



# Miossi Open Space Conservation Plan

## Initial Study – Negative Declaration

*prepared by*

**City of San Luis Obispo**

Natural Resources Protection Program

990 Palm Street

San Luis Obispo, California 93401

Contact: Robert Hill, Sustainability & Natural Resources Official

*prepared with the assistance of*

**Rincon Consultants, Inc.**

1530 Monterey Street, Suite D

San Luis Obispo, California 93401

**December 2019**



**RINCON CONSULTANTS, INC.**

Environmental Scientists | Planners | Engineers

[rinconconsultants.com](http://rinconconsultants.com)

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# Initial Study

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## 1. Project Title

Mioosi Open Space Conservation Plan

## 2. Lead Agency Name and Address

City of San Luis Obispo  
Natural Resources Protection Program  
990 Palm Street  
San Luis Obispo, California 93401

## 3. Contact Person and Phone Number

Robert Hill, Sustainability & Natural Resources Official  
(805) 781-7211

## 4. Project Location

The 266-acre Mioosi Open Space (the “project site”) is located on City-owned property north of the City of San Luis Obispo, on the southern flank of West Cuesta Ridge in the southern Santa Lucia Range. The project site is located west of U.S. 101 in the County of San Luis Obispo and includes portions of Assessor’s Parcel Numbers (APNs) 070-271-033, 070-271-034, 073-341-040, and 073-341-041. The Union Pacific Railroad (UPRR) tracks pass through the center of the project site. The property is accessed from Old Stagecoach Road.

## 5. Project Sponsor’s Name and Address

City of San Luis Obispo  
City Administration Department, Natural Resources Protection Program  
990 Palm Street  
San Luis Obispo, California 93401

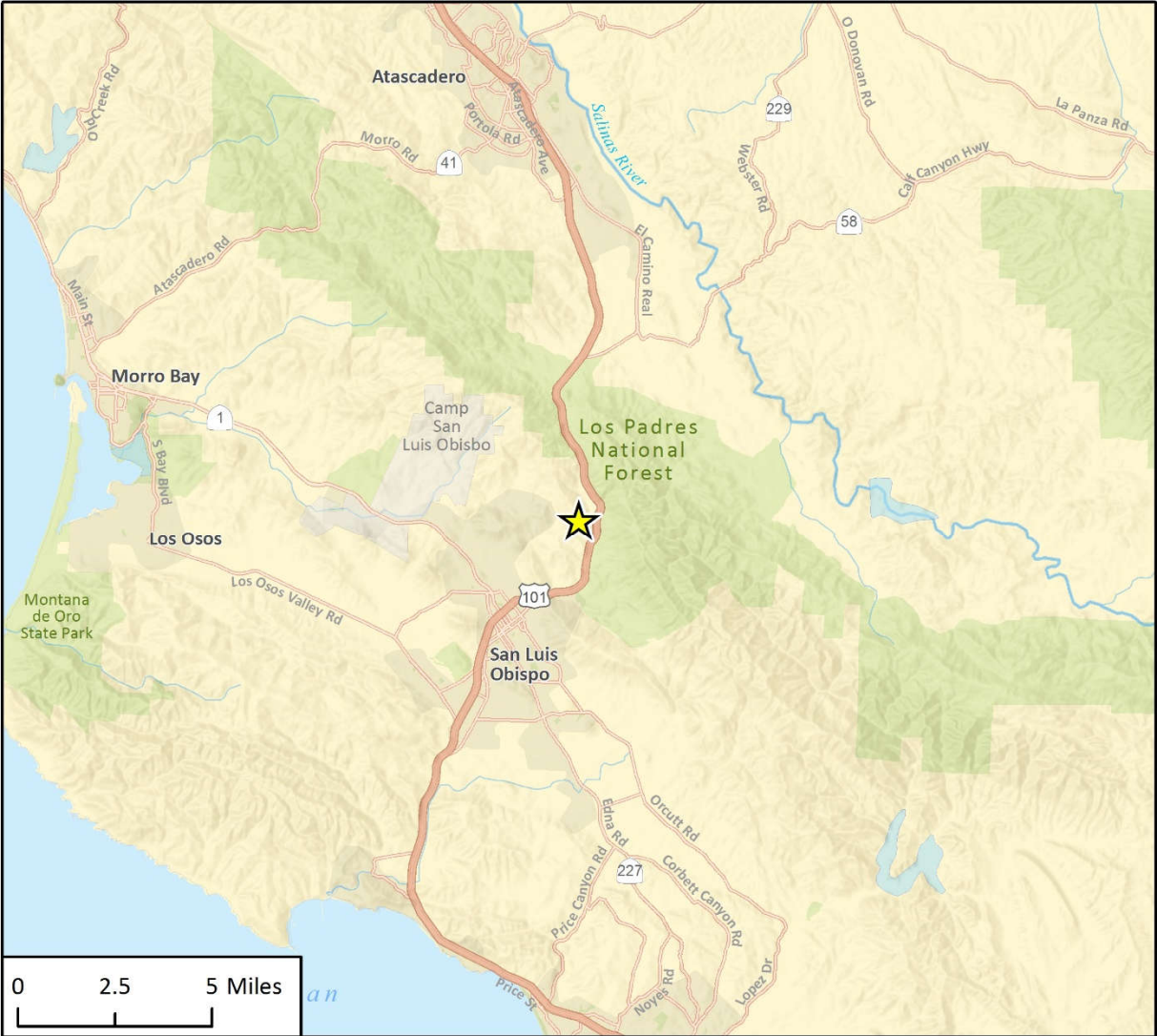
## 6. General Plan Designation and Zoning

Agriculture and Rural Lands (County of San Luis Obispo Land Use Designation)

## 7. Description of Project

The project site is a 266-acre City-owned property located north of the City of San Luis Obispo (refer to Figure 1 and Figure 2). The property was acquired by the City of San Luis Obispo in 2018 to

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2019.

★ Project Location

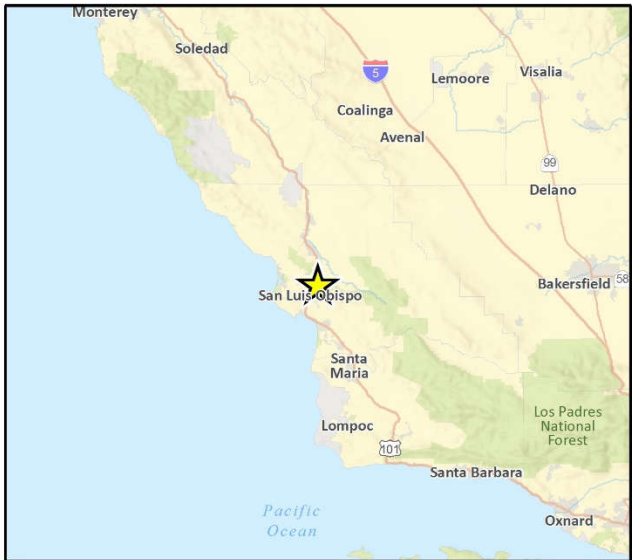
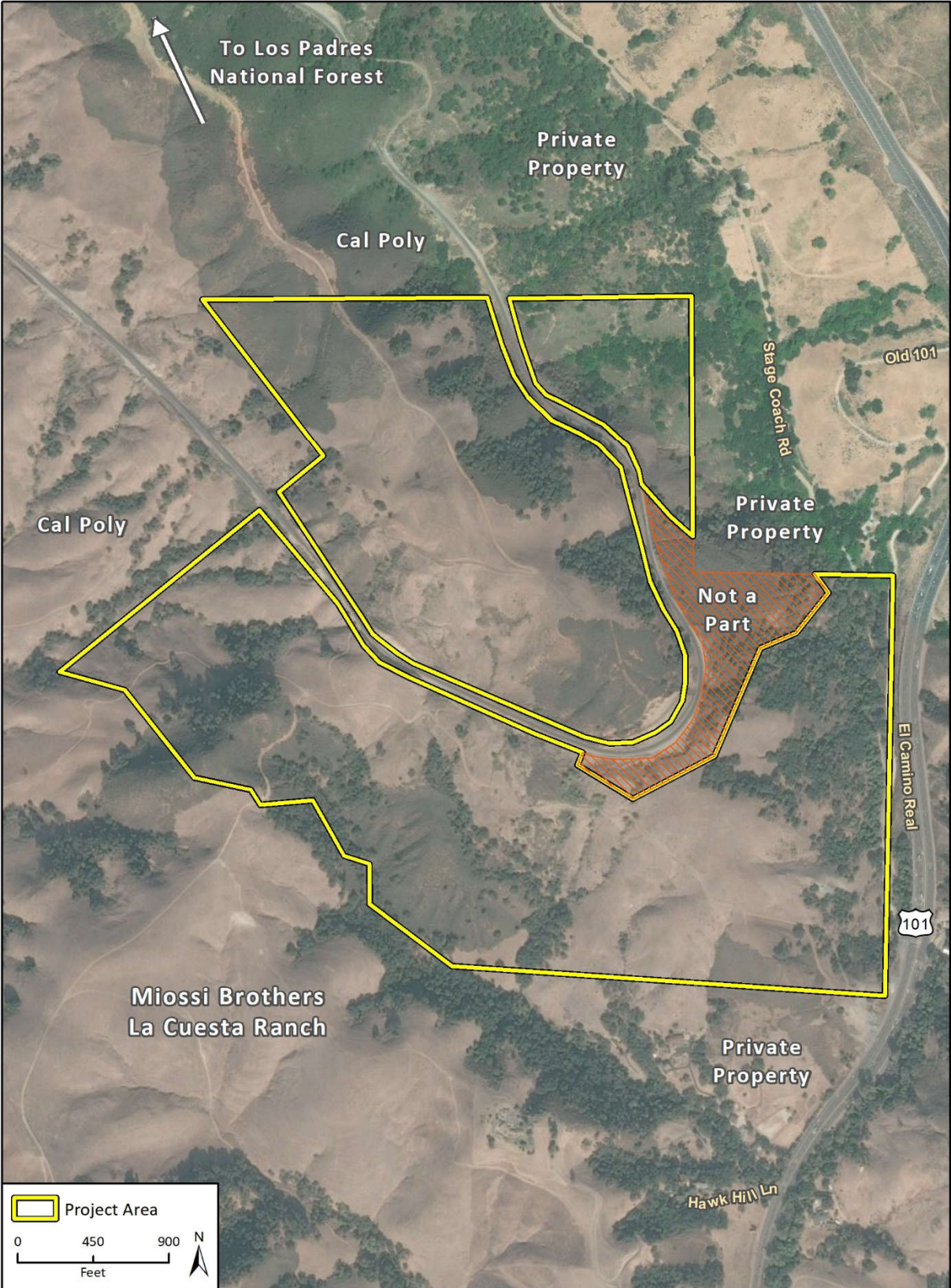


Fig 1. Regional Location



Figure 2 Project Site Location



Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 2 Project Location

increase and enhance available open space, providing natural resources and habitat conservation opportunities, as well as passive recreational trail use.

The project site is vacant and consists primarily of rural lands used for grazing, as well as unpaved off-highway roads, and is bisected by the UPRR railroad tracks. The project would implement new single-track trails, connections to Roller Coasters Trail to the north and potentially to the Poly Canyon Loop Trail to the west, and would make use of a cattle-guard-protected undercrossing of the existing UPRR tracks using an existing culvert. Project features, such as a 3' split-rail trailhead entry fence, a three-panel informational kiosk, a bike rack, approximately 10,000 square feet of informal on-site parking, pet waste "Mutt Mitts<sup>TM</sup>" and waste disposal receptacles, and small-scale safety lighting will be located at the front entrance south of Old Stagecoach Road. Informational kiosks and trail direction blades will be located along the proposed single-track trails, and the project site would be surrounded by a five-strand, wildlife-friendly, cattle perimeter fence. The proposed recreational amenities are reflected in the site plan shown in Figure 3. All recreational amenities would be designed and installed in accordance with the City's standard specifications identified in the adopted Open Space Maintenance Plan (2015). The informal parking area would be located in an existing disturbed area along Old Stagecoach Road across from the entry gate, and not require grading or surfacing. The off-site connection to Poly Canyon Loop Trail would traverse approximately 1,500 linear feet of land managed by California Polytechnic University San Luis Obispo. Vehicular access to the project site would be primarily from Old Stagecoach Road, with secondary access near the West Cuesta Ridge trailhead, which accesses Old Stagecoach Road from the north.

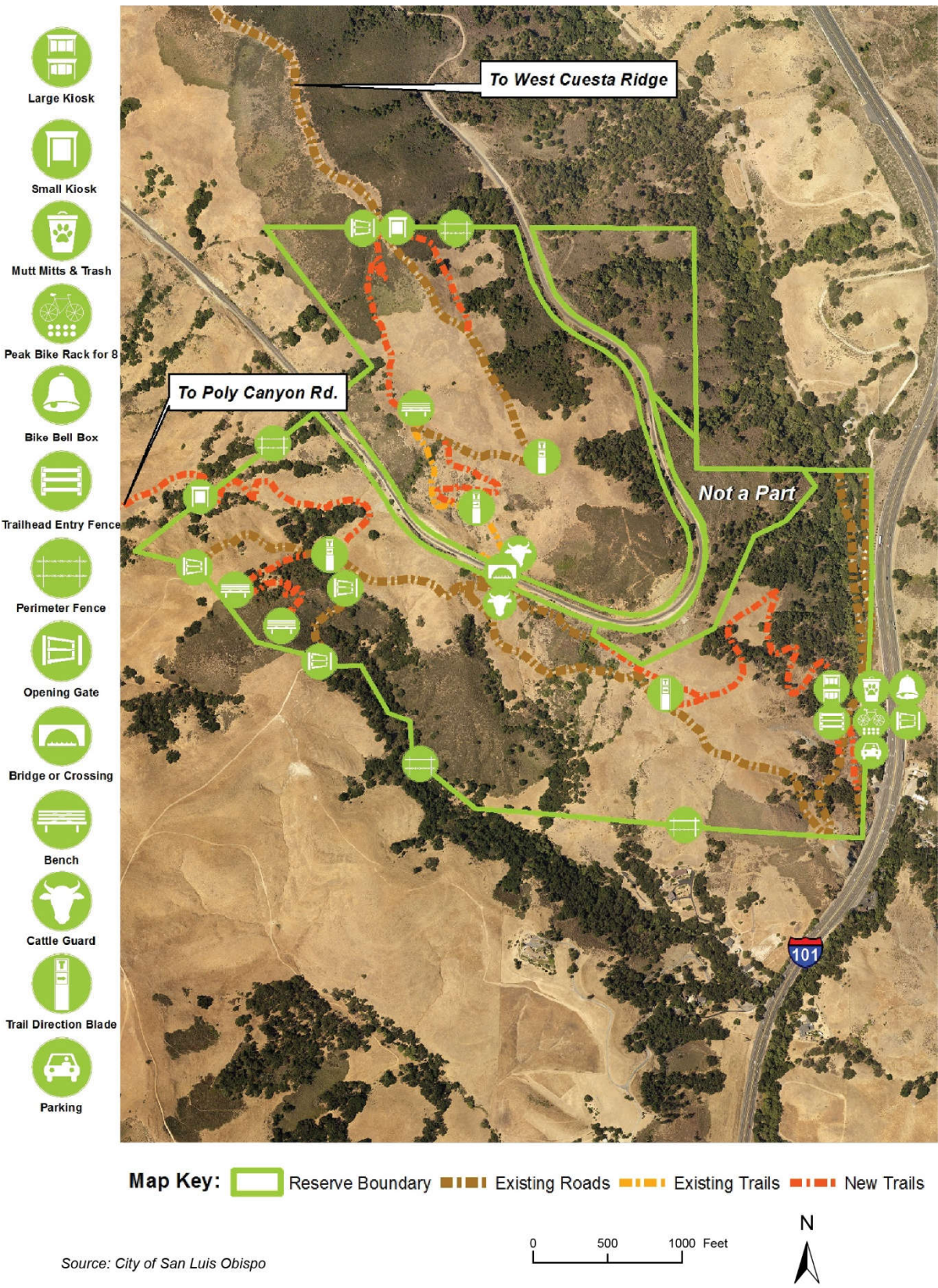
The requested approvals for the project include adoption of the Miossi Open Space Conservation Plan (Conservation Plan, Appendix A), which the City has drafted to implement the conservation objectives associated with the project. The proposed Conservation Plan would designate the project site as a City Open Space property in accordance with the City's Open Space Regulations (1996), the Conservation Guidelines for Open Space Lands of the City of San Luis Obispo (2002), and the Conservation and Open Space Element of the City's General Plan (2006). The Conservation Plan includes goals and policies designed to guide future passive recreational use and management of the property. Conservation Plan policies will guide sensitive resource avoidance during development of recreational amenities, including the design and implementation of final trail alignments and amenity locations, as well as long-term maintenance of the site. As described in the Conservation Plan, the preservation of environmental resources and habitats will be the primary consideration in all management decisions where a choice must be made between preservation of the natural environmental and passive recreational use. As described in the Conservation Plan, as part of the purchase arrangements for the property the City of San Luis Obispo has agreed to maintain the existing grazing rights on the property for a minimum of ten years. Cattle grazing would be protected by the proposed perimeter fencing and cattle guards protecting the UPRR undercrossing.

## 8. Surrounding Land Uses and Setting

The project site is bordered by Old Stagecoach Road and U.S. 101 on the east, California Polytechnic State University (Cal Poly)-owned public recreation lands on the west, U.S. Forest Service land on the north, and La Cuesta Ranch on the south. All surrounding land uses are designated Agriculture and Rural Lands in the County of San Luis Obispo General Plan. There are scattered rural residential uses located north of the property on Old Stagecoach Road in the Rural Lands County designation.



Figure 3 Site Plan



## 9. Other Public Agencies Whose Approval is Required

The project site is located in the County of San Luis Obispo. The property is owned by the City of San Luis Obispo, and is therefore subject to City plans, policies, and requirements. The project does not propose annexation of the property into the City and would not require approval from any other public agency.

## 10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The California Native American Heritage Commission (NAHC) supplied a list of local Native American individuals and/or groups with interests and knowledge about the area. Those individuals were contacted and did not identify tribal cultural resources on or adjacent to the project site. The City did not receive any requests for consultation from contacted individuals.

## Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources      | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Energy                             |
| <input type="checkbox"/> Geology/Soils             | <input type="checkbox"/> Greenhouse Gas Emissions           | <input type="checkbox"/> Hazards & Hazardous Materials      |
| <input type="checkbox"/> Hydrology/Water Quality   | <input type="checkbox"/> Land Use/Planning                  | <input type="checkbox"/> Mineral Resources                  |
| <input type="checkbox"/> Noise                     | <input type="checkbox"/> Population/Housing                 | <input type="checkbox"/> Public Services                    |
| <input type="checkbox"/> Recreation                | <input type="checkbox"/> Transportation                     | <input type="checkbox"/> Tribal Cultural Resources          |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire                           | <input type="checkbox"/> Mandatory Findings of Significance |

## Fish and Game Fees

- There is no evidence before the Department that the project will have any potential adverse effects on fish and wildlife resources or the habitat upon which the wildlife depends. As such, the project qualifies for a de minimis waiver with regards to the filing of Fish and Game Fees.
- ☐ The project has potential to impact fish and wildlife resources and shall be subject to the payment of Fish and Game fees pursuant to Section 711.4 of the California Fish and Game Code. This initial study has been circulated to the California Department of Fish and Game for review and comment.

## State Clearinghouse


- ☐ This environmental document must be submitted to the State Clearinghouse for review by one or more State agencies (e.g. Cal Trans, California Department of Fish and Game, Department of Housing and Community Development). The public review period shall not be less than 30 days (CEQA Guidelines 15073(a)).



## Determination

Based on this initial evaluation:

- ☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" 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.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potential 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

12/9/19  
Date

Tyler Corey  
Printed Name

Principal Planner  
Title

# Environmental Checklist

1	Aesthetics			
	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Except as provided in Public Resources Code Section 21099, would the project:

a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project have a substantial adverse effect on a scenic vista?*
- b. *Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

U.S. 101 is not a designated or eligible State Scenic Highway adjacent to the project site. The City of San Luis Obispo has identified the portion of U.S. 101 that is adjacent to the project site as a scenic roadway and vista. General Plan Policy 9.2.1. describes applicable requirements for development visible from scenic roadways, including avoidance of development that would “wall off” views (City of San Luis Obispo 2006). The main entrance to the project site south of Old Stagecoach Road would include project features such as the trailhead entry fence, informational kiosk, bike rack, waste disposal receptacles, on-site parking, and safety lighting, which would be visible from U.S. 101. However, existing vegetation and topographic features that surround the project site would screen these project features from public views in a manner that would minimize the change in views from vehicles on U.S. 101. The proposed recreational improvements would be designed to avoid damage

to resources such as trees or rock outcroppings, consistent with the City's Open Space Regulations (1996), the Conservation Guidelines for Open Space Lands of the City of San Luis Obispo (2002), and the Conservation and Open Space Element of the City's General Plan (2006). The proposed Conservation Plan (Appendix A) includes Policy 3.15 (Natural Resources Protection), which requires protection of native trees and planting of new native trees to enhance wildlife habitat. Implementation of the proposed natural resources protection policies included in the Conservation Plan would ensure that potential impacts to scenic resources would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point).*

The project site is located in a non-urbanized area that is partially visible from U.S. 101, alongside Old Stagecoach Road. The visual character of the area surrounding the project primarily consists of undeveloped open space. The project would remain consistent with the existing visual character by incorporating rural recreational uses. Existing vegetation and topographic features would partially obscure the proposed parking area in a manner that would not substantially degrade the natural scenery associated with the existing visual character in the project site vicinity.

**LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?*

On-site parking and safety lighting would be located at the trailhead entrance south of Old Stagecoach Road, in an area that is partially visible from public views, including travelers along U.S. 101. Minimal lighting would be provided for safety adjacent to the on-site parking. New source of light are expected to be minimal and would not adversely affect daytime or nighttime views in the area.

**LESS THAN SIGNIFICANT IMPACT**

## 2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

The project site is not designated prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, or farmland of local potential (California Department of Conservation 2016). Agricultural uses on-site are limited to grazing. As part of the purchase arrangements for the property and as described in the proposed Conservation Plan, the City of San Luis Obispo would maintain the existing grazing rights on the property for a minimum of ten years. Therefore, the project would not convert prime farmland to non-agricultural use.

**NO IMPACT**

- b. *Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?*

There are no Williamson Act contracts associated with the project site.

**NO IMPACT**

- c. *Would the project 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))?*
- d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*
- e. *Would the project 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?*

The project site is designated by the County of San Luis Obispo for Rural Lands and Agricultural land uses (County of San Luis Obispo 2019). The project site is not designated as prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, or farmland of local potential, forest land, or timberland (California Department of Conservation 2016).

**NO IMPACT**



### 3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Federal and state standards have been established for six criteria pollutants, including ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulates less than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb). Table 1 lists the current federal and state standards for criteria pollutants.

**Table 1 Current Federal and State Ambient Air Quality Standards**

Pollutant	Federal Standard	California Standard
Ozone	0.070 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	35.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)	20.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)
Nitrogen Dioxide	0.10 ppm (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)
Sulfur Dioxide	0.075 ppm (1-hr avg) 0.14 ppm (24-hr avg)	0.25 ppm (x-hr avg) 0.04 ppm (x-hr avg)
Lead	1.5 µg/m <sup>3</sup> (calendar quarter)	0.15 µg/m <sup>3</sup> (avg)
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup> (24- hr avg)	50 µg/m <sup>3</sup> (24-hour avg) 20 µg/m <sup>3</sup> (annual avg)
Particulate Matter (PM <sub>2.5</sub> )	35µg/m <sup>3</sup> (24-hr avg) 12µg/m <sup>3</sup> (annual avg)	12 µg/m <sup>3</sup> (annual avg)

ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

Source: California Air Resources Board, [www.arb.ca.gov/research/aaqs2.pdf](http://www.arb.ca.gov/research/aaqs2.pdf), September 30, 2019

The project site is located in the South Central Coast Air Basin (the basin), which includes San Luis Obispo, Santa Barbara, and Ventura Counties. The project site is under the jurisdiction of the San Luis Obispo County Air Pollution Control District (SLOCAPCD). As the local air quality management agency, SLOCAPCD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, San Luis Obispo County is classified as being in “attainment” or “nonattainment.” Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-attainment. San Luis Obispo County is designated as nonattainment for the state standards for suspended particulate matter (PM<sub>10</sub>) and ozone (California Air Resources Board [CARB] 2017). San Luis Obispo County is designated as attainment or unclassified for all other federal and state standards.

In March 2002, SLOCAPCD adopted the 2001 Clean Air Plan. In July 2005, SLOCAPCD adopted a Particulate Matter Report in order to update the jurisdiction’s control measures for particulate matter, as required by S.B. 656. In 2015, SLOCAPCD adopted an Ambient Air Monitoring Network Assessment in order to identify and analyze its historic and current air monitoring sites. The Ambient Air Monitoring Network Assessment was updated in June 2019. In September 2019, SLOCAPCD adopted an Ozone Emergency Episode Plan, in compliance with the Federal Clean Air Act, in order to provide the basis for taking actions when ambient ozone concentrations reach a level that could endanger public health in San Luis Obispo County.

- a. *Would the project conflict with or obstruct implementation of the applicable air quality plan?*
- b. *Would the project 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?*
- c. *Would the project expose sensitive receptors to substantial pollutant concentrations?*

A significant impact would only occur if the project resulted in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Development of trails and installation of recreational amenities would be completed using hand tools. Construction activities would not require grading or the use of diesel-powered equipment. The proposed informal on-site parking would be located in areas along Old Stagecoach Road that are currently cleared and would not require additional site clearing or paving. Long-term recreational use of the project site would not result in any new land uses that would generate criteria pollutant emissions from the project site or an increase in vehicle trips that would result in a substantial increase in off-site operational emissions (refer to Section 17, Transportation). Therefore, the project would generate less than significant amounts of air pollutants associated with exhaust emissions and fugitive dust and would not conflict with or obstruct implementation of the control measures established in the 2001 Clean Air Plan or other air quality management plans.

CARB identifies sensitive uses as “land uses where sensitive individuals are most likely to spend time,” such as “schools and schoolyears, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities” (CARB 2017). The closest sensitive receptors to the project site are residences and a daycare center at the California Polytechnic State University, more than one mile from the project site. The project would not result in emissions of any toxic air contaminants or other substantial pollutant concentrations that would affect sensitive receptors.

#### **LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Typical sources of objectionable odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and refineries. Exhaust from vehicles travelling along roadways may also release objectionable odors. The project does not involve any land use identified by SLOAPCD as a potential source of odors and would not change the capacity or volume on existing roadways.

**NO IMPACT**

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## 4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. 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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



This section is based on the information and finding included in the Botanical Inventory and Wildlife Surveys, prepared by Terra Verde Environmental Consulting, LLC (Terra Verde), for the project in 2019 (Appendix A). The analysis of biological resources is based on a search of biological databases, review of aerial photographs, and review of multiple literature resources. The California Natural Diversity Database (CNDDDB) was reviewed to identify occurrences of special status plants, wildlife, sensitive natural communities. A variety of in-the-field survey techniques, including a botanical inventory, wildlife surveys, vegetation community classification and mapping, a habitat assessment, and an evaluation of management considerations of the project site were conducted during ten site visits, beginning April 24, 2019 and concluding July 11, 2019. In addition, four remote, motion-sensing cameras were placed in areas likely to attract wildlife or serve as travel routes, for 49 days, from May 31 to July 11.

- a. *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 Wildlife or U.S. Fish and Wildlife Service?*

### **Special Status Plant Species**

Habitats on the project site include eleven distinct, natural vegetation communities, which are mapped in Appendix A. Natural vegetation communities on the project site include open annual grasslands, dense chaparral, various scrub communities, freshwater seeds, willow scrub, serpentine outcrops, and mixed riparian and upland woodlands. Grassland habitat on the project site is generally dominated by non-native annual grass species with variable cover of forbs and perennial grasses.

Special-status plant taxa observed during project site surveys include Santa Lucia manzanita (*Arctostaphylos luciana*), Bishop manzanita (*Arctostaphylos obispoensis*), club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*), Brewer's spineflower (*Chorizanthe breweri*), Palmer's spineflower (*Chorizanthe palmeri*), mouse-gray dudleya (*Dudleya abramsii* subsp. *murina*), and small-leaved lomatium (*Lomatium parvifolium*). Habitats on the project site are relatively pristine, particularly along the southern and eastern edges on the property where human intrusion has been minimal. Ruderal, invasive, and noxious species are most abundant along the corridors of the UPRR railroad and the unpaved access road that bisects the property, as well as within the historically and currently grazed grasslands on the west side of the property.

Project site surveys identified serpentine outcrops located on the southern and northern formations of the fault line that form a highly specialized micro-habitat. Two special-status plant species that were documented on the project site – Brewer's spineflower and mouse-gray dudleya – occur only in this micro-habitat.

Special status plant species could be impacted by temporary construction activities and long-term recreational use of the project site. Direct impacts to special status plant species could occur during construction of proposed recreational amenities. Indirect impacts to special status plant species could occur due to the spread of invasive, non-native species introduced by construction equipment or during long-term passive recreational activity on the project site. The proposed Conservation Plan (Appendix A) includes Policies 3.15 (Natural Resources Protection), 3.16 (Vegetation Management), and 3.18 (Passive Recreation), which require:

- Avoidance of constructing new trails near or within mapped populations of special-status species, serpentine outcrops, needlegrass populations, or through oak woodland habitats;

- Incorporating existing disturbed areas, including remnant firebreaks, wildlife trails, and pedestrian trails into the proposed recreational trail system;
- Cleaning of vehicles, hand tools, and other equipment during the construction phase to avoid the spread of non-native or invasive plants;
- Interpretive trail signs to inform the public of the sensitivity of resources on the property, and ways in which resources can be protected (e.g., stay on trails, pack-out trash, don't pick wildflowers);
- Implementation of invasive management efforts by a licensed herbicide applicator, particularly for the control of woolly daisy thistle and French broom;
- Long-term vegetation management practices including pruning/removal of dead/dying/diseased/non-native species, controlled grazing, erosion and sediment control or removal strategies, and application of Integrated Pest Management (IPM) practices;
- Restoration and/or re-vegetation techniques to restore degraded communities using site-or region-specific native grasses, herbs, shrubs, and trees;
- Protection of native trees and planting of new native trees to enhance wildlife habitat;
- Monitoring and patrolling or passive recreational activities for potential impacts to plant species; and
- Prohibition of active recreational activities, including high-intensity events, horseback riding, discharge of weapons, paintball, and hunting.

The City's Open Space Regulations protect natural resources, including all naturally-occurring plants within City open space lands from collection, gathering, or other disturbance except for pruning or removal of materials in conjunction with city-sponsored activities, such as trail construction or maintenance (San Luis Obispo Municipal Code, Chapter 12.22.050A). Implementation of the proposed natural resources protection, vegetation management, and passive recreation management policies included in the Conservation Plan would support passive recreation while ensuring that potential impacts to special status plant species would be less than significant.

### **Special Status Animal Species**

#### *California Red-Legged Frog (Rana draytonii)*

This species is federally-designated as endangered. This species was not observed during Terra Verde's wildlife surveys. However, the species is recorded in the CNDDDB within the last thirty years, within two miles of the center of the project site. The City of San Luis Obispo has confirmed the presence of California red-legged frog (CRLF) (Appendix A), and the project site is within federally designated critical habitat for this species.

#### *Western Pond Turtle (Actinemys pallida)*

This species is a California-designated Species of Special Concern. This species was not observed during Terra Verde's wildlife surveys. However, this species is recorded in the CNDDDB within the last thirty years within two miles of the center of the project site. This species was recorded in nearby drainages, such as Stenner Creek and Brizzolara Creek in 1995 and 1998 and has the potential to occupy San Luis Obispo Creek or use upland habitat on the project site.

*American Badger (Taxidea taxus)*

This species is a State-designated Species of Special Concern. This species was recorded on motion-sensing cameras and identified by Terra Verde biologists during wildlife surveys.

*San Luis Obispo pyrg (Pyrgulopsis taylori)*

This species was not observed during Terra Verde's wildlife surveys. However, the species is recorded in the CNDDDB within the last thirty years within two miles of the center of the project site. The project site contains habitat in and adjacent to seeps and drainages and this species is expected to be extant.

*Steelhead Trout (Oncorhynchus mykiss)*

This species is a State-designated Species of Special Concern. In 1939, a historical occurrence of Steelhead Trout was recorded in San Luis Obispo Creek, adjacent to the project site. Recent surveys in 2019 indicated a viable population remains in the reaches of the San Luis Obispo Creek (Appendix A).

*Western Mastiff Bat (Eumops perotis californicus)*

This species was not observed during Terra Verde's wildlife surveys. However, this species is recorded in the CNDDDB within the last thirty years within two miles of the center of the project site. This species was collected in the project site in 1991, and the project site contains suitable foraging habitat for this species.

*Nesting Birds*

The project site includes suitable nesting habitat for birds protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGF). Species identified by Terra Verde biologists during wildlife surveys include golden eagle (*Aquila chrysaetos*), white-tailed kite (*Elanus leucurus*), peregrine falcon (*Falco peregrinus*), and oak titmouse (*Baeolophus inornatus*). However, nests or nesting activity were not observed.

Special status animal species could be impacted by temporary construction activities and long-term recreational use of the project site. Construction of recreational amenities on the project site could directly impact special status animal species if roosting habitat for Western mastiff bat and nesting birds would be removed. Indirect impacts to special status animal species could occur if construction or passive use of recreational trails would impact riparian habitats through erosion, sedimentation, or discharge of soil or other materials. The project does not propose improvements in or adjacent to riparian habitats, such as San Luis Obispo Creek. The proposed Conservation Plan (Appendix A) includes Policies 3.15 (Natural Resources Protection) and 3.18 (Passive Recreation), which require:

- Maintain existing roads and firebreaks, including culvert repair or replacement, to reduce erosion and prevent sedimentation from entering nearby streams;
- Ensure fencing allows for safe passage of wildlife;
- Limit site access to the hours between dawn and dusk to avoid disturbances to nocturnal wildlife;
- Ensure trash receptacles are wildlife-proof and are emptied frequently enough to prevent overflow;

- Ensure dog owners bag and remove dog feces from the site to prevent the spread of disease to wildlife populations;
- Monitoring and patrolling or passive recreational activities for potential impacts to wildlife habitat; and
- Prohibition of active recreational activities, including high-intensity events, horseback riding, discharge of weapons, paintball, and hunting.

The City's Open Space Regulations protect natural resources, including all naturally-occurring animals within City open space lands from collection, gathering, or other disturbance except for removal of materials in conjunction with city-sponsored activities, such as trail construction or maintenance (San Luis Obispo Municipal Code, Chapter 12.22.050A). Implementation of the proposed natural resources protection and passive recreation management policies included in the Conservation Plan would support passive recreation while ensuring that potential impacts to special status animal species would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*
- c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*
- d. Would the project interfere substantially with 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?*

The upper reaches of San Luis Obispo Creek border the eastern edge of the project site, adjacent to Old Stagecoach Road, which serves as the primary entrance to the project site. Informal on-site parking would be located adjacent to Old Stagecoach Road west of San Luis Obispo Creek, but would not require additional site clearing or paving. No other project improvements would be located near the riparian habitat associated with San Luis Obispo Creek.

The proposed recreational trail system would use the existing culvert on the project site as an undercrossing for the UPRR railroad tracks that pass through the center of the project site. However, the project does not propose changes to the existing undercrossing. The proposed Conservation Plan (Appendix A) includes Policies 3.15 (Natural Resources Protection) and 3.18 (Passive Recreation), which require:

- Ensure fencing allows for safe passage of wildlife;
- Limit site access to the hours between dawn and dusk to avoid disturbances to nocturnal wildlife;
- Maintain existing roads and firebreaks, including culvert repair or replacement, to reduce erosion and prevent sedimentation from entering nearby streams; and
- Monitoring and patrolling or passive recreational activities for potential impacts to wildlife habitat.

Implementation of the proposed natural resources protection and passive recreation management policies included in the Conservation Plan would minimize erosion, sedimentation, and other discharge of soil or other materials, ensuring that potential impacts to riparian habitats and native resident or migratory wildlife corridors, including San Luis Creek, would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The project site includes protected coastal oak woodland. The Conservation Plan implements the City's Conservation Guidelines for Open Space Lands (2002), and the Conservation and Open Space Element of the City's General Plan (2006). As described in Policy 3.15 (Natural Resources Protection) of the Conservation Plan (Appendix A), the project would protect native trees and plant new native trees.

The project site is not included in a Habitat Conservation Plan or Natural Community Conservation Plan. The Conservation Plan is consistent with the City's Conservation Guidelines of Open Space Lands (2002).

**NO IMPACT**

## 5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section is based on the findings of the Cultural Resource Study for the Miossi Open Space prepared by Applied Earth Works, Inc. (AE) in September 2019 (Appendix A). The analysis of cultural resources is based on a pedestrian surface survey completed September 9 to 11, 2019, outreach to local Native American tribal representatives, a review of previous cultural resources studies previously completed within and adjacent to the project site, and a review of multiple literature resources, including the Central Coast Information Center (CCIC) of the California Historical Resources Information System (CHRIS) and Sacred Lands File of the Native American Heritage Commission (NAHC).

- a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

The pedestrian survey identified several historic-era resources, including a powerline and individual poles, a culvert under the UPRR railroad tracks used for cattle access in the northern portion of the project site, and a historic dam feature and infrastructure over San Luis Creek that was part of the initial water system supplying water to the City. No identified historic-era resources would be removed, modified, or otherwise affected by the proposed project improvements, habitat conservation efforts, or passive recreational uses. In accordance with Conservation Guidelines for Open Space Lands of the City of San Luis Obispo (2004), the Conservation Plan includes appropriate treatment of historic resources. The proposed Conservation Plan (Appendix A) includes Policy 3.17 (Cultural Resources Management), as well as Goals 3.2 and Goal 3.8, which commit the City to:

- Evaluating historic resources that are potentially eligible for the California Register of Historical Resources;
- Protecting historic isolated resources from vandalism and theft;
- Construction management practices to minimize potential impacts to cultural and historic-period materials identified during construction efforts;
- Provide the public with an opportunity for greater understanding and appreciation for the cultural and historic resources values associated with Miossi Open Space; and

- Protect and consider officially designating, as appropriate, the important historic and cultural resources associated with Miozzi Open Space.

The City's Open Space Regulations protect cultural resources, including historic artifacts, structures, and remains of structures within City open space lands from collection or other disturbance except for removal of materials in conjunction with city-sponsored activities, such as trail construction or maintenance (San Luis Obispo Municipal Code, Chapter 12.22.050A). Implementation of the proposed goals included in the Conservation Plan would ensure potential impacts to historic-era resources would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

No archaeological sites or features were identified during the pedestrian surface survey and based on the findings of the Cultural Resource Study the potential for encountering archaeological resources on the site is low. Due to the lack of ground visibility during the pedestrian surface survey, there is potential for encountering prehistoric materials during the installation of recreational amenities. Planned improvements on the project site would require minimal soil disturbance, including removing a few inches of topsoil in the locations of planned trails. Improvements would be installed using hand tools and would not require grading or other work that would result in substantial ground surface disturbance. In accordance with Conservation Guidelines for Open Space Lands of the City of San Luis Obispo (2014), the Conservation Plan includes appropriate treatment if archaeological resources are identified on the project site. The proposed Conservation Plan (Appendix A) includes Policy 3.17 (Cultural Resources Management), as well as Goals 3.2 and Goal 3.8, which commit the City to:

- Construction management practices to minimize potential impacts to cultural and historic-period materials identified during construction efforts;
- Provide the public with an opportunity for greater understanding and appreciation for the cultural and historic resources values associated with Miozzi Open Space; and
- Protect and consider officially designating, as appropriate, the important historic and cultural resources associated with Miozzi Open Space.

The City's Open Space Regulations protect cultural resources, including prehistoric and historic artifacts within City open space lands from collection or other disturbance except for removal of materials in conjunction with city-sponsored activities, such as trail construction or maintenance (San Luis Obispo Municipal Code, Chapter 12.22.050A). Implementation of the proposed cultural resources management goals and policies included in the Conservation Plan would incorporate recommendations from the Cultural Resources Study, ensuring potential impacts to archaeological resources would remain less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

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

No human remains have been identified on the project site and based on the findings of the Cultural Resource Study, the potential for encountering human remains on the site is low. If human remains are discovered during project construction activity, work would be required to stop at the discovery

location and any nearby area suspected to contain human remains (Public Resources Code [PRC] 7050.5). The San Luis Obispo Coroner would be contacted to determine the nature of the remains. If the coroner determines that identified remains are of Native American origin, State law describes requirements pertaining to the disposition of Native American burials, which fall within the jurisdiction of the NAHC. The NAHC would contact the most likely descendent(s) who would be afforded the opportunity to recommend means for treatment of the remains following protocols in PRC 5097.98.

**LESS THAN SIGNIFICANT IMPACT**



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## 6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Development of trails and installation of recreational amenities would be completed using hand tools. Construction activities would not require the use of diesel-fueled construction equipment or other machinery that would involve energy use. The proposed passive recreational use of the project site would not establish new land uses that would require energy to operate or an increase in vehicle trips that would result in a substantial increase in off-site energy consumption (refer to Section 17, Transportation). Small-scale safety lighting would be located at the main entrance to the property on Old Stagecoach Road, which would require minimal energy to operate. The project's energy consumption would not be wasteful or unnecessary.

### LESS THAN SIGNIFICANT IMPACT

- b. *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The City of San Luis Obispo Climate Action Plan (CAP) was adopted by the City Council in 2012. The CAP encourages pedestrian- and bicycle-friendly neighborhoods, increasing transportation options, improved energy efficiency, reduced waste and increased recycling, protection of open space, and quantifies the estimated greenhouse gas (GHG) reductions savings of such programs. The project would preserve open space for passive recreational use and habitat conservation efforts. The project site would be accessible by vehicles, pedestrians, and cyclists, and would expand the City's existing passive recreational trail system. Therefore, the project would not conflict with the City's CAP or any other state or local plan for renewable energy or energy efficiency.

### NO IMPACT

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## 7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*
- a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*
- a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*
- a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*
- c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*
- d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

The Oceanic Fault, a late quaternary fault line with displacement during the past 700,000 years, is located on the project site (California Department of Conservation 2010). The project site is in an area of San Luis Obispo County that is designated to have low potential for liquefaction and a high potential for landslides (County of San Luis Obispo 2019). The project would not result in any new habitable structures or other structures that would exacerbate landslide risk, could collapse as a result of groundshaking or surface rupture, or which would otherwise directly or indirectly subject people to substantial adverse effects involving liquefaction, landslides, or rupture of a known earthquake fault. Proposed recreational improvements would be installed using hand tools and would not require grading or other work that would exacerbate any liquefaction, landsliding, or ground shaking impacts.

#### **LESS THAN SIGNIFICANT IMPACT**

- b. Would the project result in substantial soil erosion or the loss of topsoil?*

Planned improvements on the project site would require minimal vegetation removal or soil disturbance, including removing a few inches of topsoil in the locations of planned trails. Improvements would be installed using hand tools and would not require grading or other work that would result in substantial changes to the topography of the site.

#### **LESS THAN SIGNIFICANT IMPACT**

- e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The project would not require the use of septic tanks.

#### **NO IMPACT**

*f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

There are no records of unique paleontological resources or sites, or unique geologic features on the project site. However, according to the Geologic Map of California, San Luis Obispo Sheet (CDMG 1978), the site vicinity is underlain by Franciscan formation, Middle Miocene marine, Lower Cretaceous marine deposits, which may be associated with paleontological resources. Therefore, paleontological resources may be present in fossil-bearing soils and rock formations below the ground surface. Planned improvements on the project site would require minimal soil disturbance, including removing a few inches of topsoil in the locations of planned trails. Improvements would be installed using hand tools and would not require grading or other work that would result in substantial ground surface disturbance. Existing trails, access roads, and informal parking area would be utilized to reduce impacts to the project site. In accordance with Conservation Guidelines for Open Space Lands of the City of San Luis Obispo (2014), the Conservation Plan includes appropriate treatment if paleontological resources are identified on the project site. The proposed Conservation Plan (Appendix A) includes Policy 3.17 (Cultural Resources Management), as well as Goal 3.2 and Goal 3.8, which commit the City to:

- Construction management practices to minimize potential impacts to cultural and historic-period materials identified during construction efforts;
- Provide the public with an opportunity for greater understanding and appreciation for the cultural and historic resources values associated with Miossi Open Space; and
- Protect and consider officially designating, as appropriate, the important historic and cultural resources associated with Miossi Open Space.

The City's Open Space Regulations protect cultural resources, including prehistoric and historic artifacts within City open space lands from collection or other disturbance except for removal of materials in conjunction with city-sponsored activities, such as trail construction or maintenance (San Luis Obispo Municipal Code, Chapter 12.22.050A). Implementation of the proposed cultural resources management goals and policies included in the Conservation Plan would incorporate recommendations from the Cultural Resources Study, ensuring potential impacts to paleontological resources would remain less than significant.

**LESS THAN SIGNIFICANT IMPACT**

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## 8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*
- b. *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Development of trails and installation of recreational amenities would be completed using hand tools. Construction activities would not require grading or the use of diesel-powered equipment that would emit GHGs. The proposed informal on-site parking would be located in areas along Old Stagecoach Road that are currently cleared and would not require additional site clearing or paving. Long-term recreational use of the project site would not result in any new land uses that would generate GHG emissions from the project site. As discussed in Section 17 Transportation, the project would not generate a substantial increase in area vehicle trips. Therefore, the project would generate less than significant amounts of GHG emissions.

The City of San Luis Obispo CAP encourages pedestrian- and bicycle-friendly neighborhoods, increasing transportation options, improved energy efficiency, reduced waste and increased recycling, protection of open space, and quantifies the estimated GHG reductions savings of such programs. The project site would be accessible by vehicles, pedestrians, and cyclists, and the proposed new trails would expand the City's existing network of recreational trails. The project would also preserve open space for passive recreational use and habitat conservation efforts. Therefore, the project would not conflict with the City's CAP or any other state or local plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

### LESS THAN SIGNIFICANT IMPACT



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## 9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site that is included on a list of hazardous material 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located in 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 or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- b. *Would the project 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?*

The project would not involve the transport, use, or disposal of hazardous materials. Therefore, the project would not create a significant hazard to the public or the environment or expose people or structures to harm from hazardous materials.

The Local Hazard Mitigation Plan (LHMP) states that the areas of main concern for hazardous materials upset in the project area include U.S. 101 and the UPRR (City of San Luis Obispo 2006). Truck and rail accidents could result in spills along these transportation routes. U.S. 101 is located approximately 110 feet east of the project site. The UPRR railroad tracks pass through the center of the project site. All transport of hazardous materials is subject to federal, state, and local laws and regulations pertaining to the transportation of hazardous materials. The project would not result in any change to the existing transportation of hazardous materials along U.S. 101 and UPRR and would not result in any new or exacerbated upset or accident conditions.

#### **LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

The closest sensitive receptors to the project site are residences and a daycare center at the California Polytechnic State University, located more than one mile from the project site. The nearest existing school to the project site is Pacheco Elementary School, located at 261 Cuesta Drive San Luis Obispo, approximately 2.3 miles southwest of the project site. No schools are located within 0.25 mile of the site.

#### **NO IMPACT**

- d. *Would the project be located on a site that is included on a list of hazardous material 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?*

The following databases and sites were searched for records relating to any known hazardous materials contamination within the project site:

- The State Water Resources Control Board (SWRCB) Geotracker database;
- Department of Toxic Substances Control's (DTSC) EnviroStor and Hazardous Waste Tracking System databases; and
- The Cortese List

No hazardous materials or sites were identified on or adjacent to the project site.

#### **NO IMPACT**

- e. *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 or excessive noise for people residing or working in the project area?*

The project site is located outside of the Airport Land Use Plan area, and there are no private landing strips within a five-mile radius of the project site.

**NO IMPACT**

- f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*
- g. *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

The project site is susceptible to wildfires due to the dry climate, steep topographic features, and annual grassland, chaparral and oak woodland associated with the rural setting and surrounding open space land uses. The project is located in a state responsibility area that is classified as a moderate to very high fire hazard severity zone (Cal Fire 2010). The Conservation Plan includes vegetation control measures to reduce fuel on the project site and a Wildfire Preparedness Plan that identifies fire hazard mitigation areas on the project site. City Open Space Regulations prohibit fires, smoking, discharge of weapons, and fireworks or any kind, and also allow for closure if hazardous conditions warrant such action (San Luis Obispo Municipal Code, Chapter 12.22.050A). Maintaining the existing grazing rights on the project site would maintain fuel loads in their current state, which would reduce the risk of wildfires. The access roads throughout the property would continue to be maintained as needed by Cal Fire to provide firefighting access, as well as to serve as a fuel break along the top of the ridge in the upper portion of the property. The project site would remain accessible to wildland fire fighting apparatus (Type III or similar), and primary responsibility would remain with Cal Fire due to the property being located in County of San Luis Obispo jurisdiction. The project does not propose new residential or commercial land uses that would expose people or structures to significant wildfire risks. Therefore, the Conservation Plan and ongoing preservation of the open space area would not impair or interfere with the City's emergency response plans.

**LESS THAN SIGNIFICANT IMPACT**

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# 10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) 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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*
- c.(i) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?*
- c.(iii) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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 project site is located near the top of the San Luis Obispo Creek Watershed. Maintenance and passive recreation activities would cause erosion that may lead to siltation of waterways in the project site vicinity, including San Luis Obispo Creek, located east of Old Stagecoach Road. The project would not require any surface grading or trenching. The only project components that would result in earthmoving or slope modifications are the proposed recreational trails, which would be developed using hand tools and would not result in disturbance on excess of one acre. Therefore, the project would not require a Stormwater Pollution Prevention Plan (SWPPP).

The proposed informal on-site parking would not introduce new impervious surfaces on the project site. Therefore, the project would not result in substantial erosion or siltation or substantially increase the rate or amount of surface runoff. All recreational amenities would be designed and installed in accordance with the City's standard specifications identified in the adopted Open Space Maintenance Plan (2015). The City's open space trails are closed during rain events when the greatest potential for erosion could occur. The proposed Conservation Plan (Appendix A) includes Policy 3.15 (Natural Resources Protection) which requires the City to maintain existing roads and firebreaks to reduce erosion and prevent sedimentation from entering nearby streams. Therefore, the project would not result in substantial erosion or siltation and would not negatively impact water quality standards or discharge requirements.

#### **LESS THAN SIGNIFICANT IMPACT**

- b. *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*
- e. *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

The proposed passive recreational opportunities would not require use of existing groundwater water supplies. The proposed informal on-site parking would not include new impervious surfaces that would reduce groundwater recharge. Therefore, the project would not decrease groundwater supplies, interfere with groundwater recharge, or impair or interfere with the City's water quality control or sustainable groundwater management plans.

#### **LESS THAN SIGNIFICANT IMPACT**

- c.(ii) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
- c.(iv) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?*

Planned improvements on the project site would require minimal soil disturbance, including removing a few inches of topsoil in the locations of planned trails. Improvements would be installed using hand tools and would not require grading or other work that would result in substantial changes to the topography of the site. All recreational amenities would be designed and installed in accordance with the City's standard specifications identified in the adopted Open Space Maintenance Plan (2015). The proposed informal on-site parking would not introduce new impervious surfaces on the project site. Therefore, the project would not substantially alter the existing drainage pattern of the site, introduce new impervious surfaces, or otherwise increase the rate or amount of surface runoff from the project site.

**LESS THAN SIGNIFICANT IMPACT**

- d. *In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?*

The project site is located approximately 12 miles east of the Pacific Ocean, approximately 3 miles southeast of Chorro Reservoir, approximately 7.3 miles southwest of Santa Margarita Lake, and approximately 16 miles southeast of Whale Rock Reservoir. Therefore, the project site would not be at risk from tsunami or seiche inundation. The project site is not located in the 100-year flood zone. Therefore, the project would result in the release of pollutants due to inundation.

**LESS THAN SIGNIFICANT IMPACT**



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# 11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project physically divide an established community?*
- b. *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

The project is surrounded by open space uses and U.S. 101, and would not involve new development that would physically divide an established community. The proposed Conservation Plan is consistent with the County's General Plan Conservation and Open Space Element and the City's Conservation Guidelines for Open Space Lands.

**NO IMPACT**

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## 12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *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?*
- b. *Would the project 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?*

There are no identified mineral resources on the project site (County of San Luis Obispo 2019). Planned improvements on the project site would require minimal soil disturbance, including removing a few inches of topsoil in the locations of planned trails. Proposed trails and other recreational improvements would be developed using hand tools and would not result in disturbance or removal of mineral resources of the site.

**NO IMPACT**

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# 13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
- b. *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Two sound level measurements were collected on the project site on September 25, 2019 (refer to Table 2). The primary source of ambient noise on the project site is traffic on U.S. 101. The noise level adjacent to Old Stagecoach Road, approximately 280 feet from the U.S. 101 centerline, was 68 dBA. The noise level in the interior of the project site, approximately 420 feet from the U.S. 101 centerline and at an elevation above the highway was 60 dBA.

**Table 2 Noise Monitoring Results**

Measurement Number	Measurement Location	Primary Noise Source	Sample Time	Leq [15] (dBA)
1	420 feet west of U.S. 101 centerline	U.S. 101	15 minutes	59.9
2	280 feet west of U.S. 101 centerline	U.S. 101	15 minutes	67.5

Source: Field visit using ANSI Type II Integrating sound level meter, September 25, 2019

Distances are from centerline of nearest road.

Sound level monitoring data sheets and monitoring locations are included in Appendix B.

Installation of recreational amenities on the project site, including signage, fencing, and trails, would be completed using hand tools, which would not result in a substantial increase in short-term noise or groundborne vibration.

The primary long-term noise associated with the proposed passive recreational uses would be from users arriving at and departing from the informal parking area, located on Old Stagecoach Road. The proposed parking area would be located approximately 280 feet from U.S. 101, and would be exposed to existing noise associated with highway traffic. Project activity at this location, which would include vehicle starts, car doors opening and closing, and conversations between users of the proposed recreational amenities, would not result in a substantial increase in existing noise levels because of the relatively high ambient noise levels associated with traffic on U.S. 101. The City's Open Space Regulations prohibit use of sound amplifying equipment within City open space lands except by authorized law enforcement (San Luis Obispo Municipal Code, Chapter 12.22.050H). In addition, there are no noise-sensitive receptors in the vicinity of the proposed parking area. Therefore, the project would not result in a significant increase in ambient noise levels in the vicinity of the project site.

#### **LESS THAN SIGNIFICANT IMPACT**

- c. *For a project located within the vicinity of a private airstrip or 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?*

The project site is located outside of the Airport Land Use Plan area, and there are no private landing strips within a five-mile radius of the project site.

#### **NO IMPACT**



## 14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project induce substantial unplanned 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)?*
- b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The project would provide passive recreational opportunities and open space conservation. The project site is vacant, and the project does not include any new residential uses that would induce population growth in the area. Therefore, no people or housing would be displaced by the implementation of the project.

**NO IMPACT**

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# 15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
1 Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a.1. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*
- a.2. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*
- a.3. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*
- a.4. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*

- a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

Police protection services would be provided by the San Luis Obispo County Sheriff's Department and fire protection services would be provided by Cal Fire. The City Parks and Recreation Department, through its Ranger Service, has the primary responsibility for enforcing the City's Open Space Regulations on City open space lands (San Luis Obispo Municipal Code, Chapter 12.22.050). Calls for emergency medical service in City open space have historically been low compared to overall call volume, and typically involve instances of heat exhaustion or minor injuries such as sprained ankles. The project would not result in new residential uses or other land uses that would increase demand for fire protection, police protection, schools, or public facilities in a manner that would result in the need for new or physically altered facilities.

The project would establish connectivity between existing recreational land uses in the region. Existing trails in the project site vicinity include Poly Canyon Trail Loop (a.k.a. Stenner) located 0.6 mile northwest of the project, as well as the SLO to East Cuesta Ridge trail, the Juan Bautista de Anza National Historic Trail, and the Santa Margarita to East Cuesta Trail, all of which connect to the project site. The project would establish connectivity between existing open spaces in a manner that would enhance recreational opportunities in the project site vicinity. The project would not alter any existing designated parks or require provision of any new parks.

**LESS THAN SIGNIFICANT IMPACT**

# 16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *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?*
- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The project would provide passive recreational opportunities, including the potential for new connectivity between existing trails in the project site vicinity. Existing trails in the project site vicinity include Poly Canyon Trail Loop , which is located 0.6 miles northwest of the project, as well as the SLO to East Cuesta Ridge trail, the Juan Bautista de Anza National Historic Trail, and the Santa Margarita to East Cuesta Trail, all of which have the potential to be connected to the project site. By establishing connectivity between existing neighborhood and regional recreational facilities, the project would increase the use of existing trails and open spaces in the project site vicinity but would not substantially impact the use of any dedicated City or County parks or other formal recreational facilities in a manner that would result in substantial physical deterioration of such facilities.

## LESS THAN SIGNIFICANT IMPACT

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# 17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*
- b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

New vehicle trips associated with public use of the proposed recreational trails are estimated based on existing trail and parking activity at the nearby Reservoir Canyon Natural Reserve (Reservoir Canyon). Similar to the proposed project, Reservoir Canyon is an open space owned by the City and managed for the purposes of habitat conservation and passive recreational use. Reservoir Canyon is located approximately 2.5 miles from the project site and is accessed via U.S. 101 north of the City of San Luis Obispo. The City of San Luis Obispo estimates that the Reservoir Canyon trailhead experiences approximately four daily vehicle trips per parking spot in its informal parking area. Based on this information, the twenty planned parking spots in the proposed informal parking area at the project site would result in approximately 80 daily vehicle trips, which is the equivalent of approximately 8 peak hour trips.

As described CEQA Guidelines Section 15064.3(c) "A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide." The City of San Luis Obispo has not yet adopted criteria for determination the significance of transportation impacts based on "vehicle miles traveled," which refers to the amount and distance of automobile travel attributable to a project. For the proposed project, the significance of transportation impacts is determined based on a comparison of the project's estimated generation of new vehicle trips to existing vehicle trips volumes of nearby roadways and

an evaluation of whether the project would conflict with a program, plan, ordinance or policy addressing the circulation system.

According to Caltrans 2017 traffic data, there are approximately 55,000 daily trips and 5,100 peak hour trips along the segment of U.S. 101 between the northern San Luis Obispo City Limit and the junction with State Route 58 (Cal Trans 2019). The project's 80 daily vehicle trips would increase traffic along this segment of U.S. 101 by less than 0.2%, which would not be a substantial increase in vehicle trips and would not be expected to result in a substantial change to travel conditions along U.S. 101, or to conflict with the City of San Luis Obispo Circulation Element or the Regional Transportation Plan. In addition, bicycle and pedestrian trails currently connect to the project site and proposed new trails would expand the City's existing network of recreational trails. Pedestrians and cyclists would also be able to access the project site using an existing highway underpass. In addition, some users of the project may be substituted from other similar facilities in and around the City. Therefore, not all of the estimated vehicle trips to the project site would necessarily be new.

#### **LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

Primarily vehicular access to the project is located at the intersection of U.S. 101 and Old Stagecoach Road. The project would result in approximately 80 total daily vehicle trips to the project site, which is the equivalent of approximately 8 peak hour trips. Project-added vehicle trips would increase traffic along the segment of U.S. 101 between the northern San Luis Obispo City Limit and the junction with State Route 58 by less than 0.2%, which would not substantially increase turning movements at the intersection of U.S. 101 and Old Stagecoach Road. Northbound traffic would cross U.S. 101 to reach Old Stagecoach Road; however, there is an existing turn pocket that is designed for this purpose. Southbound traffic would use the existing in-bound merge lane to U.S. 101. The project would not add lanes, change traffic patterns or capacity, or substantially increase the traffic volume of the existing roads.

#### **LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project result in inadequate emergency access?*

Vehicular access to the project site would be primarily from Old Stagecoach Road, with secondary access near the West Cuesta Ridge trailhead, which accesses Old Stagecoach Road from the north. The project would not result in inadequate emergency access.

#### **LESS THAN SIGNIFICANT IMPACT**



# 18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*
- b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

The NAHC was contacted on August 22, 2019 to determine whether any sites recorded in the NAHC's Sacred Lands File occurred in or near the project site. On September 5, 2019 the NAHC supplied a list of local Native American individuals and/or groups with interests and knowledge about the area. Those individuals were contacted and did not identify tribal cultural resources on or adjacent to the project site. No archaeological sites or features were identified during the pedestrian surface survey and based on the findings of the Cultural Resource Study the potential for encountering tribal cultural resources on the site is low. Planned improvements on the project site would require minimal soil disturbance, including removing a few inches of topsoil in the locations of planned trails. Improvements would be installed using hand tools and would not require grading

or other work that would result in substantial ground surface disturbance. In accordance with Conservation Guidelines for Open Space Lands of the City of San Luis Obispo (2014), the Conservation Plan includes appropriate treatment if tribal cultural resources are identified on the project site. The proposed Conservation Plan (Appendix A) includes Policy 3.17 (Cultural Resources Management), as well as Goals 3.2 and 3.8, which commit the City to:

- Construction management practices to minimize potential impacts to cultural and historic-period materials identified during construction efforts;
- Provide the public with an opportunity for greater understanding and appreciation for the cultural and historic resources values associated with Miozzi Open Space; and
- Protect and consider officially designating, as appropriate, the important historic and cultural resources associated with Miozzi Open Space.

The City's Open Space Regulations protect cultural resources, including prehistoric and historic artifacts within City open space lands from collection or other disturbance except for removal of materials in conjunction with city-sponsored activities, such as trail construction or maintenance (San Luis Obispo Municipal Code, Chapter 12.22.050A). Implementation of the proposed cultural resources management goals and policies included in the Conservation Plan would incorporate recommendations from the Cultural Resources Study, ensuring potential impacts to tribal cultural resources would remain less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

# 19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*
- b. *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*
- c. *Would the project 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?*

- d. *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*
- e. *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

The project would provide passive recreational opportunities and open space conservation. The project does not include residential or commercial uses that would require additional water supply or generate storm water, wastewater, or solid waste. As discussed in Section 10 *Hydrology and Water Quality*, the project would not require the construction of new or expanded water, wastewater treatment, or storm water, drainage, electrical power, natural gas, or telecommunications facilities.

**NO IMPACT**

## 20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*
- c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The project is located in a state responsibility area that is classified as a moderate to very high fire hazard severity zone (Cal Fire 2010). The Conservation Plan includes vegetation control measures to reduce fuel on the project site and a Wildfire Preparedness Plan that identifies fire hazard mitigation areas on the project site. Maintaining the existing grazing rights on the project site would maintain fuel loads in their current state, which would reduce the risk of wildfires. The access roads throughout the property would continue to be maintained as needed by the City's Ranger Service, in coordination with Cal Fire to provide firefighting access, as well as to serve as a fuel break along the

top of the ridge in the upper portion of the property. The project site would remain accessible to wildland fire fighting apparatus (Type III or similar), and primary responsibility would remain with Cal Fire due to the property being located in County of San Luis Obispo jurisdiction. The project does not propose new residential or commercial land uses that would expose people or structures to significant wildfire risks. Therefore, the Conservation Plan and ongoing preservation of the open space area will not impair or interfere with the City's emergency response plans. The project does not propose new residential or commercial land uses that would require the installation or maintenance of associated infrastructure that may exacerbate fire risk.

#### **NO IMPACT**

- b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*
- d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project is located in a state responsibility area that is classified as a moderate to very high fire hazard severity zone (Cal Fire 2010). The project site is susceptible to wildfires due to the dry climate, steep topographic features, and annual grassland, chaparral and oak woodland associated with this rural setting. The Conservation Plan includes vegetation control measures to reduce fuel on the project site and a Wildfire Preparedness Plan that identifies fire hazard mitigation areas on the project site. City Open Space Regulations prohibit fires, smoking, discharge of weapons, and fireworks or any kind, and also allow for closure if hazardous conditions warrant such action (San Luis Obispo Municipal Code, Chapter 12.22.050C). Maintaining the existing grazing rights on the project site would maintain fuel loads in their current state, which would reduce the risk of wildfires. The access roads throughout the property would continue to be maintained as needed by the City's Ranger Service, in coordination with Cal Fire to provide firefighting access, as well as to serve as a fuel break along the top of the ridge in the upper portion of the property. The project site would remain accessible to wildland fire fighting apparatus (Type III or similar), and primary responsibility would remain with Cal Fire due to the property being located in County of San Luis Obispo jurisdiction. The project does not propose new residential or commercial land uses that would exacerbate wildfire risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

#### **LESS THAN SIGNIFICANT IMPACT**

## 21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

The proposed project would enhance an existing open space area in order to formally establish passive recreation and habitat conservation practices. The proposed improvements, passive recreation, and habitat conservation practices would not substantially alter the existing habitat value of the project site. The project would not have the potential to substantially impact wildlife species or habitat, due to the incorporation of natural resources protection, vegetation management, and passive recreation management policies into the proposed Conservation Plan. No identified historic-era resources would be removed, modified, or otherwise affected by the

proposed project improvements, habitat conservation efforts, or passive recreational uses, and no archaeological or tribal cultural resources are identified on the project site.

#### **LESS THAN SIGNIFICANT IMPACT**

- b. *Does the project 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)?*

As described in the discussion of environmental checklist Sections 1-20, all environmental issues considered in this Initial Study were found to have either no impact or a less than significant impact. Potential cumulative impacts of several resource areas have been addressed in the individual resource sections, including air quality, cultural and tribal cultural resources, and GHG emissions (CEQA Guidelines Section 15064[h][3]). Other resource areas were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts, including land use and planning, mineral resources, population and housing, and utilities and service systems. Other issues (e.g., geology and soils, hazards and hazardous materials) are by their nature project-specific and impacts at one location do not add to impacts at other locations or create additive impacts. The project includes trail improvements that would be completed using hand tools and the installation of associated recreational amenities. The project’s operational phase would enhance open space in a manner that is similar to pre-project conditions and would not result in substantial long-term increases in noise or local vehicle trips. There are no proposed, planned, or probable City or County projects in the immediately project vicinity that would result in impacts which would be exacerbated by the project’s less than significant effects. Therefore, implementation of the project would result in less than significant cumulative environmental impacts.

#### **LESS THAN SIGNIFICANT IMPACT**

- c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The project does not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, as discussed in Section 3, *Air Quality*, Section 9, *Hazards and Hazardous Materials*, and Section 13, *Noise*. The project would not conflict with an air quality management plan, expose sensitive receptors to substantial pollutant concentrations or hazardous materials, or expose sensitive receptors to substantial noise pollution. The project would not result in a permanent increase in ambient noise levels in the vicinity of the project. Environmental effects causing adverse effects on human beings would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**



# References

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## Bibliography

- California Air Resources Board. Area Designation Maps / State and National. Available at <https://ww3.arb.ca.gov/desig/adm/adm.htm>.
- California Department of Conservation. (2016) San Luis Obispo County Important Farmland. Available at file:///C:/Users/showland/Downloads/slo16.pdf
- \_\_\_\_. 2010. Fault Activity Map of California. Available at <http://maps.conservation.ca.gov/cgs/fam/>
- California Department of Toxic Substances Control, EnviroStor. Accessed September 23, 2019. Available at <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Old+Stagecoach+Road+San+Luis+Obispo+CA+93401>
- Cal Fire Office of the State Fire Marshal (OSFM). (2007). Fire Hazard Severity Zone Map San Luis Obispo County. Available at [https://osfm.fire.ca.gov/media/6795/fhszs\\_map40.pdf](https://osfm.fire.ca.gov/media/6795/fhszs_map40.pdf)
- City of San Luis Obispo. 2014. Circulation Element. Available at <https://www.slocity.org/home/showdocument?id=20412>.
- \_\_\_\_. 2006. (September 3, access date). Conservation and Open Space Element. Scenic Roadways and Vistas Map. Available at <https://www.slocity.org/home/showdocument?id=2218>
- \_\_\_\_. 2012. Climate Action Plan. Available at <https://www.slocity.org/home/showdocument?id=2398>.
- \_\_\_\_. 2006. Conservation Guidelines for Open Space Lands. Available at <https://www.slocity.org/Home/ShowDocument?id=5911>
- \_\_\_\_. 2006. Local Hazard Mitigation Plan. Available at <https://www.slocity.org/home/showdocument?id=60>.
- City and County of San Luis Obispo. 2003. Waterway Management Plan and Drainage Design Manual. Available at <http://www.slocity.org/Home/ShowDocument?id=4400>
- County of San Luis Obispo. 2019. Mining Designation Reference Map. Available at <https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Ordinances/Mining-Designation-Amendments/Mining-Designation-Maps.aspx>
- County of San Luis Obispo Air Pollution Control District. 2001. 2001 Clean Air Plan San Luis Obispo County. Available at <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/business/pdf/CAP.pdf>.
- \_\_\_\_. 2015. Ambient Air Monitoring Network. Available at [https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/2015%20network%20assessment\\_FINAL.pdf](https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/2015%20network%20assessment_FINAL.pdf).

- \_\_\_\_. 2019. Ambient Air Monitoring Network. Available at <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/2019-network-plan-finalEPA2.pdf>.
- \_\_\_\_. 2005. Particulate Matter Report Implementation of SB 656 Requirements. Available at <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/business/pdf/PM.ReportFin.pdf>.
- \_\_\_\_. 2019. San Luis Obispo County Ozone Emergency Episode Plan. Available at <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/SLOAPCD%20Ozone%20Emergency%20Episode%20Plan%20%20August%202019.pdf>.
- Federal Emergency Management (FEMA) Flood Map Service Center. Accessed on September 20, 2019. Available at <https://msc.fema.gov/portal/search?AddressQuery=Old%20Stagecoach%20Road%20San%20Luis%20Obispo%20California%2093401#searchresultsanchor>.
- San Luis Obispo Council of Governments (SLOCOG). 2019. Regional Transportation Plan. Available at [https://www.dropbox.com/s/oc6i8wshikuirsh/\\_\\_\\_FINAL%202019%20RTP.pdf?dl=0](https://www.dropbox.com/s/oc6i8wshikuirsh/___FINAL%202019%20RTP.pdf?dl=0)
- State Water Resources Control Board, Geotracker. Accessed September 23, 2019. Available at <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Old+Stagecoach+Road+San+Luis+Obispo+CA+93401>.
- U.S. Fish and Wildlife Service Region 1. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). 2002. Available at [https://www.fws.gov/carlsbad/SpeciesStatusList/RP/20020528\\_RP\\_CRLF.pdf](https://www.fws.gov/carlsbad/SpeciesStatusList/RP/20020528_RP_CRLF.pdf)
- West Coast Region National Marine Fisheries Service. South-Central California Steelhead Recovery Plan. 2013. Available at [https://archive.fisheries.noaa.gov/wcr/publications/recovery\\_planning/salmon\\_steelhead/domains/south\\_central\\_southern\\_california/2013\\_scccs\\_recoveryplan\\_final.pdf](https://archive.fisheries.noaa.gov/wcr/publications/recovery_planning/salmon_steelhead/domains/south_central_southern_california/2013_scccs_recoveryplan_final.pdf)

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# Appendix A

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Public Hearing Review Draft Miossi Open Space Conservation Plan

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# MIOSSI OPEN SPACE CONSERVATION PLAN

*Public Hearing Review Draft*



**City of San Luis Obispo**  
City Administration  
Office of Sustainability  
Natural Resources Protection Program



**January 2019**

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# Mioosi Open Space Conservation Plan

*Public Hearing Review Draft*

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## Executive Summary

The *Mioossi Open Space Conservation Plan* ("the Conservation Plan") is intended to guide the conservation and stewardship of this property long into the future as part of a larger mosaic of open lands owned by the City, Cal Poly and the United States Forest Service. This process also formally designates Mioossi Open Space as a City Open Space property in accordance with the City's Open Space Regulations (1996), the *Conservation Guidelines for Open Space Lands of the City of San Luis Obispo* (2002), and the Conservation and Open Space Element of the City's General Plan (2006).

Mioossi Open Space is teeming with biodiverse environments nestled between the US Highway 101 freeway and the Poly Canyon within the land of California Polytechnic State University, San Luis Obispo. This open space is located in a secluded setting at the base of Cuesta Ridge at the northeastern boundary of the City of San Luis Obispo. The upper extents of the property feature panoramic views of the City to the south and the Pacific Ocean to the west, as well as the surrounding region. Mioossi Open Space also hosts exceptional plant and wildlife diversity, an interesting cultural resource legacy, and is well-suited to offer pleasant hiking, biking, and passive recreational opportunities. Mioossi Open Space is proximate to the City's existing Reservoir Canyon Natural Reserve and Stenner Springs Natural Reserve, as well as Poly Canyon, Los Padres National Forest, and the neighboring Santa Lucia Wilderness. This property represents a key piece of a long-standing conservation vision to establish permanent land protection within the Cuesta Canyon and Cuesta Grade areas of the San Luis Obispo Greenbelt due to outstanding natural resource values including the upper watershed of San Luis Obispo Creek, artesian springs, and important wildlife habitat. The acquisition of the property will also allow for the creation of a trail linking the new Mioossi Open Space between Poly Canyon and Los Padres National Forest where outstanding views of the City of San Luis Obispo and the valley it rests in can be gained and enjoyed.

## Site Description

Mioossi Open Space offers high value for natural resource conservation, as well for passive recreational uses on this 266-acre site. The site has an existing trail network that is also connected to a wider dirt road. Perpendicular to one of the trails is a railroad crossing with an underlying culvert previously used for the movement of grazing animals and serves as a crucial corridor for species cited in the Terra Verde wildlife survey report (2019). At the base of the site near US Highway 101 is an approximately ½ mile portion of the Old Stagecoach Road, which runs between the Highway and San Luis Obispo Creek. Mioossi Open Space ranges from a base elevation of 640 feet to its highest point along the upper ridge at 1,486 feet. Mioossi Open Space offers a full host of both natural landscape features and vegetative assemblages across a site of 266 acres. The site is comprised of a diverse assemblage of soil and rock. In the early part of the 20<sup>th</sup> century the Southern Pacific Railroad was constructed, ostensibly bifurcating the site but for a culvert undercrossing. The site has historically been grazed by livestock. Mioossi Open Space features oak woodlands, riparian areas, springs, and steep chaparral hillsides in compliment to the grassland pastures and rock outcrop features of the site.



Figure 1: Panoramic Photo of Mioossi Open Space and Poly Canyon



## Management Considerations

The *Mioosi Open Space Conservation Plan* provides a framework for a mix of management approaches to natural resources protection, scenic resources, cultural resources, erosion and drainage, fire protection, trails and passive recreation:

- **Natural Resources Protection.** The Conservation Plan places priority on maintaining the natural ecosystem, while allowing passive public recreation as appropriate and compatible. The Mioosi Open Space provides habitat for seven special status wildlife species and seven special status plant species, identified by the firm Terra Verde Environmental (2019) and City staff, that shall be protected and monitored over the long-term. Protective status is also given to all native plant communities and habitats that persist or are establishing within the open space area for the functions and values that they provide.
- **Scenic Resources.** The upper ridgeline and easterly side of Mioosi Open Space represents a scenic and prominent backdrop along US Highway 101 corridor, as well as being more distantly visible on the northeast side of the the San Luis Obispo Greenbelt from various vantage points with the City.
- **Cultural Resources.** A Phase I Cultural Resources study was undertaken by the firm Applied EarthWorks (2019) that included records research, field surveys and documentation, and outreach to historically and culturally affiliated Native American tribal representatives. Applied EarthWorks identified several historic-era resources and recorded the historic dam and associated infrastructure that was part of the initial water system supplying water to the City of San Luis Obispo. Tribal representatives requested a site visit and cultural sensitivity training for staff prior to the start of any construction. Improved trailhead signs and a new kiosk will provide the opportunity to present an educational panel to the public that broadly details the cultural and historic nature of the property.
- **Erosion and Drainage.** A Custom Soil Resource Report was prepared for Mioosi Open Space using the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) website application. The report reveals that Mioosi Open Space is comprised mostly of heavy clay soils known as the Gazos-Lodo clay loams (unit 144) and Los Osos-Lodo complex (unit 167). This soil is excessively well drained and characterized as having severe erosion potential, especially given the presence of steep slopes. Accordingly, ongoing erosion control and water management strategies are necessarily a part of the Conservation Plan.
- **Fire Protection.** Mioosi Open Space is entirely surrounded by open land uses comprised of the public lands and other larger ranch holdings. The Cuesta Ridge landscape, in general, represents a significant wildland fire hazard and there has been significant recorded fire history in this system, as well as recent smaller events. A key component of the Conservation Plan is to address fire hazard that could result in unacceptable safety risk, property loss, and impacts to the environment. This is due to prevailing and seasonal winds; presence of annual grassland, chaparral, oak woodland, and other vegetation; and adjacency to US 101 and the Los Padres National Forest landscape.
- **Trails and Passive Recreation.** An existing system of old jeep trails provide passive recreational access through the Mioosi Open Space. In the lower extents of the property located "below the tracks" the existing roads are also of utility for maintenance and site stewardship activities, Ranger Service patrol, and emergency purposes. A culvert undercrossing provides trail access between the lower and upper portions of the site, although it is not large enough to accommodate a vehicle. New multi-use trails (hiking and biking) are proposed as part of the Conservation Plan in three locations – at the easterly portion of the site proximate to the Old Stagecoach Road trailhead access; on the westerly portion of the site leading towards and providing a possible trail connection to Poly Canyon, as well as a brief "hiking only" spur to a summit feature within the property; and, a stacked loop system within the upper portion of the property. Proposed new trails are based on field reconnaissance, as well as slope, elevation, and aerial photography analysis using Geographic Information Systems (GIS) software, in order to approximately map out trail alignments that can be sustainably constructed with moderate slopes and avoidance of sensitive site features. The new trails are also planned so as to feature attractive, scenic, or interesting site features, as well as both on- and off-site views.



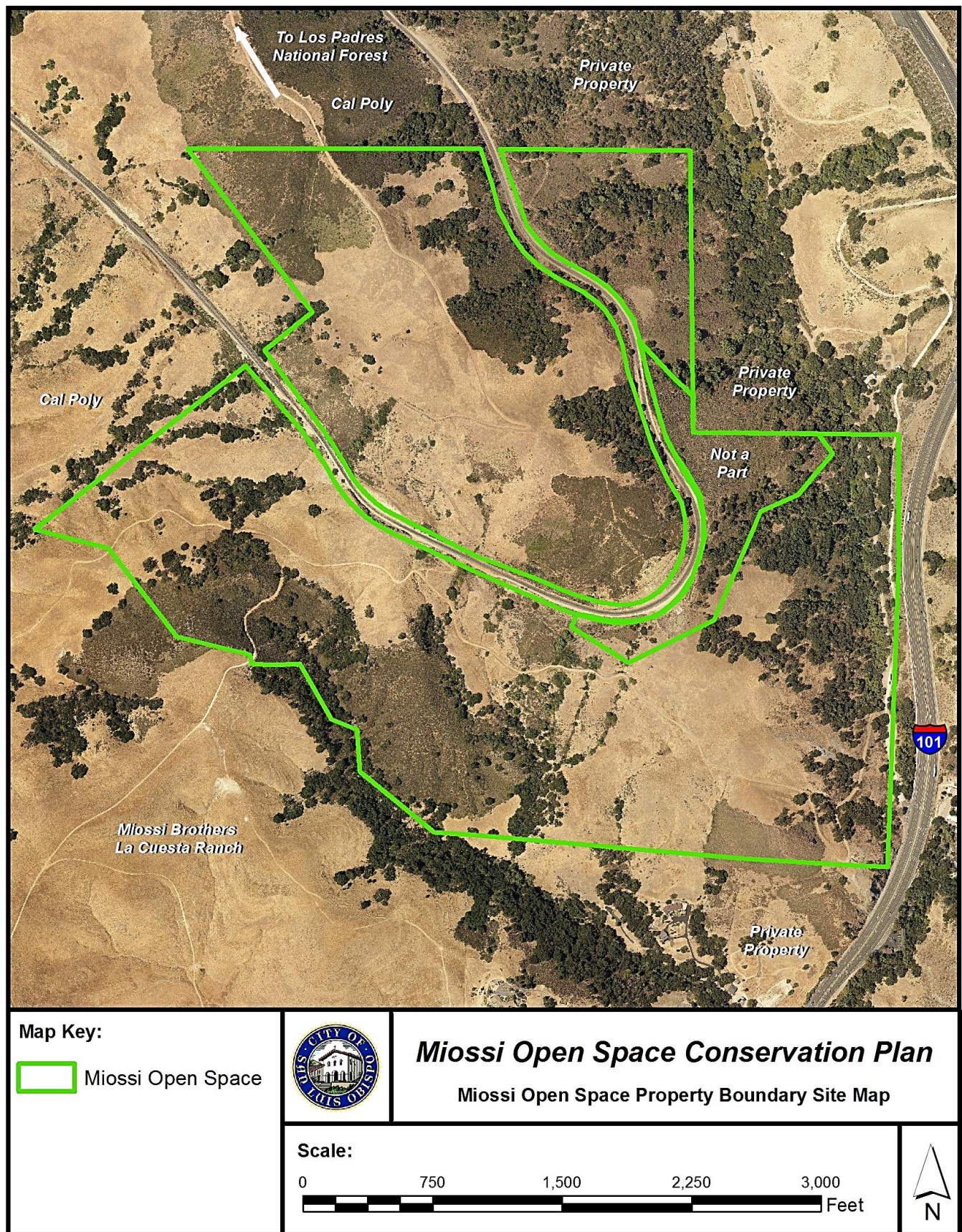


Figure 2: Mioosi Open Space Property Boundary Site Map



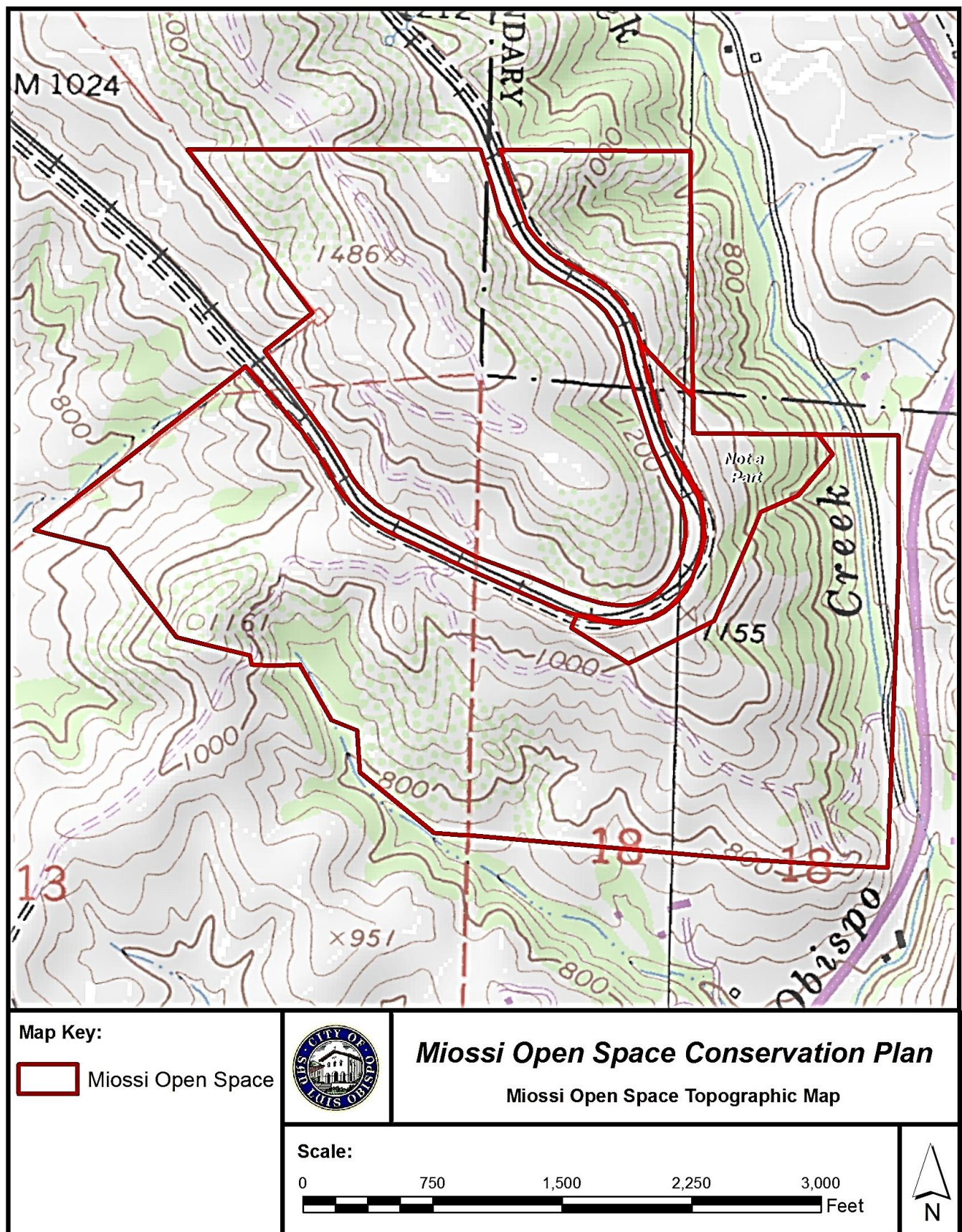


Figure 3: Mioffi Open Space Topographic Map



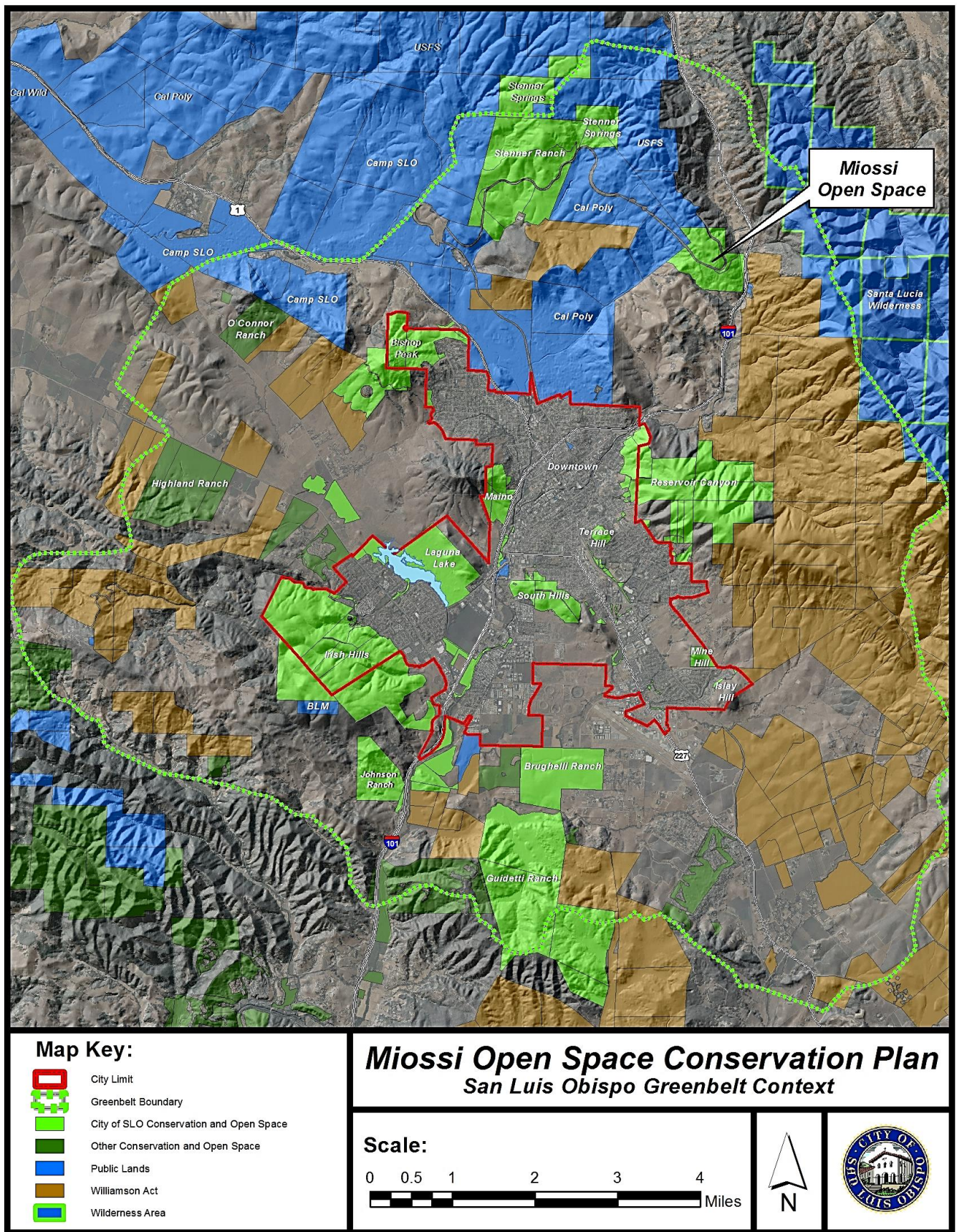


Figure 4: Mioossi Open Space and the San Luis Obispo Greenbelt



## 1. Property History

Archaeological evidence suggests that Native American use of this region of the Central Coast began as early as 8000 B.C., or 10,000 year before present, across six distinct periods of pre-history. Mioossi Open Space lies within the ethnographic territory of the Chumash, in an area historically occupied by the Northern (Obispeño) Chumash (Applied EarthWorks, 2019). Although proximate to several of the Mexican land grants distributed in the early to mid-1840s, the immediate area later became part of the township and range system of United States Government land patents following California's statehood.

Mioossi Open Space includes and is proximate to key transportation routes necessary to link San Luis Obispo to areas located to the north over Cuesta Grade, including the overland route known as Padre Road that originally served the Spanish explorers and connected the California missions, and was active in the 1860s and 1870s. Old Stagecoach Road began construction in 1876 and remained in service until 1915 when State Route 2 was constructed. State Route 2 remained active until US 101 was built in 1937. With the advent of the automobile and construction of US 101, several traveler-serving businesses sprang up at the foot of Cuesta Grande near Mioossi Open Space. US 101 has since been widened and improved and now features a significant retaining wall at the eastern boundary of Mioossi Open Space.

The Southern Pacific Railroad came to San Luis Obispo in 1894 and played a pivotal role not only in the the development of San Luis Obispo, but also in transforming the landscape of the La Cuesta Ranch which serves as a key portion of the winding alignment that climbs over Cuesta Grade. A tunnel was first constructed within the alignment through La Cuesta Ranch, but was later abandoned to accommodate the construction of a wider turn radius coming around the prominent ridgeline within the property between 1956 and 1963.

By the 1870's, the San Luis Obispo County economy was dominated by dairies, primarily owned by Swiss and Swiss-Italian farmers including the Mioossi family, whom at one time had three separate ranches in San Luis Obispo County, including other properties in Price Canyon and near present-day Montaña de Oro. The Mioossi family acquired the subject La Cuesta Ranch property in 1917 from Frank Tate and they report past use of the property for ranching and livestock grazing purposes by the family and also under lease of the property to a tenant who grazed the property up until the time of sale to the City of San Luis Obispo in 2018. Aerial photographs from 1949, 1956 and 1963 clearly depict grazing and pasturing uses of the property, as well as a series of jeep trails within both the lower and upper extents of the property.

## 2. Inventory

### 2.1 Physical Inventory and Existing Improvements

Mioossi Open Space is comprised of San Luis Obispo County assessor parcels 070-271-033, 070-271-034, 073-341-040, and 073-341-041. It is 266 acres in size with an elevation ranging between 640 and 1480 feet above mean sea level (msl). The primary entry and public access to the site is via an existing dirt road behind a locked gate located off of Old Stagecoach Road leading up and into the property.



There is also physical access from Cal Poly via US Forest Service lands, although this route is not accessible by vehicle. A culvert undercrossing beneath the railroad tracks that was reserved by the Mioossi family in the 1960s connects the lower and upper areas of the property, although the alignment of the tracks and some side area is owned separately by the Union Pacific Railroad. Other than the existing dirt road network, there are only a few improvements including perimeter fencing, the gate at Old Stagecoach Road, a developed spring and spring box, and cattle watering troughs. Portions of Old Stagecoach Road and Route 2 traverse the property adjacent to San Luis Obispo Creek. Within San Luis Obispo Creek, remnants of the old dam site and associated conveyance infrastructure remain that originally were in service as part of the City of San Luis Obispo's municipal water supply between 1911 and 1954. This location has been recorded as site AE-4087-01H and is recommended for further evaluation as an historic resource (Applied EarthWorks, 2019).

Figure 5: Culvert undercrossing



Figure 6: Site Map of AE-4087-01H and associated infrastructure (Applied EarthWorks, 2019)



2.2 Legal Agreements

There are numerous prior legal agreements for utility easements, right-of-way, reservations and long-term leases that affect the management and use of Mioosi Open Space. Utility easements are for gas, electricity, and cellular communications. Right-of-way easements are for roads and railroad. Reservation and long-term leases include provision made with the Mioosi family upon their sale of the property to the City of San Luis Obispo, including an easement for emergency and maintenance purposes consistent with historic levels of use, and easement reserving an existing cellular communications facility, and a reservation for a 10-year cattle grazing lease with option to renew. The City has secured an ALTA Owner's Policy of Title Insurance from First American Title Insurance Company, policy no. 5601869.

2.3 Soils

A Custom Soil Resource Report was prepared for Mioosi Open Space using the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) website application. The report reveals that Mioosi Open Space is comprised mostly of clay, but a variety of soils are present. This includes Gazos-Lodo clay loams (unit 144) and Los Osos-Lodo complex (unit 167), which are both clays. This soil is excessively well drained and characterized as having severe erosion potential, especially given the 30-50% (Gazos-Lodo Clay) and 30-75% (Los Osos-Lodo Complex) slopes. A soils map and complete listing of soils found within Mioosi Open Space is included as Appendix B.

2.4 Wildlife Species Inventory

A total of 79 animals were observed during surveys, photographed on remote cameras, and/or recorded by a bat detector at the Mioosi Open Space property. (see Attachment B: Botanical and Wildlife Species Lists for Mioosi Open Space) The 79 species detected comprise six taxonomic Classes: Amphibia (3), Arachnida (3), Aves (39), Insecta (17), Mammalia (14), and Reptilia (3). Seven special status wildlife species were detected on the property: golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), white-tailed kite (*Elanus leucurus*), oak titmouse (*Baeolophus inornatus*), American badger (*Taxidea taxus*), California red-legged frog (*Rana draytonii*), and South-central California coast steelhead (*Onchorynchus mykiss*) (Table 1). California Native Species Field Survey Forms were completed and submitted to California Natural Diversity Database (CNDDB) for all new special-status species observations.

Table 1: Special Status Wildlife Species Observed at Mioosi Open Space

American Badger

(*Taxidea taxus*)



**Golden eagle**

**(*Aquila chrysaetos*)**



**Oak titmouse**

**(*Baeolophus inornatus*)**





**Peregrine falcon**

**(*Falco peregrinus*)**



**White-tailed kite**

**(*Elanus leucurus*)**



**California red-legged frog**

**(*Rana draytonii*)**



**South-central California coast steelhead**

**(*Onchorynchus mykiss*)**



## 2.5 Vegetation Communities

The condition of habitats on the Mioosi Open Space property is relatively pristine, particularly along the southern and eastern edges of the property where minimal anthropogenic intrusion has occurred. Ruderal, invasive, and noxious species are most abundant along the corridors of the railroad and the main unpaved access road that bisects the property, as well as within the historically and currently grazed grasslands on the western side of the property. Eleven distinct, natural vegetation communities were mapped and described by Terra Verde Environmental (2019). In general, slope, aspect, elevation, and substrate dictate the distribution of communities, but there are broad ecotones where one community transitions widely into adjacent communities. Therefore, the communities mapped in Figure 8 should not be considered sharp transition lines between communities. Additionally, the community descriptions provided below represent typical conditions, but these habitat types are highly variable throughout the site. Vegetation community classifications are mapped and described to follow the second edition of *A Manual of California Vegetation* (MCV) classification system (Sawyer et al. 2009), as well as updates included in the MCV Online (CNPS 2019b).

### Annual Grasslands

The grassland habitat documented on site is highly variable, but is generally dominated by non-native annual grass species, with variable cover of forbs and perennial grasses. Bromes (*Bromus* spp.) and oats (*Avena* spp.) are the dominant grasses in most areas, with false brome (*Brachypodium distachyon*) occurring as a co-dominant in many areas. Non-native and invasive forbs are generally concentrated along the main unpaved access road, remnant trails, and the railroad corridor. However, a significant population of woolly distaff thistle (*Carthamus lanatus*; Cal-IPC 'High') is present throughout the grasslands, with the highest density observed on the western side of the property. Several patches of purple needlegrass (*Stipa pulchra*) were observed and mapped in relatively discrete areas within annual grassland habitat (see Figure 9). The community composition documented for all grassland habitats on the property most closely corresponds to the *Bromus* (*diandrus*, *hordeaceus*)–*Brachypodium distachyon* Semi-Natural Herbaceous Alliance (annual brome grassland) and the *Avena* (*barbata*, *fatua*) Semi-natural Herbaceous Alliance (wild oats grasslands) in the MCV classification system.

### Buck Brush-Chamise Chaparral

Large patches of chaparral dominated by buck brush (*Ceanothus cuneatus*) and chamise (*Adenostoma fasciculatum*) occur in several areas on the property, primarily on steep slopes. This community generally forms a closed-canopy of dense shrub cover ranging from four to seven feet high. Common associated species include leather oak (*Quercus durata*), Bishop manzanita, black sage (*Salvia mellifera*), and chaparral currant (*Ribes malvaceum*). Birch-leaf mountain-mahogany (*Cercocarpus betuloides*) is a significant component of this community in one patch near the southwestern corner of the property, occasionally forming the dominant shrub cover in discrete, highly localized patches.

This community composition most closely corresponds to the *Ceanothus cuneatus* Shrubland Alliance (buck brush chaparral), and specifically the *Ceanothus cuneatus*-*Adenostoma fasciculatum* mixed association of this alliance in the MCV classification system.

### Chamise-Black Sage Chaparral

Dense chaparral dominated by a distinct assemblage of chamise and black sage occurs in several areas of the property. This community forms diverse ecotones with the various scrub communities on site, and often includes California sagebrush (*Artemisia californica*), chaparral currant, bush monkeyflower (*Diplacus aurantiacus*), and western poison oak (*Toxicodendron diversilobum*) at variable cover.

This community composition most closely corresponds to the *Adenostoma fasciculatum*-*Salvia mellifera* Shrubland Alliance (Chamise-black sage chaparral) in the MCV classification system.

### **Sagebrush, Black Sage, and Coyote Brush Scrub**

Various associations of scrub habitat occur on site, including areas that are dominated by California sagebrush, black sage, and coyote brush. Some stands support nearly monotypic cover of either black sage or coyote brush, and others form a more typical coastal scrub community with a mix of these dominant species, along with California coffeeberry (*Frangula californica*), western poison oak, bush monkeyflower, deerweed (*Acemison glaber*), blue elderberry (*Sambucus caerulea* subsp. *nigra*), chaparral yucca (*Hesperoyucca whipplei*), and silver bush lupine (*Lupinus albifrons* var. *albifrons*). These communities form diverse 12 assemblages that often intergrade, as well as adjacent chaparral, oak woodland, and grassland habitats. The composition and cover of scrub habitats observed on site correspond with several alliances in the MCV classification system, including: *Artemisia californica* Shrubland Alliance (California sagebrush scrub), *Artemisia californica*-*Salvia mellifera* Shrubland Alliance (California sagebrush-black sage scrub), *Salvia mellifera* Shrubland Alliance (Black sage scrub), and *Baccharis pilularis* Shrubland Alliance (coyote brush scrub).

### **Coast Live Oak Woodland**

Coast live oak (*Quercus agrifolia*) forms the dominant tree cover on east-facing slopes and in low-lying areas of the property, including along intermittent and ephemeral drainages that bisect the grasslands in the southern and western portions of the property. In upland areas, this community intergrades with adjacent chaparral and scrub communities, and supports a variable understory typically dominated by western poison oak, creeping snowberry (*Symphoricarpos mollis*), and western bracken fern (*Pteridium aquilinum* var. *pubescens*). In association with ephemeral drainages, California bay (*Umbellularia californica*) and western sycamore (*Platanus racemosa*) are common components of the tree canopy, with a variable understory that is similar in composition to that of upland woodland habitats on site. This community assemblage most closely corresponds to the *Quercus agrifolia* Woodland Alliance (coast live oak woodland) in the MCV classification system.

### **Mixed Riparian Woodland**

The upper reaches of San Luis Obispo Creek border a portion of the eastern edge of the property. The riparian corridor associated with this creek is a diverse, mixed woodland dominated by coast live oak, California bay, and western sycamore, with arroyo willow (*Salix lasiolepis*) occurring commonly and a small population of big-leaf maple (*Acer macrophyllum*). The understory is a dense thicket of western poison oak, with California blackberry (*Rubus ursinus*), giant horsetail (*Equisetum telmateia* subsp. *braunii*), wood fern (*Dryopteris arguta*), and giant chain fern (*Woodwardia fimbriata*) occurring in localized patches. In addition, a robust population of French broom (*Genista monspessulana*) was documented along San Luis Obispo Creek and Old Stage Coach Road. This community assemblage most closely corresponds to the *Quercus agrifolia*-*Platanus racemosa*/*Toxicodendron diversilobum* Association of the coast live oak woodland alliance in the MCV classification system.

### **Arroyo Willow Scrub**

Limited patches of willow scrub were observed in association with the upper reaches of ephemeral drainages and seeps on the property. Arroyo willow is the dominant species, with red willow (*Salix laevigata*), western sycamore, and cottonwood (*Populus trichocarpa*, *P. fremontii*) occurring infrequently. This community assemblage most closely corresponds to the *Salix lasiolepis* Shrubland Alliance (arroyo willow scrub) in the MCV classification system.

### **Serpentine Outcrop**

A few expressions of serpentine outcrop were documented on site, which are characterized by exposed, ultramafic bedrock and low overall vegetative cover. Though limited in extent, serpentine outcrops form a highly specialized micro-habitat. On site, two of the special-status botanical species documented occur only in this micro-habitat: Brewer's spineflower and mouse-gray dudleya. Shrub cover is mostly absent, with deerweed, golden yarrow (*Eriophyllum confertiflorum*), and narrowly leaved bedstraw (*Galium angustifolium* subsp.



*angustifolium*) occurring most commonly. A few unidentifiable individuals of mariposa lily (*Calochortus* sp.) were observed on the serpentine outcrops near the eastern edge of the site (see Figure 9). At the time of the surveys, these individuals appeared to have been recently browsed by deer or other herbivores and, therefore, the species at this location could not be confirmed; however, based on identifiable features, habitat, and range, it was most likely either club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*, found elsewhere on site) or San Luis mariposa lily (*C. obispoensis*) – a CRPR 1B.2 species that was not observed anywhere else on the property.

This habitat composition does not correspond to any of the community assemblages identified in MCV.

### **Freshwater Seeps**

Several perennial or nearly perennial seeps were identified. These areas are generally surrounded by chaparral and scrub habitat but support a unique assemblage of plants due to the presence of perennial water. Dominant cover is mostly herbaceous, consisting of several species of rushes (*Juncus* spp.) and sedges (*Carex* spp.), along with sneezeweed (*Helenium puberulum*) and magnificent seep monkeyflower (*Erythranthe grandis*). This unique habitat is infrequent and corresponds to the *Juncus* (*oxymersis*, *xiphioides*) Provisional Herbaceous Alliance (iris-leaf rush seeps) and the *Juncus patens* Provisional Herbaceous Alliance (western rush marshes) in the MCV classification system.

In addition to these natural community assemblages, limited anthropogenic and ruderal areas were identified and mapped, primarily along the railroad corridor, which supports some of the highest density of non-native, invasive, and/or noxious weeds on site. In particular, the railroad corridor, as well as historically disturbed habitats in close proximity to the railroad, support a high density of crimson fountain grass (*Pennisetum setaceum*).



**Figure 7: Representative transition zone between grassland and chaparral vegetation communities**

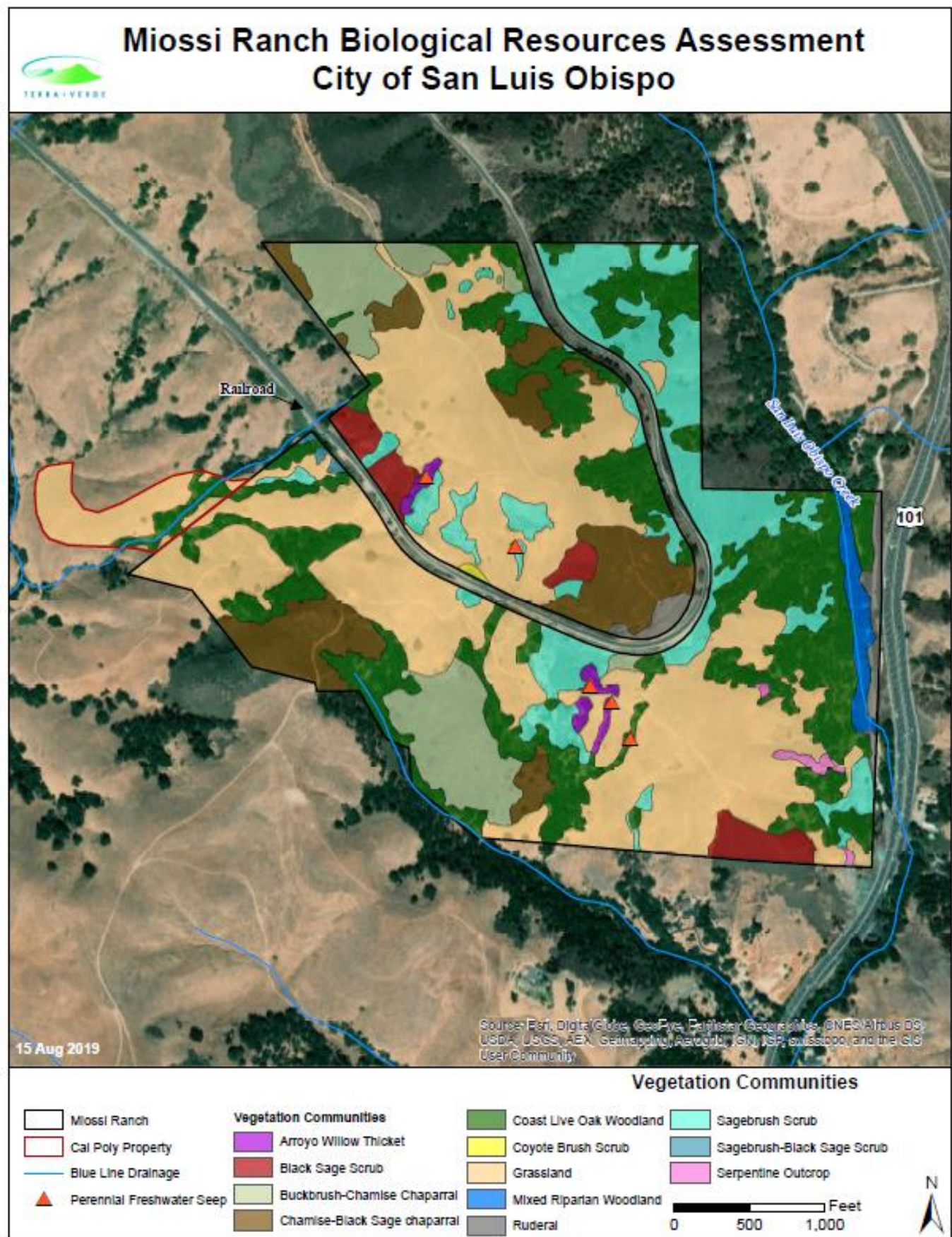


Figure 8: Vegetation Communities within MioSSI Open Space (Terra Verde Environmental, 2019)



## 2.6 Rare Plants Inventory

Seven special-status botanical species were documented on site, of which six associated with serpentine and serpentine-derived soils. The one non-serpentine associated species, Santa Lucia manzanita (*Arctostaphylos luciana*), is also an edaphic specialist that typically occurs on shale soils. Santa Lucia manzanita and Bishop manzanita (*Arctostaphylos obispoensis*) were typically found in close proximity, reflecting the highly diverse, and mixed nature of substrates on the property.

Species	Listing Status <sup>1</sup>	Estimated Population Size <sup>2</sup>	Location(s) / Habitat <sup>2</sup>
<i>Arctostaphylos luciana</i> Santa Lucia manzanita	CRPR 1B.2	<5	Observed at the edge of chaparral and oak woodland habitats on the eastern side of the property.
<i>Arctostaphylos obispoensis</i> Bishop manzanita	CRPR 4.3	<25	Occurs in association with scrub and chaparral habitats on the eastern side of the property.
<i>Calochortus clavatus</i> var. <i>clavatus</i> Club-haired mariposa lily	CRPR 4.3	Several hundred	Observed growing within and at the edges of scrub and chaparral habitats throughout the property.
<i>Chorizanthe breweri</i> Brewer's spineflower	CRPR 1B.3	Several hundred	Observed on a single serpentine outcrop near the southeastern corner of the property.
<i>Chorizanthe palmeri</i> Palmer's spineflower	CRPR 4.2	Several thousand	Abundant in association with grasslands and at the edges of scrub/chaparral habitat throughout the property.
<i>Dudleya abramsii</i> subsp. <i>murina</i> Mouse-gray dudleya	CRPR 1B.3	Several hundred	Observed on a single serpentine outcrop near the southeastern corner of the property.
<i>Lomatium parvifolium</i> Small-leaved lomatium	CRPR 4.2	Several hundred	Observed commonly in various habitats, mostly on the eastern side of the property.

<sup>1</sup>Listing Status: Indicates listing status for rare and endangered (i.e., special-status) taxa. No state or federal-listed special-status species were observed; taxa included on the California Rare Plant Rank (CRPR) are assigned listing status based on the degree of rarity (Lists 1A through 4) and threat level (0.1, 0.2, and 0.3) (CNPS 2019c).

<sup>2</sup>Population estimates and documentation of locations/habitats where special-status plants were observed are based on direct observations of individuals and populations. Additional occurrences may be present in areas where access was not possible.

**Table 2: Special Status Botanical Species Observed at Mioosi Open Space**

### Santa Lucia manzanita



*(Arctostaphylos luciana)*

**Bishop manzanita**



**(*Arctostaphylos obispoensis*)**

**Club-haired mariposa lily**



**(*Calochortus clavatus* var. *clavatus*)**



**Brewer's spineflower**



*(Chorizanthe brewerii)*

**Palmer's spineflower**



*(Chorizanthe palmeri)*

**Mouse-grey dudleya**



**(*Dudleya abramsii* sbsp. *murina*)**

**Small-leaved lomatium**



**(*Lomatium parvifolium*)**



## 2.7 Miozzi Open Space Invasive Weed Species

There are a number of invasive weeds on-site that pose an on-going threat to the diversity of this sites ecology. Terra Verde Environmental identified and mapped four species of invasive weeds: Distaff thistle, Purple star-thistle, Skeleton weed, and Yellow star-thistle. Highlighted in the map, below, there are three levels of density to distinguish the concentrations of Distaff thistle; low, medium, and high density. The invasive weeds on site are localized to the existing on-site roads and trails with the highest densities along the road. Nearly all of the high density observed areas are to the south of the railroad with isolated pockets to the north of the railroad tracks. These classifications serve as a guide for management of these weeds and require actions to be taken as part of the City's efforts for conservation and habitat protection. Recommended management actions include selective herbicide application, livestock grazing, and tilling [in accordance with Integrated Pest Management (IPM) practice, as called for in the City's Conservation and Open Space Element (2006)].

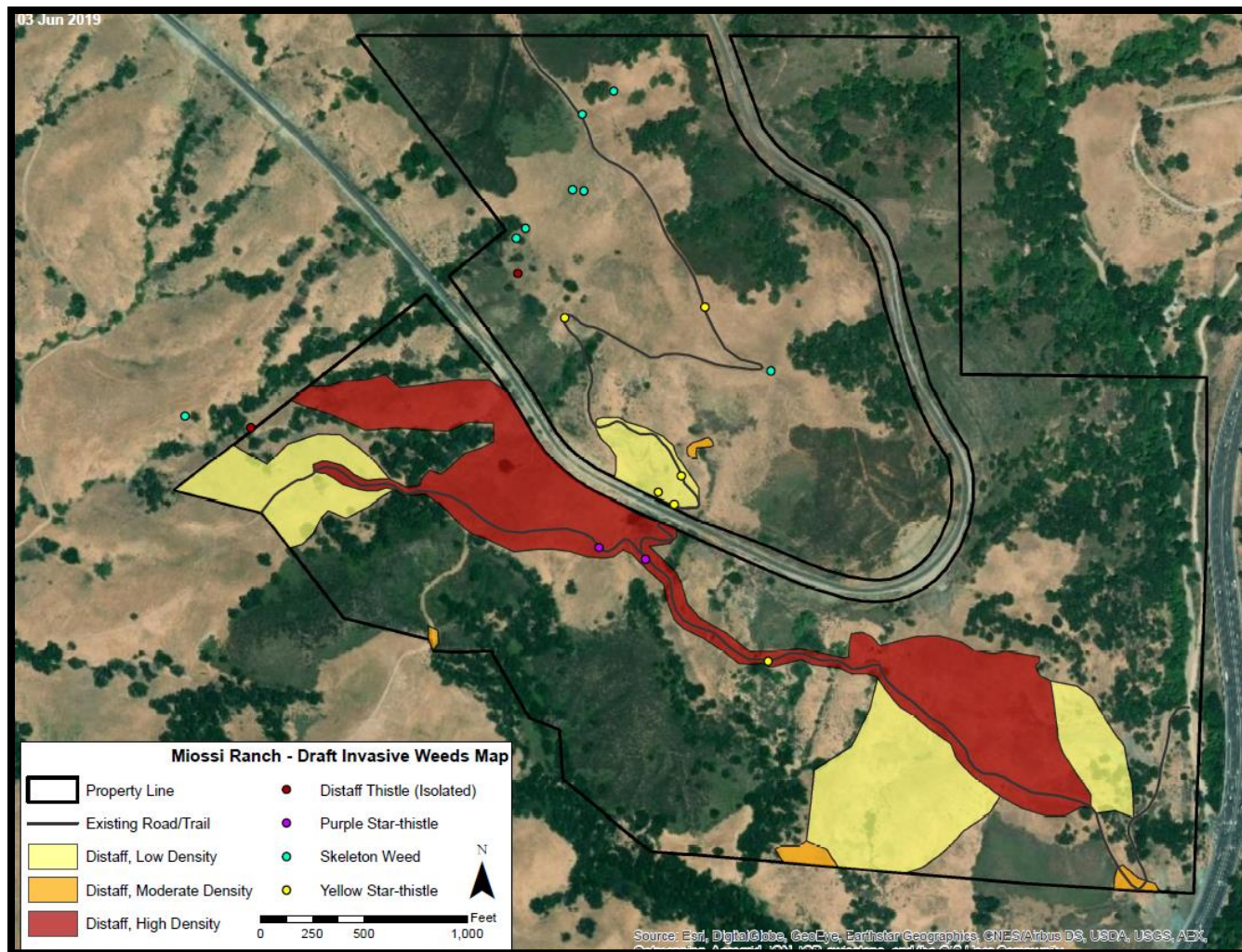


Figure 9: Miozzi Open Space – Invasive Weed Species Map (Terra Verde Environmental, 2019)

## 2.8 Carbon Farming Pilot Program Site Potential

The Miozzi Open Space may be suitable in a limited capacity for future “carbon farming” efforts in furtherance of the City's climate action goals and the objective of achieving local carbon sequestration. When conducted, this entails application of a quarter-inch (1/4”) layer of compost to grassland/rangeland, which has the proven capability of sequestering carbon in the soil, as well as enhancing soil moisture content. An important decision-making and evaluative criteria for including this site will be understanding and monitoring any potential impacts to species diversity and native grasslands. In this regard, areas that are currently experiencing high densities of invasive Distaff thistle may be the most suitable in consideration of the dual goals of restoration and carbon sequestration.

### 3. Goals and Policies

The Conservation and Open Space Element of the City's General Plan and the document *Conservation Guidelines for Open Space Lands of the City of San Luis Obispo* (2002) describes management guidelines and policies for all City open space properties, and is incorporated by reference into the Conservation and Open Space Element of the City's General Plan.

The *Miossi Open Space Conservation Plan* has as its overarching goal to achieve sustainable conservation of habitat, while also allowing for passive recreational elements. The plan will accomplish this goal, and address the management issues described, above, through the following goals and policies.

#### **Goals**

The City will manage Miossi Open Space with the following goals:

- 3.1** Conserve, enhance, and restore natural plant and wildlife communities by protecting their habitats in order to maintain viable wildlife populations within balanced ecosystems.
- 3.2** Provide the public with an opportunity for greater understanding and appreciation for the cultural and historic resources values associated with Miossi Open Space.
- 3.3** Provide the public with a safe, accessible, and pleasing natural environment in which to pursue passive recreational activities, including hiking and biking, while maintaining the integrity of natural resources and minimizing the impacts on the wildlife and habitats present in Miossi Open Space.
- 3.4** Actively address sedimentation sources and erosion both within and originating from Miossi Open Space.
- 3.5** Minimize the impacts of harmful activities, such as off-trail hiking and biking use or catastrophic wildfire, while maintaining natural drainage systems as a means of conveying stormwater into downstream urban areas.
- 3.6** Provide signage and interpretive features to enhance user safety, prevent unauthorized entrance at neighboring private property, and for educational purposes.
- 3.7** Maintain, protect, and improve aesthetic views as seen from various locations throughout the City of San Luis Obispo and along US 101.
- 3.8** Protect and consider officially designating, as appropriate, the important historic and cultural resources associated with Miossi Open Space.
- 3.9** Regularly monitor and patrol Miossi Open Space, establish Levels of Acceptable Change (LAC), and take action to correct areas or problems that exceed LAC.
- 3.11** Identify potential opportunities for conducting a carbon farming pilot program in a low-sensitivity and low-impact area of the site.
- 3.12** Identify and protect migratory corridors for wildlife species found on-site and that are moving through the site.
- 3.13** Explore natural solutions to invasive weed species and habitat restoration through the use of livestock grazing and browsing; minimize use of synthetic methods that often have detrimental impacts to the comprehensive ecological footprint in accordance with IPM practices.

## **Policies**

The City will manage Miossi Open Space in accordance with the City's adopted *Conservation Guidelines for Open Space Lands of the City of San Luis Obispo* (2002), as well as the following policies that elaborate upon, or are in addition to, those found in the *Conservation Guidelines*:

### **3.14 Public Comment and Input**

This Conservation Plan seeks to accommodate community preferences while addressing the City's goals in the Conservation and Open Space Element. A public meeting was held on November 6, 2019 in order to gather community input following staff's presentation of the draft Conservation Plan. Both written comments and public testimony received during the review process will be considered in the final version of the document.

### **3.15 Natural Resources Protection**

The 266-acre Miossi Open Space property supports a diverse assemblage of species and habitats. Purchase of this parcel by the City for permanent conservation was a critical acquisition for the establishment of a continuous corridor of publicly accessible open space that connects the City of San Luis Obispo to the Los Padres National Forest on West Cuesta Ridge.

To aid the City in preparing to open the property for public recreational use, the following protective management considerations were offered by Terra Verde Environmental and are incorporated herein:

1. Wherever possible, the City should avoid constructing new trails near or within mapped populations of special-status species, serpentine outcrops, needlegrass populations, or through oak woodland habitats.
2. Several remnant firebreaks, wildlife trails, and/or pedestrian trails were observed through areas of dense chaparral and scrub habitat. Where appropriate, incorporating these existing trails with new trails will minimize disturbance and impact.
3. Trails and roads at stream crossings should be constructed in a manner that avoids downstream sedimentation or discharges of soil or other materials.
4. Maintaining existing roads and fire breaks, including culvert repair or replacement, will reduce erosion and prevent sediment from entering nearby streams.
5. Vehicles, hand tools, and other equipment brought on site should be cleaned of all soil/mud and other debris to avoid the spread of non-native or invasive plants to the site.

Further, all tools and equipment should be cleaned after use at the site to avoid the spread of invasive species from Miossi Open Space to other City-owned open space areas.

6. Install interpretive trail signs to inform the public of the sensitivity of resources on the property and important ways in which those resources can be protected (e.g., stay on trail, pack-in/pack-out trash, don't pick wildflowers).
7. Invasive species management efforts should be implemented under the guidance of a licensed herbicide applicator, particularly for the control of woolly distaff thistle and French broom on site.
8. Ensure that all fencing on the property allows for safe passage of wildlife.
9. To avoid disturbances to nocturnal wildlife, limit site access to the hours between dawn and dusk [or in accordance with San Luis Obispo Municipal Code 12.22].

10. If trash receptacles are installed, ensure they are wildlife-proof and are emptied frequently enough to prevent overflow.

11. Require that dog owners bag and remove their dog's feces from the site to prevent the spread of disease to wildlife populations [in accordance with San Luis Obispo Municipal Code 12.22].

Implementing these recommendations on the Mioosi Open Space will support passive recreation while ensuring the persistence of pristine native habitats and diverse species assemblages, including robust special-status plant and wildlife populations.

### 3.16 Vegetation Management

1. The City will monitor and manage vegetation to meet prescribed goals for the land. Management strategies such as the following will be implemented where necessary: physical pruning/removal of unwanted or problematic vegetation – especially dead, dying, diseased, or non-native species; controlled, seasonal grazing; erosion and sediment control or removal strategies; and, application of Integrated Pest Management (IPM) practices.

2. Restoration and/or re-vegetation techniques will be utilized when necessary to restore a degraded vegetative community to a fully functioning ecosystem. All restoration activities will utilize site or region-specific native grasses, herbs, shrubs, and trees. Planting of invasive, non-native species will be prohibited. Adjacent landowners are encouraged to undertake efforts to control target non-native vegetation on their land.

3. All existing native trees will be protected wherever possible, and new native trees planted to enhance wildlife habitat. Where possible, vegetation will be left to follow its natural course of succession; however hazardous trees and fire protection will necessitate active management in some areas and instances. The ultimate goal will be to re-establish, or preserve, a self-sustaining ecosystem.

### 3.17 Cultural Resources Management

Mioosi Open Space contains and represents an interesting and diverse cultural resource legacy. "All natural and cultural resources are protected..." under the City's Open Space Regulations (Municipal Code 12.22.050). Accordingly, a Phase I Cultural Resources study was undertaken by the firm Applied EarthWorks (2019) that included records research, field surveys and documentation, and outreach to historically and culturally affiliated Native American tribal representatives. Applied EarthWorks identified several historic-era resources and recorded the historic dam and associated infrastructure that was part of the initial water system supplying water to the City of San Luis Obispo. Tribal representatives requested a site visit and cultural sensitivity training for staff prior to the start of any construction. Improved trailhead signs and a new kiosk will provide the opportunity to present an educational panel to the public that broadly details the cultural and historic nature of the property. Applied Earthworks' recommendations, incorporated here as policy, are as follows:

1. Conduct an evaluation of the dam and associated infrastructure (AE-4087-01H) to determine if this resource is eligible for the CRHR. Currently this resource will not be affected by the Project; however, due to the potential for this resource to be significant under CEQA, the City may need to assess the level any impacts on this resource in the future.
2. Several potentially historic isolated resources were noted (i.e. power poles, old road segments, a cattle trough) in the Project area. These miscellaneous features and AE-4087-01H have the potential of being vandalized by the public when the trails open. The power poles contain glass insulators both within the Project area and directly adjacent to the Project area. Glass insulators are considered collector items and there is high potential that individuals will take them. Additionally, AE-4087-01H (dam on San Luis Creek) is directly west of Stage Coach Road and can be viewed from the road. The City will consider and implement ways to protect these resources from vandalism and theft.

3. There is potential for encountering prehistoric or historic-period materials not identified during the current study. Prehistoric materials may include chert flaked stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing fire-altered rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones). Historic-period materials might include stone, concrete, wood or adobe building foundations, corrals, and walls; filled wells or privies; mining features; and deposits of metal, glass, and/or ceramic refuse. If any of these materials are found during the course of construction, ground-disturbing activities should be halted, and a qualified archaeologist should be contacted to determine if materials are isolated finds or part of a larger archaeological deposit. If an archaeological site is identified, then the resource should be evaluated for significance under CEQA and further treatment measures may be required.
4. If human remains are discovered during Project construction, work must stop at the discovery location and any nearby area suspected to contain human remains (PRC 7050.5). The San Luis Obispo Coroner must be contacted to determine whether the cause of death should be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (PRC 5097). The coroner will contact the NAHC. The NAHC will contact the most likely descendant(s) who will be afforded the opportunity to recommend means for treatment of the human remains following protocols in PRC 5097.98.

### **3.18 Passive Recreation**

Common passive recreational activities that are anticipated to take place within Mioosi Open Space include wildlife viewing, hiking, and biking. All recreational uses will be monitored and patrolled in accordance with the City of San Luis Obispo's Open Space Regulations, Municipal Code, Chapter 12.22, in general. Active recreational uses are considered more intrusive to the local natural environment and include activities such as high intensity events, horseback riding, discharge of weapons, paintball, and hunting that will be prohibited. All passive recreation uses will be monitored for potential impacts to plant species and wildlife habitat that occur within Mioosi Open Space.

### **3.19 Scientific Research**

Non-destructive scientific study and research will be permitted with prior, written approval from the City's Natural Resources Manager. A condition of approval will be that the applicant provides the City with a written report of the findings of the study. This will assist the City in compiling a detailed inventory of natural and biological resources located within Mioosi Open Space. Numerous research projects could arise from this Conservation Plan. Issues such as successional vegetation planning for climate change or post-fire circumstances, non-native species control, species population monitoring, and drainage and sedimentation analysis projects could easily be developed with students to further the collective knowledge base of Mioosi Open Space, as well as assist in adaptive management strategies.

## **4. Conservation Plan**

### **4.1 Naming**

*Mioosi Open Space* shall be the name of the plan area. The property is comprised of a single holding acquired at one time from one party. It is therefore an "Open Space," according to the City's Open Space Regulations (Municipal Code, 12.22.030).

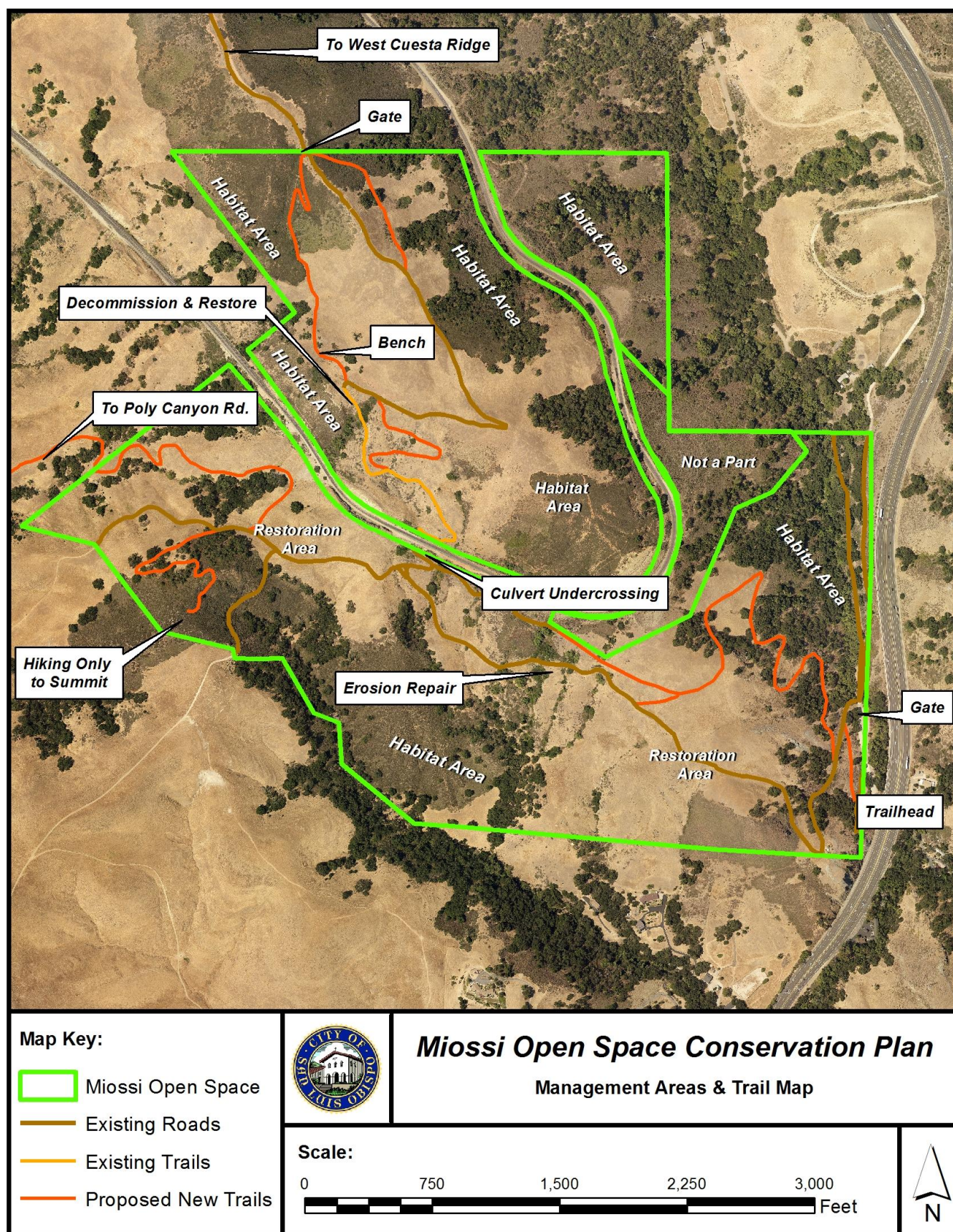
### **4.2 Land Use Designations**

The property is within the land use jurisdiction of the County of San Luis Obispo and is zoned for agriculture and rural lands. Internal land uses of Mioosi Open Space are explained below, and depicted in the following map, Figure 11.

#### 4.2.1 Management Areas

- a. **Habitat Area** – Land areas where the primary objective will be to protect natural resources by maintaining intact native plant communities and habitat for both resident and migratory wildlife. This is by far the largest share of the land uses within Miozzi Open Space.
- b. **Maintained Trails** – Active management of land in these areas will be required to facilitate approved activities while protecting valuable natural resources. These trails are generally kept clear and receive maintenance as needed to prevent erosion, pooling of water, and instability. Slopes range generally from 10% or less to as much as 30%. Both hiking and biking is allowable on maintained trails.
- c. **Dirt Road** – A vehicular access road provides access through the lower portion of the property, and also through the upper portion of the property if accessed through Los Padres National Forest and Cal Poly lands. These areas will be managed primarily as a trail corridor, and will require periodic maintenance of rolling dips and tranverse trenches in order to direct water drainage to the inlet facility at the bottom. Both hiking and biking is allowed on dirt roads. Vehicular use shall be restricted to authorized City personnel for management and maintenance purposes only, for emergency services, and in accordance with the Miozzi family's reserved access rights.
- d. **Drainage and culverts** – Drainage facilities consisting of a small concrete channel and culvert outlets are located along the access road and will require short-term repair, as well as periodic maintenance and soil removal in order to remain functional.
- e. **Viewing Benches** – One viewing benches be installed in the upper portion of the property to honor a significant gift made by the Forbes Family to help the City acquire Miozzi Open Space.
- f. **Grazing** – The grassland portions of Miozzi Open Space were historically grazed by cattle. Secure perimeter fencing and a steady supply of stock water will require periodic maintenance; controlled seasonal grazing is a valuable management strategy for reducing hazardous fuel loads, while the recruitment of native bunchgrasses and annual forbs that are adapted to a disturbance regime is also a desired management goal. Successful implementation may require the use of electric "hot wire" fence, portable watering facilities, and close supervision.
- g. **Gates, Kiosks, Signs, and Fencing** – The entry gate at Old Stagecoach Road shall be replaced and maintained in functional condition to ensure readily available access for emergency and maintenance purposes. A new trailhead entry will be installed at this location to include split rail fencing, informational kiosk, and signs within Miozzi Open Space, all of which will require ongoing maintenance to remain in functional condition. As fencing is repaired or replaced, five-strand fencing should be installed that is barbless on the top and bottom strand, with the bottom strand being located 18" off the ground in order to allow for safe wildlife passage both over and under the fence.
- h. **Restoration Areas** – Several areas of Miozzi Open Space warrant restoration activities. These include the mapped invasive weed species population mapped, as well as two areas of erosion proximate to the access road in both the lower and upper portions of the property.





**Figure 10: Miossi Open Space Management Areas and Trail Map**



### **4.3 Photo Monitoring Points**

Photo-monitoring points throughout Mioossi Open Space have been established in order to document baseline conditions and periodically observe changes. Photo points include property corners, areas of heavy public traffic, areas likely to suffer erosion damage, and habitats with sensitive plant and wildlife species.

The photo points will be used to establish baseline conditions. Additional points may be added as necessary if conditions change or new issues arise. Photos points are included as Appendix A.

### **4.4 Needs Analysis**

The *Mioossi Open Space Conservation Plan* contemplates the need for a variety of projects and initiatives in order provide long-term stewardship, restoration, and proper management of the land.

#### **4.4.1 Resource Management and Protection**

Biological surveys are the basis for natural resource management in Mioossi Open Space. After the initial surveys conducted for the creation of this Conservation Plan, the City will need to monitor and protect the habitat areas and sensitive species identified, as well as update species inventories from time to time.

#### **4.4.2 Resource Enhancement**

Enhancement of natural resources will focus on restoration of two areas, as described in 4.2.1(h), above.

#### **4.4.3 Signage**

Signage for Mioossi Open Space will a three-panel kiosk at the main trailhead at Old Stagecoach Road and will highlight natural and historic resources with interpretive features, as well as provide a trail map graphic. Signs located at the trailhead and throughout the property ill be used to provide directions and location for safety purposes, apprise users of open space regulations, and identify adjacent private property ownership to discourage trespass.

#### **4.4.4 Trailhead Amenities and New Trails**

All new trailhead amenities and trails will be constructed in accordance with City's Open Space Maintenance Plan (2015). A new entry gate at the main trailhead at Old Stagecoach Road, split rail fencing, and a wildlife-friendly garbage receptacle and "mutt mitt" dispenser will be installed. These trails will be constructed by City staff to contemporary standards for slope and drainage, and shall be designed to minimize any potential impacts to sensitive resources or nearby neighbors.

#### **4.4.5 Site Stewardship and "Pride of Ownership"**

Additional needs at Mioossi Open Space include the following items:

- Regular ranger and sheriff patrols due to the remote location of the trailhead
- Promptly attend to and abate graffiti
- Remove trash, refuse, broken bottles
- Maintain drainage facilities
- Protect against off-trail use and pilferage or defacement of cultural resource values identified by Applied EarthWorks (2019).

## **6. Wildfire Preparedness Plan**

Mioossi Open Space is designated as a Very High Fire Hazard Severity Zone by Cal Fire. Mioossi Open Space is entirely surrounded by other open land uses comprised of private ranches and other conservation lands. Significant wildland fire hazard risk exists due to prevailing westerly and seasonal winds; presence of annual grassland, chaparral, oak woodland, other mixed trees and vegetation, and adjacency to US 101 and the Los Padres National Forest landscape. The Cuesta Ridge landscape, in general, has a significant recorded fire history in this system, as well as recent smaller events. A key

component of the Conservation Plan is to address fire hazard that could result in unacceptable safety risk, property loss, and impacts to the environment.

Accordingly, City Open Space Regulations prohibit fires, smoking, discharge of weapons, and fireworks or any kind, and also allow for closure if hazardous conditions warrant such action (12.22.050). Important pre-fire activity includes the use of controlled and seasonal grazing (as described in 4.2.1(f), above). The access roads throughout the property have historically been regularly graded by Cal Fire to provide firefighting access, as well as to serve as a fuel break along the top of the ridge in the upper portion of the property

Mioosi Open Space is accessible to wildland fire fighting apparatus (Type III or similar), and primary responsibility is with Cal Fire due to the property being located in County of San Luis Obispo jurisdiction. Driving access into Mioosi Open Space is through the access road located off of Old Stagecoach Road, which can be opened with a Parks Master key (marked PM on the lock itself). There are several other access points that provide emergency ingress and egress to open space users from the westerly and northerly portions of the property. Aerial wildland fire fighting apparatus would also likely be called for in the event of any fire on or near the property. The City does not maintain any critical, at-risk infrastructure within the property itself.

## **7. Implementation**

General maintenance activities in accordance with the adopted policies described in *Conservation Guidelines for Open Space Lands of the City of San Luis Obispo* and the *Conservation and Open Space Element* shall be implemented on a regular or as-needed basis.

Specific Tasks are anticipated as follows, subject to available funding:

### **Prior to Opening the Property to the Public**

- Provide tribal representative site visits; arrange and attend cultural resources sensitivity training with Ranger Service and Natural Resources staff, as well as volunteer trail crew members
- Install "wildlife friendly" perimeter fence along the southerly property boundary
- Install new signage at trailheads and along trails
- Install entry gate, kiosk, parking and fencing, and trailhead amenities (trash can and mutt mitts)
- Maintain and repair erosion and drainage areas along existing access routes
- Install new trail bypass around erosive landslip area in the upper area of the property
- Begin ongoing invasive weed species treatment

### **Years 1-3**

- Install new trail sections
- Implement and monitor grazing strategy
- Evaluate potential for carbon farming activities
- Further evaluate the historic dam and associated infrastructure to determine eligibility for the California Register of Historic Resources

### **Ongoing Specific Tasks**

- Maintain drainage systems, road, and trails
- Monitor ecosystem health
- Monitor non-native, dead, or dying vegetation and remove as appropriate
- Regularly patrol the property and interact with users
- Weed whacking, mowing, and grazing for hazardous fuel reduction
- Site stewardship and "pride of ownership" tasks
- Work with local universities to continue resource inventories and research opportunities

## **8. Fiscal Statement**

Day-to-day management of Mioosi Open Space will continue to be supported through the operating budgets within the Natural Resources Program and Ranger Service. City staff has developed an ongoing Capital Improvement Plan (CIP) program for major maintenance activities and improvements that is considered as part of the City's bi-annual Financial Plan. The program will include signage, trail work, and trailhead amenities. City staff will also pursue grants and volunteers to augment funding for this plan's identified projects. Overall, the fiscal impact of the conservation plan and its implementation is considered relatively minor given opportunities to phase projects and leverage modest investments of City funds.

## **9. Updates and Amendment**



This Conservation Plan is intended to guide management actions over the course of the next ten years, after which time staff should consider the need for an update. Any portion of the plan may be considered for amendment upon request. Any citizen or other interested party may initiate such a request, and shall be directed to the City Manager or designee. Such a request will include the nature of the requested amendment and rationale for the request. If appropriate, the amendment will be processed in the same manner as the original Conservation Plan.

**Figure 11: Panoramic Photo from “Above the Tracks” on Mioosi Open Space**

## Appendix A: Photo Monitoring Points




Photo monitoring points for Mioosi Open Space, as discussed in Section 4.3. These locations may be modified, or new locations may be added, as conditions warrant.




**Table 3: Photo Monitoring Points:**

(All photos established by Terra Verde Environmental between April and June 2019)




1.	
2.	



3.			
4.			
5.			

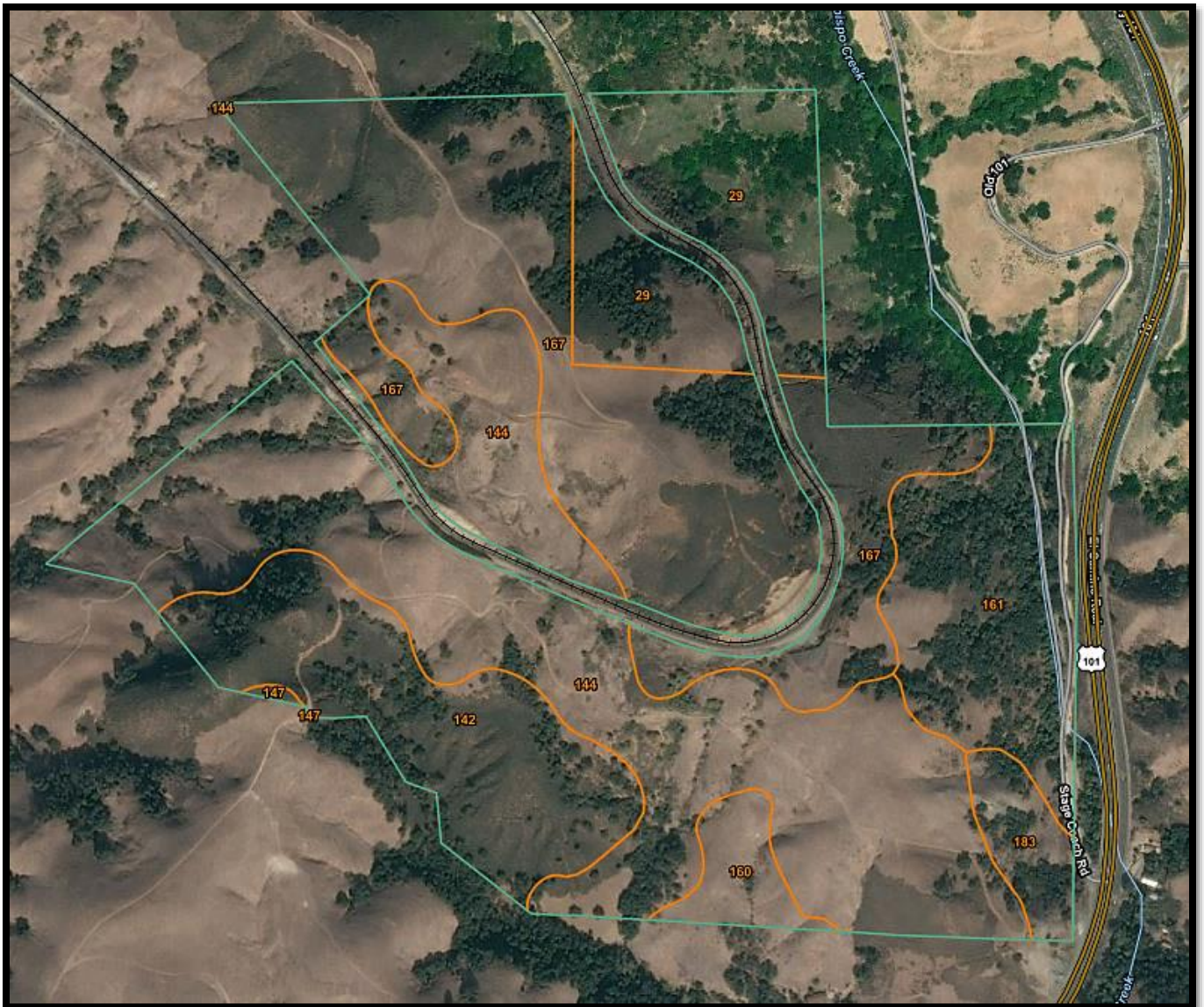
6.			
7.			
8.			



9.			
10.			
11.			



## Appendix B: Soil Report for Mioosi Open Space



## **Appendix C:**

***Summary and Results of a Plant Inventory and Wildlife Survey at Miossi Open Space,  
City of San Luis Obispo, California (Terra Verde Environmental, 2019)***



August 15, 2019

Mr. Bob Hill  
Natural Resources Manager  
City of San Luis Obispo  
990 Palm Street  
San Luis Obispo, California 93401

**RE: Results of Botanical Inventory and Wildlife Surveys Completed on the Miossi Ranch Property, San Luis Obispo, California**

Dear Mr. Hill,

This document is being provided to summarize the results of botanical and wildlife surveys completed by Terra Verde Environmental Consulting, LLC (Terra Verde) at the City of San Luis Obispo's (City) newly acquired Miossi Ranch property. Specifically, 266 acres of the Miossi family's historic La Cuesta Ranch property were recently acquired as part of the City's Greenbelt Preservation Program. To support the City in adding Miossi Ranch to the existing network of publicly accessible open space lands, Terra Verde completed an inventory and assessment of biological resources present on the property. Surveys included a botanical inventory, wildlife surveys, vegetation community classification and mapping, a habitat assessment, and an evaluation of management considerations.

Miossi Ranch is located north of the City of San Luis Obispo, on the southern flank of West Cuesta Ridge in the southern Santa Lucia Range. The property is bordered by Old Stage Coach Road and U.S. Highway 101 on the east, California Polytechnic State University (Cal Poly)-owned public recreation lands on the west, U.S. Forest Service land on the north, and La Cuesta Ranch on the south. The addition of the Miossi Ranch property to the City's open space will create an uninterrupted corridor of protected public land between Cal Poly and the Los Padres National Forest along West Cuesta Ridge.

### **Survey Methods**

Terra Verde botanists and wildlife biologists conducted surveys on the Miossi Ranch property from April through July 2019 to capture a range of seasonal conditions through spring and early summer (Table 1).



**Table 1. Summary of Surveys Completed at Miossi Ranch in 2019**

Date	Personnel	Survey Focus	Conditions <sup>1</sup>
April 24	Kristen Nelson Amy Golub Robyn Powers Bob Hill	<ul style="list-style-type: none"> <li>• Preliminary site visit</li> <li>• Botanical inventory</li> <li>• Vegetation community mapping</li> <li>• Habitat assessment</li> <li>• Incidental wildlife observations</li> </ul>	Clear skies, wind 3.4 mph, 50 to 77°F
May 06	Kristen Nelson Sara Snyder	<ul style="list-style-type: none"> <li>• Botanical inventory</li> <li>• Vegetation community mapping</li> <li>• Habitat assessment</li> <li>• General wildlife survey</li> </ul>	100% overcast, wind 3.3 mph, 52 to 61°F
May 23	Kristen Nelson Sara Snyder	<ul style="list-style-type: none"> <li>• Botanical inventory</li> <li>• Vegetation community mapping</li> <li>• Habitat assessment</li> <li>• General wildlife survey</li> </ul>	100% overcast, light rain, wind 3.4 mph, 53 to 64°F
May 30	Kristen Nelson Sara Snyder	<ul style="list-style-type: none"> <li>• Botanical inventory</li> <li>• Vegetation community mapping</li> <li>• Habitat assessment</li> <li>• General wildlife survey</li> </ul>	Foggy until 1:00 pm, then clear skies, wind 3.8 mph, 52 to 73°F
May 31	Robyn Powers Riley Chestnut Brooke Langle	<ul style="list-style-type: none"> <li>• Deploy 4 remote, motion-sensing cameras (remote cameras)</li> <li>• Deploy acoustic bat detector</li> <li>• Incidental wildlife observations</li> </ul>	Clear skies, wind 4.0 mph, 51 to 71°F
June 07	Riley Chestnut	<ul style="list-style-type: none"> <li>• Remove bat detector</li> <li>• Check remote cameras</li> <li>• Incidental wildlife observations</li> </ul>	Clear skies, wind 5.2 mph, 47 to 69°F
June 19	Robyn Powers	<ul style="list-style-type: none"> <li>• Check/re-position remote cameras</li> <li>• Incidental wildlife observations</li> </ul>	Clear skies, wind 4.1 mph, 57 to 73°F
June 20	Kristen Nelson Lindsey Roddick <sup>2</sup>	<ul style="list-style-type: none"> <li>• Botanical inventory</li> <li>• Vegetation community mapping</li> <li>• Habitat assessment</li> </ul>	Clear skies, wind 3.5 mph, 57 to 66°F
June 26	Kristen Nelson Lindsey Roddick	<ul style="list-style-type: none"> <li>• Botanical inventory</li> <li>• Vegetation community mapping</li> <li>• Habitat assessment</li> </ul>	Clear skies, wind 5.2 mph, 56 to 74°F
July 11	Robyn Powers Giancarlo Napolitano	<ul style="list-style-type: none"> <li>• Remove remote cameras</li> <li>• Incidental wildlife observations</li> </ul>	Clear skies, wind 3.8 mph, 53 to 84°F

<sup>1</sup>Cloud cover, average wind speed in miles per hour (mph), and temperature range in degrees Fahrenheit (F) acquired from Western Regional Climate Center (WRCC), San Luis Obispo station (WRCC 2019)

<sup>2</sup>Support staff from the Land Conservancy of San Luis Obispo County



Before conducting field surveys, several resources were consulted to identify geographic features and historically documented sensitive resources in the vicinity of Miossi Ranch. Resources consulted include:

- Aerial photographs of the property and adjacent areas (Google Earth 2019)
- Consortium of California Herbaria (CCH) online database of plant collections for the area surrounding Miossi Ranch (CCH 2019)
- California Natural Diversity Database (CNDDDB) list of rare, threatened, and endangered species that have been recorded within two miles of Miossi Ranch (California Department of Fish and Wildlife 2019) (see Attachment A – Figure 1a: 2-mile CNDDDB Botanical Occurrences Map and Figure 1b: 2-mile CNDDDB Wildlife Occurrences Map)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for the San Luis Obispo 7.5-minute quadrangle (CNPS 2019a)

General wildlife surveys were completed by Terra Verde biologists Brooke Langle, Sara Snyder, Robyn Powers, and Riley Chestnut during eight site visits, as summarized in Table 1. Wildlife species observed directly and indirectly by sign (e.g., tracks, scat, vocalizations) during walking and driving surveys were documented. In addition, four remote, motion-sensing cameras (remote cameras) were in place for 49 days from May 31 to July 11. To maximize wildlife encounter rates, cameras were placed in areas likely to attract wildlife or serve as travel routes, such as unpaved roads, trails, and near water sources (see Attachment A – Figure 2: Sensitive Resources and Observation Points Map). The camera locations were named according to their placement:

- Entrance Camera: placed along the unpaved access road approximately 200 meters south of the property gate off Old Stage Coach Road
- Underpass Camera: placed south of the railroad near the corrugated steel culvert underpass that connects the unpaved access road south of the railroad with Roller Coaster Trail to the north
- Seep Camera: placed along Roller Coaster Trail near the pooled water that flows from northeast to southwest toward the railroad
- Overlook Camera: placed at a high point along Roller Coaster Trail on the northern portion of the property

All cameras were positioned approximately two feet above the ground in order to capture a range of small and large animals, and each was programmed to take a series of three photos with each motion-triggered event. Photos were reviewed and species were recorded by camera location, date, and time.





Additionally, acoustic monitoring equipment for bat detection (Pettersson D500x) was in place for seven consecutive nights between May 31 and June 07. To maximize the possibility of detecting bats, the equipment was positioned on the outside edge of riparian vegetation associated with the seep along Roller Coaster Trail, approximately 100 meters northeast of the railroad (see Attachment A – Figure 2). This site was chosen because its ecological characteristics would likely attract leaf-gleaning bat species as well as bat species that forage for insects in and near a water source. Acoustic data were analyzed using SonoBat US West (Szewczak) and a bat species list was compiled.

Botanical surveys were conducted over the course of six site visits between April 24 and June 26 by Terra Verde botanists Kristen Nelson and Amy Golub, with support from botanist Lindsey Roddick from the Land Conservancy of San Luis Obispo County. Surveys were timed to coincide with the peak blooming and/or fruiting period for mid- and late spring blooming annual species. To the extent feasible, all portions of the Miossi Ranch property were accessed on foot in order to complete the botanical species inventory and vegetation community mapping. In addition, an approximately 10-acre area of Cal Poly-owned land was surveyed to document resources and habitats along a proposed new trail. To maximize the detectability of plants and wildlife that may inhabit areas of largely impenetrable chaparral habitat, the team surveyed transects within the chaparral communities on site, as well as along the edges, where there is greatest potential for unique species to occur. Chaparral communities were also surveyed from a distance with binoculars, as needed. An area of dense shrub habitat in the northeastern-most corner of the property was inaccessible because of the density of vegetation, the steepness of the slope, and the presence of deep, eroded gullies bisecting the slope face. Habitats in this area were viewed from a distance with binoculars for the purpose of general vegetation community classification and mapping.

Botanical species identifications and taxonomic nomenclature followed *The Jepson Manual: Vascular Plants of California*, 2nd edition (Baldwin et al. 2012) as well as taxonomic updates provided in the Jepson eFlora (Jepson Flora Project 2019). Vegetation community classifications follow the second edition of *A Manual of California Vegetation* (MCV) classification system (Sawyer et al. 2009), as well as updates included in the MCV Online (CNPS 2019b), where applicable.

### **Sufficiency of Biological Data**

Terra Verde used standard survey methods and specialized equipment to efficiently obtain high-quality data. The surveys were conducted during a single year in a single season and, because the natural history of plants and wildlife are often driven by seasonal changes, there are species that may occur on site that were not detected during the surveys. The presence of these species was



assessed through the identification of suitable habitat and an analysis of historical biological data in the region.

Spring and early summer is an ideal time to conduct surveys for plants and wildlife. The botanical surveys were timed to coincide with the typical peak blooming and/or fruiting period for species that were expected to occur on site, which aids in species identification and visibility. Therefore, numerous ephemeral, annually blooming species were observed in peak identifiable condition during the surveys. Spring is also an active period for wildlife when reproductive activities, such as nest-building, increased foraging, or increased den or burrow excavation provide improved visibility and more frequent sign. The botanists and wildlife biologists who surveyed the site have extensive experience with the region's species and ecology. They focused the surveys appropriately and surveyed with sufficient rigor to provide the City with a baseline list of natural resources.

### **Topographic and Geologic Setting**

Mioissi Ranch, situated on the southern flank of West Cuesta Ridge, receives significant coastal influence from frequent maritime fog that settles in Chorro Valley. The railroad bisects the property in an irregular "U" shape, with the highest elevation (454 meters) occurring above the railroad, near the northern boundary of the property (see Attachment A – Figure 2). From this high point, the eastern side of the property slopes steeply toward the headwaters of San Luis Obispo Creek, Old Stage Coach Road, and Highway 101. The southern and western portions of the property are moderately to steeply sloped, extending from the high point toward Cal Poly and La Cuesta Ranch, offering sweeping views of Chorro Valley and the volcanic range known locally as the Nine Sisters (i.e., Morro Rock, Black Hill, Cerro Cabrillo, Hollister, Cerro Romauldo, Chumash, Bishop, Cerro San Luis, and Islay Peaks).

Mioissi Ranch is situated in a unique geological transition zone, which supports diverse habitats and opportunity for numerous rare and endangered plant species to occur. The geology of Mioissi Ranch is highly varied and unique as a result of the Oceanic Fault, a northwest- to southeast-trending fault line situated just above and roughly parallel to the southern half of the U-shaped section of the railroad on site. South of the fault line, there is a large deposit of Franciscan Complex *mélange*, which is characterized as a 'chaotic mixture of fragmented rock masses' (Wiegiers and Gutierrez 2010). This formation is interspersed with mixed deposits of sandstone and shale, diabase and basalt, and serpentinitized ultramafic rock of varying age. Further, the steep slopes in this area are characterized by several landslide deposits, resulting in a highly diverse soil complex throughout. North of the fault line, large veins of basalt, serpentinite, and sandstone dominate the landscape, with smaller deposits of chert. This geologic setting is mirrored by equally diverse habitats, which are described in further detail below.



## Wildlife Survey Results

A total of 79 animals were observed during surveys, photographed on remote cameras, and/or recorded by a bat detector at the Miossi Ranch property (see Attachment B: Botanical and Wildlife Species Lists for Miossi Ranch). The 79 species detected comprise six taxonomic Classes: Amphibia (3), Arachnida (3), Aves (39), Insecta (17), Mammalia (14), and Reptilia (3). Five special-status species were detected on the property: golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), white-tailed kite (*Elanus leucurus*), oak titmouse (*Baeolophus inornatus*), and American badger (*Taxidea taxus*) (Table 2). California Native Species Field Survey Forms were completed and submitted to CNDDB for all special-status species observations (see Attachment C: California Native Species Field Survey Forms).

**Table 2. Special-status Wildlife Species Observed at Miossi Ranch**

Common Name	Scientific Name	Status
Golden eagle	<i>Aquila chrysaetos</i>	California designated Fully Protected; Federally designated Bird of Conservation Concern
Peregrine falcon	<i>Falco peregrinus</i>	California designated Fully Protected; Federally designated Bird of Conservation Concern
White-tailed kite	<i>Elanus leucurus</i>	California designated Fully Protected
Oak titmouse	<i>Baeolophus inornatus</i>	Federally designated Bird of Conservation Concern
American badger	<i>Taxidea taxus</i>	California designated Species of Special Concern

Three non-native wildlife species were observed on site: wild turkey (*Meleagris gallopavo*), western honeybee (*Apis mellifera*), and cabbage white butterfly (*Pieris rapae*). It should be noted that, although they were detected, domestic dog (*Canis familiaris*) is not included in the wildlife species count – most dogs accompanied human hikers and bikers; however, one dog detected via remote camera appeared to be unaccompanied.

Sixteen animal species were detected by the remote cameras (Table 3), in addition to human hikers, mountain bikers, and motor-bikers. Coyotes (*Canis latrans*) and mule deer (*Odocoileus hemionus*) were detected on each of the four cameras and were detected with the most frequency (see Attachment D – Photos 17 and 18). One of the special-status species recorded, American badger, was photographed with the remote cameras.



**Table 3. Summary of Species Detected by Remote Cameras**

Common Name	Scientific Name	Camera Location			
		Entrance	Underpass	Seep	Overlook
Anise swallowtail	<i>Papilio zelicaon</i>				X
Western honeybee	<i>Apis mellifera</i>				X
California quail	<i>Callipepla californica</i>		X		
California scrub-jay	<i>Aphelocoma californica</i>		X	X	
California thrasher	<i>Toxostoma redivivum</i>		X	X	
California towhee	<i>Melospiza crissalis</i>		X		
Woodrat	<i>Neotoma</i> sp.		X	X	
California ground squirrel	<i>Otospermophilus beecheyi</i>	X			
Cottontail rabbit	<i>Sylvilagus</i> sp.	X	X	X	
Striped skunk	<i>Mephitis mephitis</i>	X	X	X	
Mule deer	<i>Odocoileus hemionus</i>	X	X	X	X
American badger	<i>Taxidea taxus</i>	X			
Bobcat	<i>Lynx rufus</i>	X		X	X
Gray fox	<i>Urocyon cinereoargenteus</i>				X
Coyote	<i>Canis latrans</i>	X	X	X	X
Domestic dog	<i>Canis familiaris</i>	X		X	X

The calls of two bat species, Mexican free-tailed bat (*Tadarida brasiliensis*) and big brown bat (*Eptesicus fuscus*), were recorded by the bat detector.

Several wildlife species are likely or known to occur on the Miossi property that were not observed during the surveys. For example, four species not observed during surveys were recorded in the CNDDB within the last 30 years and within two miles of the center of the Miossi Ranch property: California red-legged frog (*Rana draytonii*), San Luis Obispo pyrg (*Pyrgulopsis taylori*), western mastiff bat (*Eumops perotis californicus*), and southwestern pond turtle (*Actinemys pallida*). Focused surveys for California red-legged frog, a species federally designated as threatened and California-designated as a Species of Special Concern, were not conducted because the City has recently confirmed their presence on the property (Robert Hill, City of San Luis Obispo, pers. comm., April 24, 2019). Furthermore, Miossi Ranch is within federally designated critical habitat for California red-legged frog. The San Luis Obispo pyrg, a freshwater mollusk, was found on or near the property in 1994 and 2000. Miossi Ranch contains habitat for



this species in and adjacent to seeps and drainages and is expected to be extant. A western mastiff bat was collected in the general area of Miossi Ranch in 1991. The open grassland areas of the property provide suitable foraging habitat for western mastiff bats as they hunt for night-flying insects. Southwestern pond turtles were recorded in nearby drainages, such as Stenner Creek and Brizzolara Creek in 1995 and 1998 and have potential to occupy San Luis Obispo Creek or use upland habitat on the Miossi property. The southwestern pond turtle is a California-designated Species of Special Concern. Additional species were recorded in the CNDDDB, but are extirpated (i.e., foothill yellow-legged frog [*Rana boylei*]), have an exceptionally large non-specific location (e.g., prairie falcon [*Falco mexicanus*]), or have outdated records (e.g., 1956 record of an Atascadero June beetle [*Polyphylla nubile*]). As depicted on Figure 1b in Appendix A, a historical record of steelhead trout (*Oncorhynchus mykiss*) in San Luis Obispo Creek was recorded in the CNDDDB in 1939. However, recent surveys in 2019 have indicated a viable population remains in the reaches of the creek that border Miossi Ranch (Freddy Otte, City of San Luis Obispo, pers. comm., August 7, 2019).

The wildlife surveys were limited to daytime encounters, remote cameras, and a bat detector. The list of species provided here should not be considered comprehensive, but rather an overview of the most common species using the property. Small, elusive, and nocturnal species that require more intensive survey techniques likely use the property and surrounding protected lands. During survey work on nearby sites in 2012 and 2013, Terra Verde biologists directly observed American black bears (*Ursus americanus*) on the slopes directly across Highway 101 to the east, and mountain lions (*Puma concolor*) were recorded on remote cameras in the City's Reservoir Canyon Natural Reserve to the southeast. Several additional mountain lion sightings have been reported on Cal Poly campus, southwest of Miossi Ranch, since 2012. Based on these sightings, the contiguous open space in the adjacent Santa Lucia Range, and the results of the remote camera surveys, which indicate an abundant prey base for large carnivores on the property, black bears and mountain lions can be expected to occur on site. More intensive, species-focused surveys would likely also reveal several additional species of invertebrates, reptiles, amphibians, and small mammals using the site.

### **Botanical Inventory and Vegetation Community Mapping Results**

A total of 275 vascular plant taxa were documented on the property, of which 207 (75%) are native, 68 are naturalized (25%), and 30 (11%) are considered invasive or noxious. Seven of the native species identified are special-status taxa. Habitats on site are highly diverse, including a mosaic of open annual grasslands, dense chaparral, various scrub communities, freshwater seeps, willow scrub, serpentine outcrops, and mixed riparian and upland woodlands (see Attachment A – Figure 3: Vegetation Communities Map).



### Special-status Botanical Species

Of the seven special-status botanical species documented on site, six are weakly to strongly associated with serpentine and serpentine-derived soils. The one non-serpentine associated species, Santa Lucia manzanita (*Arctostaphylos luciana*), is also an edaphic specialist that typically occurs on shale soils. Santa Lucia manzanita and Bishop manzanita (*Arctostaphylos obispoensis*) were typically found in close proximity, reflecting the highly diverse, and mixed nature of substrates on the property. Table 4 provides a summary of special-status species observation details and Figure 2 in Attachment A depicts these special-status species observations.

**Table 4. Occurrence Details for Special-status Plant Taxa Observed**

Species	Listing Status <sup>1</sup>	Estimated Population Size <sup>2</sup>	Location(s) / Habitat <sup>2</sup>
<i>Arctostaphylos luciana</i> Santa Lucia manzanita	CRPR 1B.2	<5	Observed at the edge of chaparral and oak woodland habitats on the eastern side of the property.
<i>Arctostaphylos obispoensis</i> Bishop manzanita	CRPR 4.3	<25	Occurs in association with scrub and chaparral habitats on the eastern side of the property.
<i>Calochortus clavatus</i> var. <i>clavatus</i> Club-haired mariposa lily	CRPR 4.3	Several hundred	Observed growing within and at the edges of scrub and chaparral habitats throughout the property.
<i>Chorizanthe breweri</i> Brewer's spineflower	CRPR 1B.3	Several hundred	Observed on a single serpentine outcrop near the southeastern corner of the property.
<i>Chorizanthe palmeri</i> Palmer's spineflower	CRPR 4.2	Several thousand	Abundant in association with grasslands and at the edges of scrub/chaparral habitat throughout the property.
<i>Dudleya abramsii</i> subsp. <i>murina</i> Mouse-gray dudleya	CRPR 1B.3	Several hundred	Observed on a single serpentine outcrop near the southeastern corner of the property.
<i>Lomatium parvifolium</i> Small-leaved lomatium	CRPR 4.2	Several hundred	Observed commonly in various habitats, mostly on the eastern side of the property.

<sup>1</sup>Listing Status: Indicates listing status for rare and endangered (i.e., special-status) taxa. No state or federal-listed special-status species were observed; taxa included on the California Rare Plant Rank (CRPR) are assigned listing status based on the degree of rarity (Lists 1A through 4) and threat level (0.1, 0.2, and 0.3) (CNPS 2019c).

<sup>2</sup>Population estimates and documentation of locations/habitats where special-status plants were observed are based on direct observations of individuals and populations. Additional occurrences may be present in areas where access was not possible.



### Invasive and Noxious Species

In addition to documenting special-status species, taxa that are included on the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory (Inventory) (Cal-IPC 2019) were documented. The Cal-IPC Inventory ranks species based on their degree of invasiveness and ecological impacts, as follows:

- Limited: invasive but with minor statewide ecological impacts, or insufficient information to justify a higher score
- Moderate: substantial and apparent, but generally not severe ecological impacts on physical processes, plant and animal communities, and vegetation structure
- High: severe ecological impacts on physical processes, plant and animal communities, and vegetation structure

A total of 30 taxa considered noxious or invasive were observed on the property; invasive rankings are indicated on the Botanical Species List included in Attachment B.

### Vegetation Communities

The condition of habitats on the Miossi Ranch property is relatively pristine, particularly along the southern and eastern edges of the property where minimal anthropogenic intrusion has occurred. Ruderal, invasive, and noxious species are most abundant along the corridors of the railroad and the main unpaved access road that bisects the property, as well as within the historically and currently grazed grasslands on the western side of the property. Eleven distinct, natural vegetation communities were mapped. In general, slope, aspect, elevation, and substrate dictate the distribution of communities, but there are broad ecotones where one community transitions widely into adjacent communities. Therefore, the communities mapped in Figure 3 of Attachment A should not be considered sharp transition lines between communities. Additionally, the community descriptions provided below represent typical conditions, but these habitat types are highly variable throughout the site. Representative site photographs are included as Attachment D.

#### **Annual Grasslands**

The grassland habitat documented on site is highly variable, but is generally dominated by non-native annual grass species, with variable cover of forbs and perennial grasses. Bromes (*Bromus* spp.) and oats (*Avena* spp.) are the dominant grasses in most areas, with false brome (*Brachypodium distachyon*) occurring as a co-dominant in many areas. Non-native and invasive forbs are generally concentrated along the main unpaved access road, remnant trails, and the railroad corridor. However, a significant population of woolly distaff thistle (*Carthamus lanatus*; Cal-IPC 'High') is present throughout the grasslands, with the highest density observed on the western side of the property. Several patches of purple needlegrass



(*Stipa pulchra*) were observed and mapped in relatively discrete areas within annual grassland habitat (see Attachment A – Figure 3). The community composition documented for all grassland habitats on the property most closely corresponds to the *Bromus (diandrus, hordeaceus)*–*Brachypodium distachyon* Semi-Natural Herbaceous Alliance (annual brome grassland) and the *Avena (barbata, fatua)* Semi-natural Herbaceous Alliance (wild oats grasslands) in the MCV classification system.

#### **Buck Brush-Chamise Chaparral**

Large patches of chaparral dominated by buck brush (*Ceanothus cuneatus*) and chamise (*Adenostoma fasciculatum*) occur in several areas on the property, primarily on steep slopes. This community generally forms a closed-canopy of dense shrub cover ranging from four to seven feet high. Common associated species include leather oak (*Quercus durata*), Bishop manzanita, black sage (*Salvia mellifera*), and chaparral currant (*Ribes malvaceum*). Birch-leaf mountain-mahogany (*Cercocarpus betuloides*) is a significant component of this community in one patch near the southwestern corner of the property, occasionally forming the dominant shrub cover in discrete, highly localized patches.

This community composition most closely corresponds to the *Ceanothus cuneatus* Shrubland Alliance (buck brush chaparral), and specifically the *Ceanothus cuneatus*-*Adenostoma fasciculatum* mixed association of this alliance in the MCV classification system.

#### **Chamise-Black Sage Chaparral**

Dense chaparral dominated by a distinct assemblage of chamise and black sage occurs in several areas of the property. This community forms diverse ecotones with the various scrub communities on site, and often includes California sagebrush (*Artemisia californica*), chaparral currant, bush monkeyflower (*Diplacus aurantiacus*), and western poison oak (*Toxicodendron diversilobum*) at variable cover.

This community composition most closely corresponds to the *Adenostoma fasciculatum*-*Salvia mellifera* Shrubland Alliance (Chamise-black sage chaparral) in the MCV classification system.

#### **Sagebrush, Black Sage, and Coyote Brush Scrub**

Various associations of scrub habitat occur on site, including areas that are dominated by California sagebrush, black sage, and coyote brush. Some stands support nearly monotypic cover of either black sage or coyote brush, and others form a more typical coastal scrub community with a mix of these dominant species, along with California coffeeberry (*Frangula californica*), western poison oak, bush monkeyflower, deerweed (*Acmispon glaber*), blue elderberry (*Sambucus caerulea* subsp. *nigra*), chaparral yucca (*Hesperoyucca whipplei*), and silver bush lupine (*Lupinus albifrons* var. *albifrons*). These communities form diverse



assemblages that often intergrade, as well as adjacent chaparral, oak woodland, and grassland habitats. The composition and cover of scrub habitats observed on site correspond with several alliances in the MCV classification system, including: *Artemisia californica* Shrubland Alliance (California sagebrush scrub), *Artemisia californica-Salvia mellifera* Shrubland Alliance (California sagebrush-black sage scrub), *Salvia mellifera* Shrubland Alliance (Black sage scrub), and *Baccharis pilularis* Shrubland Alliance (coyote brush scrub).

### **Coast Live Oak Woodland**

Coast live oak (*Quercus agrifolia*) forms the dominant tree cover on east-facing slopes and in low-lying areas of the property, including along intermittent and ephemeral drainages that bisect the grasslands in the southern and western portions of the property. In upland areas, this community intergrades with adjacent chaparral and scrub communities, and supports a variable understory typically dominated by western poison oak, creeping snowberry (*Symphoricarpos mollis*), and western bracken fern (*Pteridium aquilinum* var. *pubescens*). In association with ephemeral drainages, California bay (*Umbellularia californica*) and western sycamore (*Platanus racemosa*) are common components of the tree canopy, with a variable understory that is similar in composition to that of upland woodland habitats on site. This community assemblage most closely corresponds to the *Quercus agrifolia* Woodland Alliance (coast live oak woodland) in the MCV classification system.

### **Mixed Riparian Woodland**

The upper reaches of San Luis Obispo Creek border a portion of the eastern edge of the property. The riparian corridor associated with this creek is a diverse, mixed woodland dominated by coast live oak, California bay, and western sycamore, with arroyo willow (*Salix lasiolepis*) occurring commonly and a small population of big-leaf maple (*Acer macrophyllum*). The understory is a dense thicket of western poison oak, with California blackberry (*Rubus ursinus*), giant horsetail (*Equisetum telmateia* subsp. *braunii*), wood fern (*Dryopteris arguta*), and giant chain fern (*Woodwardia fimbriata*) occurring in localized patches. In addition, a robust population of French broom (*Genista monspessulana*) was documented along San Luis Obispo Creek and Old Stage Coach Road. This community assemblage most closely corresponds to the *Quercus agrifolia-Platanus racemosa/Toxicodendron diversilobum* Association of the coast live oak woodland alliance in the MCV classification system.

### **Arroyo Willow Scrub**

Limited patches of willow scrub were observed in association with the upper reaches of ephemeral drainages and seeps on the property. Arroyo willow is the dominant species, with red willow (*Salix laevigata*), western sycamore, and cottonwood (*Populus trichocarpa*, *P.*



*fremontii*) occurring infrequently. This community assemblage most closely corresponds to the *Salix lasiolepis* Shrubland Alliance (arroyo willow scrub) in the MCV classification system.

### **Serpentine Outcrop**

A few expressions of serpentine outcrop were documented on site, which are characterized by exposed, ultramafic bedrock and low overall vegetative cover. Though limited in extent, serpentine outcrops form a highly specialized micro-habitat. On site, two of the special-status botanical species documented occur only in this micro-habitat: Brewer's spineflower and mouse-gray dudleya. Shrub cover is mostly absent, with deerweed, golden yarrow (*Eriophyllum confertiflorum*), and narrowly leaved bedstraw (*Galium angustifolium* subsp. *angustifolium*) occurring most commonly. A few unidentifiable individuals of mariposa lily (*Calochortus* sp.) were observed on the serpentine outcrops near the eastern edge of the site (see Attachment B – Figure 3). At the time of the surveys, these individuals appeared to have been recently browsed by deer or other herbivores and, therefore, the species at this location could not be confirmed; however, based on identifiable features, habitat, and range, it was most likely either club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*, found elsewhere on site) or San Luis mariposa lily (*C. obispoensis*) – a CRPR 1B.2 species that was not observed anywhere else on the property.

This habitat composition does not correspond to any of the community assemblages identified in MCV.

### **Freshwater Seeps**

Several perennial or nearly perennial seeps were identified. These areas are generally surrounded by chaparral and scrub habitat but support a unique assemblage of plants due to the presence of perennial water. Dominant cover is mostly herbaceous, consisting of several species of rushes (*Juncus* spp.) and sedges (*Carex* spp.), along with sneezeweed (*Helenium puberulum*) and magnificent seep monkeyflower (*Erythranthe grandis*). This unique habitat is infrequent and corresponds to the *Juncus (oxymenis, xiphioides)* Provisional Herbaceous Alliance (iris-leaf rush seeps) and the *Juncus patens* Provisional Herbaceous Alliance (western rush marshes) in the MCV classification system.

In addition to these natural community assemblages, limited anthropogenic and ruderal areas were identified and mapped, primarily along the railroad corridor, which supports some of the highest density of non-native, invasive, and/or noxious weeds on site. In particular, the railroad corridor, as well as historically disturbed habitats in close proximity to the railroad, support a high density of crimson fountain grass (*Pennisetum setaceum*).





## Discussion and Management Considerations

The 266-acre Miossi Ranch property supports a diverse assemblage of species and habitats. Purchase of this parcel by the City for permanent conservation was a critical acquisition for the establishment of a continuous corridor of publicly accessible open space that connects the City of San Luis Obispo to the Los Padres National Forest on West Cuesta Ridge.

To aid the City in preparing to open the property for public recreational use, the following management considerations are offered:

- Wherever possible, the City should avoid constructing new trails near or within mapped populations of special-status species, serpentine outcrops, needlegrass populations, or through oak woodland habitats.
- Several remnant firebreaks, wildlife trails, and/or pedestrian trails were observed through areas of dense chaparral and scrub habitat. Where appropriate, incorporating these existing trails with new trails will minimize disturbance and impact.
- Trails and roads at stream crossings should be constructed in a manner that avoids downstream sedimentation or discharges of soil or other materials.
- Maintaining existing roads and fire breaks, including culvert repair or replacement, will reduce erosion and prevent sediment from entering nearby streams.
- Vehicles, hand tools, and other equipment brought on site should be cleaned of all soil/mud and other debris to avoid the spread of non-native or invasive plants to the site. Further, all tools and equipment should be cleaned after use at the site to avoid the spread of invasive species from Miossi Ranch to other City-owned open space areas.
- Install interpretive trail signs to inform the public of the sensitivity of resources on the property and important ways in which those resources can be protected (e.g., stay on trail, pack-in/pack-out trash, don't pick wildflowers).
- Invasive species management efforts should be implemented under the guidance of a licensed herbicide applicator, particularly for the control of woolly daisy thistle and French broom on site.
- Ensure that all fencing on the property allows for safe passage of wildlife.
- To avoid disturbances to nocturnal wildlife, limit site access to the hours between dawn and dusk.
- If trash receptacles are installed, ensure they are wildlife-proof and are emptied frequently enough to prevent overflow.
- Require that dog owners bag and remove their dog's feces from the site to prevent the spread of disease to wildlife populations.





Implementing these recommendations on the Miossi Ranch property will support public recreation while ensuring the persistence of pristine native habitats and diverse species assemblages, including robust special-status plant and wildlife populations.

If you have any questions or require additional information, please contact me at knelson@terraverdeweb.com or at (702) 596-5038.

Sincerely,

A handwritten signature in black ink that reads "Kristen Nelson".

Kristen Nelson  
Botanist

Attachments

A – Maps

Figure 1: 2-mile CNDDDB Occurrences

Figure 2: Sensitive Resources and Observation Points

Figure 3: Vegetation Communities

B – Botanical and Wildlife Species Lists for Miossi Ranch

C – California Native Species Field Survey Forms for Miossi Ranch

D – Representative Site Photographs



## References

- Baldwin, Bruce G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. *The Jepson Manual: Vascular Plants of California*, Second Edition. 2012. University of California Press. Berkeley, California.
- California Department of Fish and Wildlife, 2019. California Natural Diversity Database: RareFind 5. Accessible online with subscription at: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April – August 2019.
- California Invasive Plant Council (Cal-IPC). 2019. California Invasive Plant Inventory. Available online at: <http://cal-ipc.org/>. Accessed April – August 2019.
- California Native Plant Society (CNPS). 2019a. Online Inventory of Rare and Endangered Plants. Sacramento, California. Available Online at: <http://www.rareplants.cnps.org/>. Accessed April – August 2019.
- 2019b. A Manual of California Vegetation, Online Edition. Available at: <http://www.cnps.org/cnps/vegetation/>. Accessed May - June 2019. CNPS, Sacramento, CA.
- 2019c. The CNPS Ranking System. Available Online at: <https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants>. Accessed May - June 2019.
- Consortium of California Herbaria (CCH). 2019. Regents of the University of California. Available online at: <http://ucjeps.berkeley.edu/consortium/>. Accessed April – August 2019.
- Jepson Flora Project. 2019. Regents of the University of California. Available online at: <http://ucjeps.berkeley.edu/eflora/>. Accessed April – August 2019.
- Sawyer, John O.; Keeler-Wolf, Todd; and Evens, Julie M. 2009. *A Manual of California Vegetation*, Second Edition. California Native Plant Society Press: Sacramento, California.
- Wieggers, M. O. and C. I. Gutierrez. 2010. Geologic Map of the San Luis Obispo 7.5' Quadrangle. San Luis Obispo County, California: A Digital Database. Available online at: [file:///C:/Users/knelson/Downloads/SanLuisObispo24k\\_preliminary.pdf](file:///C:/Users/knelson/Downloads/SanLuisObispo24k_preliminary.pdf). Accessed August 2019.



## **ATTACHMENT A – Figures**

**Figure 1a:** 2-mile CNDDDB Botanical Occurrences

**Figure 1b:** 2-mile CNDDDB Wildlife Occurrences

**Figure 2:** Sensitive Resources and Observations Points

**Figure 3:** Vegetation Communities

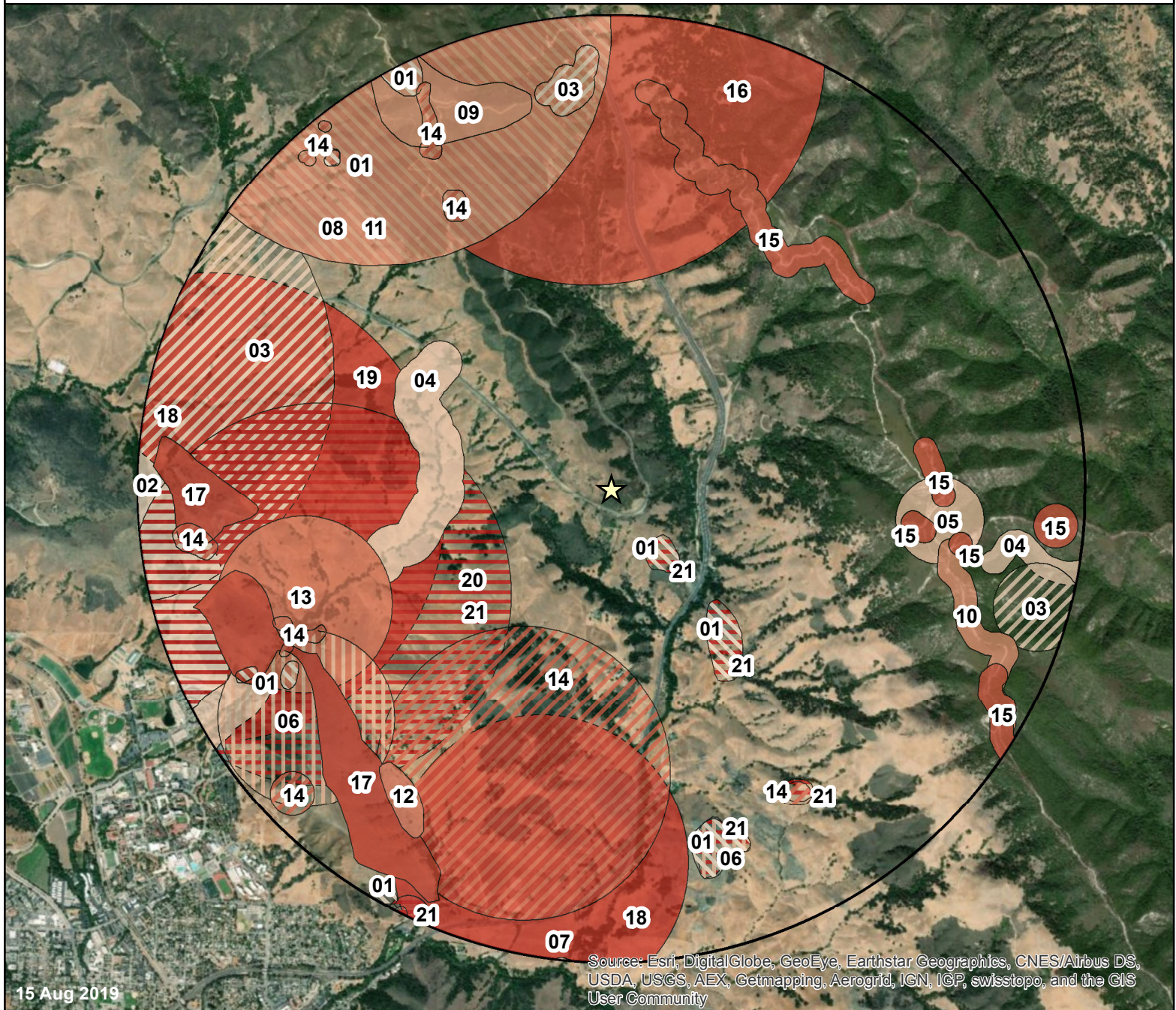


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# Mioosi Ranch Biological Resources Assessment City of San Luis Obispo



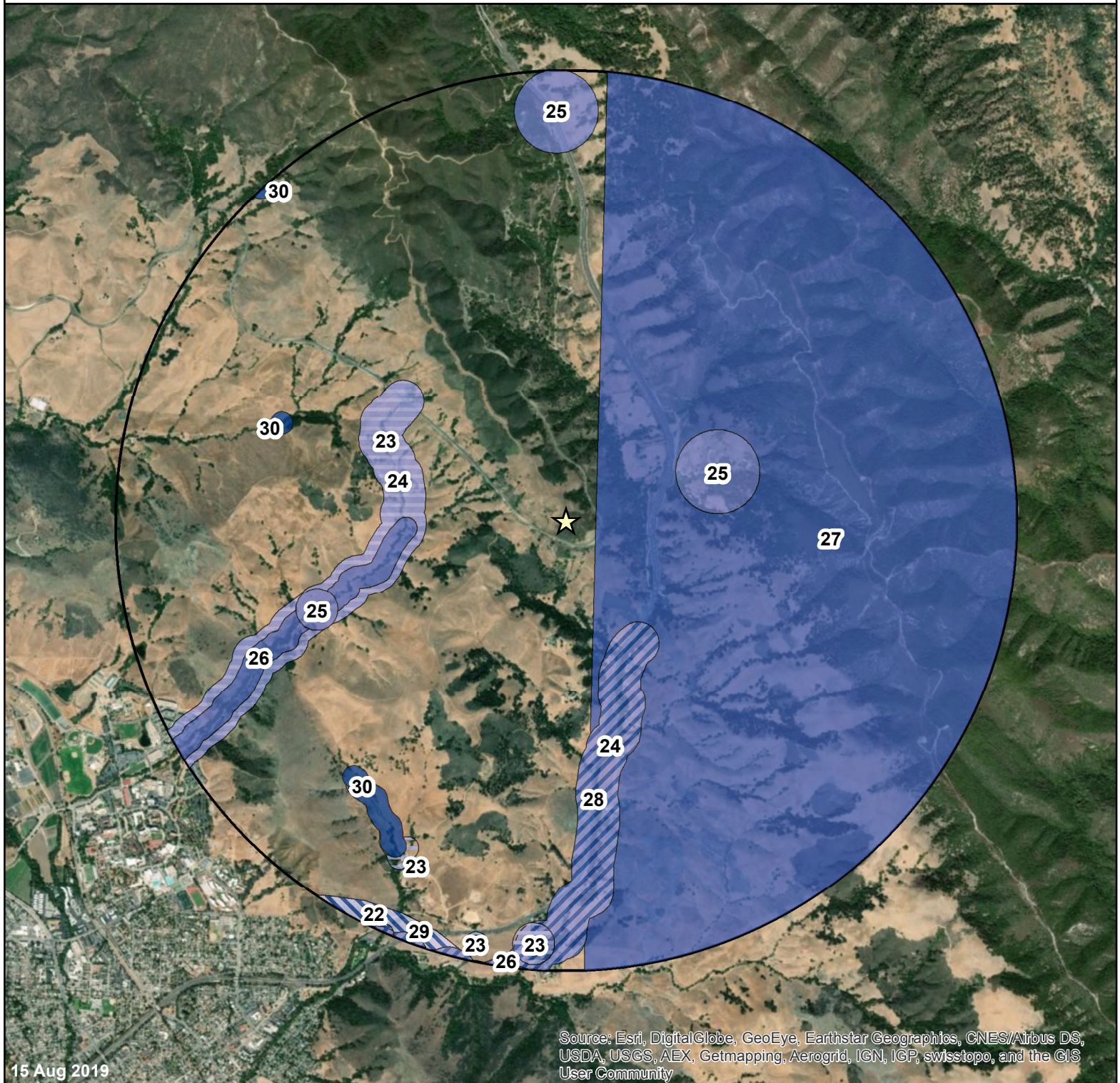
**Figure 1a: 2-mile CNDDDB Botanical Occurrences**







# Mioissi Ranch Biological Resources Assessment City of San Luis Obispo



**Figure 1b: 2-mile CNDDDB Wildlife Occurrences**

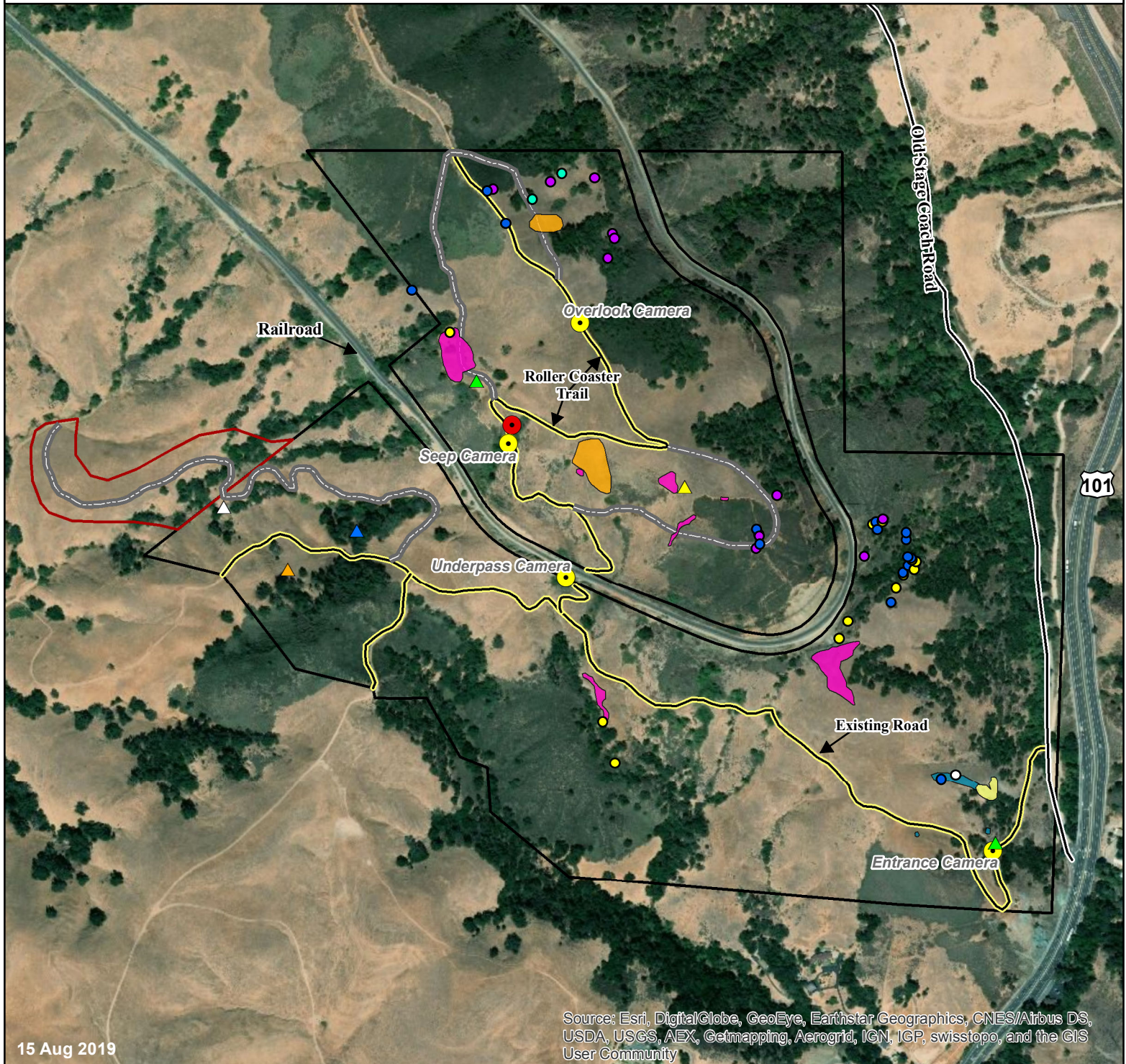






# Mioossi Ranch Biological Resources Assessment

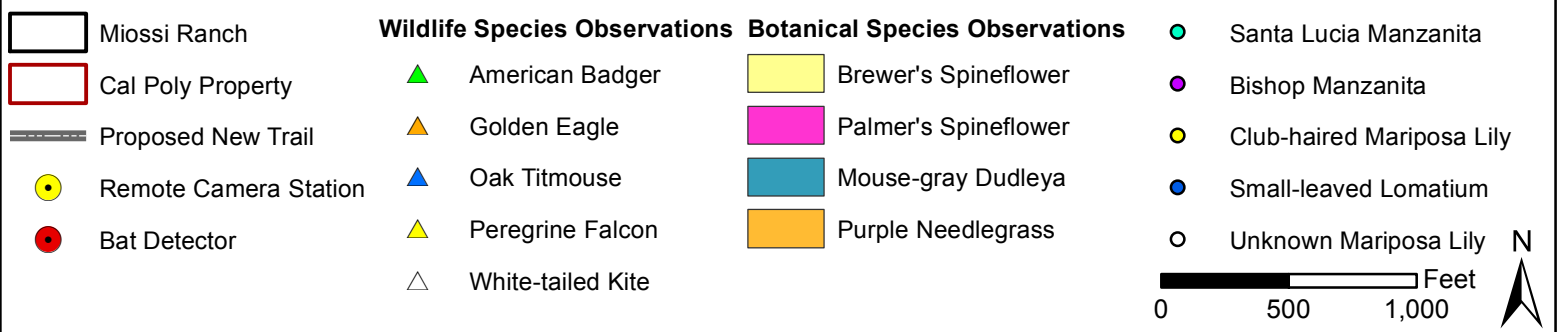
## City of San Luis Obispo



15 Aug 2019

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Figure 2: Sensitive Resources and Observation Points**







# Miozzi Ranch Biological Resources Assessment City of San Luis Obispo

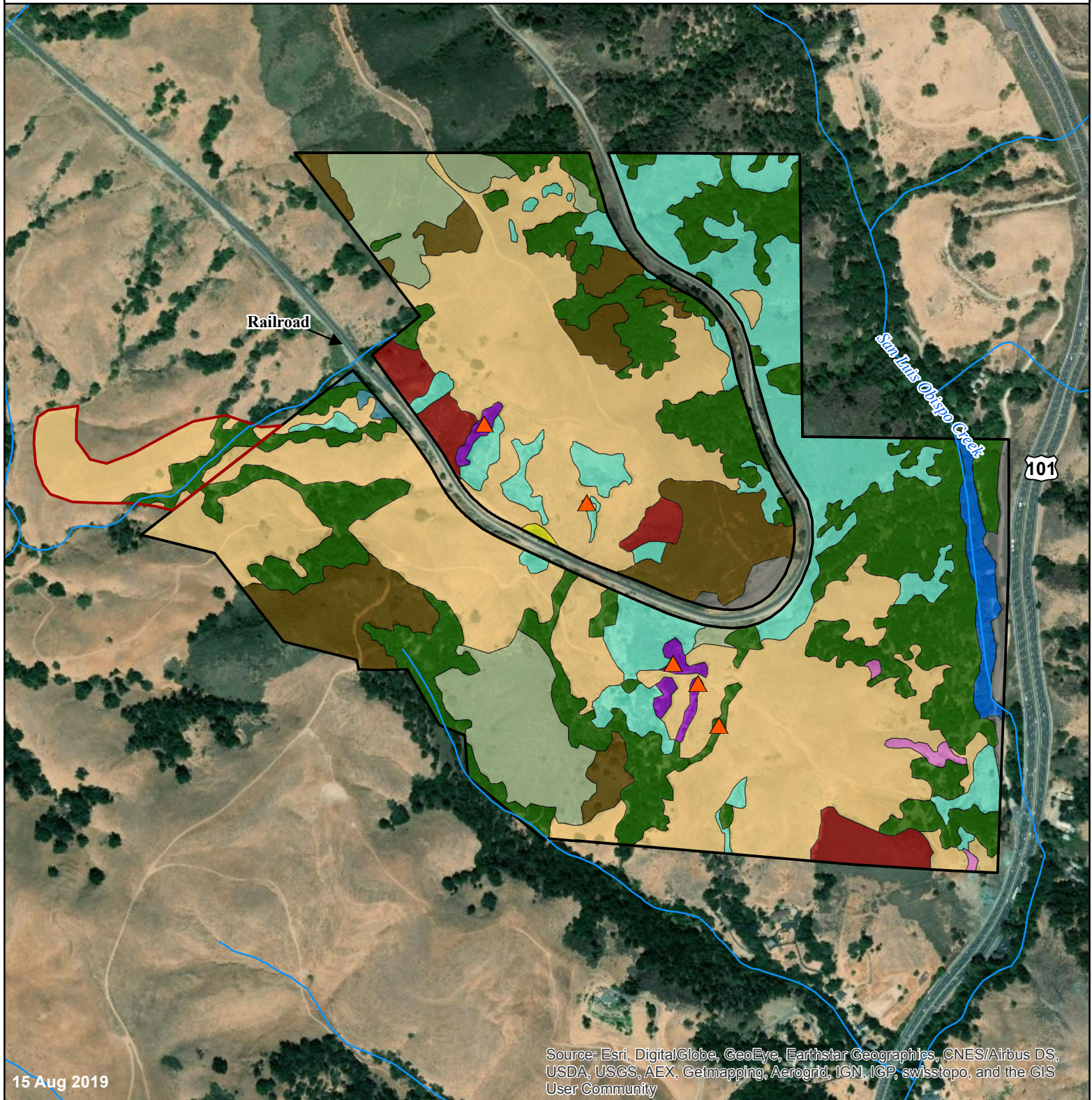
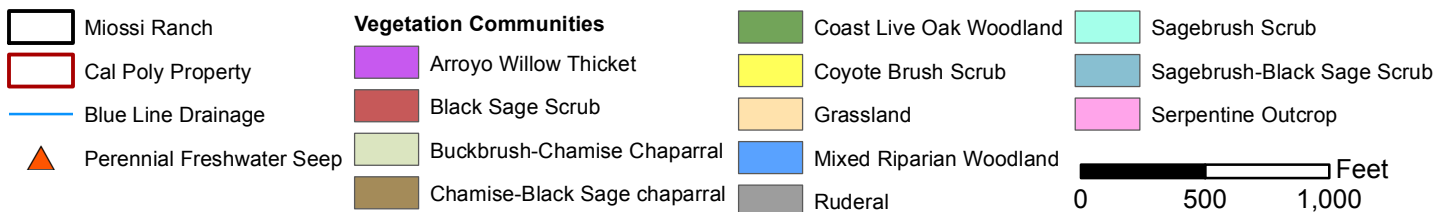


Figure 3: Vegetation Communities





## **ATTACHMENT B – Botanical and Wildlife Species Lists for Miossi Ranch**



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### Botanical Species List for Miossi Ranch

Observed by Terra Verde on April 24; May 6, 23, and 30; and June 20 and 26, 2019

Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Vascular Plants</b>				
<b>Adoxaceae, Muskroot Family</b>	<i>Sambucus nigra</i> subsp. <i>caerulea</i>	Blue elderberry	--	Native
<b>Agavaceae, Century Plant Family</b>	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soap plant	--	Native
	<i>Hesperoyucca whipplei</i>	Chaparral yucca	--	Native
<b>Anacardiaceae, Sumac Family</b>	<i>Rhus integrifolia</i>	Lemonade berry	--	Native
	<i>Schinus molle</i>	Pepper tree	Lim	Naturalized
	<i>Toxicodendron diversilobum</i>	Western poison oak	--	Native
<b>Apiaceae, Carrot Family</b>	<i>Apiastrum angustifolium</i>	Wild celery	--	Native
	<i>Conium maculatum</i>	Poison hemlock	Mod	Naturalized
	<i>Daucus pusillus</i>	American wild carrot	--	Native
	<i>Foeniculum vulgare</i>	Fennel	High	Naturalized
	<i>Lomatium caruifolium</i>	Caraway leaved lomatium	--	Native
	<i>Lomatium parvifolium</i>	Small-leaved lomatium	CRPR 4.2	Native
	<i>Sanicula arguta</i>	Sharp toothed sanicle	--	Native
	<i>Sanicula bipinnata</i>	Poison sanicle	--	Native
	<i>Sanicula bipinnatifida</i>	Purple sanicle	--	Native
	<i>Sanicula crassicaulis</i>	Gamble weed	--	Native
	<i>Torilis arvensis</i>	Tall sock-destroyer	Mod	Naturalized
	<i>Torilis nodosa</i>	Short sock-destroyer	--	Naturalized
<b>Apocynaceae, Dogbane Family</b>	<i>Asclepias eriocarpa</i>	Kotolo	--	Native
	<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	--	Native
<b>Asteraceae, Sunflower Family</b>	<i>Achillea millefolium</i>	Common yarrow	--	Native
	<i>Achyrachaena mollis</i>	Soft blow wives	--	Native
	<i>Acourtia microcephala</i>	Sacapellote	--	Native
	<i>Agoseris grandiflora</i>	Giant mountain dandelion	--	Native
	<i>Agoseris heterophylla</i>	Annual mountain dandelion	--	Native
	<i>Artemisia californica</i>	California sagebrush	--	Native
	<i>Artemisia douglasiana</i>	Mugwort	--	Native
	<i>Baccharis pilularis</i> subsp. <i>consanguinea</i>	Coyote brush	--	Native
	<i>Baccharis salicifolia</i>	Mule fat	--	Native



Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Asteraceae, Sunflower Family (cont.)</b>	<i>Carduus pycnocephalus</i>	Italian thistle	Mod	Naturalized
	<i>Carthamus lanatus</i>	Woolly distaff thistle	High	Naturalized
	<i>Centaurea calcitrapa</i>	Purple star-thistle	Mod	Naturalized
	<i>Centaurea melitensis</i>	Maltese star-thistle	Mod	Naturalized
	<i>Centaurea solstitialis</i>	Yellow star-thistle	High	Naturalized
	<i>Chondrilla juncea</i>	Skeleton weed	Mod	Naturalized
	<i>Cirsium vulgare</i>	Bull thistle	Mod	Naturalized
	<i>Corethrogyne filaginifolia</i>	Common sandaster	--	Native
	<i>Ericameria arborescens</i>	Golden-fleece	--	Native
	<i>Erigeron foliosus</i> var. <i>foliosus</i>	Leafy fleabane	--	Native
	<i>Erigeron philadelphicus</i> var. <i>philadelphicus</i>	Philadelphia fleabane	--	Native
	<i>Eriophyllum confertiflorum</i>	Golden-yarrow	--	Native
	<i>Eurybia radulina</i>	Roughleaf aster	--	Native
	<i>Gamochaeta ustulata</i>	Featherweed	--	Native
	<i>Grindelia camporum</i>	Gumweed	--	Native
	<i>Hazardia squarrosa</i>	Saw-toothed goldenbush	--	Native
	<i>Hedypnois rhagadioloides</i>	Crete weed	--	Native
	<i>Helenium puberulum</i>	Sneezeweed		Native
	<i>Helminthotheca echioides</i>	Bristly ox-tongue	Lim	Naturalized
	<i>Hemizonia congesta</i> subsp. <i>luzulifolia</i>	Hayfield tarweed	--	Native
	<i>Hesperervax sparsiflora</i> var. <i>sparsiflora</i>	Erect dwarf cudweed	--	Native
	<i>Heterotheca sessiliflora</i>	Sessileflower goldenaster	--	Native
	<i>Hypochaeris glabra</i>	Smooth cat's ear	Lim	Naturalized
	<i>Hypochaeris radicata</i>	Rough cat's ear	Mod	Naturalized
	<i>Lactuca serriola</i>	Prickly lettuce	--	Naturalized
	<i>Lasthenia gracilis</i>	Common goldfields	--	Native
	<i>Logfia filaginoides</i>	California cottonrose	--	Native
	<i>Logfia gallica</i>	Daggerleaf cottonrose	--	Naturalized
	<i>Madia gracilis</i>	Gumweed	--	Native
	<i>Micropus californicus</i> var. <i>californicus</i>	Cottontop	--	Native
	<i>Microseris douglasii</i> subsp. <i>douglasii</i>	Douglas' silverpuffs	--	Native

Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Asteraceae, Sunflower Family (cont.)</b>	<i>Pseudognaphalium californicum</i>	Ladies' tobacco	--	Native
	<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	--	Naturalized
	<i>Pseudognaphalium microcephalum</i>	Wright's cudweed	--	Native
	<i>Psilocarphus tenellus</i>	Slender woolly-marbles	--	Native
	<i>Rafinesquia californica</i>	California chicory	--	Native
	<i>Silybum marianum</i>	Milk thistle	--	Naturalized
	<i>Sonchus asper</i> subsp. <i>asper</i>	Prickly sow thistle	--	Naturalized
	<i>Sonchus oleraceus</i>	Common sow thistle	--	Naturalized
	<i>Stebbinsoseris heterocarpa</i>	Grassland silverpuffs	--	Native
	<i>Stephanomeria cichoriacea</i>	Silver rock-lettuce	--	Native
	<i>Stephanomeria exigua</i>	Small wirelettuce	--	Native
	<i>Uropappus lindleyi</i>	Silver puffs	--	Native
	<i>Xanthium strumarium</i>	Cocklebur	--	Native
<b>Blechnaceae, Deer Fern Family</b>	<i>Woodwardia fimbriata</i>	Giant chain fern	--	Native
<b>Boraginaceae, Borage Family</b>	<i>Amsinckia intermedia</i>	Common fiddleneck	--	Native
	<i>Cryptantha clevelandii</i> var. <i>clevelandii</i>	Cleveland's cryptantha	--	Native
	<i>Cryptantha flaccida</i>	Beaked cryptantha	--	Native
	<i>Cryptantha intermedia</i> var. <i>intermedia</i>	Common cryptantha	--	Native
	<i>Cryptantha muricata</i> var. <i>muricata</i>	Showy prickly-nut cryptantha	--	Native
	<i>Eucrypta chrysanthemifolia</i>	Spotted eucrypta	--	Native
	<i>Phacelia imbricata</i>	Imbricate phacelia	--	Native
	<i>Plagiobothrys nothofulvus</i>	Rusty popcornflower	--	Native
<b>Brassicaceae, Mustard Family</b>	<i>Brassica nigra</i>	Black mustard	Mod	Naturalized
	<i>Hirschfeldia incana</i>	Mediterranean hoary mustard	Mod	Naturalized
	<i>Thysanocarpus curvipes</i>	Common fringe pod	--	Native
<b>Caprifoliaceae, Honeysuckle Family</b>	<i>Symphoricarpos albus</i> var. <i>laevigatus</i>	Snowberry	--	Native
	<i>Symphoricarpos mollis</i>	Creeping snowberry	--	Native
<b>Caryophyllaceae, Pink Family</b>	<i>Cerastium glomeratum</i>	Sticky mouse-ear chickweed	--	Naturalized
	<i>Silene gallica</i>	Windmill pink	--	Naturalized



Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Caryophyllaceae, Pink Family (cont.)</b>	<i>Spergula arvensis</i>	Stickwort	--	Naturalized
	<i>Stellaria media</i>	Common chickweed	--	Naturalized
<b>Chenopodiaceae, Goosefoot Family</b>	<i>Chenopodium californicum</i>	California goosefoot	--	Native
<b>Convolvulaceae, Morning-glory Family</b>	<i>Cuscuta californica</i> var. <i>californica</i>	Dodder	--	Native
<b>Crassulaceae, Stonecrop Family</b>	<i>Crassula connata</i>	Pygmy-weed	--	Native
	<i>Dudleya abramsii</i> subsp. <i>murina</i>	Mouse-gray dudleya	CRPR 1B.3	Native
	<i>Dudleya lanceolata</i>	Lance-leaved dudleya	--	Native
	<i>Dudleya pulverulenta</i>	Chalk dudleya	--	Native
<b>Cucurbitaceae, Gourd Family</b>	<i>Marah fabacea</i>	California man-root	--	Native
<b>Cyperaceae, Sedge Family</b>	<i>Carex triquetra</i>	Trigonus sedge	--	Native
	<i>Cyperus eragrostis</i>	Tall flatsedge	--	Native
	<i>Cyperus niger</i>	Brown cyperus	--	Native
	<i>Eleocharis macrostachya</i>	Common spikerush	--	Native
<b>Dennstaedtiaceae, Bracken Family</b>	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Western bracken fern	--	Native
<b>Dryopteridaceae, Wood Fern Family</b>	<i>Dryopteris arguta</i>	California wood fern	--	Native
<b>Equisetaceae, Horsetail Family</b>	<i>Equisetum telmateia</i> subsp. <i>braunii</i>	Giant horsetail	--	Native
<b>Ericaceae, Heath Family</b>	<i>Arctostaphylos glandulosa</i> subsp. <i>cushingiana</i>	Cushing manzanita	--	Native
	<i>Arctostaphylos luciana</i>	Santa Lucia manzanita	CRPR 1B.2	Native
	<i>Arctostaphylos obispoensis</i>	Bishop manzanita	CRPR 4.3	Native
<b>Euphorbiaceae, Spurge Family</b>	<i>Croton setiger</i>	Turkey-mullein	--	Native
	<i>Ricinus communis</i>	Castor bean	--	Naturalized
<b>Fabaceae, Legume Family</b>	<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish lotus	--	Native
	<i>Acmispon brachycarpus</i>	Short podded lotus	--	Native
	<i>Acmispon glaber</i>	Deerweed	--	Native
	<i>Acmispon junceus</i>	Rush lotus	--	Native
	<i>Acmispon parviflorus</i>	Hill lotus	--	Native
	<i>Acmispon strigosus</i>	Strigose lotus	--	Native
	<i>Acmispon wrangelianus</i>	Chilean trefoil	--	Native
	<i>Astragalus gambelianus</i>	Little blue loco	--	Native

Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Fabaceae, Legume Family (cont.)</b>	<i>Genista monspessulana</i>	French broom	High	Naturalized
	<i>Lathyrus vestitus</i>	Common pacific pea	--	Native
	<i>Lupinus albifrons</i> var. <i>albifrons</i>	Silver bush lupine	--	Native
	<i>Lupinus bicolor</i>	Miniature lupine	--	Native
	<i>Lupinus concinnus</i>	Bajada lupine	--	Native
	<i>Lupinus nanus</i>	Sky lupine	--	Native
	<i>Lupinus succulentus</i>	Arroyo lupine	--	Native
	<i>Medicago polymorpha</i>	California burclover	Lim	Naturalized
	<i>Melilotus albus</i>	White sweetclover	--	Naturalized
	<i>Melilotus indicus</i>	Sourclover	--	Naturalized
	<i>Trifolium ciliolatum</i>	Foothill clover	--	Native
	<i>Trifolium depauperatum</i>	Truncate sack clover	--	Native
	<i>Trifolium fucatum</i>	Bull clover	--	Native
	<i>Trifolium hirtum</i>	Rose clover	Lim	Naturalized
	<i>Trifolium microcephalum</i>	Small-head clover	--	Native
	<i>Trifolium microdon</i>	Thimble clover	--	Native
	<i>Trifolium willdenovii</i>	Tomcat clover	--	Native
	<i>Vicia sativa</i>	Spring vetch	--	Naturalized
	<i>Vicia villosa</i>	Hairy vetch	--	Naturalized
<b>Fagaceae, Oak Family</b>	<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak	--	Native
	<i>Quercus berberidifolia</i>	Scrub oak	--	Native
	<i>Quercus douglasii</i>	Blue oak	--	Native
	<i>Quercus durata</i>	Leather oak	--	Native
<b>Geraniaceae, Geranium Family</b>	<i>Erodium botrys</i>	Big heron bill	--	Naturalized
	<i>Erodium brachycarpum</i>	Foothill filaree	--	Naturalized
	<i>Erodium cicutarium</i>	Redstem filaree	Lim	Naturalized
	<i>Geranium dissectum</i>	Cut leaved geranium	Lim	Naturalized
	<i>Geranium molle</i>	Crane's bill geranium	--	Naturalized
<b>Grossulariaceae, Gooseberry Family</b>	<i>Ribes malvaceum</i>	Chaparral currant	--	Native
	<i>Ribes speciosum</i>	Fuchsia-flowered gooseberry	--	Native
<b>Iridaceae, Iris Family</b>	<i>Sisyrinchium bellum</i>	Western blue-eyed-grass	--	Native
<b>Juncaceae, Rush Family</b>	<i>Juncus balticus</i> subsp. <i>ater</i>	Baltic rush	--	Native
	<i>Juncus bufonius</i> var. <i>bufonius</i>	Toad rush	--	Native
	<i>Juncus patens</i>	Spreading rush	--	Native



Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Juncaceae, Rush Family (cont.)</b>	<i>Juncus phaeocephalus</i> var. <i>phaeocephalus</i>	Brownheaded rush	--	Native
	<i>Juncus xiphioides</i>	Iris-leaved rush	--	Native
<b>Lamiaceae, Mint Family</b>	<i>Salvia columbariae</i>	Chia	--	Native
	<i>Salvia mellifera</i>	Black sage	--	Native
	<i>Salvia spathacea</i>	California hummingbird sage	--	Native
	<i>Stachys bullata</i>	California hedge nettle	--	Native
	<i>Trichostema lanceolatum</i>	Vinegar weed	--	Native
<b>Lauraceae, Laurel Family</b>	<i>Umbellularia californica</i>	California bay	--	Native
<b>Liliaceae, Lily Family</b>	<i>Calochortus albus</i>	Fairy-lantern	--	Native
	<i>Calochortus clavatus</i> var. <i>clavatus</i>	Club-haired mariposa lily	CRPR 4.3	Native
	<i>Fritillaria biflora</i>	Checker lily	--	Native
<b>Linaceae, Flax Family</b>	<i>Hesperolinon micranthum</i>	Common dwarf flax	--	Native
<b>Lythraceae, Loosestrife Family</b>	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	--	Naturalized
<b>Malvaceae, Mallow Family</b>	<i>Sidalcea malviflora</i> subsp. <i>malviflora</i>	Checkermallow	--	Native
<b>Melanthiaceae, False-hellebore Family</b>	<i>Toxicoscordion fremontii</i>	Death camas	--	Native
<b>Montiaceae, Miner's Lettuce Family</b>	<i>Calandrinia menziesii</i>	Red maids	--	Native
	<i>Claytonia perfoliata</i>	Miner's lettuce	--	Native
<b>Myrsinaceae, Myrsine Family</b>	<i>Lysimachia arvensis</i>	Scarlet pimpernel	--	Naturalized
<b>Nyctaginaceae, Four O'clock Family</b>	<i>Mirabilis laevis</i> var. <i>crassifolia</i>	Wishbone bush	--	Native
<b>Onagraceae, Evening-primrose Family</b>	<i>Clarkia affinis</i>	Chaparral fairyfan	--	Native
	<i>Clarkia purpurea</i> subsp. <i>quadrivulnera</i>	Four-spot	--	Native
	<i>Epilobium brachycarpum</i>	Annual fireweed	--	Native
	<i>Epilobium canum</i>	California fuchsia	--	Native
<b>Orobanchaceae, Broomrape Family</b>	<i>Bellardia trixago</i>	Mediterranean linseed	Lim	Naturalized
	<i>Castilleja affinis</i> subsp. <i>affinis</i>	Wright's Indian paint brush	--	Native





Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Orobanchaceae, Broomrape Family (cont.)</b>	<i>Castilleja attenuata</i>	Valley tassels	--	Native
	<i>Castilleja exserta</i>	Purple owl's clover	--	Native
<b>Oxalidaceae, Oxalis Family</b>	<i>Oxalis pes-caprae</i>	Bermuda buttercup	--	Naturalized
<b>Paeoniaceae, Peony Family</b>	<i>Paeonia californica</i>	California peony	--	Native
<b>Papaveraceae, Poppy Family</b>	<i>Eschscholzia caespitosa</i>	Tufted eschscholzia	--	Native
	<i>Eschscholzia californica</i>	California poppy	--	Native
<b>Phrymaceae, Lopseed Family</b>	<i>Diplacus aurantiacus</i>	Bush monkeyflower	--	Native
	<i>Erythranthe grandis</i>	Magnificent seep monkeyflower	--	Native
<b>Plantaginaceae, Plantain Family</b>	<i>Keckiella cordifolia</i>	Heart leaved keckiella	--	Native
	<i>Plantago erecta</i>	California plantain	--	Native
	<i>Plantago lanceolata</i>	English plantain	Lim	Naturalized
	<i>Plantago major</i>	Common plantain	--	Naturalized
<b>Platanaceae, Sycamore Family</b>	<i>Platanus racemosa</i>	Western sycamore	--	Native
<b>Poaceae, Grass Family</b>	<i>Agrostis gigantea</i>	Redtop	--	Naturalized
	<i>Avena barbata</i>	Slender wild oat	Mod	Naturalized
	<i>Avena fatua</i>	Wild oat	Mod	Naturalized
	<i>Brachypodium distachyon</i>	False brome	Mod	Naturalized
	<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	--	Native
	<i>Bromus catharticus</i>	Rescue grass	--	Naturalized
	<i>Bromus diandrus</i>	Ripgut grass	Mod	Naturalized
	<i>Bromus hordeaceus</i>	Soft chess	Lim	Naturalized
	<i>Bromus madritensis</i> subsp. <i>rubens</i>	Red brome	High	Naturalized
	<i>Cynodon dactylon</i>	Bermuda grass	--	Naturalized
	<i>Elymus condensatus</i>	Giant wild-rye	--	Native
	<i>Elymus glaucus</i>	Blue wild-rye	--	Native
	<i>Elymus multisetus</i>	Big squirreltail	--	Native
	<i>Festuca microstachys</i>	Small fescue	--	Native
	<i>Festuca myuros</i>	Rattail sixweeks grass	Mod	Naturalized
	<i>Festuca perennis</i>	Rye grass	Mod	Naturalized
	<i>Hainardia cylindrica</i>	Thin tail	--	Naturalized
	<i>Hordeum brachyantherum</i>	Meadow barley	--	Native

Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Poaceae, Grass Family (cont.)</b>	<i>Hordeum marinum</i> subsp. <i>gussoneanum</i>	Mediterranean barley	Mod	Naturalized
	<i>Hordeum murinum</i>	Wall barley	Mod	Naturalized
	<i>Koeleria macrantha</i>	June grass	--	Native
	<i>Lamarckia aurea</i>	Goldentop	--	Naturalized
	<i>Melica californica</i>	California melic	--	Native
	<i>Melica imperfecta</i>	Little California melica	--	Native
	<i>Melica torreyana</i>	Torrey's melic	--	Native
	<i>Pennisetum setaceum</i>	Crimson fountain grass	Mod	Naturalized
	<i>Phalaris aquatica</i>	Harding grass	--	Naturalized
	<i>Poa secunda</i> subsp. <i>secunda</i>	One-sided blue grass	--	Native
	<i>Polypogon monspeliensis</i>	Rabbitfoot grass	--	Native
	<i>Stipa lepida</i>	Foothill needle grass	--	Native
	<i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	--	Naturalized
	<i>Stipa pulchra</i>	Purple needle grass	--	Native
<b>Polemoniaceae, Phlox Family</b>	<i>Gilia clivorum</i>	Purplespot gilia	--	Native
	<i>Navarretia atractylodes</i>	Holly leaf navarretia	--	Native
<b>Polygonaceae, Buckwheat Family</b>	<i>Chorizanthe breweri</i>	Brewer's spineflower	CRPR 1B.3	Native
	<i>Chorizanthe membranacea</i>	Pink spineflower	--	Native
	<i>Chorizanthe palmeri</i>	Palmer's spineflower	CRPR 4.2	Native
	<i>Chorizanthe staticoides</i>	Turkish rugging	--	Native
	<i>Eriogonum elongatum</i>	Long-stem wild buckwheat	--	Native
	<i>Eriogonum fasciculatum</i> subsp. <i>foliolosum</i>	California buckwheat	--	Native
	<i>Eriogonum nudum</i>	Naked buckwheat	--	Native
	<i>Pterostegia drymarioides</i>	Fairy mist	--	Native
	<i>Rumex conglomeratus</i>	Green dock	--	Naturalized
	<i>Rumex crispus</i>	Curly dock	--	Naturalized
	<i>Rumex pulcher</i>	Fiddle dock	--	Naturalized
<b>Polypodiaceae, Polypody Family</b>	<i>Polypodium californicum</i>	California polypody	--	Native
<b>Portulacaceae, Purslane Family</b>	<i>Portulaca oleracea</i>	Purslane	--	Naturalized
<b>Primulaceae, Primrose Family</b>	<i>Primula clevelandii</i>	Padre's shooting star	--	Native
<b>Pteridaceae, Brake Family</b>	<i>Pellaea andromedifolia</i>	Coffee fern	--	Native
	<i>Pellaea mucronata</i>	Bird's-foot fern	--	Native
	<i>Pentagramma triangularis</i>	Goldback fern	--	Native



Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Ranunculaceae, Buttercup Family</b>	<i>Clematis lasiantha</i>	Western virgin's bower	--	Native
	<i>Delphinium hesperium</i> subsp. <i>hesperium</i>	Western larkspur	--	Native
	<i>Delphinium parryi</i> subsp. <i>parryi</i>	Parry's larkspur	--	Native
	<i>Ranunculus californicus</i>	California buttercup	--	Native
<b>Rhamnaceae, Buckthorn Family</b>	<i>Ceanothus cuneatus</i>	Buck brush	--	Native
	<i>Frangula californica</i>	California coffee berry	--	Native
	<i>Rhamnus crocea</i>	Spiny redberry	--	Native
	<i>Rhamnus ilicifolia</i>	Hollyleaf redberry	--	Native
<b>Rosaceae, Rose Family</b>	<i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i>	Chamise	--	Native
	<i>Cercocarpus betuloides</i>	Birch-leaf mountain-mahogany	--	Native
	<i>Heteromeles arbutifolia</i>	Toyon	--	Native
	<i>Prunus ilicifolia</i> subsp. <i>ilicifolia</i>	Holly-leaved cherry	--	Native
	<i>Rosa spithamea</i>	Coast ground rose	--	Native
	<i>Rubus ursinus</i>	California blackberry	--	Native
<b>Rubiaceae, Madder Family</b>	<i>Galium andrewsii</i> subsp. <i>andrewsii</i>	Phlox-leaved bedstraw	--	Native
	<i>Galium andrewsii</i> subsp. <i>intermedium</i>	Phlox-leaved bedstraw	--	Native
	<i>Galium angustifolium</i> subsp. <i>angustifolium</i>	Narrowly leaved bedstraw	--	Native
	<i>Galium aparine</i>	Goose grass	--	Native
	<i>Galium californicum</i>	California bedstraw	--	Native
	<i>Galium porrigens</i>	Climbing bedstraw	--	Native
<b>Salicaceae, Willow Family</b>	<i>Populus fremontii</i>	Fremont cottonwood	--	Native
	<i>Populus trichocarpa</i>	Black cottonwood	--	Native
	<i>Salix laevigata</i>	Red willow	--	Native
	<i>Salix lasiolepis</i>	Arroyo willow	--	Native
<b>Sapindaceae, Soapberry Family</b>	<i>Acer macrophyllum</i>	Big-leaf maple	--	Native
<b>Scrophulariaceae, Figwort Family</b>	<i>Scrophularia californica</i>	California figwort	--	Native
<b>Solanaceae, Nightshade Family</b>	<i>Solanum douglasii</i>	Douglas' nightshade	--	Native
	<i>Solanum xanti</i>	Purple nightshade	--	Native



Family	Scientific Name	Common Name	Listing Status <sup>1</sup>	Origin
<b>Themidaceae, Brodiaea Family</b>	<i>Bloomeria crocea</i> var. <i>crocea</i>	Common goldenstar	--	Native
	<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	Blue dicks	--	Native
<b>Typhaceae, Cattail Family</b>	<i>Typha domingensis</i>	Southern cattail	--	Native
<b>Verbenaceae, Vervain Family</b>	<i>Verbena lasiostachys</i>	Western vervain	--	Native
<b>Violaceae, Violet Family</b>	<i>Viola pedunculata</i>	Johnny-jump-up	--	Native
<b>Viscaceae, Mistletoe Family</b>	<i>Phoradendron leucarpum</i>	Big leaf mistletoe	--	Native

<sup>1</sup>**Listing Status:** Indicates listing status for rare and endangered (i.e., special-status) taxa, as well as taxa considered noxious/invasive weeds in California and San Luis Obispo County. No state- or federal-listed special-status species were documented; taxa included on the California Rare Plant Rank (CRPR) are assigned listing status based on the degree of rarity (Lists 1A through 4) and threat level (0.1, 0.2, and 0.3), as follows (CNPS 2019c):

**Rarity Ranks:**

- **List 1A:** presumed extirpated in California, and rare or extinct elsewhere
- **List 1B:** rare, threatened, or endangered in California and elsewhere
- **List 2A:** presumed extirpated in California, but more common elsewhere
- **List 2B:** rare, threatened, or endangered in California, but more common elsewhere
- **List 3:** review list of plants about which more information is needed
- **List 4:** watch list of plants with limited distribution

**Threat Ranks:**

- **0.1:** seriously threatened in California (> 80% threatened / high degree and immediacy of threat)
- **0.2:** moderately threatened in California (20-80% threatened / moderate degree and immediacy of threat)
- **0.3:** not very threatened in California (< 20% threatened / low degree and immediacy or no current threats known)

### Wildlife Species List for Miossi Ranch

Observed by Terra Verde on April 24; May 6, 23, 30, and 31; and June 7, 19, and 11, 2019

Taxonomic Class	Scientific Name <sup>1</sup>	Common Name	Listing Status	Origin
<b>Amphibian</b>	<i>Anaxyrus boreas halophilus</i>	California toad		Native
	<i>Pseudacris sierra</i>	Sierran tree frog		Native
	<i>Taricha torosa</i>	California newt		Native
<b>Arachnid</b>	<i>Aphonopelma</i> sp.	Tarantula		Native
	<i>Araneus</i> sp.	Orb weaver		Native
	<i>Dermacentor occidentalis</i>	Pacific coast tick		Native
<b>Bird</b>	<i>Aphelocoma californica</i>	California scrub-jay		Native
	<i>Aquila chrysaetos</i>	Golden eagle	California—FP Federal—BCC	Native
	<i>Baeolophus inornatus</i>	Oak titmouse	Federal—BCC	Native
	<i>Buteo jamaicensis</i>	Red-tailed hawk		Native
	<i>Callipepla californica</i>	California quail		Native
	<i>Calypte anna</i>	Anna's hummingbird		Native
	<i>Cathartes aura</i>	Turkey vulture		Native
	<i>Chamaea fasciata</i>	Wrentit		Native
	<i>Chondestes grammacus</i>	Lark sparrow		Native
	<i>Colaptes auratus</i>	Northern flicker		Native
	<i>Corvus brachyrhynchos</i>	American crow		Native
	<i>Corvus corax</i>	Common raven		Native
	<i>Elanus leucurus</i>	White-tailed kite	California—FP	Native
	<i>Empidonax difficilis</i>	Pacific-slope flycatcher		Native
	<i>Falco peregrinus</i>	Peregrine falcon	California—FP Federal—BCC	Native
	<i>Falco sparverius</i>	American kestrel		Native
	<i>Haemorhous mexicanus</i>	House finch		Native
	<i>Hirundo rustica</i>	Barn swallow		Native
	<i>Melanerpes formicivorus</i>	Acorn woodpecker		Native
	<i>Meleagris gallopavo</i>	Wild turkey		Naturalized
	<i>Melospiza crissalis</i>	California towhee		Native
	<i>Mimus polyglottos</i>	Northern mockingbird		Native
	<i>Myiarchus cinerascens</i>	Ash-throated flycatcher		Native
	<i>Patagioenas fasciata</i>	Band-tailed pigeon		Native
	<i>Poliophtila caerulea</i>	Blue-gray gnatcatcher		Native
	<i>Psaltiriparus minimus</i>	Bushtit		Native
	<i>Sayornis nigricans</i>	Black phoebe		Native
	<i>Sialia mexicana</i>	Western bluebird		Native
	<i>Sitta carolinensis</i>	White-breasted nuthatch		Native



<b>Taxonomic Class</b>	<b>Scientific Name<sup>1</sup></b>	<b>Common Name</b>	<b>Listing Status</b>	<b>Origin</b>
<b>Bird (cont.)</b>	<i>Spinus psaltria</i>	Lesser goldfinch		Native
	<i>Sturnella neglecta</i>	Western meadowlark		Native
	<i>Tachycineta bicolor</i>	Tree swallow		Native
	<i>Tachycineta thalassina</i>	Violet-green swallow		Native
	<i>Thryomanes bewickii</i>	Bewick's wren		Native
	<i>Toxostoma redivivum</i>	California thrasher		Native
	<i>Turdus migratorius</i>	American robin		Native
	<i>Tyrannus verticalis</i>	Western kingbird		Native
	<i>Tyto alba</i>	Barn owl		Native
	<i>Zenaida macroura</i>	Mourning dove		Native
<b>Insect</b>	<i>Apiomerus californicus</i>	California bee assassin		Native
	<i>Apis mellifera</i>	Western honeybee		Naturalized
	<i>Autographa californica</i>	Alfalfa looper		Native
	<i>Bombus</i> sp.	Bumble bee		Native
	<i>Cephenemyia apicata</i>	Deer nose bot fly		Native
	<i>Chrysomela confluens</i>	Leaf beetle		Native
	<i>Coelocnemis californica</i>	California broad-necked darkling beetle		Native
	<i>Coenonympha tullia</i>	Common ringlet		Native
	<i>Dasymutilla californica</i>	Velvet ant		Native
	<i>Diabrotica undecimpunctata</i>	Spotted cucumber beetle		Native
	<i>Grammia ornata</i>	Ornate tiger moth		Native
	<i>Hyles lineata</i>	White-lined sphinx moth		Native
	<i>Icaricia acmon</i>	Acmon blue		Native
	<i>Papilio rutulus</i>	Western tiger swallowtail		Native
	<i>Papilio zelicaon</i>	Anise swallowtail		Native
	<i>Pieris rapae</i>	Cabbage white		Naturalized
	<i>Trirhabda flavolimbata</i>	Coyote brush leaf beetle		Native
<b>Mammal</b>	<i>Canis latrans</i>	Coyote		Native
	<i>Eptesicus fuscus</i>	Big brown bat		Native
	<i>Lynx rufus</i>	Bobcat		Native
	<i>Mephitis mephitis</i>	Striped skunk		Native
	<i>Neotoma</i> sp.	Woodrat		Native
	<i>Odocoileus hemionus</i>	Mule deer		Native
	<i>Otospermophilus beecheyi</i>	California ground squirrel		Native
	<i>Peromyscus maniculatus</i>	Deer mouse		Native
	<i>Procyon lotor</i>	Raccoon		Native
	<i>Sylvilagus</i> sp.	Cottontail rabbit		Native
	<i>Tadarida brasiliensis</i>	Mexican free-tailed bat		Native

<b>Taxonomic Class</b>	<b>Scientific Name<sup>1</sup></b>	<b>Common Name</b>	<b>Listing Status</b>	<b>Origin</b>
<b>Mammal (cont.)</b>	<i>Taxidea taxus</i>	American badger	California—CSC	Native
	<i>Thomomys bottae</i>	Botta's pocket gopher		Native
	<i>Urocyon cinereoargenteus</i>	Gray fox		Native
<b>Reptile</b>	<i>Elgaria multicarinata webbii</i>	Alligator lizard		Native
	<i>Sceloporus occidentalis</i>	Western fence lizard		Native
	<i>Crotalus oreganus oreganus</i>	Northern Pacific rattlesnake		Native

<sup>1</sup>Highlighted species have special conservation status:

- California—FP = California-designated Fully Protected Species
- California—CSC = California-designated Species of Special Concern
- Federal—BCC = Federally designated Bird of Conservation Concern



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## **ATTACHMENT C – California Native Species Field Survey Forms for Miossi Ranch**



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## **ATTACHMENT D – Representative Site Photographs**



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**Photo 1.** View west across the western portion of Miossi Ranch (April 24, 2019).



**Photo 2.** View north of the grassland bordered by oak woodland at the top of the ridge in the northern portion of the property (April 25, 2019).





**Photo 3.** View east at a transition zone between grassland and chaparral along the ridge top in the middle of the property (May 6, 2019).



**Photo 4.** View west across the property toward Cal Poly (May 6, 2019).





**Photo 5.** View of coastal scrub along a west-facing slope on the western portion of the property (May 6, 2019).



**Photo 6.** View east toward the seep where the *seep* remote camera was placed (May 6, 2019).





**Photo 7.** View north of oaks along the drainages on the western edge of the property with Cal Poly property to the north (May 6, 2019).



**Photo 8.** View west of main drainage along the western edge of the property (May 6, 2019).





**Photo 9.** View southwest of a drainage near the southern end of the property (May 23, 2019).



**Photo 10.** View northeast of chaparral-covered hill near the southwest corner of the property (May 23, 2019).





**Photo 11.** View south of the main drainage on the western portion of the property (May 23, 2019).



**Photo 12.** View southeast of serpentine outcrops along the eastern portion of the property (May 23, 2019).





**Photo 13.** *Dudleya abramsii* subsp. *murina* on the serpentine outcrop on the east side of the property (May 23, 2019).



**Photo 14.** *Chorizanthe breweri* on a serpentine outcrop on the east side of the property (May 23, 2019).



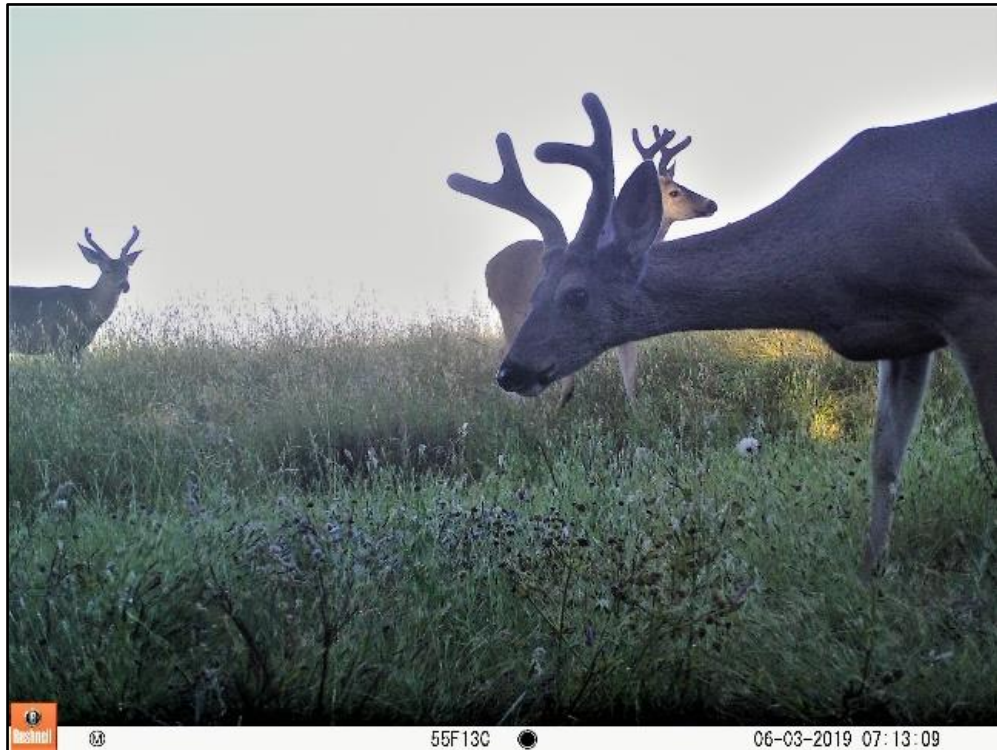


**Photo 15.** *Calochortus clavatus* var. *clavatus* occurring in association with chaparral habitat (June 26, 2019).



**Photo 16.** *Chorizanthe palmeri* in a rocky opening within annual grassland habitat (June 26, 2019).





**Photo 17.** Mule deer bucks at *overlook* remote camera.



**Photo 18.** Coyote at *entrance* remote camera.



Photo 19. Anise swallowtail at *overlook* remote camera.



Photo 20. Bobcat at *entrance* remote camera.

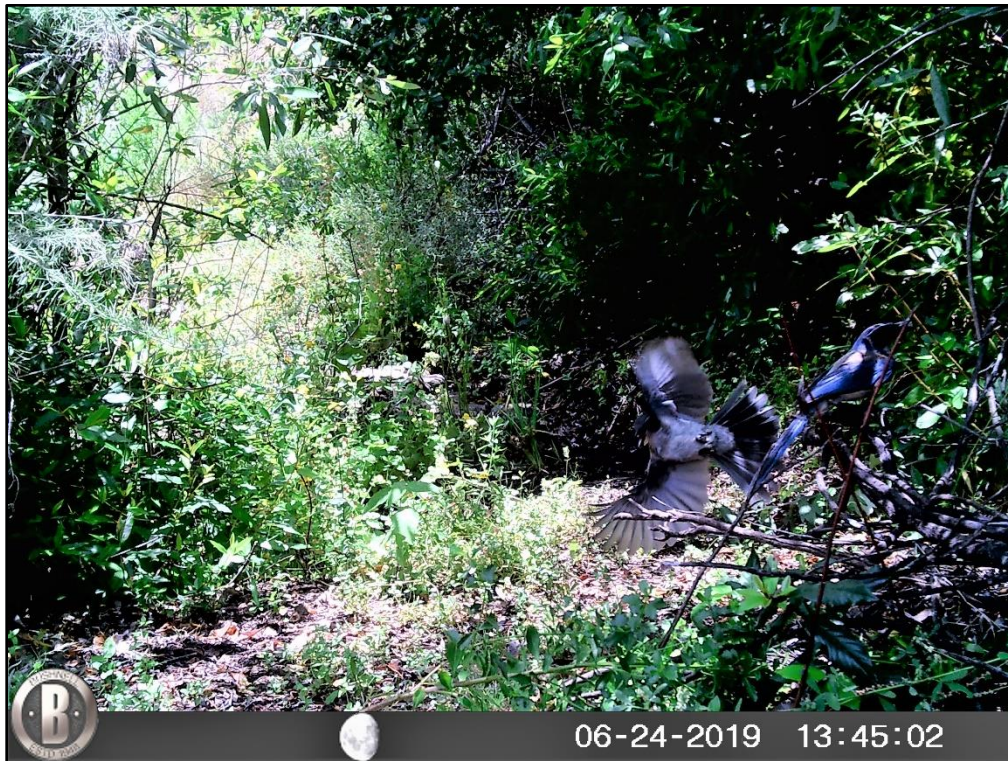




**Photo 21.** California quail at *underpass* remote camera.



**Photo 22.** Gray fox at *overlook* remote camera.



**Photo 23.** California scrub-jays at *seep* remote camera.

**Appendix D:**

***Cultural Resource Study for the Miossi Open Space, San Luis Obispo, California  
(Applied EarthWorks, Inc., November 2019)***



# **Cultural Resource Study for the Miossi Open Space, San Luis Obispo, California**

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November 2019



## MANAGEMENT SUMMARY

At the request of the City of San Luis Obispo (City), Applied EarthWorks, Inc. (Æ) completed a Phase 1 cultural resource study in support of the proposed Miossi Open Space (Project) in San Luis Obispo County, California. The property has a network of existing dirt roads and trails, and the City is proposing additional hand-cut trails for hiking to be opened to the public for recreational use. The Project area includes 266 acres made up of Assessor's Parcel Numbers 070-271-033, 070-271-034, 073-341-040, and 073-341-041. It is on the west side of Cuesta Grade, beginning at Old Stage Coach Road at the foot of the grade, and running west towards lands owned by California Polytechnic State University and the Miossi family. The Project is in the City's greenbelt and is owned by the City but is outside City limits. Southern Pacific Railway tracks bisect the Project area; the railroad and the right of way are not part of the Project.

This study provides compliance with the California Environmental Quality Act (CEQA), which mandates that government agencies consider the effects of permitted actions on important archaeological and historical resources (Public Resource Code 5020 and 21000 et. seq. and California Code of Regulations 15000 et. seq.).

Æ's study included a records search of the Central Coast Information Center (CCIC) of the California Historical Resources Information System (CHRIS) and Sacred Lands File of the Native American Heritage Commission, outreach to local Native American tribal representatives, and a pedestrian surface survey. Tribal representatives requested a site visit and cultural sensitivity training for staff prior to the start of construction. Background research found four previous studies have covered portions of the Project area, but no previously recorded sites are mapped within the Miossi Open Space property.

Æ's pedestrian survey encountered several possible historic-era miscellaneous resources and recorded a historic dam feature (AE-4081-01H). The miscellaneous resources include a powerline that follows the railroad right of way and individual poles that occasionally cross into the Project area, and a cattle water trough that is no longer in use. Additionally, there is a large culvert under the railroad tracks that the Miossi family used to allow cattle to access to the north portion of the property. AE-4087-01H is a historic dam and associated infrastructure over San Luis Creek that was part of the initial water system supplying water to the City. AE-4087-01H was formally recorded but not evaluated at this time.

Æ's study did not identify any prehistoric archaeological sites or features. Therefore, no additional archaeological fieldwork is recommended. However, Æ recommends an evaluation of the dam and associated infrastructure (AE-4087-01H) to determine if this resource is eligible for the California Register of Historic Resources. Currently this resource will not be affected by the Project; however, due to the potential for this resource to be significant under CEQA, the City may need to assess the level any impacts on this resource in the future.

Due to the lack of ground visibility during the current study, there is the potential for encountering prehistoric or historic-period materials during Project activities. If any of prehistoric or historic materials are found during the course of construction, ground-disturbing activities should be halted, and a qualified archaeologist should be contacted to determine if

materials are isolated finds or part of a larger archaeological deposit. If an archaeological site is identified, then the resource should be evaluated for significance under CEQA and further treatment measures may be required.

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 CHRIS at the University of California, Santa Barbara.

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# 1

## INTRODUCTION

At the request of the City of San Luis Obispo (City), Applied EarthWorks, Inc. (Æ) completed a cultural resource study for the Miossi Open Space at Old Stage Coach Road at the base of the Cuesta Grade on the west side of U.S. Route 101 (US 101) in San Luis Obispo County, California (Project; Figure 1-1). The property includes 266 acres made up of Assessor's Parcel Numbers (APNs) 070-271-033, 070-271-034, 073-341-040, and 073-341-041. The Project is within Township 30 South, Range 12 East, Sections 12 and 13 as depicted in the U.S. Geological Survey (USGS) San Luis Obispo 7.5-minute topographic quadrangle, and Township 30 South, Range 13 East, Sections 7 and 18 as depicted in the USGS Lopez Mountain 7.5-minute topographic map quadrangle (Figures 1-2 and 1-3).

The Project is on the west side of the Cuesta Grade, beginning at Old Stage Coach Road at the foot of the grade, and running west towards lands owned by California Polytechnic State University (Cal Poly) and the Miossi family. The property is in the City's greenbelt and is owned by the City but is outside City limits. Southern Pacific Railway tracks bisect the Project area; the railroad, right of way, and a section of railroad-owned land are not part of the Project area.

### 1.1 PURPOSE OF INVESTIGATION

The City purchased 266 acres of the La Cuesta Ranch from the Miossi Family Trust to use as open space and proposes to open the Miossi Open Space to the public for recreational use. The property has a network of existing dirt roads and trails and the City is proposing the addition of new hand-cut trails for hiking (Figure 1-4).

The Project is in support of the Miossi Open Space Conservation Plan to be adopted by the City, which is held accountable under the California Environmental Quality Act (CEQA) to consider the impacts of their actions on the cultural environment (Public Resource Code [PRC] 5020 and 21000 et. seq. and California Code of Regulations 15000 et. seq.). Therefore, the City is required to assess potential impacts of the proposed Project on archaeological and historical resources. The purpose of Æ's investigation was to identify any cultural resources that could be impacted by Project activities. The investigation results provided herein will assist Rincon Consultants in the drafting the Initial Study for the Project and document the assessment of potential impacts to cultural resources under CEQA.

### 1.2 PERSONNEL QUALIFICATIONS

Æ Principal Archaeologist Erin Enright (M.A., Registered Professional Archaeologist 16575) served as principal investigator and provided technical review of this document. Æ Associate Architectural Historian Amber Long (M.A.) conducted historical research and co-authored the report. She also served as project manager, managed Project tasks, and oversaw background research. Æ Staff Archaeologists Philip Clarkson and Neil Rhodes conducted the archaeological



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



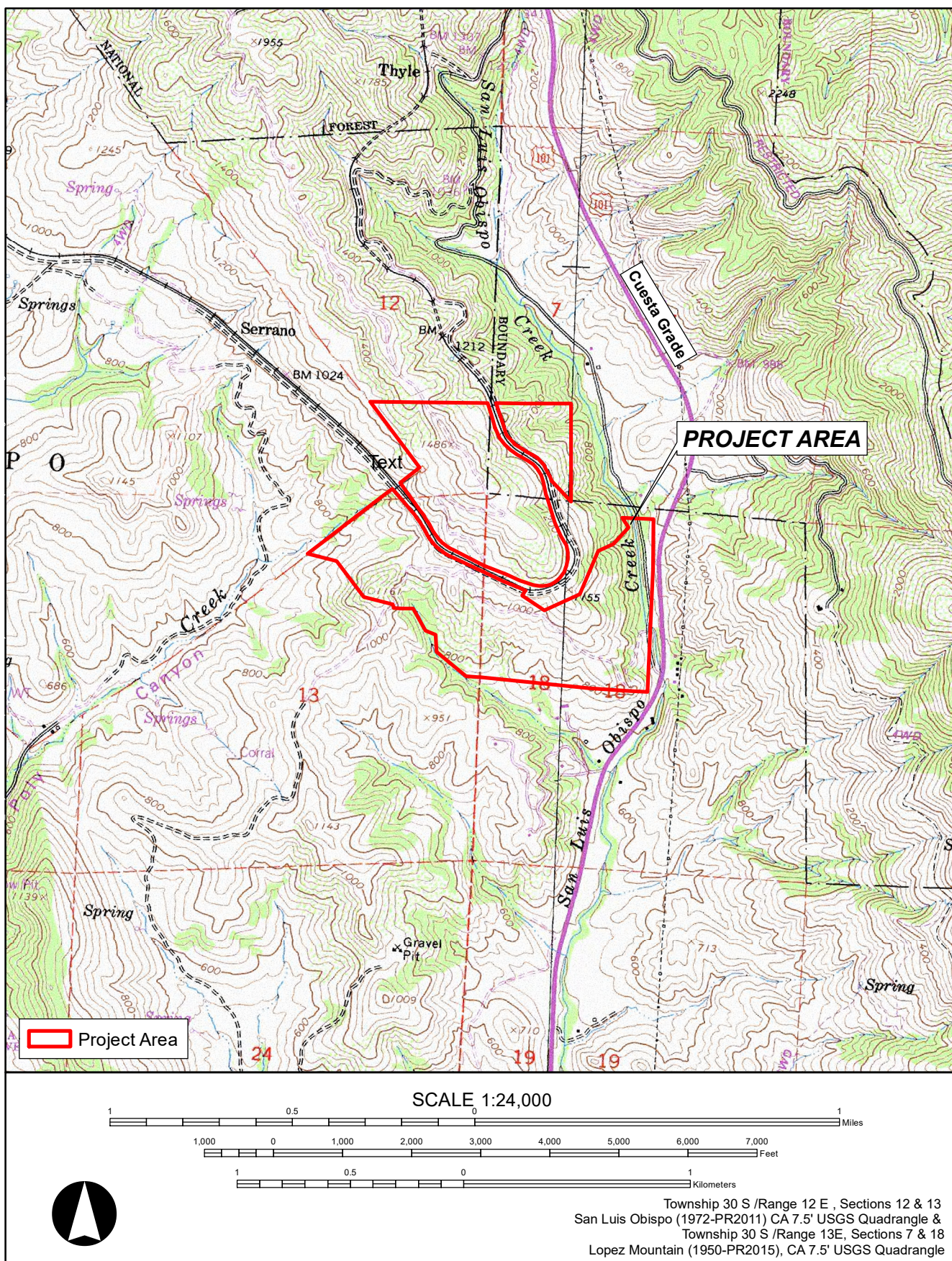
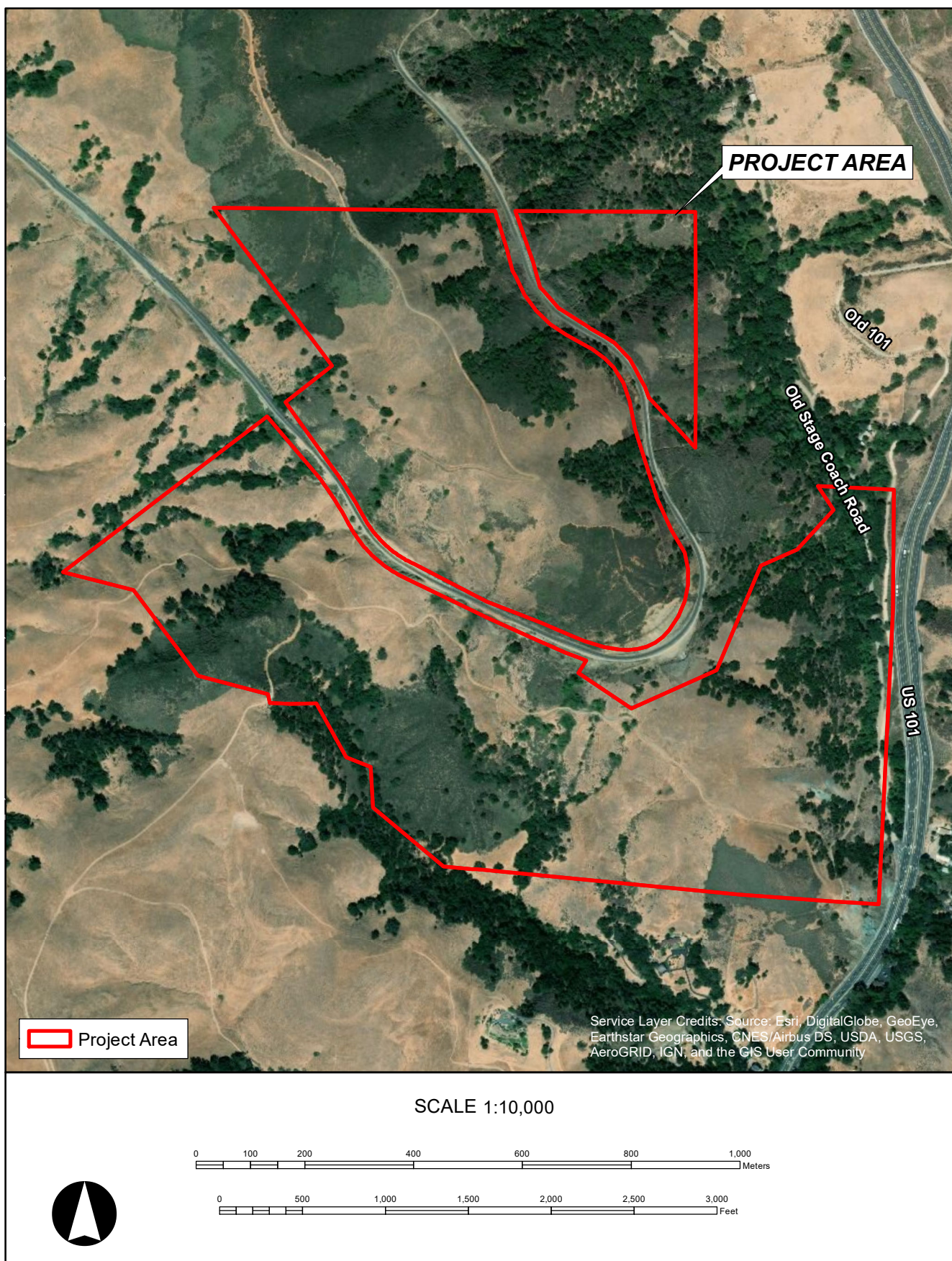


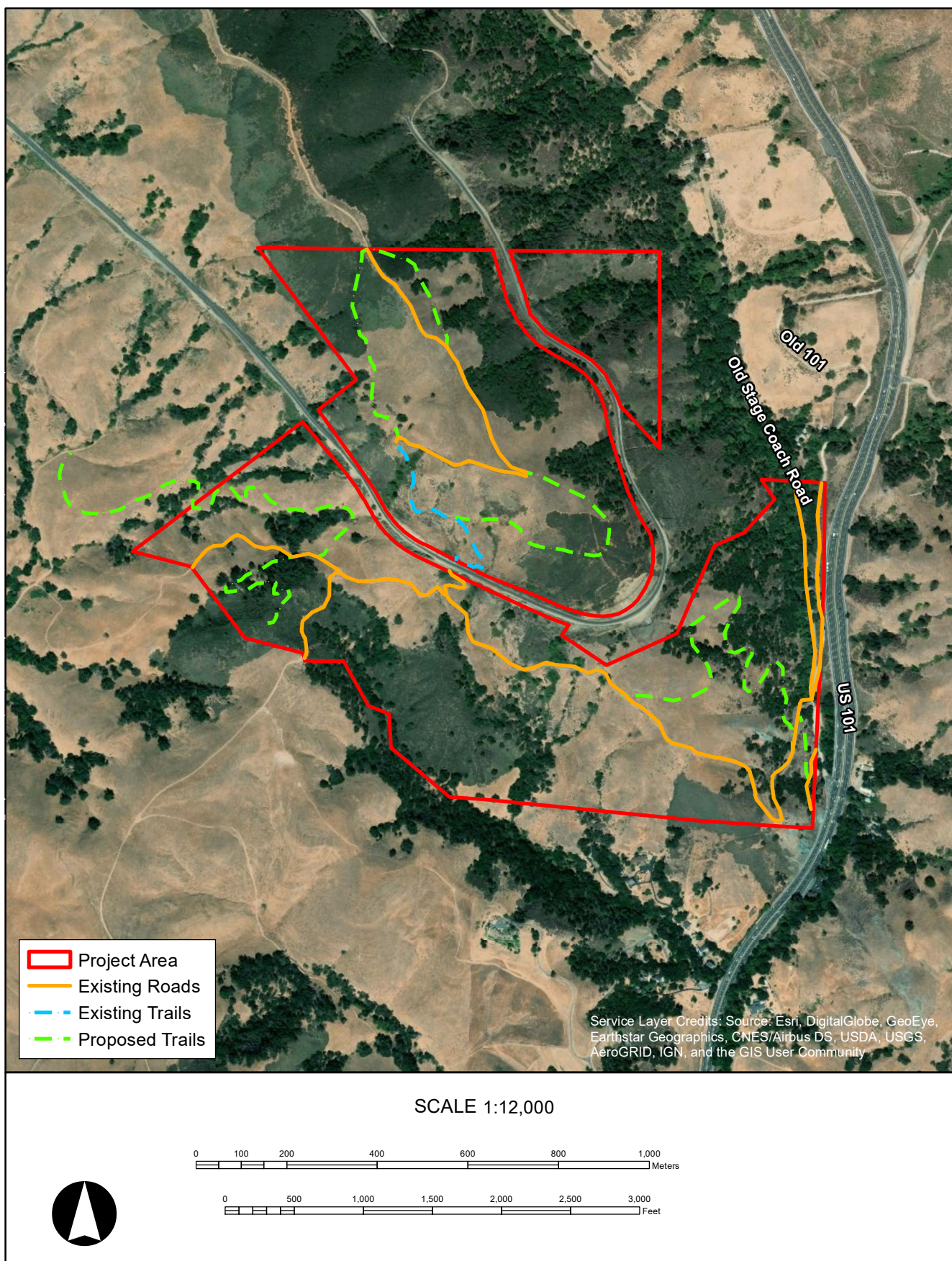
Figure 1-2 Project area on the USGS San Luis Obispo and Lopez Mountain 7.5-minute quadrangles.





**Figure 1-3 Aerial view of the Project area.**





**Figure 1-4 Project area with proposed and existing trails and roads.**

field survey; Philip Clarkson co-authored this report. Æ Staff Archeologist Kelli Wathen (M.A.) communicated with Native American representatives and performed a records search of the Native American Heritage Commission's (NAHC) Sacred Lands Inventory.

### **1.3 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 (OHP 1990). This document consists of six chapters. Following this introduction, Chapter 2 describes the environmental and cultural setting of the Project 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 contains a summary and recommendations. A complete listing of references cited is provided in Chapter 6. Appendix A presents the results of the records search and Appendix B contains the documentation of communication with the Native American Heritage Commission and local tribal representatives. Appendix C contains the California Department of Parks and Recreation (DPR) documentation of the historical structure in the Project area.

## ENVIRONMENTAL AND CULTURAL CONTEXT

### 2.1 NATURAL ENVIRONMENT

San Luis Obispo lies within a varied topographic area comprised of rugged hillside and coastal valleys. The area lies within the southern extent of the Coast Ranges geologic province, formed by pressure between the North American and Pacific tectonic plates that created a series of northwest-southeast trending ridges and valleys and raised the coastline. Local coastal terraces were formed through this 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 Project area is at the base of Cuesta Grade, which is a part of a volcanic intrusive complex reaching from south of San Luis Obispo out to the Pacific Ocean.

San Luis Obispo's 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 San Luis Obispo range from 47 to 71 degrees Fahrenheit, August is the warmest month and December is the coldest. Precipitation occurs primarily as winter rain between November and March, and the wettest month is usually February. Mean annual precipitation in San Luis Obispo is 19.02 inches (U.S. Climate Data 2019).

Natural habitats and vegetation communities of San Luis Obispo County include valley live oak, coast live oak woodland, mixed chaparral communities and central coastal scrub in the interior mountains and valleys. Coastal prairies, dunes, oak woodlands and intertidal zone border the Pacific Ocean. Localized habitats include willow, bay laurel, sycamore and mixed riparian vegetation along waterways. Native bunchgrass, and nonnative grasslands and agricultural areas are dominant throughout the County (Kuchler 1988).

### 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.

**Table 2-1 (continued)**  
**Regional Chronology of the Central Coast**

<b>Period</b>	<b>Years B.C./A.D.</b>	<b>Calibrated Years B.P.</b>
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, bipoined 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; Pias 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 (Coddling 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 (Coddling 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 Project 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 Project lies specifically 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). Various lines of historical and archaeological evidence indicate that the general population density in the northern Chumash region was far less at the time of European contact than in earlier prehistoric times, and the Chumash population at Mission San Luis Obispo de Tolosa was never as high as at the more southerly missions at Santa Barbara, Lompoc, and Santa Ynez (Greenwood 1978). The Native American population at Mission San Luis Obispo reached its peak of 919 in 1803, as most of the Northern Chumash left their native villages and moved into the mission or its outposts. By the time of secularization in 1834, missionization, disease, and destruction of the native subsistence base had forced the Chumash to give up most of their traditional lifeways. Only 170 Chumash remained at the mission in 1838.

## **2.4 HISTORY OF SAN LUIS OBISPO**

### **2.4.1 San Luis Obispo County**

The first Europeans the Chumash encountered were Spanish explorers in the sixteenth century. In 1587, Pedro de Unamuno landed his ship in Morro Bay and explored inland to San Luis Obispo. The Gaspar de Portolá expedition likely passed through Oceano in 1769, and Juan Bautista de Anza followed practically the same route as Portolá in 1774 and 1776 (Hoover et al. 1990:359).

Mission San Luis Obispo de Tolosa was founded in 1772 by Padre Junipero Serra. This site was selected for its level lands and “two little arroyos which contained water with sufficient lands that with little trouble . . . could be irrigated from them” (Palóu 1926). Father Joseph Caveller quickly constructed a small wooden chapel that also served as a shelter. In 1774, a more permanent church with adobe foundations and a superstructure of shaved limbs and tules was erected. In 1776, Northern Chumash damaged the mission buildings by shooting burning arrows into the roofs thatched with tule (Hoover et al. 1990:360). An adobe church replaced the original chapel in 1794. The native population declined rapidly. In 1803 there was a peak of 919 Native Americans residing at the mission, but by 1838 the population had declined to 170. According to the Roll of 1928 compiled by the Bureau of Indian Affairs, only four Native Americans living at the time claimed to be survivors of San Luis Obispo Mission Indians (Greenwood 1978:521).

California became a Mexican territory in 1822. Unlike their Spanish predecessors, the Mexican authorities opened California 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 (Hackel 1998). 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 at that time mission lands were not available. Such 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 on prime California lands and redistributed the mission estates to private individuals in the form of land grants. During the early and mid-1840s, the former mission lands of the county were carved up into large ranchos, each totaling several thousand acres (Krieger 1988:41–43). Some of the recipients of these Mexican land grants were Yankee sea captains, including William Dana and John Wilson, who had established themselves in the San Luis Obispo area in the previous decades.

After the mission was secularized in 1835, mission lands were divided into land grants and influential families were given the largest grants (Morrison and Haydon 1917:35). The Bear Flag Revolt, which occurred in 1846, resulted in California’s independence from Mexico and control of the territory soon fell into the hands of the United States (Krieger 1988). Rancho owners soon discovered the need to defend their title 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 mainly interested in the riches to be found in the gold fields of the Sierra Nevada. Newcomers were able to find some semblance of the culture they left behind in the northern part of the state and the San Francisco Bay area, but Southern California was seen as a wild, untamed country full of lawlessness. As a result, the

population of newly formed San Luis Obispo County grew slowly. The 1850 census listed 336 residents, but ethnicity was not recorded. However, over 230 were born in California, suggesting Native American and/or Mexican heritage. Of the remainder, 55 were born in Mexico, 20 were born in America, and 26 were European immigrants. The population of San Luis Obispo County would remain relatively unchanged throughout the 1850s when Henry Miller observed 150 houses in the area inhabited primarily by Native Americans and Mexicans (Miller 1985).

As with many regions, commercial and urban growth in San Luis Obispo County was intimately intertwined with the development of the transportation network. The earliest route between San Luis Obispo and the northern part of the county was the El Camino Real, which traversed the Cuesta Pass and began as a horse and foot path built by Spanish explorers and missionaries in the late eighteenth century (Caltrans 1995:4, Appendix 1). The discovery of Cuesta Pass was pivotal to the growth of the area as a historically significant transportation corridor (Caltrans 1995: Appendix 1). El Camino Real connected the California missions and was later widened to accommodate wheeled vehicles and increased traffic. This route became known as the Padre Road and in the 1860s and 1870s was used as the main route for the Overland Mail Company (Caltrans 1995:4). The Overland Mail Company began using the Padre Road in 1861, connecting San Diego to Monterey and improving communication, transportation, and the economics of the area (Caltrans 1995: Appendix 1, Appendix 4).

In 1876, the County began constructing County Road Number One, also known as Old Stagecoach Road. It remained in service until 1915 when the California Highway Commission approve the construction of State Route 2, or the Coast Highway (Caltrans 1995:4). State Route 2 was made from Portland cement concrete and the route paralleled Old Stagecoach Road and portions of Padre Road (Caltrans 1995: Appendix 1). The route was used until construction of the modern Coast Highway, US 101, in 1937 (Caltrans 1995:4, Appendix 4). US 101 eliminated the dangerous curves of the previous highways and improved the grade in the steepest areas. It is believed that Padre Road was used as an access road during construction of US 101 (Caltrans 1995: Appendix 1). Each subsequent highway alignment destroyed much of the historic fabric of the previous highways, either by building on top of them, or using materials for the next highway. Each highway employed the newest advances in technology and road building.

Despite the brisk pace of business, a large part of the Central Coast was still relatively isolated from the rest of the state in the early 1890s. Travel between San Luis Obispo and Los Olivos was made easy and affordable by the Pacific Coast Railroad Company (PCRC); however, before 1894, reaching destinations outside the region meant riding the stagecoach to Templeton or Santa Barbara to get to the Southern Pacific Railroad or, alternatively, taking a steamer out of Port Harford in Avila Beach, bound for San Francisco or one of the other ports of call along the California coast (Best 1992:42; Tognazzini 1991).

Much of that changed when the Southern Pacific Railroad rolled into San Luis Obispo in 1894. The Oregon Improvement Company, which was reorganized as the Pacific Coast Company in 1897, now faced competition from the unquestioned leader of the rail industry. By 1901, when the Southern Pacific reached Santa Barbara, thereby establishing a continuous line between San Francisco and Los Angeles, passenger traffic out of Port Harford all but evaporated (Best 1992:51). In terms of freight business and intraregional passenger travel, however, the Southern

Pacific and the PCRC not only coexisted for many years but formed an amicable relationship. The two railroads coordinated their time tables to facilitate interrail transfers, and a spur line was built along South Street between the PCRC depot and the Southern Pacific depot between Marsh and Higuera streets on Johnson Avenue. The PCRC enjoyed some of its best freight years during the latter part of the 1890s (Tognazzini 1996, 1999).

With the advent of the automobile age and the construction of US 101 through town, San Luis Obispo became a favorite overnight stop for motorists traveling between the San Francisco Bay area and southern California. Motels and car-related businesses (e.g., gas stations, repair shops) sprang up at the southwest and northeast ends of the town.

The city's population swelled to 8,500 people in 1926, and in the following year the National Guard founded Camp Merriam on 2,000 acres on the northern outskirts of town. This became a U.S. Army infantry and artillery training camp known as Camp San Luis between 1940 and 1941. Perhaps the most visible growth occurred toward the end of World War II, when military installations established in response to the war artificially inflated the local economy. By 1944 the population had reached 16,000 people. Many of those were soldiers who returned permanently to San Luis Obispo after the war (Krieger 1988:102–104), and the city's growing population pushed out beyond the borders of town.

#### **2.4.2 The Miossi Family**

In addition to being a transportation corridor, Cuesta Canyon was used primarily for grazing and farming. Bernardo Miossi immigrated to California in 1866 from Canton Ticino, Switzerland. He arrived in San Francisco, unable to speak English and took any job he could get before purchasing some cows and starting a milk route (Morrison and Haydon 1917:973). In 1883 Miossi married Eliza Martella, also of Canton Ticino and moved to San Luis Obispo County where they purchased 1,000 acres in the Arroyo Grande area. They subsequently purchased 1,300 acres from John M. Price in Price Canyon in 1891 and 1,200 acres of the Pacheco Ranch in Los Osos, adjacent to Spooner Ranch in Montaña de Oro (Morrison and Haydon 1917:973–4). In 1917, the Miossi family purchased La Cuesta Ranch from Frank Tate and used the land to extend their dairy cattle operation. La Cuesta Ranch occupied land at the base of Cuesta Grade, continuing north and west of the Cuesta Grade, where the Project area currently lies. Bernardo and Eliza had two sons, Harold and Bernie. Harold took over the ranching operation from his father and continued running the ranch until 1960 when he was appointed as the California Probate Referee for the County (Harold J. Miossi Charitable Trust 2019).



## **3 METHODS**

### **3.1 RECORDS SEARCH**

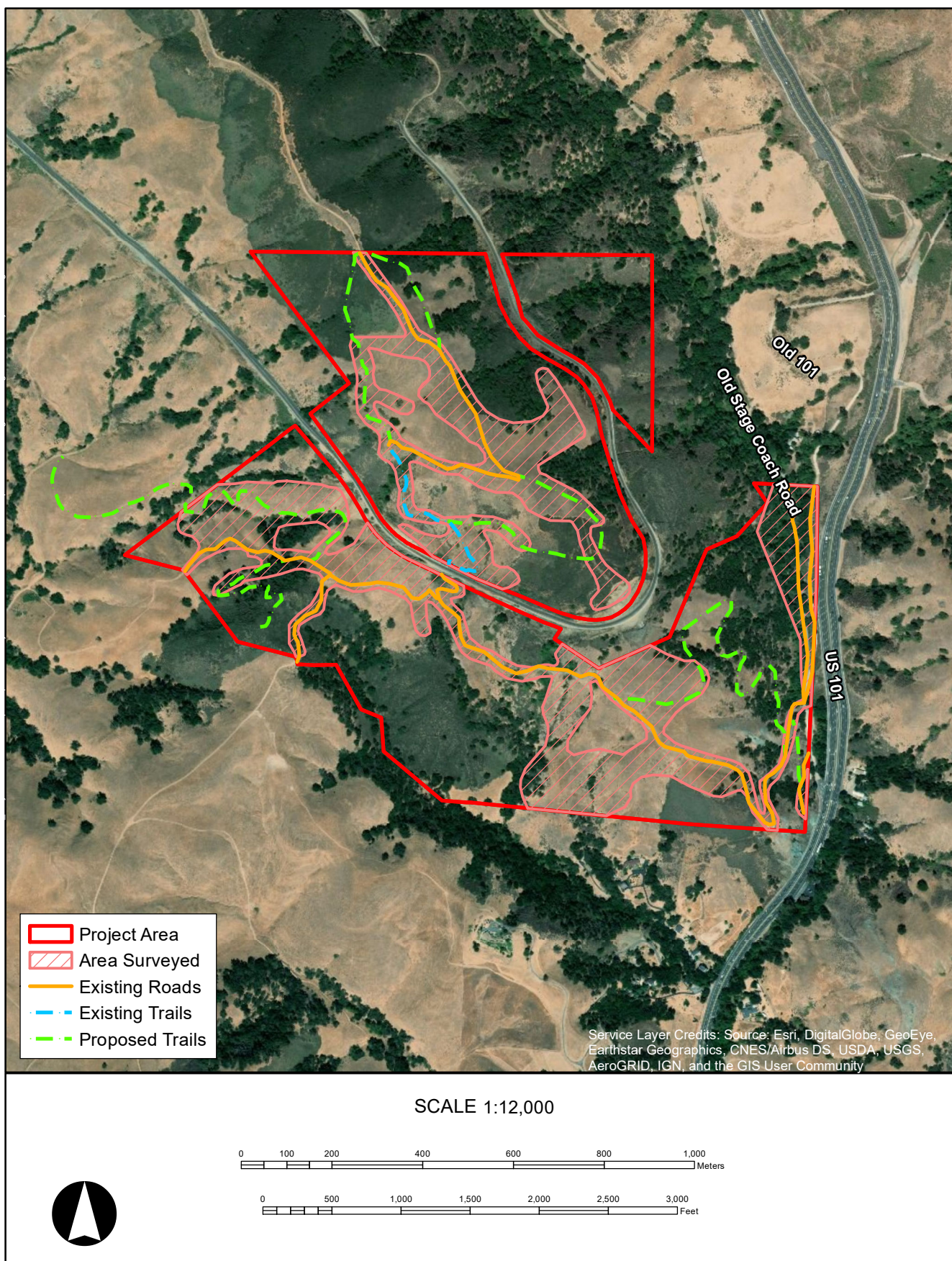
On August 23, 2019, Æ conducted a records search for the Project at the Central Coast Information Center (CCIC) of the California Historical Resources Information System (CHRIS), housed at the University of California, Santa Barbara. Through examination of maps, site records, and archaeological reports, the records search identified previous archaeological surveys, previously recorded cultural resources, and data recovery projects within 0.25-mile of the Project (Appendix A). Additionally, Æ staff reviewed the State Historic Property Data Files, National Register of Historic Places, 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.

### **3.2 NATIVE AMERICAN COMMUNICATION**

Æ contacted the California Native American Heritage Commission (NAHC) on August 22, 2019 to determine whether any sites recorded in the NAHC's Sacred Lands File occurred in or near the Project area. On September 5, 2019 the NAHC supplied a list of local Native American individuals and/or groups with interests and knowledge about the area (Appendix B). Those included on the list were contacted by letter and telephone to request comments or information about the Project area (see Section 4.3).

### **3.3 ARCHAEOLOGICAL RESOURCES INSPECTION**

Æ Staff Archaeologists Philip Clarkson and Neil Rhodes completed a pedestrian survey of the Project area September 9 to 11, 2019. Due to the rugged terrain and safety concerns posed by steep slopes, a targeted survey strategy was used that focused on roads, proposed trails, flat areas, rock outcrops, ridgelines, and areas close to water (Figure 3-1). Special attention was given to rodent burrows and areas with disturbed soils. Dense chaparral or slopes greater than 45 degrees were not surveyed. Clarkson and Rhodes used a Trimble Global Positioning System (GPS) unit with submeter accuracy to plot cultural resources. Photographs were taken with a digital camera.



**Figure 3-1** Survey coverage area.

## 4 FINDINGS

### 4.1 PREVIOUS CULTURAL RESOURCE STUDIES

The CCIC records search identified 8 previous cultural resource investigations within the 0.25-mile search radius (Appendix A). Four cultural resource investigations have occurred within portions of the Project area (Table 4-1).

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

Report No.	Date	Author	Title	Location
SL-00438	1984	Haversat, T., G. Breschini	<i>Preliminary Archaeological Reconnaissance of Twenty-Nine Proposed Early Warning Siren Locations, San Luis Obispo County, California.</i>	Outside Project area.
SL-02023	1991	Gibson, R.	<i>Results of Phase One Archaeological Surface Survey for the Pacific Bell Fiber Optics Cable Project between Santa Margarita and San Luis Obispo, CA</i>	Bisects southern portion of Project area.
SL-02631	1994	Ronami, J.	<i>Archaeological Survey Report for the Proposed Route 101/Cuesta Grade Improvement Project</i>	Outside Project area.
SL-03701	1995	Caltrans	<i>Historic Property Survey Report for the Route 101 Cuesta grade Improvement Project from 1.1 miles North of Reservoir Canyon Road to Cuesta Grade Overhead in San Luis Obispo County, California.</i>	Bisects eastern portion of the Project area.
SL-03834	1995	Gibson, R.	<i>Phase One Archaeological Surface Survey for the UNOCAL Pipeline Replacement Project along Cuesta Ridge and Highway 101, South of Santa Margarita, San Luis Obispo, CA</i>	Bisects eastern portion of the Project area.
SL-03934	1999	McGowan, D.	<i>Cultural Resources Inventory Report for Williams Communication, Inc. Fiber Optic Cable Installation Project, San Luis Obispo to Bakersfield Volume I</i>	Outside Project area.
SL-03934A	1999	—	<i>Appendix A. Cultural Resource Monitoring Plan</i>	Outside Project area.
SL-03934B	1999	—	<i>Appendix B. Native American Contacts; Appendix C Cultural Resource Site Record Forms (removed)</i>	Outside Project area.
SL-04884	1999	Mason, R.	<i>Cultural Resources Survey and Paleontologic Resources Literature Review Report for Level 3 Long Haul Fiber Optic Project: Cuesta Grade Workaround Northeast of San Luis Obispo, San Luis Obispo, California</i>	Bisects eastern portion of Project area.
SL-06460	2009	Linder, M., M. Linder, B. Price	<i>Cultural Resources Survey for the Atascadero-San Luis Obispo 70kV Power Line Maintenance and Upgrade Project, San Luis Obispo County, California</i>	Outside Project area.

Several of these previous studies (Gibson 1991, 1995; Mason 199; Caltrans 1995) covered portions of the Project area. Robert Gibson (1991) surveyed a 5-mile corridor adjacent to US 101

for a fiber-optic cable installation project and identified two archaeological sites and three historic isolates. A portion of Gibson's survey area bisects the most south eastern portion of the Project area on steep terrain just west of US 101; however, none of the recorded resources are within the Project area. Additionally, in 1995 Gibson surveyed a 6-mile segment of UNOCAL pipeline and identified four historic isolates. A portion of this survey entered the Project area following Stage Coach Road. None of the recorded isolates are in the Project area. Roger Mason (1999) surveyed a 6.5-mile section for a fiber-optic cable installation project adjacent to US 101 and did not identify any cultural resources. Mason's survey covered Stage Coach Road and most of eastern portion of the Project area.

Caltrans' (1995) survey for the Cuesta Grade Improvement project evaluated 1 prehistoric site, 3 historic transportation routes, and 13 structures. The survey area transected the eastern portion of the Project area covering a small portion of San Luis Creek and the steep terrain adjacent to US 101. Caltrans (1995) evaluated the eligibility of Padre Road and Old Stage Coach Road and found them ineligible for the NRHR.

The remaining studies were conducted within a 0.25 mile of the Project area. Haversat and Breschini (1984) completed a survey for 29 early warning sirens, one of which, is south of the Project area. John Romani (1994) surveyed a section adjacent to US 101 for a Caltrans US 101 improvement project and recorded a historic debris site northeast of the Project area. Dana McGowan (1999) conducted a survey for fiber-optic cable installation project and recorded four resources east of the Project area. Report numbers SL-03934A and SL-03934B are appendixes to McGowan's report. Applied EarthWorks (Linder et al. 2009) conducted a 15.5-mile survey for a transmission line preplacement project along US 101 and identified six previously unknown cultural resources. The resources included two historical sites, three historical features, and one prehistoric isolate outside of the Project area.

## 4.2 PREVIOUSLY RECORDED RESOURCES

Record search results found no previously recorded archaeological resources recorded within the Project area; however, three archaeological resources are within 0.25-mile of the Project area (Table 4-2).

**Table 4-2**  
**Previously Recorded Resources within 0.25 mile of Project Area**

Primary No.	Type	Age	Recorded By	Description
P-40-001538	Site	Historic	1992 John Romani	Historic Habitation Materials
P-40-041212	Linear Feature	Historic	2008 Marc Linder	Power Poles
P-40-041214	Structure	Historic	2009	Public Utility Building

## 4.3 NATIVE AMERICAN COMMUNICATION

The NAHC responded to Æ's information request on September 5, 2019 noting that its search of the Sacred Lands File indicated the presence of Native American traditional sites/places in the immediate Project 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 a notification letter on September 6, 2019 to individuals on the NAHC list informing them of the nature and intent of the Project and soliciting comments or concerns. Follow-up phone calls were conducted on September 19, 2019. Table 4-3 identifies each individual or group on the list that was contacted and provides the responses to the request for information.

**Table 4-3**  
**Native American Communication Results**

Name	Tribe/Group	Comments
Patrick Tumamait	Barbareno/Ventureno Band of Mission Indians	Phone conversation 9/11/2019. He has no concerns.
Elenor Arrellanes	Barbareno/Ventureno Band of Mission Indians	Phone conversation on 9/19/2019. Defers to Mona Tucker.
Julie Tumamait-Stenslie	Barbareno/Ventureno Band of Mission Indians	Left voicemail on 9/19/2019.
Raudel Banuelos	Barbareno/Ventureno Band of Mission Indians	Left voicemail on 9/19/2019.
Julio Quair	Chumash Council of Bakersfield	Left voicemail on 9/19/2019.
Gino Altamirano	Coastal Band of the Chumash Nation	No phone number provided. Email sent 9/19/2019.
Fred Collins	Northern Chumash Tribal Council	Left voicemail on 9/19/2019.
Fredrick Segobia	Salinan Tribe of Monterey, San Luis Obispo Counties	Phone conversation 9/18/2019. Requested a site visit prior to the start of the project.
Mark Vigil	San Luis Obispo County Chumash Council	Left voicemail on 9/19/2019.
Kenneth Kahn	Santa Ynez Band of Chumash Indians	Left voicemail on 9/19/2019.
Donna Haro	Xolon-Salinan Tribe	Left voicemail on 9/19/2019.
Karen White	Xolon-Salinan Tribe	Conversation on 9/19/2019. Email on 9/25/19 stated she had no concerns about the project.
Mona Tucker	<i>yak tityu tityu yak tilhini</i> Chumash Tribe	Conversation on 9/19/2019. Requested that project staff receive cultural sensitivity training to look for resources.

Æ's Native American communication efforts resulted in two requests made by local tribal representatives. Frederick Segobia of the Salinan Tribe of Monterey and San Luis Obispo Counties requested a site visit prior to the start of any Project activities. Mona Tucker of the *yak tityu tityu yak tilhini* Chumash Tribe requested that any Project staff working on site receive cultural resource sensitivity training to train staff on how identify cultural resources. Karen White of the Xolon-Salinan Tribe will contact Æ once she has had a chance to review the Project. The remaining representatives did not respond to Æ's communication efforts.

#### **4.4 ARCHAEOLOGICAL INSPECTION**

Æ Staff Archaeologists Philip Clarkson and Neil Rhodes conducted a pedestrian survey of the 266-acre Project area September 9 to 11, 2019. The Project area spans from the base of Cuesta Grade to the north and west, and encompasses coastal valley grasslands, live oak groves, riparian zones, and chaparral communities. Visibility throughout the Project area was poor to fair due to



high grasses and dense chaparral; however, rock outcroppings and live oak groves provided higher visibility. Due to the rugged terrain and safety concerns posed by steep slopes, a targeted survey strategy was used that focused on roads, proposed trails, flat areas, rock outcrops, ridgelines, and areas close to water (see Figure 3-1).

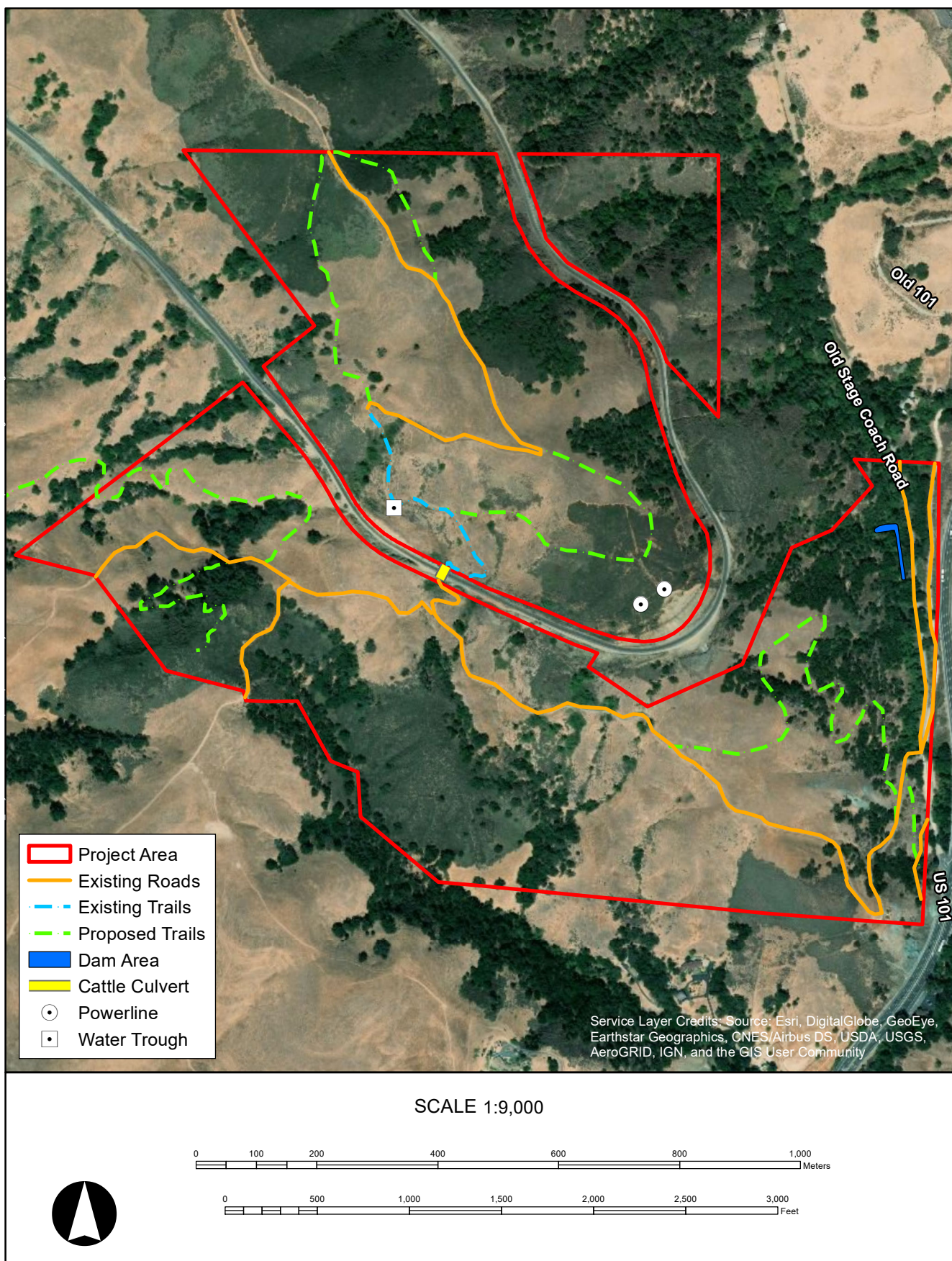
While Æ targeted landforms appropriate for prehistoric sites, no prehistoric cultural materials were encountered during this study. However, Æ's field crew observed several potentially historic resources and features such as power poles, old roads, cattle trough, culvert, and a dam (Figure 4-1). The power poles, old roads, cattle trough, and culvert are noted below but not recorded as these resources lack clear temporal associations and it unknown if they are historic or modern. Only the historic dam was recorded on California of Department of Parks and Recreation (DPR) forms as it is clearly historic and part of the City's historic water infrastructure system (see Section 4.4.2; Appendix C).

#### **4.4.1 Noted Resources**

Æ noted an abandoned powerline that follows the railroad right of way and occasionally crosses into the Project area. The 9-inch diameter poles support double cross beams with 20-line capacity (Figure 4-2). Most of the poles have glass insulators, one pole has porcelain insulators. The power lines are no longer in use (Robert Hill pers. comm. 2019, City of San Luis Obispo).

During fieldwork Æ also encountered a cattle water trough that is no longer in use. It is a circular metal repurposed container with "REUSABLE CONTAINER DO NOT DESTROY" stenciled on one side in yellow paint (Figure 4-3). Additionally, a large culvert that crosses under the railroad tracks was observed (Figure 4-4). The Miossi family used the culvert to allow cattle to access the northern area of the property without crossing over the railroad tracks (Robert Hill pers. comm. 2019, City of San Luis Obispo). There is an associated concrete pad and fence line with two railroad ties and two railroad rails as posts on the western side of the railroad tracks.

Finally, the Project area includes segments of Old Stage Coach Road and the 1915 alignment of US 101, also called Old 101. These roads were evaluated by Caltrans (1995) and were found ineligible for the NRHP. According to Caltrans (1995), Padre Road was paved over to create Old Stage Coach Road, approximately 0.36 miles is within the eastern portion of the Project area. The segment within the Project area, will be used for Project parking, is concrete and used for access to residences outside the Project area. Old Stage Coach Road continues north up Cuesta Canyon ending at Cuesta Ridge. Approximately 0.28 miles of Old 101 is within the eastern portion of the Project area. The road is packed dirt and is also used for residential access before continuing up the canyon and crossing over US 101 midway up the Cuesta Grade. This road will not be used for the Project.



**Figure 4-1 Potential historic resources identified within the Project area.**





**Figure 4-2** Power pole, facing west.



**Figure 4-3** Cattle trough, facing east.





**Figure 4-4** Culvert undercrossing, facing east.

#### **AE-4087-01H**

AE-4087-01H is a historic dam and associated infrastructure across San Luis Creek that was part of the initial water system supplying water to the City (Appendix C). A dam removal project in conjunction with a salmonid restoration project resulted in the demolition of a 10-foot section of the dam to allow salmon to pass. Southeast of the dam is a concrete two-sectioned settling pond with a wooden cover. A 10-inch diameter steel pipe with lead solder extends out of the settling pond with a wooden support structure before going underground. A shutoff valve is south of the settling pond placed directly before the pipe goes underground (Figures 4-5 through 4-8).



**Figure 4-5** AE-4087-01H dam and associated infrastructure within the Project area.





**Figure 4-6** AE-4087-01H, Western segment of dam, facing east.





**Figure 4-7** AE-4087-01H, concrete settling pond, facing south.





**Figure 4-8** AE-4087-01H, steel pipeline, facing south.



## 5 SUMMARY AND RECOMMENDATIONS

### 5.1 RESULTS

Æ completed a Phase 1 cultural resource study in support of the proposed Miossi Open Space to be opened to the public for recreational use (Project). The property has a network of existing dirt roads and trails, and the City is proposing additional hand-cut trails for hiking. The Project area includes 266 acres made up of APNs 070-271-033, 070-271-034, 073-341-040, and 073-341-041. The Project area is on the west side of the Cuesta Grade, beginning at Old Stage Coach Road at the foot of Cuesta Grade, and running west towards lands owned by Cal Poly and the Miossi family. The Project is in the City's greenbelt and is owned by the City but is outside City limits. Southern Pacific Railway tracks bisect the Project area; the railroad and the right of way are not part of the Project.

Æ's study included a records search of the CCIC and Sacred Lands File of the NACH, outreach to local Native American tribal representatives, and a pedestrian surface survey. Tribal representatives requested a site visit and cultural sensitivity training for staff prior to the start of construction. Background research found four previous studies have covered portions of the Project area, but no previously recorded sites are mapped within the Project area. However, three previously recorded resources, P-40-001538, -041212 and -041214, have been recorded within the 0.25-mile search radius of the Project area.

Æ's pedestrian survey encountered several possibly historic-era miscellaneous features and recorded a historic dam feature (AE-4081-01H). The miscellaneous resources include a powerline that follows the railroad right of way and occasionally crosses into the Project area and a cattle water trough that is no longer in use. Additionally, there is a large culvert under the railroad tracks that the Miossi family used to allow cattle to access to the north portion of the property. AE-4087-01H is a historic dam and associated infrastructure over San Luis Creek that was part of the initial water system supplying water to the City. AE-4087-01H was formally recorded but not evaluated at this time (Appendix C).

### 5.2 RECOMMENDATIONS

Æ's study did not identify any prehistoric archaeological sites or features; no additional archaeological fieldwork is recommended. However, Æ recommends an evaluation of the dam and associated infrastructure (AE-4087-01H) to determine if this resource is eligible for the CRHR. Currently this resource will not be affected by the Project; however, due to the potential for this resource to be significant under CEQA, the City may need to assess the level any impacts on this resource in the future.

Along with the dam, several potentially historic isolated resources were noted (i.e. power poles, old road segments, a cattle trough) in the Project area. These miscellaneous features and AE-4087-01H have the potential of being vandalized by the public when the trails open. The power poles contain glass insulators both within the Project area and directly adjacent to the Project area. Glass insulators are considered collector items and there is high potential that



individuals will take them. Additionally, AE-4087-01H (dam on San Luis Creek) is directly west of Stage Coach Road and can be viewed from the road. The fence along the creek has been cut and unauthorized trails lead directly to the dam and associated infrastructure. Therefore, AECOM recommends that during the planning phase of the Project the City take into consideration ways to protect these resources from vandalism and theft.

### **5.2.1 Inadvertent Discoveries**

Due to the lack of ground visibility, there is potential for encountering prehistoric or historic-period materials not identified during the current study. Prehistoric materials may include chert flaked stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing fire-altered rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones). Historic-period materials might include stone, concrete, wood or adobe building foundations, corrals, and walls; filled wells or privies; mining features; and deposits of metal, glass, and/or ceramic refuse. If any of these materials are found during the course of construction, ground-disturbing activities should be halted, and a qualified archaeologist should be contacted to determine if materials are isolated finds or part of a larger archaeological deposit. If an archaeological site is identified, then the resource should be evaluated for significance under CEQA and further treatment measures may be required.

If human remains are discovered during Project construction, work must stop at the discovery location and any nearby area suspected to contain human remains (PRC 7050.5). The San Luis Obispo Coroner must be contacted to determine whether the cause of death should be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (PRC 5097). The coroner will contact the NAHC. The NAHC will contact the most likely descendant(s) who will be afforded the opportunity to recommend means for treatment of the human remains following protocols in PRC 5097.98.

## 6 REFERENCES

- Agenbroad, Larry D., John R. Johnson, Don Morris, and Thomas W. Stafford, Jr.  
2005 Mammoths and Humans as Late Pleistocene Contemporaries on Santa Rosa Island. *Proceedings of the Sixth California Islands Symposium*:3–7. National Park Service, Institute for Wildlife Studies.
- Arnold, Jeanne E.  
1992 Complex Hunter-Gatherer-Fishers of Prehistoric California: Chiefs, Specialists, and Maritime Adaptations of the Channel Islands. *American Antiquity* 57:60–84.
- Best, Gerald M.  
1992 *The Pacific Coast Company*. Signature Press, Wilton, California.
- California Department of Transportation (Caltrans)  
1995 *Historic Property Survey Report for the Route 101 Cuesta Grade Improvement Project From 1.1 Miles North of Reservoir Canyon Road to Cuesta Grade Overhead in San Luis Obispo County, California*. California Department of Transportation Environmental Planning Branch. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.
- Codding, Brian F., Terry L. Jones, Roshanne S. Bakhtiary, Samantha Law, Judith F. Porcasi, and Ken Gobalet  
2013 *Archaeological Investigations at Tom's Pond (CA-SLO-1366/H), Diablo Canyon Lands, San Luis Obispo County, California*: Final Report of the 2011 Cal Poly Field School and Mitigation Program. California Polytechnic State University Corporation, San Luis Obispo.
- Enright, Erin A.  
2010 Prehistoric Coastal Adaptations at CA-SBA-694, Vandenberg Air Force Base, California. Paper presented at the 44th Annual Meeting of the Society for California Archaeology, Riverside.
- Erlandson, Jon M.  
1994 *Early Hunter-Gatherers of the California Coast*. Plenum Press, New York.
- Erlandson, Jon M., and Roger H. Colten (editors)  
1991 *Hunter-Gatherers of Early Holocene Coastal California*. Perspectives in California Archaeology, Jeanne E. Arnold, general editor. Institute of Archaeology, University of California, Los Angeles.
- Erlandson, Jon M., Theodore G. Cooley, and Richard Carrico  
1987 A Fluted Projectile Point Fragment from the Southern California Coast: Chronology and Context at CA-SBA-1951. *Journal of California and Great Basin Anthropology* 9:120–128.

Erlandson, Jon M., Douglas J. Kennett, Lynn Ingram, Daniel A. Guthrie, Don P. Morris, Mark A. Tveskov, G. James West, and Phillip L. Walker

- 1996 An Archaeological and Paleontological Chronology for Daisy Cave (CA-SMI-261), San Miguel Island, California. *Radiocarbon* 38(2):355–373.

Farquhar, Jennifer, Ryan Brady, Tom Garlinghouse, and John Ellison

- 2011 *Archaeological Investigations for the Nacimiento Water Project, San Luis Obispo County, California* Albion Environmental. Inc., general editor. County of San Luis Obispo, Santa Cruz, California.

Gibson, Robert

- 1991 *Results of Phase One Archaeological Surface Survey for the Pacific Bell Fiber Optics Cable Project between Santa Margarita and San Luis Obispo, CA*. Archaeological Consulting. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.
- 1995 *Phase One Archaeological Surface Survey for the UNOCAL Pipeline Replacement Project along Cuesta Ridge and Highway 101, South of Santa Margarita, San Luis Obispo Co, CA*. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.
- 1996 *Results of Archaeological Monitoring for Unocal Soil Testing Program along Pipelines near Santa Margarita, San Luis Obispo County, California*. Gibson's Archaeological Consulting, Paso Robles, California. Submitted to Gunner Bay, Pismo Beach, California.

Glassow, Michael A.

- 1990 *Archaeological Investigations on Vandenberg Air Force Base in Connection with the Development of Space Transportation System Facilities*, with contributions by G. A. Batchelder Jeanne E. Arnold, Richard T. Fitzgerald, Brian K. Glenn, D. A. Guthrie, Donald L. Johnson, and Phillip L. Walker. Department of Anthropology, University of California, Santa Barbara. Submitted to U.S. Department of the Interior, National Park Service, Western Region Interagency Archeological Services Branch, San Francisco, Contract No. CX-8099-2-0004.
- 1996 *Purisimeño Chumash Prehistory: Maritime Adaptations along the Southern California Coast*. Case Studies in Archaeology. Harcourt Brace College Publishers, Fort Worth, Texas.

Glassow, Michael A., and Larry R. Wilcoxon

- 1988 Coastal Adaptations near Point Conception, California, with Particular Regard to Shellfish Exploitation. *American Antiquity* 53:36–51.

Graumlich, Lisa J.

- 1993 A 1000-Year Record of Temperature and Precipitation in the Sierra Nevada. *Quaternary Research* 39(2):249-255.

Greenwood, Roberta S.

- 1972 *9000 Years of Prehistory at Diablo Canyon, San Luis Obispo County, California*. San Luis Obispo County Archaeological Society Occasional Paper No. 7 San Luis Obispo, California.
- 1978 Obispeño and Purisimeño Chumash. In *California*, edited by Robert F. Heizer, pp. 520–523. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Hackel, Steven W.

- 1998 Land, Labor, and Production. In *Contested Eden: California before the Gold Rush*, edited by Ramón A. Gutiérrez and Richard J. Orsi, pp. 111–146. University of California Press, in association with the California Historical Society, Sacramento. Heritage Discoveries, Inc.

Harold J. Miossi Charitable Trust

- 2019 About Harold Miossi, <https://www.miossicharitabletrust.org/about/>, accessed September 16, 2019.

Haversat, T. and G. Breschini

- 1984 *Preliminary Archaeological Reconnaissance of Twenty-Nine Proposed Early Warning Siren Locations, San Luis Obispo County, California*. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.

Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe

- 1990 *Historic Spots in California*, edited by Revised by Douglas E. Kyle. 4th ed. Stanford University Press, Stanford, California.

Johnson, John R.

- 1988 *Chumash Social Organization: An Ethnohistoric Perspective*, Department of Anthropology, University of California, Santa Barbara.

Jones, Deborah, Terry Jones, William Hildebrandt, Patricia Mikkelsen, and Kacey Hadick

- 2015 *Archaeological Investigations for the Los Osos Wastewater Project, San Luis Obispo County, California*. Far Western Archaeological Research Group, Inc., Davis, California. Prepared for the County of San Luis Obispo Public Works Office, San Luis Obispo, California.

Jones, Deborah, Patricia Mikkelsen, and Jack Meyer

- 2012 *Archaeological Study for Inadvertent Impacts to Sites CA-SLO-80/H, CA-SLO-1345, and CA-SLO-1346 for Operational Improvements along US 101, Pismo Beach, San Luis Obispo County, California*. Far Western Anthropological Research Group, Inc., general editor. Submitted to California Department of Transportation, District 5, San Luis Obispo, California, Davis, California.

Jones, Terry L., Kathleen Davis, Glenn Farris, Steven D. Grantham, Teresa W. Fung, and Betty Rivers

- 1994 *Toward a Prehistory of Morro Bay: Phase II Archaeological Investigations for the Highway 41 Widening Project, San Luis Obispo County, California*. Submitted to California Department of Transportation, Environmental Branch, San Luis Obispo.

Jones, Terry L., and Jennifer A. Ferneau

- 2002 Deintensification along the Central Coast. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 205–232. Perspectives in California Archaeology, Vol. 6. Cotsen Institute of Archaeology, University of California, Los Angeles, Social Sciences Division.

Jones, Terry L., Richard T. Fitzgerald, and Judith F. Porcasi

- 2008 The Cross Creek-Diablo Canyon Complex of South Central California: Mid-latitude Foragers at the Pleistocene-Holocene Boundary. *North Pacific Prehistory* 2:169–202.

Jones, Terry L., and Jennifer R. Richman

- 1995 On Mussels: *Mytilus Californianus* as a Prehistoric Resource. *North American Archaeologist* 16:33–58.

Jones, Terry L., Nathan E. Stevens, Deborah A. Jones, Richard T. Fitzgerald, and Mark G. Hylkema

- 2007 The Central Coast: A Midlatitude Milieu. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 125–146. AltaMira Press, Lanham, Maryland.

Jones, Terry L., and Georgie Waugh (editors)

- 1995 *Central California Coastal Prehistory: A View from Little Pico Creek*. Perspectives in California Archaeology, Vol. 3, Jeanne E. Arnold, general editor. Institute of Archaeology, University of California, Los Angeles.

Joslin, Terry, L.

- 2010 *Middle and Late Holocene Hunter-Gatherer Adaptations to Coastal Ecosystems along the Southern San Simeon Reef, California*. University of California, Santa Barbara.

Keeley, Lawrence

- 1988 Hunter-Gatherer Economic Complexity and “Population Pressure”: A Cross-Cultural Analysis. *Journal of Anthropological Archaeology* 7:373–411.

Kennett, Douglas J., B. Lynn Ingram, Jon M. Erlandson, and Phillip Walker

- 1997 Evidence for Temporal Fluctuations in Marine Radiocarbon Reservoir Ages in the Santa Barbara Channel, Southern California. *Journal of Archaeological Science* 24(11):1051–1059.

King, Chester D.

- 1990 *Evolution of Chumash Society: A Comparative Study of Artifacts Used for Social System Maintenance in the Santa Barbara Channel Region before A.D. 1804*. The



- Evolution of North American Indians, David Hurst Thomas, general editor. Garland, New York.
- Krieger, Daniel E.  
 1988 *Looking Backward into the Middle Kingdom: San Luis Obispo County*. Windsor Publications, Northridge, California.
- Kuchler, August W.  
 1988 The Map of the Natural Vegetation of California. In *Terrestrial Vegetation of California*, edited by M. Barbour and J. Major, pp. 909–938. California Native Plant Society, Special Publication 9.
- Landberg, Leif  
 1965 *The Chumash Indians of Southern California*. Southwest Museum Papers No. 2 Los Angeles, California.
- Lebow, Clayton G., Douglas R. Harro, Rebecca L. McKim, Charles M. Hodges, Ann M. Munns, Erin A. Enright, and Leeann G. Haslouer  
 2015 The Sudden Flats Site: A Pleistocene/Holocene Transition Shell Midden on Alta California's Central Coast. *California Archaeology* 7:265–294.
- Lichtenstein, Robert J., Barry A. Price, Erin A. Enright, Leeann Haslouer, Mary Clark Baloian, and Ann M. Munns  
 2014 *Emergency Data Recovery at CA-SLO-2686, Carrizo-Midway 230 kV Reconductoring Project Caliente Switching Station, San Luis Obispo County, California*. Applied EarthWorks, Inc., general editor. Prepared for Terra Verde Environmental Consulting. Submitted to Pacific Gas and Electric Company, San Luis Obispo, California.
- Linder, Megan, Marc Linder and Barry Price  
 2009 *Cultural Resources Survey for the Atascadero-San Luis Obispo 70 kV Power Line Maintenance and Upgrade Project, San Luis Obispo County, California*. Applied EarthWorks, Inc. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.
- Mason, R.  
 1999 *Cultural Resources Survey and Paleontologic Resources Literature Review Report for Level 3 Long Haul Fiber Optic Project: Cuesta Grade Workaround Northeast of San Luis Obispo, San Luis Obispo County, California*. Chambers Group. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.
- McGowan, Dana  
 1999 *Cultural Resources Inventory Report for William Communications, Inc. Fiber Optic Cable Installation Project, San Luis Obispo to Bakersfield, Vol. I*. Jones and Stokes Associates. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.

Miller, Henry

- 1856 *Account of a Tour of the California Missions*. Book Club of America, San Francisco. Reprinted 1985, in *Mission in the Valley of the Bears*, compiled and edited by Francis J. Weber, pp. 40–41. Libra Press, Hong Kong.

Milliken, Randall

- 2010 *Contact-Period Native California Community Distribution Model: A Dynamic Digital Atlas and Wiki Encyclopedia, Vol. 1: Introduction*. Far Western Anthropological Research Group, Inc., Davis, California.

Mills, William, Michael Rondeau, and Terry L. Jones

- 2005 A Fluted Projectile Point from Nipomo, San Luis Obispo County, California. *Journal of California and Great Basin Anthropology* 25:68–74.

Moratto, Michael J.

- 1984 *California Archaeology*. Academic Press, Orlando, Florida.

Moratto, Michael J., Clayton G. Lebow, Erin A. Enright, Robert R. Peterson Jr., Leeann G. Haslouer, Douglas R. Harro, and Ann M. Munns

- 2009 *Prehistoric Coastal Adaptation at CA-SBA-694 and CA-SBA-695 near Purisima Point, Vandenberg Air Force Base, Santa Barbara County, California* Applied EarthWorks, Inc., general editor. 30th Civil Engineer Squadron, Environmental Flight Cultural Resources Section (30 CES/CEVNC), Vandenberg Air Force Base, California, Lompoc, California.

Morrison, Anne L., and John H. Haydon

- 1917 *History of San Luis Obispo County and Environs, California, with Biographical Sketches of the Leading Men and Women of the County and Environs Who Have Been Identified with the Growth and Development of the Section from the Early Days to the Present*. Historic Record Company, Los Angeles, California.

Office of Historic Preservation (OHP)

- 1990 *Archaeological Resource Management Reports: Recommended Contents and Format*. California Department of Parks and Recreation, Sacramento.

Olson, Ronald L.

- 1930 *Chumash Prehistory*. University of California Publications in American Archaeology and Ethnology Vol. 28.

Palóu, Francisco

- 1926 *Historical Memoirs of New California by Fray Francisco Palóu, O.F.M.* Translated and edited from the archives of New Mexico by Herbert Eugene Bolton. Atheneum House, Boston.

Pletka, Scott, and Nicole Pletka

- 2004 *Proposal for CRHP Extended Phase I Survey and Phase II Test Excavations, Willow Road Extension Project, Community of Nipomo, County of San Luis Obispo*,

- California. LSA Associates, San Luis Obispo, California. Submitted to Department of Public Works, County of San Luis Obispo, San Luis Obispo, California.
- Pisias, Nicklas G.  
 1978 Paleooceanography of the Santa Barbara Basin during the Last 8000 Years. *Quaternary Research* 10(3):366–384.
- Price, Barry A.  
 2005 Fashionably Late: Chronological and Cultural Definitions of the Late Period on the Central California Coast. Paper presented at the 39th Annual Meeting of the Society for California Archaeology, Sacramento.
- Price, Barry A., Sandra S. Flint, and Kham N. Slater  
 1997 *Cultural Resource Monitoring and Emergency Archaeological Excavations for Segment 2 of the Chorro Valley Water Transmission Pipeline Project*. Applied EarthWorks, Inc. Prepared for the County of San Luis Obispo. Submitted to U.S. Army Corps of Engineers, Los Angeles District, Fresno, California.
- Price, Barry A., Ann M. Munns, Georgeanna Hawley, Terry L. Joslin, Douglas R. Harro, and Rebecca L. McKim  
 2012 *A Slice of Time at Diablo Canyon: Archaeological Sampling at CA-SLO-61, San Luis Obispo County, California* Applied EarthWorks, Inc., general editor. Prepared for Terra Verde Environmental Consulting. Submitted to Pacific Gas and Electric Company, San Luis Obispo, California.
- Rogers, David Banks  
 1929 *Prehistoric Man of the Santa Barbara Coast*. Santa Barbara Museum of Natural History Special Publications 1, Santa Barbara, California.
- Romani, John  
 1994 *Archaeological Survey Report for the Proposed Route 101/Cuesta Grade Improvements Project*. Greenwood and Associates. On file, California Historical Resources Information System, Central Coast Information Center, University of California, Santa Barbara.
- Stine, Scott  
 1990 Late Holocene Fluctuations of Mono Lake, Eastern California. *Palaeogeography, Palaeoclimatology, Palaeoecology* 78:333–381.
- Tognazzini, Wilmar N. (compiler)  
 1991 February 11 through February 18. In *100 Years Ago, 1891: Excerpts from the San Luis Obispo Morning Tribune*, pp. 17. San Luis Obispo, California.  
 1996 Grain Shipping. An Average Here of a Thousand Sacks Daily since July First. July 26 through August 1. In *100 Years Ago, 1896: Excerpts from the San Luis Obispo Morning Tribune and Breeze*, pp. 72–73. San Luis Obispo, California.

- 1999 Pacific Coast Railway Notes. August 13 through August 19. *100 Years Ago, 1899*. On-line edition, <http://wntog.tripod.com/99.html>, accessed October 2006. Wilmar N. Tognazzini, Morro Bay, California.

United States Climate Data

- 2019 <https://www.usclimatedata.com/climate/san-luis-obispo/california/united-states/usca1502>, accessed June 26, 2019.



## **APPENDIX A**

### **Records Search Results**





**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

9/4/2019

Amber Long  
Applied EarthWorks  
811 El Capitan Way, Suite 100  
San Luis Obispo, CA 93401

Re: Miossi Open Space Conservation Project

The Central Coast Information Center received your record search request for the project area referenced above, located on the San Luis Obispo and Lopez Mountain USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a ¼ mile radius:

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

Resources within project area:	No resources were located within the project area
Resources within ¼ mi. radius:	P-40-001538, P-40-041212, P-40-041214
Reports within project area:	SL-03701, SL-04884, SL-02023, SL-03834
Reports within ¼ mi. radius:	See attached reports list

<b><u>Resource Database Printout (list):</u></b>	X enclosed <input type="checkbox"/> not requested <input type="checkbox"/> nothing listed
<b><u>Resource Database Printout (details):</u></b>	X enclosed <input type="checkbox"/> not requested <input type="checkbox"/> nothing listed
<b><u>Resource Digital Database Records:</u></b>	<input type="checkbox"/> enclosed X not requested <input type="checkbox"/> nothing listed
<b><u>Report Database Printout (list):</u></b>	X enclosed <input type="checkbox"/> not requested <input type="checkbox"/> nothing listed
<b><u>Report Database Printout (details):</u></b>	X enclosed <input type="checkbox"/> not requested <input type="checkbox"/> nothing listed
<b><u>Report Digital Database Records:</u></b>	<input type="checkbox"/> enclosed X not requested <input type="checkbox"/> nothing listed
<b><u>Resource Record Copies:</u></b>	<input type="checkbox"/> enclosed <input type="checkbox"/> not requested X nothing listed
<b><u>Report Copies:</u></b>	<input type="checkbox"/> enclosed X not requested <input type="checkbox"/> nothing listed
<b><u>OHP Historic Properties Directory:</u></b>	<input type="checkbox"/> enclosed X not requested <input type="checkbox"/> nothing listed
<b><u>Archaeological Determinations of Eligibility:</u></b>	<input type="checkbox"/> enclosed X not requested <input type="checkbox"/> nothing listed

The following sources of information are available at [http://ohp.parks.ca.gov/?page\\_id=28065](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.

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

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  
Assistant Coordinator



## Report List



Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SL-00438		1984	Haversat, T. and Breschini, G.	Preliminary Archaeological Reconnaissance of Twenty-Nine Proposed Early Warning Siren Locations, San Luis Obispo County, California	Archaeologiosl.Consulting	40-001000, 40-001087, 40-001088
SL-02023		1991	Gibson, Robert O.	Results of Phase One Archaeological Surface Survey for the Pacific Bell Fiber Optics Cable Project between Santa Margarita and San Luis Obispo, CA	none given	40-000538, 40-001436
SL-02631		1994	Romani, John F.	Archaeological Survey Report for the Proposed Route 101/Cuesta Grade Improvement Project	Greenwood and Associates	40-001538
SL-03701		1995	Ruggerone, Gary L.	Historic Property Survey Report for the Route 101 Cuest Grade Improvement Project From 1.1 Miles North of Reservoir Canyon Road to Cuesta Grade Overhead in San Luis Obispo County, California	California Department of Transportation Environmental Planning Branch	40-001538
SL-03834		1995	Gibson, Robert O.	Phase one archaeological surface survey for the unocal pipeline replacement project along curesta ridge and highway 101, south of Santa Margarita, San Luis Obispo Co, Ca	none given	40-001674
SL-03934		1999	Dana McGowan	Cultural Resources Inventory Report for Williams Communications, Inc. Fiber Optic Cable Installation Project, San Luis Obispo to Bakersfield Volume I	Jones and Stokes Associates	40-000587, 40-001559, 40-002493, 40-041327
SL-03934A		1999	none given	Appendix A. Cultural Resource Monitoring Plan	Jones & Stokes Associates	
SL-03934B		1999	none given	Appendix B Native American Contacts; Appendix C Cultural Resource Site Record Forms (removed)	Jones & Stokes Associates	
SL-04884		1999	Mason, R.D.	Cultural Resources Survey and Paleontologic Resources Literature Review Report for Level 3 Long Haul Fiber Optic Project: Cuesta Grane Wordaround Northeast of San Luis Obispo, San Luis Obispo County, California	Chambers Group	
SL-06460		2009	Megan M. Linder, Marc D. Linder, and Barry A. Price	Cultural Resources Survey for the Atascadero-San Luis Obispo 70 kV Power Line Maintenance and Upgrade Project, San Luis Obispo County, California	Applied EarthWorks, Inc.	40-002598, 40-002599, 40-038242, 40-041211, 40-041212, 40-041213

# MioSSI Open Space Conservation Project

Customer Name: Amber Long, Applied EarthWorks  
Project Location: Old Stage Coach Road

Reports Map 1 of 7

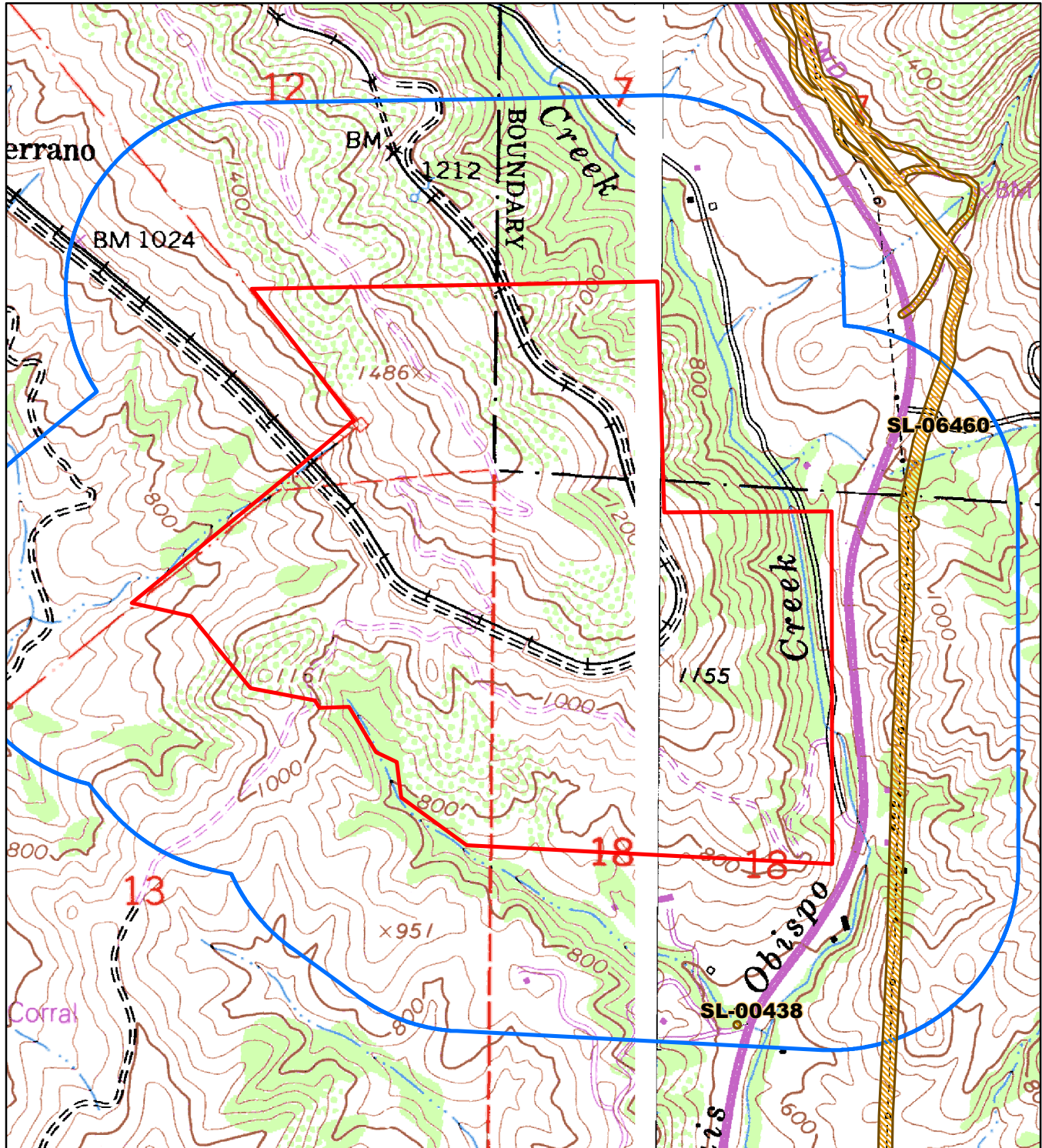
## Legend

-  Project Area
-  1/4 Mile Buffer



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

0 105 210 420 630 840 Meters







# Miozzi Open Space Conservation Project

Customer Name: Amber Long, Applied EarthWorks  
Project Location: Old Stage Coach Road

Reports Map 2 of 7

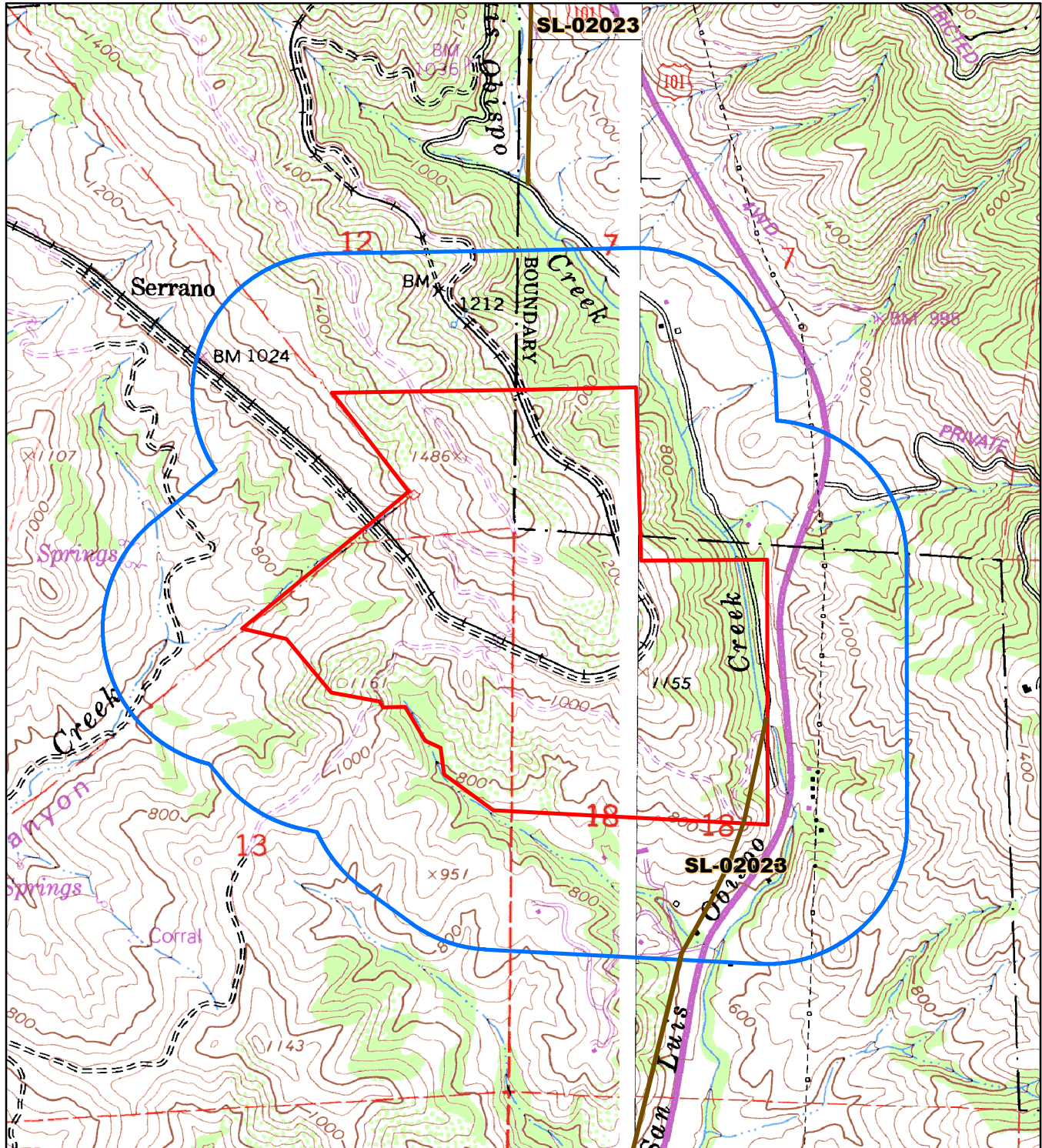
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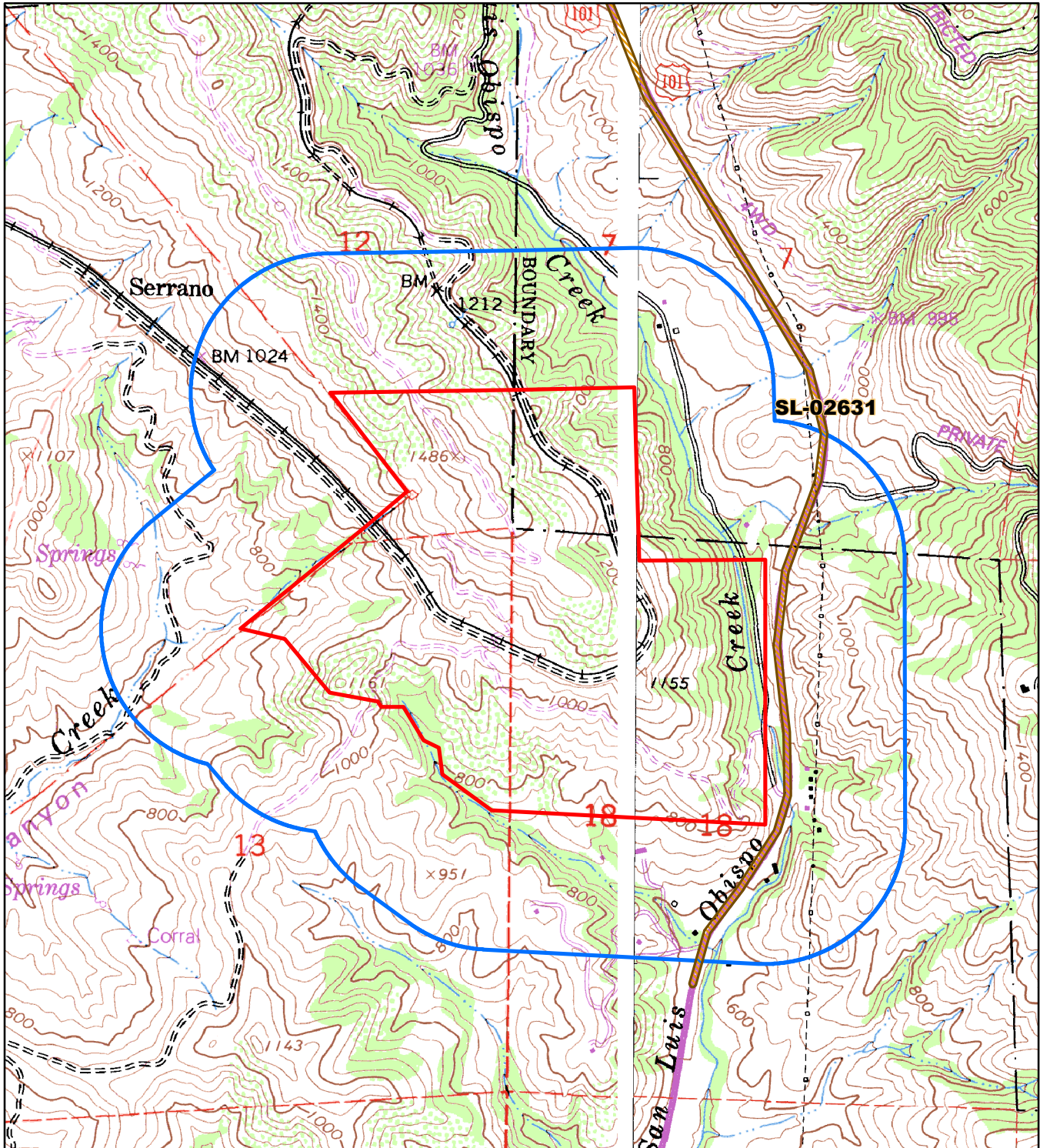


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(805) 893-2474  
(805) 893-8707 FAX

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# MioSSI Open Space Conservation Project

Customer Name: Amber Long, Applied EarthWorks  
Project Location: Old Stage Coach Road

Reports Map 4 of 7

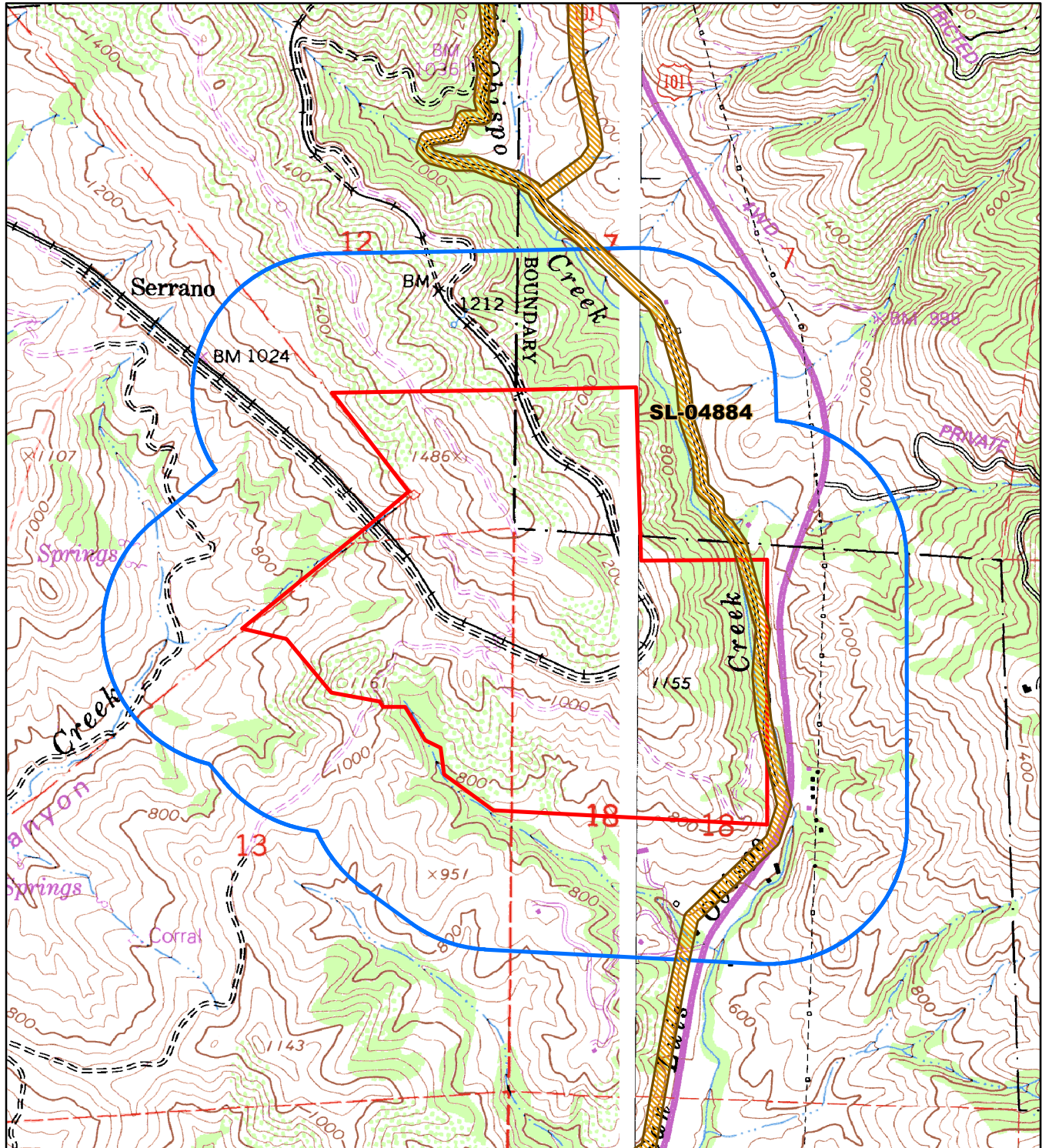
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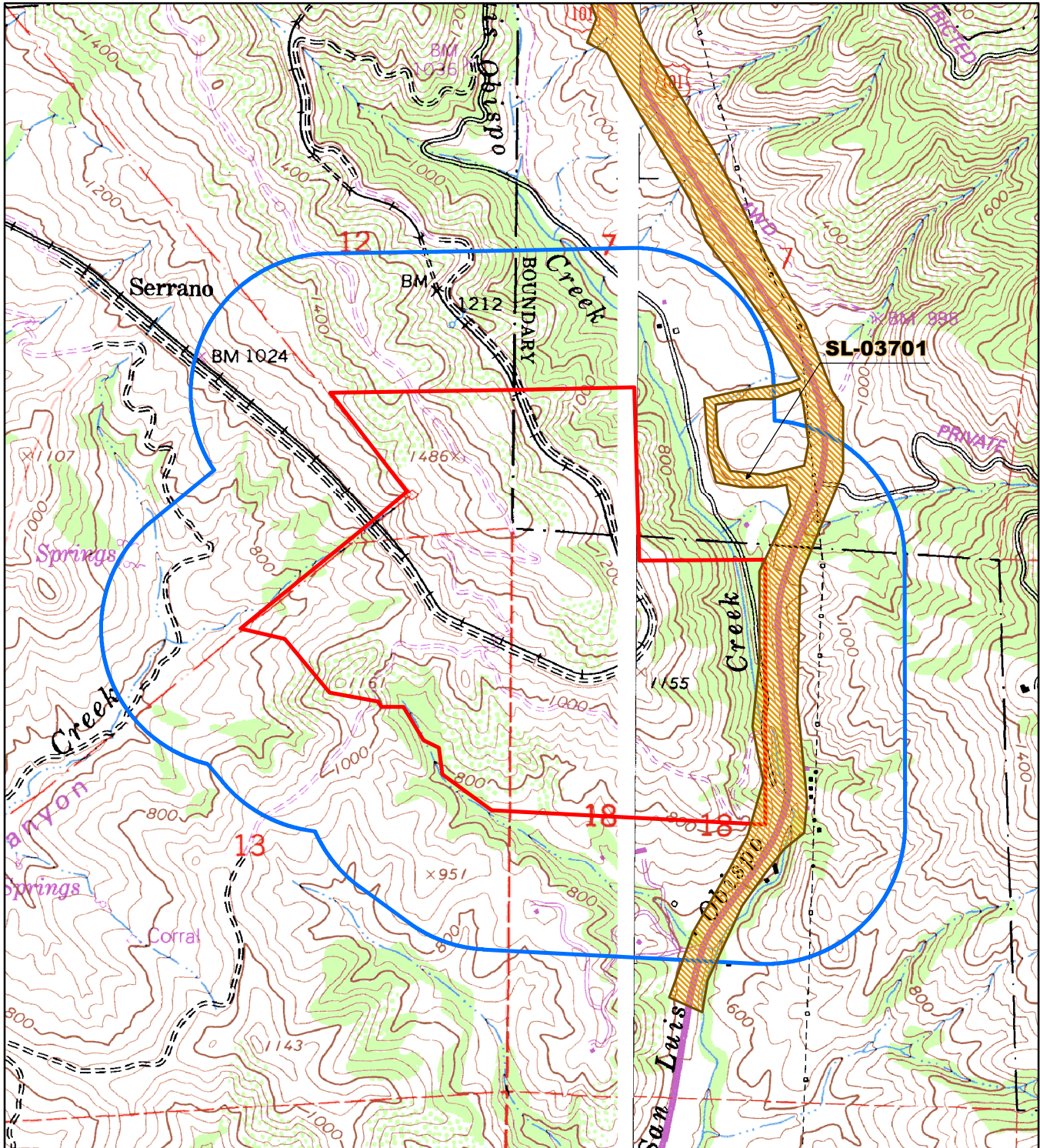


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Santa Barbara, CA 93106-3210  
(805) 893-2474  
(805) 893-8707 FAX

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# MioSSI Open Space Conservation Project

Customer Name: Amber Long, Applied EarthWorks  
Project Location: Old Stage Coach Road

Reports Map 6 of 7

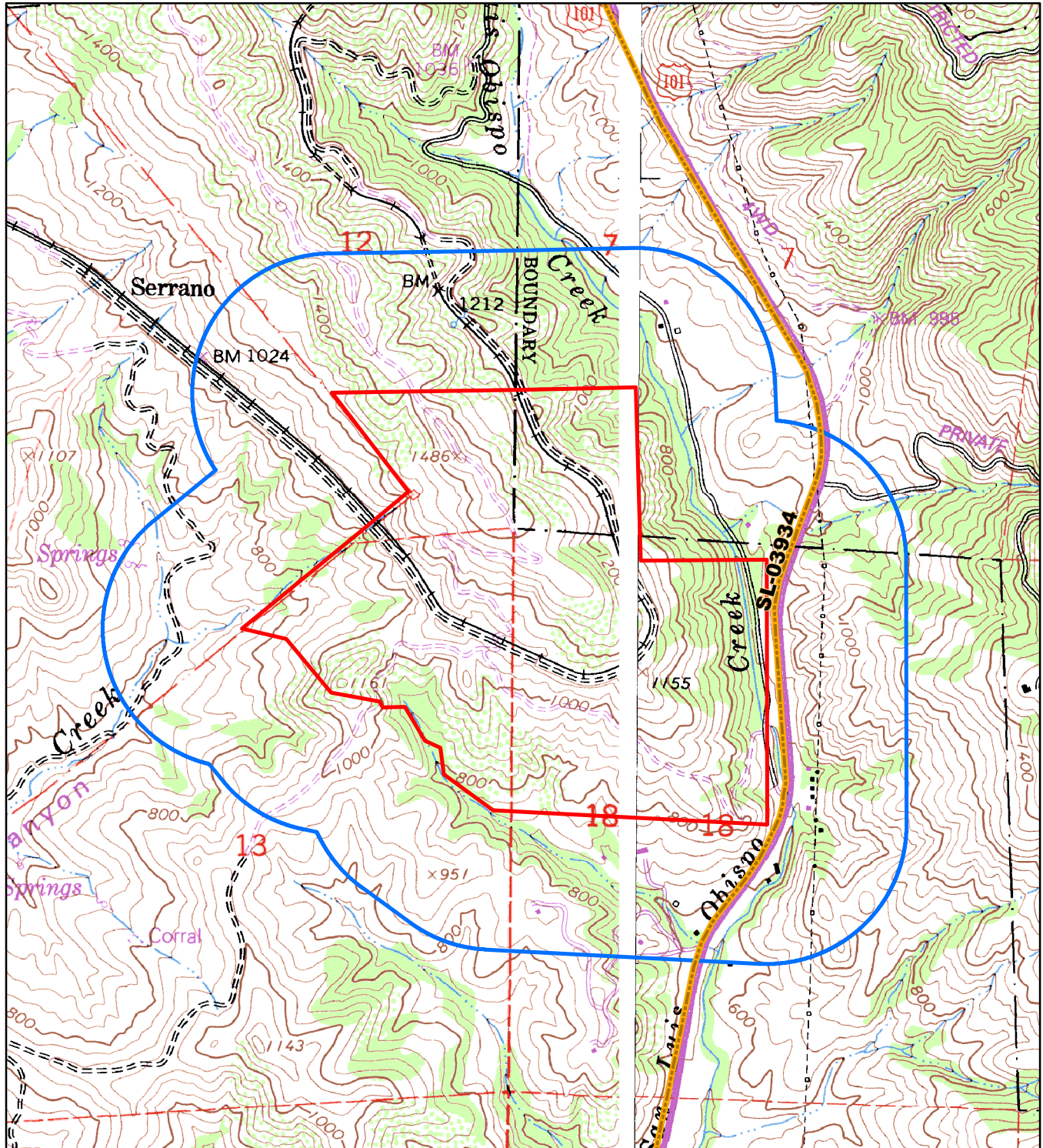
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-  Project Area
-  1/4 Mile Buffer

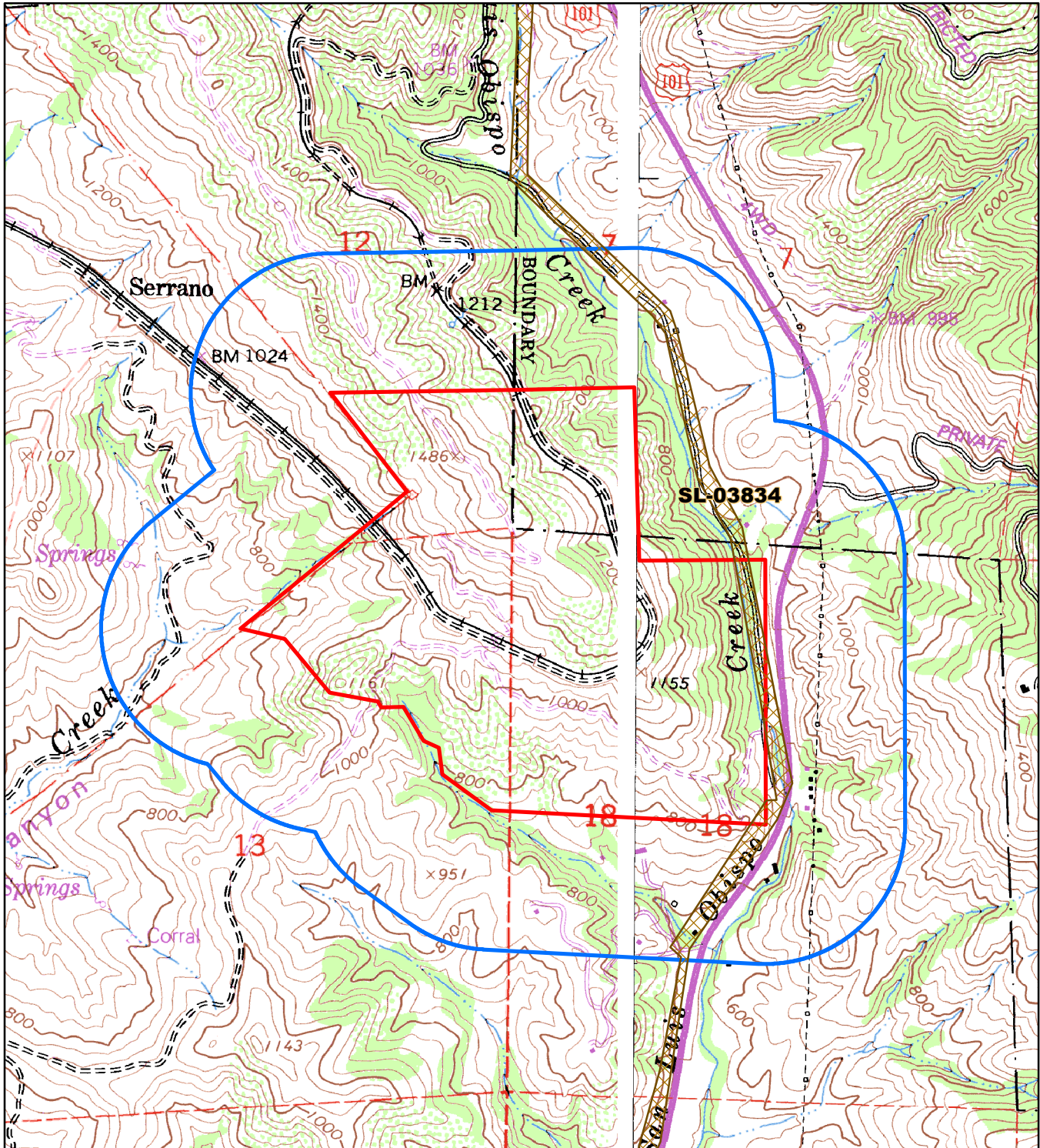


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University of California  
Santa Barbara, CA 93106-3210  
(805) 893-2474  
(805) 893-8707 FAX

0 140 280 560 840 1,120  
Meters







## Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-40-001538	CA-SLO-001538	Other - P-40-001538	Site	Historic	AH16	1992 (John Romani, Greenwood and Associates)	SL-02631, SL-03701
P-40-041212		Other - AE-1906-4H	Other	Historic	AH16	2008 (Marc Linder, Applied EarthWorks)	SL-06460, SL-06833
P-40-041214		Other - Atascadero-San Luis Obispo 70 kV Power Line	Structure	Historic	HP09; HP11	2009	SL-06453





# Mioosi Open Space Conservation Project

Customer Name: Amber Long, Applied EarthWorks  
Project Location: Old Stage Coach Road

Sites Map 1 of 2

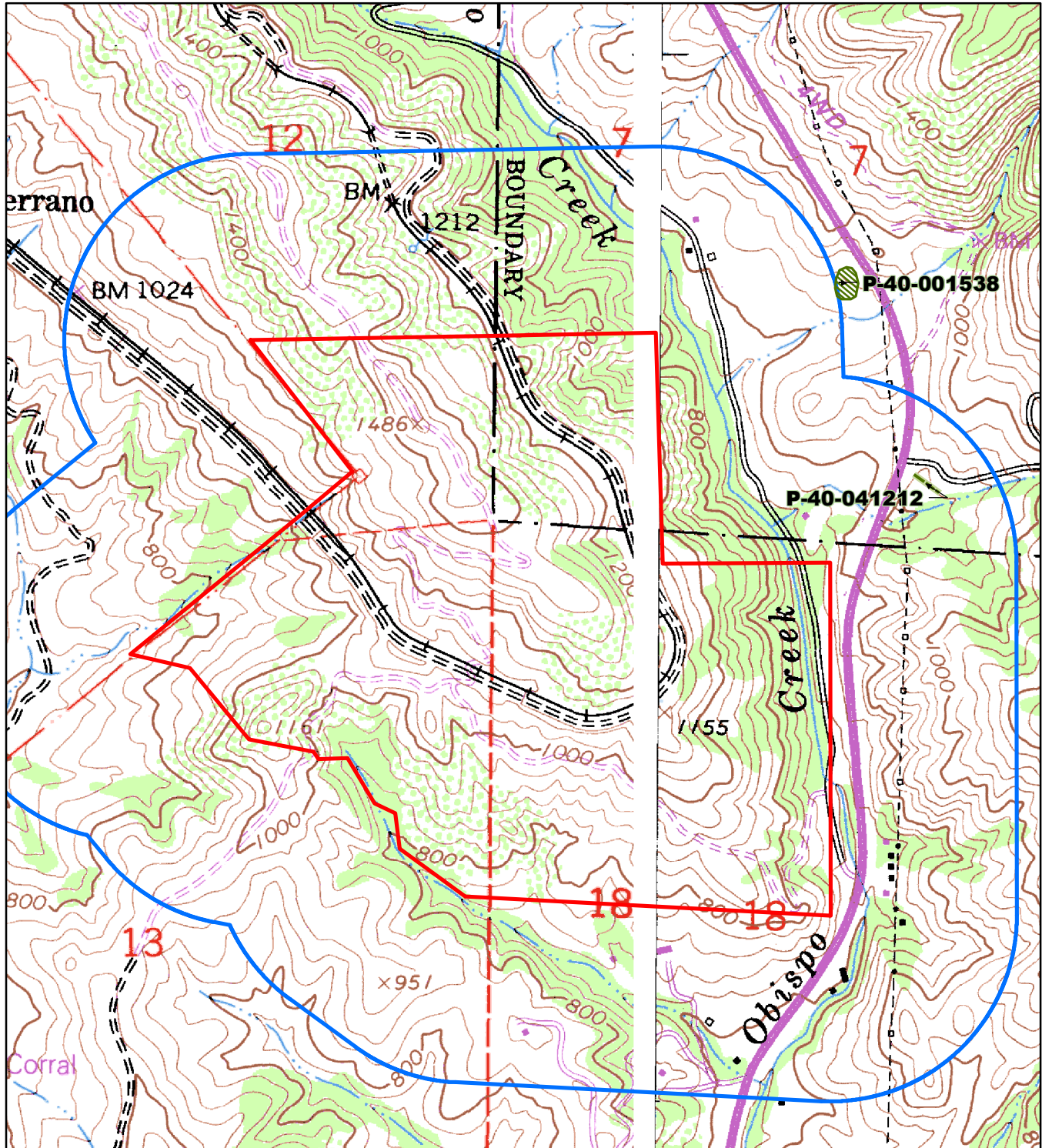
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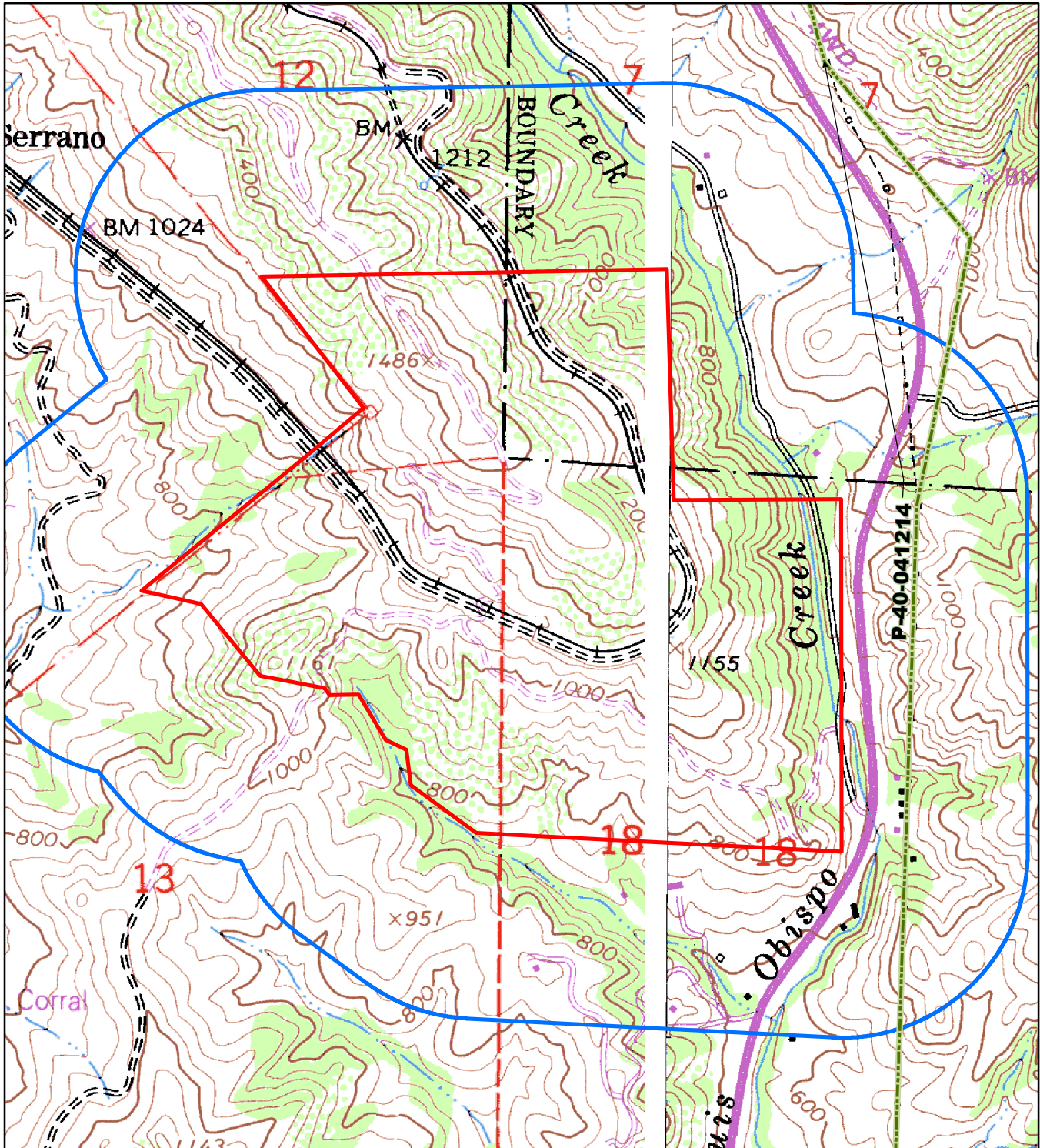
-  Project Area
-  1/4 Mile Buffer



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## **APPENDIX B**

### **Native American Communication**





August 22, 2019

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

RE: Miossi Open Space Conservation Plan Phase 1 Cultural Study, San Luis Obispo, California

To Whom it May Concern,

Applied EarthWorks, Inc. is conducting a cultural resource study for the proposed open space conservation project of a 266-acre property into an open space for public recreational use in San Luis Obispo, California. The project area is depicted on the attached copy of the San Luis Obispo CA 7.5' Quadrangle Map and is located within sections 12 and 13 of Township 30S, Range 12E and Lopez Mountain, CA 7.5' Quadrangle Map and is located within sections 7 and 18 of Township 30S, Range 13E.

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.

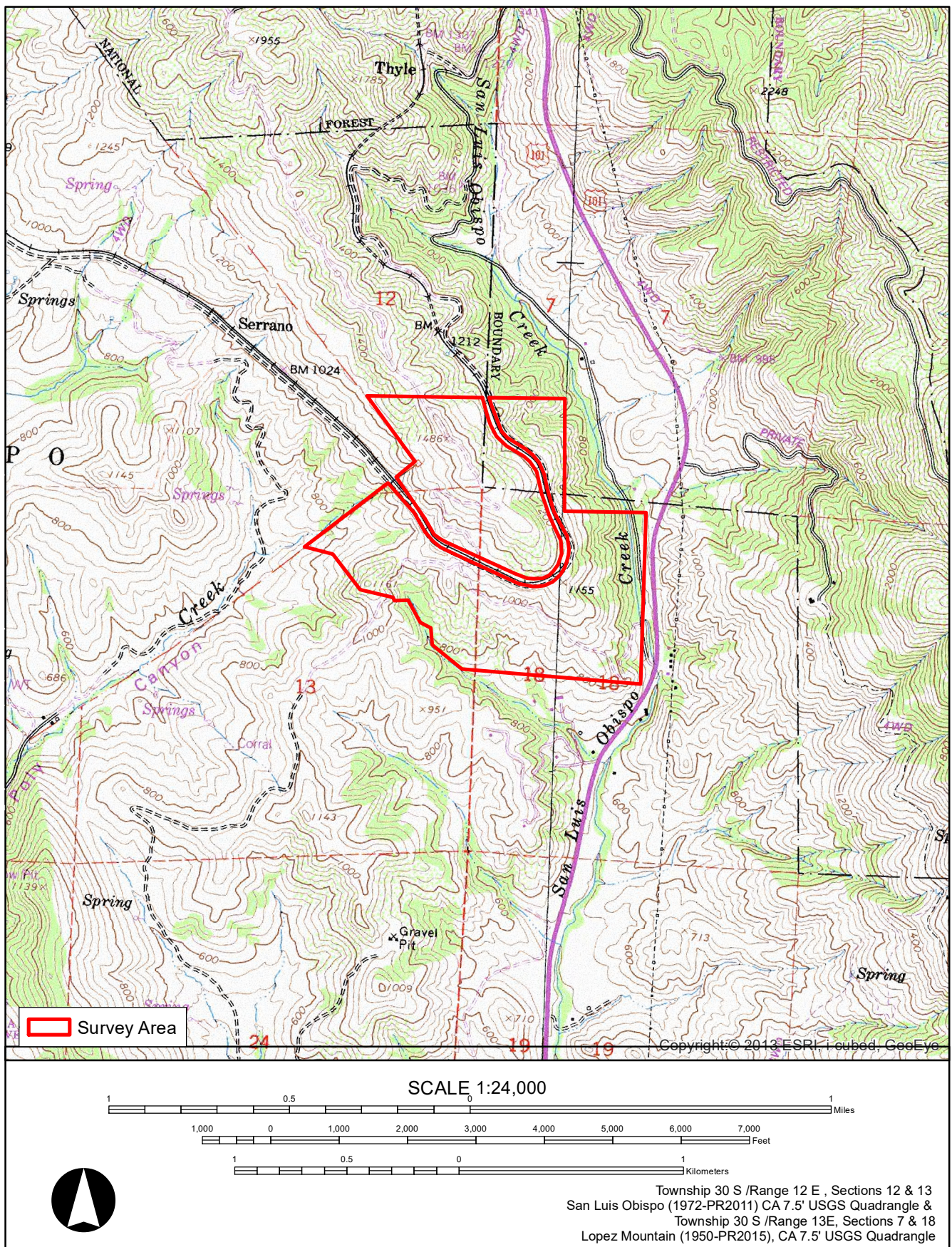
Please fax the results to (805) 594-1577 and do not hesitate to call me at (805) 594-1590 if you have any questions or require additional information. Thank you for your time and consideration in this matter.

Sincerely,



Kelli Wathen,  
Staff Archaeologist  
Applied EarthWorks, Inc.





**Location map for the Miossi Open Space Conservation Plan Phase 1 Cultural Study, San Luis Obispo, California - AE4087.**



## NATIVE AMERICAN HERITAGE COMMISSION

Cultural and Environmental Department

1550 Harbor Blvd., Suite 100

West Sacramento, CA 95691

Phone: (916) 373-3710

Email: [nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)Website: <http://www.nahc.ca.gov>

Twitter: @CA\_NAHC



September 5, 2019

Kelli Wathen  
Applied EarthWorks, Inc.

VIA Email to: [kwathen@appliedearthworks.com](mailto:kwathen@appliedearthworks.com)

RE: Miossi Open Space Conservation Plan Phase 1 Cultural Study Project, San Luis Obispo County

Dear Ms. Wathen:

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 tribes 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 the NAHC. 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: [Andrew.Gren@nahc.ca.gov](mailto:Andrew.Gren@nahc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Andrew Green".

Andrew Green  
Staff Services Analyst

Attachment



**Native American Heritage Commission  
Native American Contact List  
San Luis Obispo County  
9/5/2019**

**Barbareno/ Ventureno Band of  
Mission Indians**

Patrick Tumamait,  
992 El Camino Corto Chumash  
Ojai, CA, 93023  
Phone: (805) 216 - 1253

**Northern Chumash Tribal  
Council**

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

**Barbareno/ Ventureno Band of  
Mission Indians**

Raudel Banuelos,  
331 Mira Flores Chumash  
Camarillo, CA, 93012  
Phone: (805) 427 - 0015

**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@salinatribe.com

**Barbareno/ Ventureno Band of  
Mission Indians**

Eleanor Arrellanes,  
P. O. Box 5687 Chumash  
Ventura, CA, 93005  
Phone: (805) 701 - 3246

**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

**Barbareno/Ventureno Band of  
Mission Indians**

Julie Tumamait-Stenslie,  
Chairperson  
365 North Poli Ave Chumash  
Ojai, CA, 93023  
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jtumamait@hotmail.com

**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

**Chumash Council of  
Bakersfield**

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

**Xolon-Salinan Tribe**

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

**Coastal Band of the Chumash  
Nation**

Gino Altamirano, Chairperson  
P. O. Box 4464 Chumash  
Santa Barbara, CA, 93140  
cbcn.consultation@gmail.com

**Xolon-Salinan Tribe**

Karen White, Chairperson  
P. O. Box 7045 Salinan  
Spreckels, CA, 93962  
Phone: (831) 238 - 1488  
xolon.salinan.heritage@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 Miossi Open Space Conservation Plan Phase 1 Cultural Study Project, San Luis Obispo County.

**Native American Heritage Commission  
Native American Contact List  
San Luis Obispo County  
9/5/2019**

***yak tityu tityu yak tilhini –  
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 Miossi Open Space Conservation Plan Phase 1 Cultural Study Project, San Luis Obispo County.

September 18, 2019

Donna Haro  
Xolon-Salinan Tribe  
P.O. Box 7045  
Spreckles, CA 93962

RE: Mioossi Open Space Conservation Plan Phase 1 Cultural Study, San Luis Obispo, California

Dear Ms. Haro:

Applied EarthWorks, Inc. is conducting a cultural resource study for the proposed open space conservation project of a 266-acre property into an open space for public recreational use in San Luis Obispo, California. The project area is depicted on the attached copy of the San Luis Obispo CA 7.5' Quadrangle Map and is located within sections 12 and 13 of Township 30S, Range 12E and Lopez Mountain, CA 7.5' Quadrangle Map and is located within sections 7 and 18 of Township 30S, Range 13E.

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, California. This letter is being submitted to formally request any information you may have regarding Native American cultural resources within or adjacent to the project site. If you have information regarding the study 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 [kwathen@appliedearthworks.com](mailto:kwathen@appliedearthworks.com) if you have any questions or require additional information. Thank you for your time and consideration.

Sincerely,



Kelli Wathen,  
Staff Archaeologist  
Applied EarthWorks, Inc.

## **APPENDIX C**

### **Cultural Resource Records**

\*Archaeological site location information is exempt from the Freedom of Information Act (FOIA) and California Public Records Act (CPRA).





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

Primary #  
HRI #  
Trinomial  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 4

Resource Name or # AE-4087-01H

**P1. Other Identifier:** Dam and infrastructure over San Luis Creek

**\*P2. Location: a. County:** San Luis Obispo

☒ Not for Publication ☐ Unrestricted

**b. USGS 7.5' Quad:** Lopez Mountain **Date:** 1950; PR2015 T 30S, R 13E; NE ¼ of NW ¼ of Section 18  
Mount Diablo B.M.

**c. Address:**

**d. UTM:** NAD 83, Zone 10; 716103 mE / 3911386 mN

**e. Other Locational Data:** From Highway 101 exit at Old Stage Coach Road at the base of Cuesta Grade. Drive 0.3 mile on Old Stage Coach Road. The site is directly to the west and can be seen from the road.

**\*P3a. Description:** This site consists of a concrete dam used to supply water to the City of San Luis Obispo, a concrete settling pond, a steel pipeline, and a wooden support structure for the pipeline. The dam has been decommissioned and the midsection of the dam is no longer intact.

**\*P3b. Resource Attributes:** AH8 Dams

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

**\*P5a. Photograph or Drawing:**



**P5b. Description of Photo:** Western abutment, facing east

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

**\*P7. Owner and Address:**  
City of San Luis Obispo  
990 Palm Street  
San Luis Obispo, CA 93401

**\*P8. Recorded By:**  
Philip Clarkson and Neil Rhodes  
Applied EarthWorks, Inc.  
811 El Capitan Way, Suite 100  
San Luis Obispo, CA 93401

**\*P9. Date Recorded:** 9/11/2019

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

**Describe:** Targeted search for known site

**\*P11. Report Citation:**

Long, Amber, Philip Clarkson, and Kelli Wathen

2019 *Mioosi Open Space Conservation Plan Phase I Study*. Applied EarthWorks, Inc. 811 El Capitan Way, Suite 100 San Luis Obispo County, California.

**\*Attachments:** ☐ NONE

☒ Location Map

☒ Sketch Map

☐ Continuation Sheet

☐ Building, Structure,  
and Object Record

☒ Archaeological Record

☐ District Record

☐ Linear Feature Record

☐ Photograph Record

☐ Milling Station Record

☐ Rock Art Record

☐ Artifact Record

☐ Other (list):

State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**ARCHAEOLOGICAL SITE RECORD**

Primary #  
HRI #/Trinomial

Page 2 of 4

Resource Name or # AE-4087-01H

\*A1. **Dimensions:** a. Length 310 feet x b. Width 100 feet

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other: Trimble

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 ☐ Low Explain: Site consists of three large features

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

A2. **Depth:** ☐ None ☒ Unknown

Method of determination:

\*A3. **Human Remains:** ☐ Present ☒ Absent ☐ Possible ☐ Unknown (explain):

\*A4. **Features:** 1. Concrete dam, 2. Concrete settling pond, 3. Pipeline with support structure. The entirety of the dam is approximately 75 feet long, the abutment ends are buried in the soil and total measurements are not certain. The concrete abutments measure 2 feet thick and base width of 5 feet thick. The maximum height of the dam is 6.4 feet tall. The concrete settling pond measures 5.0 feet wide by 17.0 feet long by 4.4 feet deep and is divided in half. Portions of a wooden cover to the pond are still intact, boards measure 5 feet long by 1 foot wide by 1 3/4 inches thick. The pipeline attaches to the settling pond on the southern/downstream side and daylights for 230 feet before going underground. The steel pipe is 10 inches in diameter with lead solder. The pipe sits on a wooden support structure measuring 4 feet wide, the exact depth is unknown due to cave-ins. Halfway between the settling pond and where the pipe goes underground there is a shut-off valve measuring 26 inches tall by 17 inches wide by 8 1/2 inches thick.

\*A5. **Cultural Constituents (not associated with features):** None

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

\*A7. **Site Condition:** ☐ Good ☒ Fair ☐ Poor ☐ Disturbances: Dam was decommissioned during a salmonid restoration project.

\*A8. **Nearest Water (type, distance, and direction):** Site is on and adjacent to San Luis Obispo Creek.

\*A9. **Elevation:** 740 feet amsl

A10. **Environmental Setting (vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):** In a riparian zone on and adjacent to San Luis Obispo Creek, with bay laurel, coastal live oaks, sycamore trees, and poison oak.

A11. **Historical Information** (full citations in A15 below): The dam was as part of the early water infrastructure for the City of San Luis Obispo. Deeds from 1910 and 1911 detail the easements that the City purchased for San Luis Obispo Creek and the rights to the water.

\*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:

A13. **Interpretations:**

A14. **Remarks:** Resource was not evaluated for the California Register of Historic Resources (CRHR) or the National Register of Historic Places (NRHP) at this time.

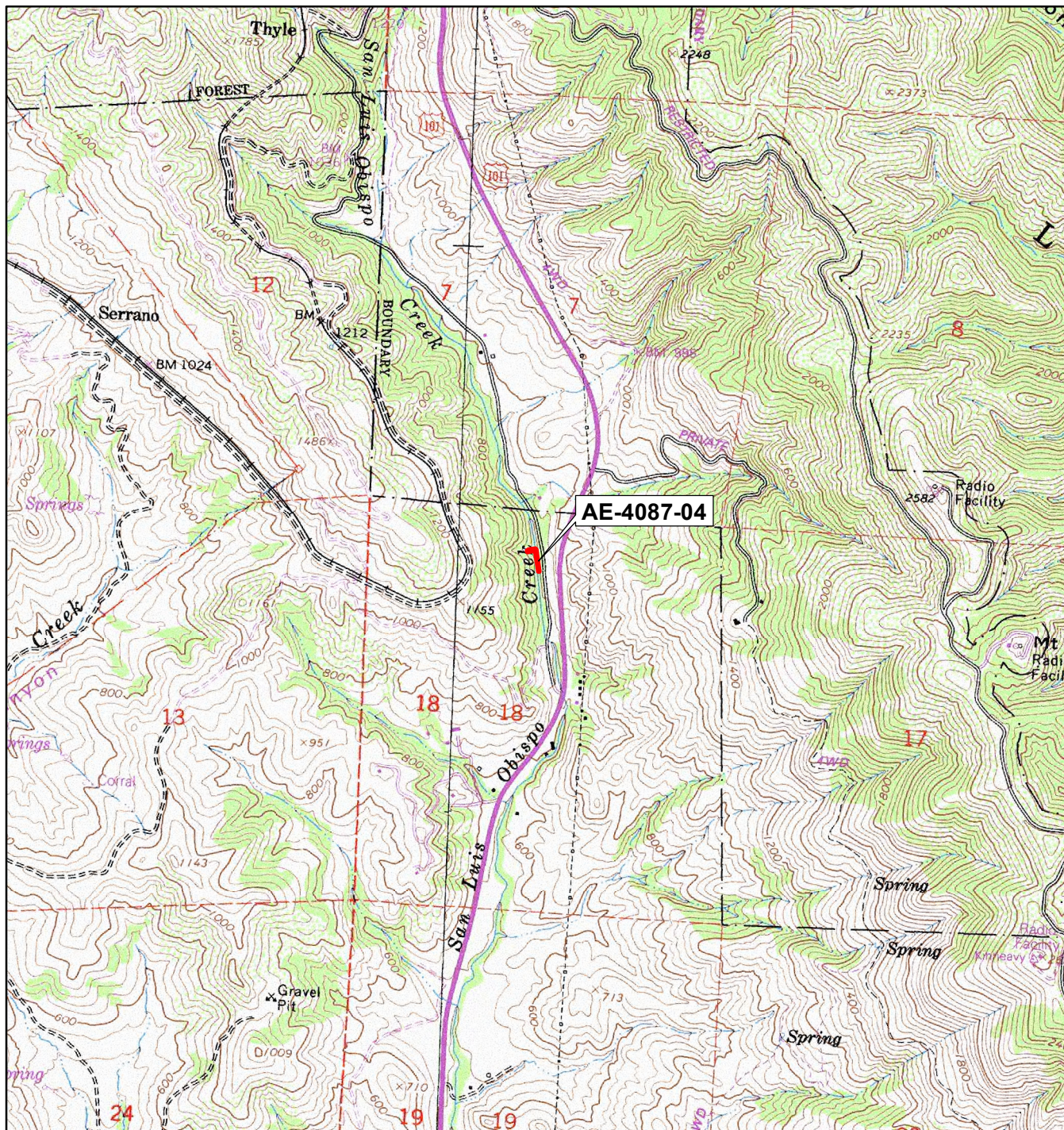
A15. **References:** Deeds referenced in A11 were obtained through personal communication with the City of San Luis Obispo's Office of Sustainability, Robert Hill, 2019.

A16. **Photographs:**  
Original media/negatives kept at: Applied EarthWorks, Inc.

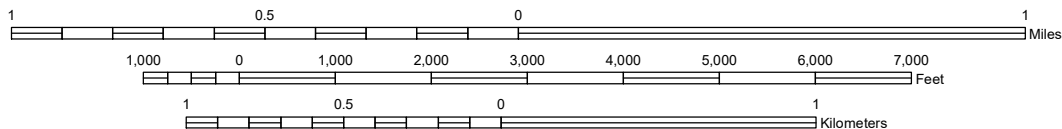
\*A17. **Form Prepared By:** Philip Clarkson  
**Affiliation and Address:** Applied EarthWorks, Inc.

**Date:** 9/18/2019



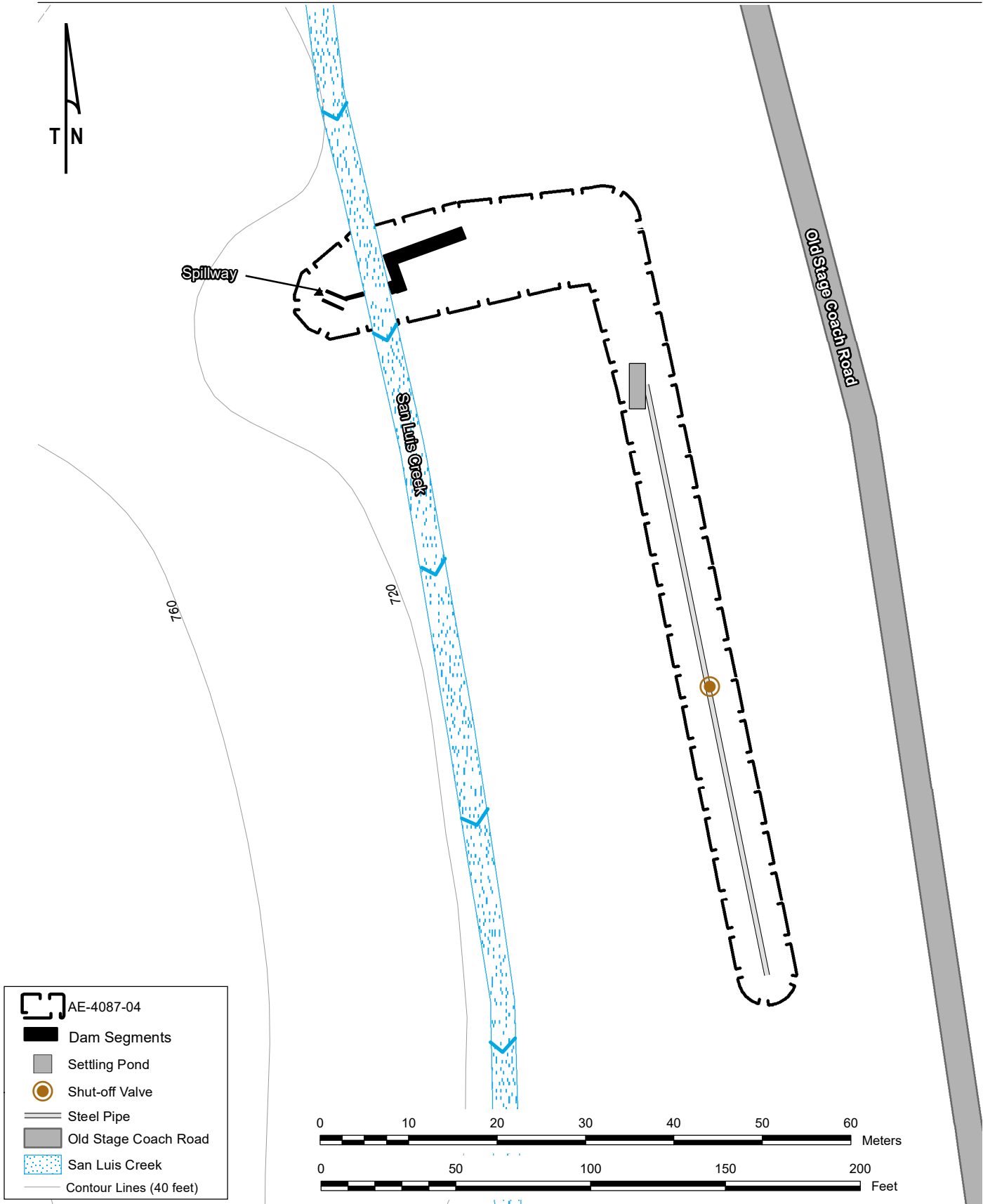


SCALE 1:24,000



TRUE NORTH





# Appendix B

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Sound Level Monitoring Results

Freq Weight : A  
 Time Weight : SLOW  
 Level Range : 40-100  
 Max dB : 71.1 - 2019/09/25 10:26:51  
 Level Range : 40-100  
 SEL : 89.4  
 Leq : 59.9

No.s	Date Time	(dB)					
1	2019/09/25 10:14:54	62.2	61.6	59.4	60.4	61.9	
6	2019/09/25 10:15:09	61.9	63.7	63.2	66.6	61.7	
11	2019/09/25 10:15:24	59.9	58.2	58.4	57.5	57.1	
16	2019/09/25 10:15:39	58.6	57.6	59.7	58.7	58.9	
21	2019/09/25 10:15:54	59.3	59.7	58.2	58.5	59.6	
26	2019/09/25 10:16:09	58.8	59.3	59.6	59.5	59.4	
31	2019/09/25 10:16:24	61.0	58.8	59.0	59.4	58.8	
36	2019/09/25 10:16:39	56.2	53.4	53.2	55.6	57.4	
41	2019/09/25 10:16:54	61.6	60.0	57.0	54.2	54.6	
46	2019/09/25 10:17:09	57.2	59.9	58.1	58.4	59.3	
51	2019/09/25 10:17:24	61.4	62.4	61.1	59.4	58.4	
56	2019/09/25 10:17:39	58.9	58.6	61.0	62.6	61.3	
61	2019/09/25 10:17:54	60.0	59.6	59.3	58.2	59.2	
66	2019/09/25 10:18:09	55.8	56.3	56.0	59.2	59.2	
71	2019/09/25 10:18:24	58.6	59.3	58.7	57.2	59.1	
76	2019/09/25 10:18:39	57.5	58.3	59.0	61.3	60.6	
81	2019/09/25 10:18:54	65.2	65.3	60.7	59.0	56.3	
86	2019/09/25 10:19:09	60.1	59.1	59.6	59.8	59.9	
91	2019/09/25 10:19:24	58.7	58.3	57.1	57.8	57.5	
96	2019/09/25 10:19:39	57.4	58.6	59.1	57.7	59.5	
101	2019/09/25 10:19:54	58.6	61.2	63.1	61.4	60.8	
106	2019/09/25 10:20:09	62.4	61.1	60.2	59.9	58.8	
111	2019/09/25 10:20:24	55.2	56.1	59.3	60.7	61.2	
116	2019/09/25 10:20:39	60.8	57.2	61.1	61.8	61.1	
121	2019/09/25 10:20:54	61.3	58.8	57.2	60.0	58.6	
126	2019/09/25 10:21:09	57.6	59.8	60.3	60.5	58.9	
131	2019/09/25 10:21:24	59.2	57.8	60.8	61.1	59.7	
136	2019/09/25 10:21:39	57.2	58.2	59.5	57.5	59.8	
141	2019/09/25 10:21:54	60.4	59.5	60.7	60.7	59.8	
146	2019/09/25 10:22:09	58.5	58.2	57.2	58.0	57.6	
151	2019/09/25 10:22:24	58.8	59.5	59.4	57.2	55.8	
156	2019/09/25 10:22:39	55.1	54.8	56.3	58.2	60.7	
161	2019/09/25 10:22:54	60.1	57.4	56.1	57.5	59.1	
166	2019/09/25 10:23:09	58.0	57.1	57.0	56.6	57.8	
171	2019/09/25 10:23:24	57.0	55.3	53.4	55.9	55.8	
176	2019/09/25 10:23:39	57.0	58.3	56.4	55.0	57.8	
181	2019/09/25 10:23:54	58.9	60.3	60.1	61.2	62.4	
186	2019/09/25 10:24:09	58.2	62.5	61.4	62.9	59.5	
191	2019/09/25 10:24:24	61.6	59.1	60.7	60.9	61.0	
196	2019/09/25 10:24:39	59.7	58.8	56.0	54.5	53.9	
201	2019/09/25 10:24:54	58.1	56.4	55.8	60.5	59.3	
206	2019/09/25 10:25:09	58.6	60.0	58.5	57.9	57.6	
211	2019/09/25 10:25:24	58.9	59.3	58.6	57.5	57.5	
216	2019/09/25 10:25:39	58.7	57.5	57.3	56.8	57.8	
221	2019/09/25 10:25:54	55.3	56.4	55.8	56.0	56.2	
226	2019/09/25 10:26:09	57.3	58.0	56.8	56.7	58.6	
231	2019/09/25 10:26:24	58.3	59.1	60.4	60.3	60.3	
236	2019/09/25 10:26:39	61.5	63.9	66.3	70.6	67.3	
241	2019/09/25 10:26:54	62.6	61.6	63.3	61.3	61.8	
246	2019/09/25 10:27:09	59.1	58.9	57.4	57.3	55.1	
251	2019/09/25 10:27:24	53.3	56.3	56.1	58.0	59.8	
256	2019/09/25 10:27:39	60.4	60.5	59.7	57.8	57.6	
261	2019/09/25 10:27:54	63.0	63.9	65.6	66.4	65.0	
266	2019/09/25 10:28:09	63.4	62.5	59.8	58.1	57.0	
271	2019/09/25 10:28:24	59.2	61.7	59.7	59.5	59.2	
276	2019/09/25 10:28:39	58.1	61.5	61.6	60.1	60.9	
281	2019/09/25 10:28:54	60.2	59.7	59.3	59.7	57.4	
286	2019/09/25 10:29:09	57.2	57.1	56.3	58.1	60.1	
291	2019/09/25 10:29:24	59.9	57.8	57.3	56.4	59.6	
296	2019/09/25 10:29:39	60.3	60.0	59.9	61.0	62.7	

Freq Weight : A  
 Time Weight : SLOW  
 Level Range : 40-100  
 Max dB : 85.3 - 2019/09/25 10:44:59  
 Level Range : 40-100  
 SEL : 97.0  
 Leq : 67.5

No.s	Date Time	(dB)				
1	2019/09/25 10:42:40	67.9	66.3	65.5	66.1	66.0
6	2019/09/25 10:42:55	65.0	65.4	69.6	66.3	62.9
11	2019/09/25 10:43:10	60.8	65.1	66.3	66.8	66.7
16	2019/09/25 10:43:25	69.7	67.1	61.7	59.1	59.2
21	2019/09/25 10:43:40	59.4	61.5	62.7	60.5	62.9
26	2019/09/25 10:43:55	62.3	65.0	66.5	64.6	63.5
31	2019/09/25 10:44:10	64.5	63.7	62.7	64.8	66.2
36	2019/09/25 10:44:25	68.3	68.4	68.9	66.8	64.3
41	2019/09/25 10:44:40	68.5	75.2	73.8	72.1	76.4
46	2019/09/25 10:44:55	84.4	82.9	74.5	67.3	67.1
51	2019/09/25 10:45:10	65.8	63.0	62.4	62.1	63.6
56	2019/09/25 10:45:25	61.1	61.1	63.6	63.1	60.0
61	2019/09/25 10:45:40	64.0	64.3	67.2	66.2	65.8
66	2019/09/25 10:45:55	65.7	64.4	64.8	62.4	66.3
71	2019/09/25 10:46:10	64.9	63.0	65.4	63.9	60.0
76	2019/09/25 10:46:25	61.6	62.7	63.8	61.9	65.3
81	2019/09/25 10:46:40	66.7	63.2	64.6	66.0	67.4
86	2019/09/25 10:46:55	67.6	65.7	61.0	65.2	66.4
91	2019/09/25 10:47:10	63.8	63.3	64.1	64.2	63.9
96	2019/09/25 10:47:25	64.1	64.7	64.5	62.4	64.1
101	2019/09/25 10:47:40	62.9	65.7	67.3	65.3	61.0
106	2019/09/25 10:47:55	61.2	63.1	63.7	61.9	63.9
111	2019/09/25 10:48:10	64.7	64.8	64.1	64.6	65.7
116	2019/09/25 10:48:25	67.7	67.9	67.4	64.8	63.8
121	2019/09/25 10:48:40	65.0	66.0	66.8	65.7	65.5
126	2019/09/25 10:48:55	64.0	64.9	64.6	62.8	62.4
131	2019/09/25 10:49:10	64.8	65.4	66.9	65.3	68.3
136	2019/09/25 10:49:25	66.5	70.0	68.0	66.6	65.3
141	2019/09/25 10:49:40	66.1	68.4	68.7	67.5	66.2
146	2019/09/25 10:49:55	64.8	62.1	62.1	62.8	64.4
151	2019/09/25 10:50:10	66.2	62.7	61.8	65.7	65.8
156	2019/09/25 10:50:25	67.1	66.4	68.6	68.9	67.3
161	2019/09/25 10:50:40	65.4	62.4	65.2	67.7	68.2
166	2019/09/25 10:50:55	71.3	73.5	70.8	66.0	68.9
171	2019/09/25 10:51:10	70.8	67.1	66.4	61.4	63.5
176	2019/09/25 10:51:25	65.7	65.3	63.6	63.9	59.9
181	2019/09/25 10:51:40	57.5	63.7	65.3	64.9	66.5
186	2019/09/25 10:51:55	65.6	65.8	66.9	65.6	65.8
191	2019/09/25 10:52:10	65.2	63.1	63.2	62.8	64.1
196	2019/09/25 10:52:25	64.9	63.0	58.8	58.9	62.7
201	2019/09/25 10:52:40	60.9	60.3	62.2	62.8	61.9
206	2019/09/25 10:52:55	61.9	60.9	60.2	65.9	69.9
211	2019/09/25 10:53:10	68.2	66.2	67.3	66.7	67.8
216	2019/09/25 10:53:25	67.2	66.9	65.0	63.0	64.3
221	2019/09/25 10:53:40	63.2	60.0	61.7	63.1	65.5
226	2019/09/25 10:53:55	65.0	66.4	68.2	69.1	68.9
231	2019/09/25 10:54:10	65.9	62.8	62.0	62.3	62.0
236	2019/09/25 10:54:25	60.4	61.2	63.4	65.1	64.2
241	2019/09/25 10:54:40	66.0	66.4	66.2	64.2	62.5
246	2019/09/25 10:54:55	61.4	64.6	63.7	63.5	64.6
251	2019/09/25 10:55:10	63.8	63.0	67.5	73.4	76.5
256	2019/09/25 10:55:25	72.5	67.8	65.4	66.0	64.3
261	2019/09/25 10:55:40	58.3	61.8	60.8	60.3	63.5
266	2019/09/25 10:55:55	64.0	62.0	62.9	62.4	62.1
271	2019/09/25 10:56:10	63.3	66.2	65.5	64.6	62.9
276	2019/09/25 10:56:25	58.5	59.0	65.5	67.0	65.9
281	2019/09/25 10:56:40	66.9	68.4	68.3	67.1	65.0
286	2019/09/25 10:56:55	64.1	62.8	63.8	66.8	65.0
291	2019/09/25 10:57:10	59.9	65.5	70.1	70.0	66.1
296	2019/09/25 10:57:25	65.5	67.7	69.5	68.8	65.2