sincerely,

Phil Clarkson
Staff Archaeologist
Applied EarthWorks, Inc.

APPENDIX C

Site Records

*Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 6254.10, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the NHPA (PL 89-665, as amended, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]).

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	**Primary #** 40-000031 **HRI #** **Trinomial** CA-SLO-31/H Update **NRHP Status Code**
Other Listings Review Code	Reviewer Date

P1. Other Identifier:

***P2. Location: a. County:** San Luis Obispo ☒ **Not for Publication** ☐ **Unrestricted**

b. USGS 7.5′ Quad: Morro Bay South **Date:** 1950-2015 Canada de Los Osos y Pecho y Islay Land Grant MD **B.M.**

c. Address:

d. UTM: NAD 83, Zone 10N; 698660 **mE /** 3911309 **mN**

e. Other Locational Data: From the intersection of South Bay Boulevard and Turri Road, follow Turri Road southeast for 1.2 miles. Turn right on a dirt road (Sombrero Drive) past the Los Osos Creek Wetland Preserve. In 0.2 miles turn right, continue straight crossing Warden Creek and follow the road to the end. The site consists of the knoll and continues west.

***P3a. Description:** This site was first recorded in 1948 by A.R. Pilling and described as a "large area of midden and surface artifacts on a dune." Pilling identified oyster shell, a mano, mortar, projectile point, and knife and concluded it was used as a temporary camping place (Pilling 1948). At that time, Los Osos Creek was south of the site boundary and the landform that contained the site was a large dune that continued west. By 1959 Los Osos Creek had been rerouted north of the site with extensive excavation necessary to complete the task. In July 2020, a survey of the knoll east of the Pilling site boundary concluded that the site extended over the knoll where shell midden and debitage scatter was identified. Survey of the previously recorded site boundary was not possible due to intense vegetation. A residence, barn, shed, and one unknown demolished structure on the knoll added a historic component to the site.

***P3b. Resource Attributes:** AP2–Lithic scatter, AP15–Habitation debris, HP2–Single family property, HP4–Ancillary building, HP33–Farm/Ranch

***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other:

***P5a. Photograph or Drawing:**

P5b. Description of Photo: Site overview, looking northwest at knoll with residence in background.

***P6. Date Constructed/Age and Sources:** ☐ Prehistoric ☐ Historic ☒ Both

***P7. Owner and Address:** Coastal San Luis Resource Conservation District
1951 Turri Road
San Luis Obispo, CA 93405

***P8. Recorded By:** Phil Clarkson
Applied EarthWorks, Inc.
811 El Capitan Way, Suite 100
San Luis Obispo, CA 93401

***P9. Date Recorded:** July 7, 2020

***P10. Survey Type:** ☐ Intensive ☐ Reconnaissance ☒ Other

Describe: Targeted survey approach covering approximately 28 acres.

***P11. Report Citation:**

Long, Amber, Erin Enright, and Phillip Clarkson
2020 *Cultural Resource Study for the Los Osos Creek Restoration Project, Los Osos, San Luis Obispo County, California.* Applied EarthWorks, Inc. San Luis Obispo, California.

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

***A1. Dimensions: a. Length** 427 meters **x b. Width** 495 meters

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other: GPS Mapping

Method of Determination (check any that apply): ☐ Artifacts ☒ Features ☒ Soil ☐ Vegetation ☒ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (explain):

Reliability of Determination: ☐ High ☐ Medium ☒ Low Explain: The site likely extends beyond the project survey area; plus surface visibility was poor. No testing has occurred to check boundaries.

Limitations (check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ☐ Disturbances ☒ Vegetation ☐ Other (explain):

A2. Depth: at least 70 centimeters ☐ None ☐ Unknown
Method of determination: A previously excavated area on the knoll was visible up to 70 centimeters in which lithic debitage and marine shell was observed throughout.

***A3. Human Remains:** ☐ Present ☐ Absent ☐ Possible ☒ Unknown (explain): None observed

***A4. Features:** A historic residence, barn, and shed are on the knoll.

***A5. Cultural Constituents (not associated with features):** One contracting stem projectile point base was found on the knoll along with some historic debris.

***A6. Were Specimens Collected?** ☒ No ☐ Yes (If yes, attached Artifact Record or catalog.)

***A7. Site Condition:** ☐ Good ☒ Fair ☐ Poor ☒ Disturbances: This update only covers the portion of the site within Æ's project area. However, disturbances are found within portions of CA-SLO-31 from historic period structures and more recent ground disturbance (excavation) by homeless people living on portions of the site.

***A8. Nearest Water (type, distance, and direction):** Los Osos Creek cuts through the eastern area of the site.

***A9. Elevation:** 50 feet asl.

A10. Environmental Setting (vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.): The portion of CA-SLO-31 updated by Æ is on an elevated knoll that overlooks Los Osos Creek. Vegetation in the area includes riparian down in the creek along with low-lying grasses, brush, and ice plant on the knoll. Soils observed on the knoll include silty clay sediments that also contain darker midden soils.

A11. Historical Information (full citations in A15 below): The parcel was originally part of Rancho Canada de Los Osos land grant. The rancho was subdivided as shown in Stratton's 1868 map. The modern-day parcel was carved out of Lots 29 and 79. The town of El Moro (Baywood Park) and modern-day Los Osos occupy most of Lot 79. Early land ownership records provide land descriptions in historic survey terms, making it difficult to determine who owned portions of Lots 29 and 79 within the parcel versus the remainder of the lots, after Captain Wilson's family sold off the land. An 1880 map indicates the Nelson family owned the southern half of the parcel within Lot 79 (Ward 1880).

Title records indicate several families owned land in Lots 29 and 79, including the Wood and Souza families (First American Title Company 2020). Wood sold land within the parcel to Antonio Souza in 1898. Souza went on to purchase other ranches near San Luis Obispo including Prefumo Canyon and near Bishop's Peak (Joan Sullivan, personal communication). Antonio's son, George Souza, purchased the parcel from his mother after his father passed in 1935. George worked the ranch but lived in San Luis Obispo (Joan Sullivan, personal communication). At some point the ranch house burned down (Tornatzky 2016). The land was used primarily for agriculture and remained in the Souza family until 1985 when it was sold to George and Ann Martines. In 1999, the parcel was purchased by the Marla Kathrena Morrissey Trust, and the CSLRCD was given the parcel in 2015.

***A12. Age:** ☒ Prehistoric ☐ Protohistoric ☐ 1542–1769 ☐ 1769–1848 ☐ 1848–1880 ☒ 1880–1914 ☒ 1914–1945 ☒ Post 1945 ☐ Undetermined Describe position in regional prehistoric chronology or factual historic dates if known:
Based on the building materials, the house was mostly likely built between 1940–1960 (NAHB Research Center Inc. 2001). Based on the barn type, condition, and building materials, it was mostly likely built between 1890–1930

(Auer 1989). An exact build date for the shed is not known but based on the building materials, the shed was likely built between 1940–1960, but after the residence was constructed (Nelson 1963; Williams 2008).

A13. Interpretations: CA-SLO-31 may be part of a single resource known as the Los Osos Middle School Site, a large habitation site consisting of approximately 80 acres, along with CA-SLO-214 and -1274 due to their overlapping boundaries and continuity in the types of materials observed.

A14. Remarks: Due to thick vegetation and low surface visibility, survey of the previously recorded site boundary to the west was not possible.

A15. References:

Auer, Michael J.
1989 *The Preservation of Historic Barns*. Preservation Brief 20. U.S. Department of the Interior, National Park Service, Preservation Assistance Division, Washington, D.C.

First American Title Company
2020 Chain of Title Guarantee for APN 067-011-048, San Luis Obispo, California.

NAHB Research Center Inc.
2001 *Review of Structural Materials and Methods for Home Building in the United States: 1900 to 2000*. NAHB Research Center Inc., Upper Marlboro, Maryland. Prepared for U. S. Department of Housing and Urban Development, Washington D.C.

Nelson, Lee H.
1963 *Nail Chronology as an aid to dating old buildings*. American Association for State and Local History, Technical Leaflet 15.

Pilling, A.R.
1948 CA-SLO-31 Archaeological Site Record. On file, at the California Historical Resources Information Center, Central Coast Information Center, University of California, Santa Barbara.

Tornatzky, Lynette
2016 *Images of America: Los Osos/Baywood Park.* Arcadia Publishing, Charleston, South Carolina.

Ward, H. C.
1880 *Plat of a Part of Lot 79 in the Rancho Canada de Los Osos, San Luis Obispo County, California.*

Williams, Don
2008 "Reading" Tool Marks on Furniture. *The Chronicle* 61(3):106–116.

A16. Photographs: See continuation sheet.
Original media/negatives kept at: Applied EarthWorks, Inc., San Luis Obispo, California

***A17. Form Prepared By:** Kelli Wathen and Amber Long **Date:** 11/20/2020
Affiliation and Address: Applied EarthWorks, Inc. 811 El Capitan Way, Suite 100, San Luis Obispo, CA 93401

B1. Historic Name: N/A

B2. Common Name: Residence

B3. Original Use: Single family residence **B4. Present Use:** Abandoned and vacant

***B5. Architectural Style:** Vernacular

***B6. Construction History (construction date, alterations, and dates of alterations):** The build date of the residence is unknown. County Assessor's records show that a residence was built around 1934 and a small addition constructed at an unknown date (San Luis Obispo County 1949–1973). The existing residence is similar in shape and size; however, the foundation is more modern, suggesting this residence may have built following a fire. Some of the exposed exterior vertical wall planks and foundation materials date to the late nineteenth century. Late nineteenth century and early twentieth century materials present include circular-sawn wood boards, sash-type milled boards, and cut nails. The presence of the older materials indicates they may have been purchased as salvage or reused from remnants of earlier buildings on the property. Based on the building materials, the house was mostly likely built between 1940–1960 (NAHB Research Center Inc. 2001).

***B7. Moved?:** ☐ No ☐ Yes ☒ Unknown Date: Original Location:

***B8. Related Features:** Barn and shed

B9. a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance:** Theme: None Area: Los Osos, California
Period of Significance: None Property Type: Rural ranch Applicable Criteria: None

The vernacular, single-story residence has an irregular rectangular floorplan on a pier-and-beam foundation. A small addition was constructed on the north end of the building. Vertical board-and-batten siding covers the original section of the primary elevation (west), while the siding on the addition is smooth. The original roof is a low-pitched gable with overhanging eaves, and the addition has a flat roof. The primary entrance is recessed into the building with a wide porch overhang. The windows are gone but there are openings for two double-hung windows. The secondary access door is on the addition and has an opening for a vertical sliding window.

The northern elevation is clad in smooth siding. The middle section of wall is missing and is flanked on both sides by small, square sliding windows. One window is missing entirely. An interior wall that divides the original building and the addition can been seen through the missing section of the exterior wall, and also has board-and-batten siding and a partially covered window opening, indicating that was the original northern elevation.

The rear, or west elevation, is similar to the primary elevation. The original part of the building is clad in vertical -and-batten siding, and the siding on the addition is smooth. There are two square openings for sliding windows, and one for a double hung window. There is an opening for a back door on the addition, and an opening in the wall of the original residence. A utility shed was added to the northwest corner with a wood door and shed style roof.

The south elevation is also clad in vertical board-and-batten siding with three window openings. Two double-hung window openings have been converted to entrances and the remaining window is a small square sliding window. The building is in extremely poor condition, having been abandoned and likely used by homeless populations. Most of the interior wood plank flooring and subfloor are damaged or missing, the interior walls are damaged or repaired with large unpainted plywood boards, and structural framing is exposed.

The residence was evaluated for eligibility for listing on the National Register of Historic Places and the California Register of Historical Resources.

Criterion 1/A. Historic topographic maps indicate a residence was on the property as early as the late nineteenth century and aerial photographs show that the property was used primarily for agriculture. The precise build date of the existing residence is unknown; however, materials analysis indicate it was built sometime between 1940 and 1960, therefore, the original residence is no longer extant. Without a precise date, the residence cannot be tied to a specific important event in history. The only association to a time is based on the materials used in the existing

residence, which date from 1940 to 1960. Due the lack of sufficient data, the residence is not associated with any specific events or trends of historical significance; therefore, it is not considered significant under Criterion A/1.

Criterion 2/B. The builder and architect of the residence is unknown. George Sousa owned the property during the time it could have been built, but no information is available to determine that he was the builder. No archival information suggests that Sousa was influential or that would elevate him to a level of importance to be considered a person of importance to our past. Therefore, the residence is not associated with any person of historical significance and is not considered significant under Criterion B/2.

Criterion 3/C. The residence is a vernacular single-family home with a small addition. The build date is unknown, but based on the materials used in its construction, can be narrowed to 1940 to 1960. It was likely built in part by using scraps found on the ranch. The building does not embody the distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, or possess high artistic value. Therefore, the residence is not significant under Criterion C/3.

Criterion 4/D. This criterion is most relevant for archaeological sites, but it can be applied to built-environment resources if further study has the potential to yield information that cannot be obtained from other sources. Historical information about vernacular style residences is prevalent, and further study of the residence would not add any new information to the historic record. Therefore, the residence is not considered significant under Criterion D/4.

Integrity. Integrity of a resource is only assessed when a resource is determined significant under one of the criteria above. The residence is not significant under any of the NRHP/CRHR criteria; therefore, integrity will not be addressed. The residence is not recommended eligible for listing on the NRHP/CRHR.

B11. Additional Resource Attributes (list attributes and codes): AP2 – Lithic scatter, AP15 – Habitation debris, HP2 – Single family property, HP4 – Ancillary building, HP33 – Farm/Ranch

***B12. References:**

NAHB Research Center Inc.
2001 *Review of Structural Materials and Methods for Home Building in the United States: 1900 to 2000*. NAHB Research Center Inc. Upper Marlboro, Maryland. Prepared for U. S. Department of Housing and Urban Development, Washington D.C.

San Luis Obispo County
1949-1973 *Residential Building Records for 1951 Turri Road, Los Osos.* On file at the San Luis Obispo County Assessor's Office, San Luis Obispo, California.

B13. Remarks: The residence is not recommended eligible for listing on the NRHP/CRHR.

***B14. Evaluator:** Amber Long, M.A.
Date of Evaluation: November 17, 2020

This space reserved for official comments.

Sketch Map

B1. Historic Name: None

B2. Common Name: Barn

B3. Original Use: Agricultural storage **B4. Present Use:** Vacant

***B5. Architectural Style:** Western Prairie

***B6. Construction History (construction date, alterations, and dates of alterations):** The construction date is unknown. The barn has circular-sawn wood boards, sash-type milled boards, and cut nails that date to the late nineteenth and early twentieth centuries (Williams 2008). The modern nails throughout the barn appear to be a mix of contemporary and early machine-made wire nails that also date to the late nineteenth and early twentieth centuries. An exact build date for the barn is not known. Based on the barn type, condition, and building materials, it was mostly likely built between 1890–1930 (Auer 1989).

***B7. Moved?:** ☐ No ☐ Yes ☒ Unknown Date: Original Location:

***B8. Related Features:** Residence and shed.

B9. a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance:** Theme: None Area: Los Osos, California
Period of Significance: None Property Type: Rural ranch Applicable Criteria: None

The barn is abandoned and in exceptionally poor condition. Based on the remaining structural components, it was likely a Western Prairie style barn with a monitor style roof. The barn is made of timber framing and vertical wood planks, characteristic of the Western Prairie style. The center gabled area of the barn would likely have been enclosed but may have been open on one or both ends as a breezeway. The crib areas either side of the center section would likely have housed animals. The gable likely housed a loft for storage. The interior of the south crib is covered in sheets of painted plywood which are not original to the structure. The interior of the north crib is partially collapsed but the remaining materials show that it was a wood frame structure with a corrugated metal roof.

The barn was evaluated for eligibility for listing on the National Register of Historic Places and the California Register of Historical Resources.

Criterion A/1. The Western Prairie style barn was constructed sometime between 1890 and 1930 based on the materials still present in the dilapidated barn. This style of barn was common during this time across California. The style was versatile and could have been used to house animals and store hay or crops. Due to the versatile nature of the barn it is difficult to associate it with a specific event or pattern in history; therefore, it is not considered significant under Criterion A/1.
Criterion B/2. The builder and architect of the barn is unknown. The Sousa family owned the property from 1898 to 1985 so it is likely the barn was built during their tenure. No archival information suggests that the Sousa family was influential or that would elevate the family to a level of importance to be considered a person(s) of importance to our past. Therefore, the barn is not associated with any person of historical significance and is not considered significant under Criterion B/2.
Criterion C/3. The barn is indicative of Western Prairie style barns, which are common in California. The building does not embody the distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, or possess high artistic value. Therefore, the barn is not significant under Criterion C/3.
Criterion D/4. This criterion is most relevant for archaeological sites, but it can be applied to built-environment resources if further study has the potential to yield information that cannot be obtained from other sources. Historical information about Western Prairie barns is prevalent, and further study of the barn would not add any new information to the historic record. Therefore, the barn is not considered significant under Criterion D/4.
Integrity. Integrity of a resource is only assessed when a resource is determined significant under one of the criteria above. The barn is not significant under any of the NRHP/CRHR criteria; therefore, integrity will not be addressed. The barn is not recommended eligible for listing on the NRHP/CRHR.

B11. Additional Resource Attributes (list attributes and codes): AP2 – Lithic scatter, AP15 – Habitation debris, HP2–Single family property, HP4 – Ancillary building, HP33 – Farm/Ranch

***B12. References:**

Auer, Michael J.
1989 *The Preservation of Historic Barns.* Preservation Brief 20. U. S. Department of the Interior, National Park Service, Preservation Assistance Division, Washington D. C.

Williams, Don
2008 "Reading" Tool Marks on Furniture. *The Chronicle* 61(3):106-116.

B13. Remarks: The barn is not recommended eligible for listing on the NRHP/CRHR.

***B14. Evaluator:** Amber Long, M.A.
Date of Evaluation: November 17, 2020

Sketch Map

This space reserved for official comments.

B1. Historic Name: None

B2. Common Name: Shed

B3. Original Use: Storage **B4. Present Use:** Vacant

***B5. Architectural Style:** Vernacular

***B6. Construction History (construction date, alterations, and dates of alterations):** The construction date of the shed is unknown. It has the same board-and-batten siding as the residence. Other materials used for the shed appear more modern, as no circular-sawn wood boards, sash-type milled boards, and cut nails were observed. The shed also has a concrete slab foundation, which became widespread after World War II (Gaudette and Slaton 2007). Based on the building materials, the shed was likely built between 1940–1960, but after the residence was constructed (Nelson 1963; Williams 2008).

***B7. Moved?:** ☐ No ☐ Yes ☐ Unknown Date: Original Location:

***B8. Related Features:** Residence and barn.

B9. a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance:** Theme: None Area: Los Osos, California
Period of Significance: None Property Type: Rural Ranch Applicable Criteria: None

The shed is vernacular and utilitarian with vertical board-and-batten siding, low-pitched hipped roof with shallow eaves, and a concrete slab foundation. It is a single room with doorways on the east and west elevations; the western door is rusted and still attached. Two windows are on the south elevation, and interior walls are drywalled. One of the windows has been boarded over from the inside with wood, and the other window was covered with a sheet of corrugated metal that has fallen off and into the interior. The roof and its framing are entirely exposed on the interior. Both the drywall and exposed concrete slab are cracked.

The shed was evaluated for eligibility for listing on the National Register of Historic Places and the California Register of Historical Resources.

Criterion A/1. The vernacular, utilitarian shed is typical of an agricultural outbuilding. Based on the materials to build the shed, it likely dates from 1940 to 1960, but after construction of the exiting residence, due to the presence of the concrete foundation. Due the lack of sufficient data, the shed is not associated with any specific events or trends of historical significance; therefore, it is not considered significant under Criterion A/1.
Criterion B/2. The builder and architect of the shed is unknown. George Sousa owned the property during the time it could have been built, but no information is available to determine that he was the builder. No archival information suggests that Sousa was influential or that would elevate him to a level of importance to be considered a person of importance to our past. Therefore, the shed is not associated with any person of historical significance and is not considered significant under Criterion B/2.
Criterion C/3. The shed is a vernacular structure, likely built with some of the same materials as the residence. The build date is unknown, but the existence of a concrete foundation suggests it was built later than the residence. The building does not embody the distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, or possess high artistic value. Therefore, the shed is not significant under Criterion C/3.
Criterion D/4. This criterion is most relevant for archaeological sites, but it can be applied to built-environment resources if further study has the potential to yield information that cannot be obtained from other sources. Historical information about vernacular style outbuildings is prevalent, and further study of the shed would not add any new information to the historic record. Therefore, the shed is not considered significant under Criterion D/4.
Integrity. Integrity of a resource is only assessed when a resource is determined significant under one of the criteria above. The shed is not significant under any of the NRHP/CRHR criteria; therefore, integrity will not be addressed. The shed is not recommended eligible for listing on the NRHP/CRHR.

B11. Additional Resource Attributes (list attributes and codes): AP2 – Lithic scatter, AP15 – Habitation debris, HP2 – Single family property, HP4 – Ancillary building, HP33 – Farm/Ranch

***B12. References:**

Gaudette, Paul, and Deborah Slaton
2007 *Preservation of Historic Concrete.* Preservation Briefs, 15. U.S. Department of the Interior, National Parks Service, Heritage Preservation Services.

Nelson, Lee H.
1963 Nail Chronology as an id to dating old buildings. *American Association for State and Local History, Technical Leaflet 15.*

Williams, Don
2008 "Reading" Tool Marks on Furniture. *The Chronicle* 61(3):106-116.

B13. Remarks: The shed is not recommended eligible for listing on the NRHP/CRHR.

***B14. Evaluator:** Amber Long, M. A.
Date of Evaluation: November 17, 2020

Sketch Map

This space reserved for official comments.

Photo 1: Midden with marine shell and chert on the surface of the knoll.

Photo 2: Contracting stem projectile point base.

Photo 3: Subsurface soil profile showing midden deposit.

Photo 4: Primary elevation of the residence with the addition on the right, view facing west.

Photo 5: North elevation of the residence, view facing south.

Photo 6: West elevation of the residence with addition on the left, view facing east.

Photo 7: South elevation of the residence, view facing north.

Photo 8: West elevation of the barn, view facing east. View obscured by vegetation.

Photo 9: Crib on south side of barn interior, view facing east.

Photo 10: Crib on north side of barn interior, view facing east. Unknown collapsed building in the background.

Photo 11: View from south crib barn interior, across barn, to north crib. View facing north.

Photo 12: Shed exterior. View facing southeast.

Photo 13: Shed interior. View facing east.

Photo 14: Shed interior. View facing west.

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

LOCATION MAP

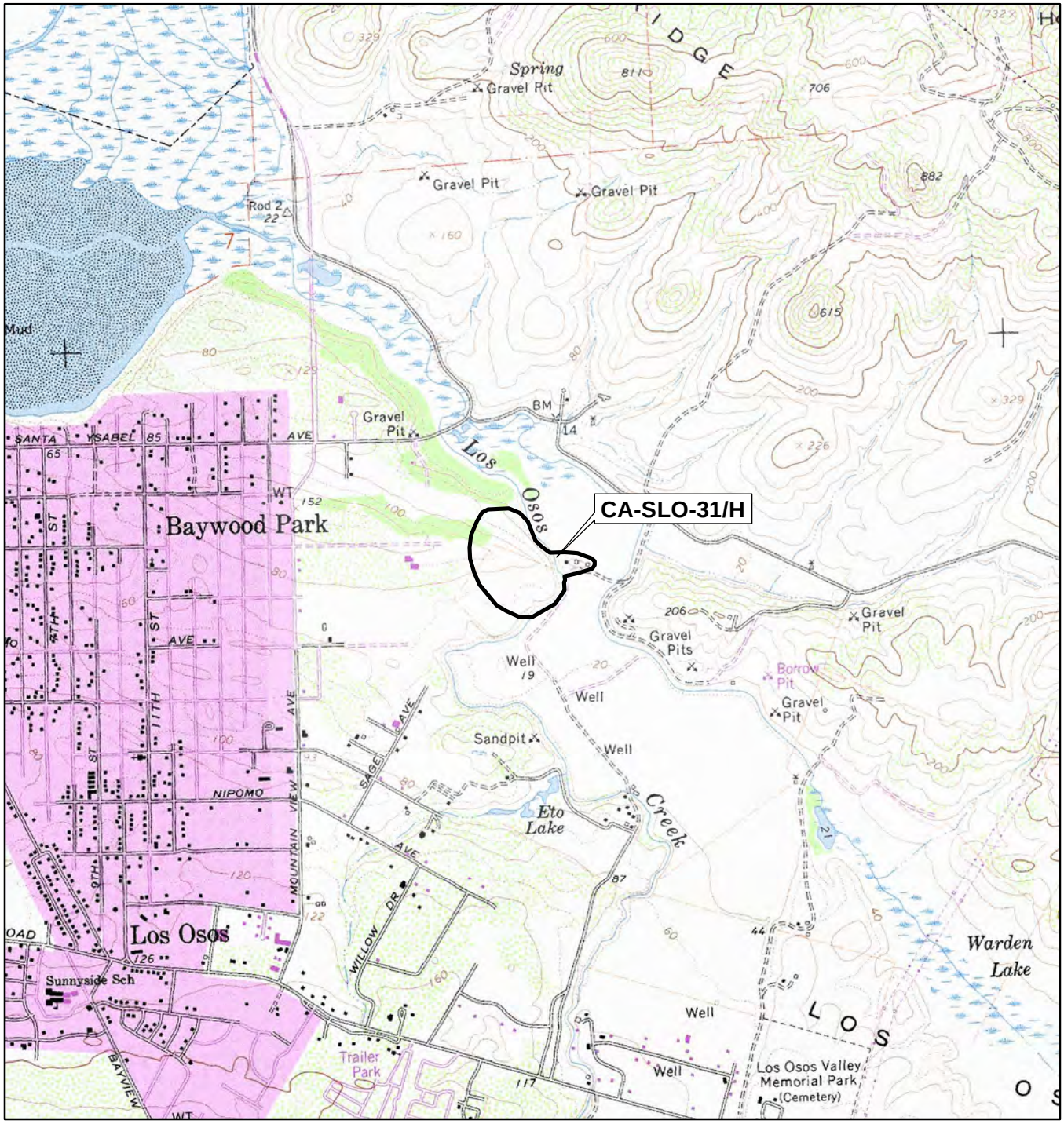
Primary # 40-000031
HRI#
Trinomial CA-SLO-31/H

Resource Name or #:

Scale: 1:24,000

Map Name: Morro Bay South (1950-2015), CA, USGS 7.5' quadrangles

Date: 2020



SCALE 1:24,000

1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

TRUE NORTH

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

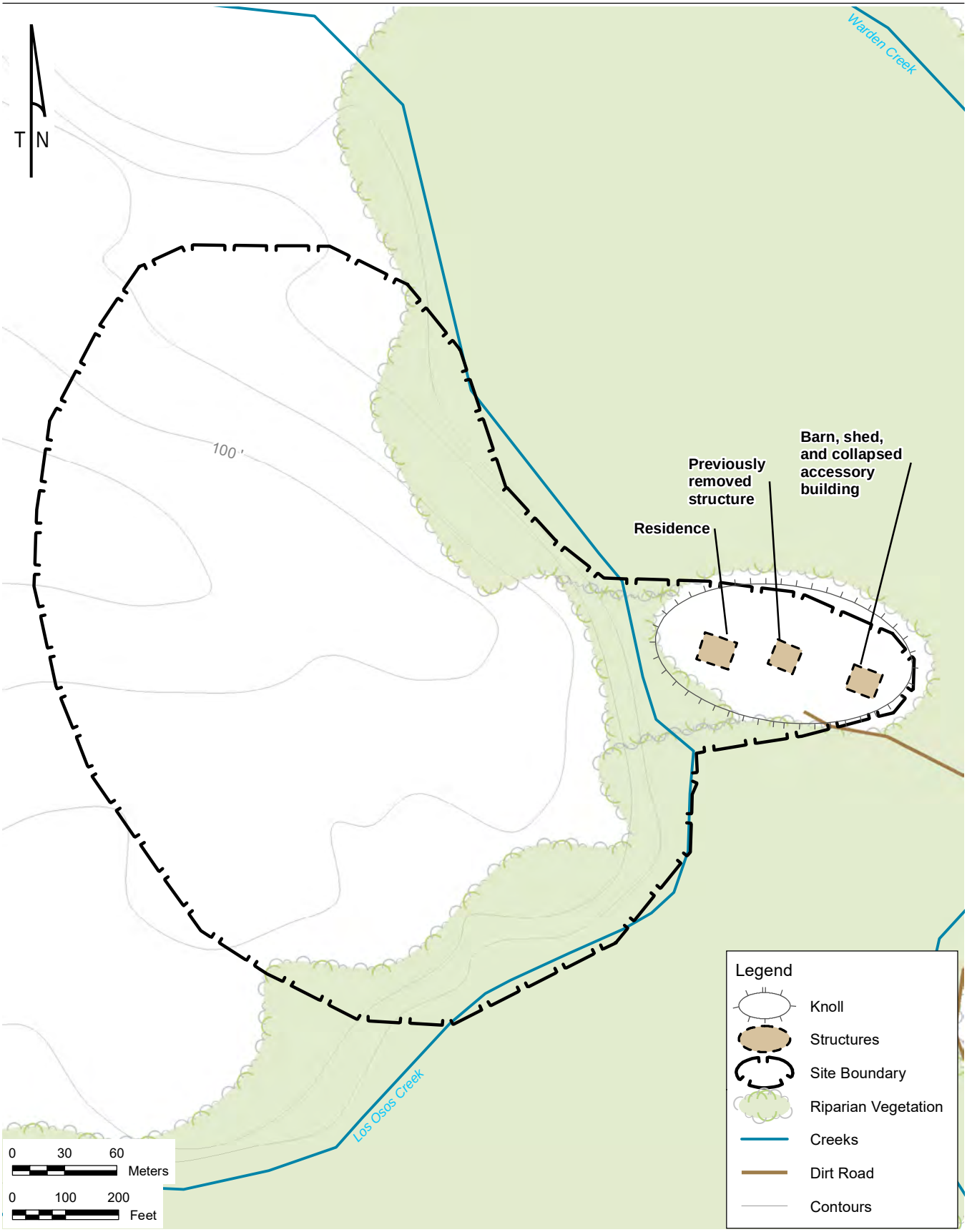
Primary # 40-000031
HRI#
Trinomial CA-SLO-31/H

***Resource Name or #:** (Assigned by recorder)

***Drawn by:** K. WATHEN

***Scale:** 1 inch equals 79 meters

***Date of map:** November 2020



*Required information