



110 S. PINE STREET #101 (ON HERITAGE WALK) • SANTA MARIA, CALIFORNIA 93458-5082 • 805-925-0951 • TDD 925-4354

PUBLIC NOTICE OF AVAILABILITY OF ENVIRONMENTAL DOCUMENT NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Notice is hereby given that a draft Mitigated Negative Declaration has been prepared for the below described project in accordance with the provisions of the California Environmental Quality Act of 1970, as set forth in the Public Resources Code, Sections 21000 to 21174, as amended. As a result of this project, the following significant, but mitigable, effects on the environment are anticipated in the areas of: Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, and Noise.

1. Environmental Document No: SP2018-0013
2. Applicant: City of Santa Maria
3. Project Description:
 - A. Project Title: Los Flores Ranch Shooting Facility
 - B. Assessor's Parcel Numbers: 101-060-002
 - C. Location: Los Flores Ranch Park, US Highway 101 Exit 161; 34.817622°N/120.341159°W
 - D. Proposed Development: The project develops an outdoor shooting range on a 5.0 acre site in the southern portion of the City of Santa Maria's 1,774-acre Los Flores Ranch property in the Solomon Hills for the exclusive use by the City of Santa Maria's Police Department for the purpose of live-fire training and firearms qualification maintenance. The general public will not have access to the facility. An outdoor shooting range with four shooting lanes, one live fire shooting house, one mobile classroom on a graded pad, and two graded parking areas to accommodate a total of 40 parking spaces is being proposed.

The draft Mitigated Negative Declaration and all documents referenced in the document may be reviewed at the Community Development Department, 110 S. Pine Street, #101, Santa Maria, CA, 93458, Phone No. (805) 925-0951, ext. 244, FAX No. 928-7565. The draft Mitigated Negative Declaration is also available for review in the Santa Maria Public Library, located at 421 S. McClelland Street, Santa Maria, CA. Written comments on the draft Negative Declaration will be accepted during the period from **April 9, 2019 to May 10, 2019**. Please submit comments on or before 5:00 p.m. on **May 10, 2019**, the close of the public comment period.



**CITY OF SANTA MARIA
INITIAL ENVIRONMENTAL STUDY
MITIGATED NEGATIVE DECLARATION
APRIL 7, 2019**

LOS FLORES RANCH SHOOTING FACILITY, SP2018-0013

Los Flores Ranch
6245 Dominion Road
Santa Maria, California 93454
APN: 101-060-002

PROJECT SUMMARY

| | |
|---------------------------------|--|
| Project Description | The project develops an outdoor shooting range on a 5.0-acre site in the southern portion of the City of Santa Maria's 1,774-acre Los Flores Ranch property in the Solomon Hills for the exclusive use by the City of Santa Maria's Police Department for the purpose of live-fire training and firearms qualification maintenance. The general public will not have access to the facility. An outdoor shooting range with four shooting lanes, one live fire shooting house, one mobile classroom on a graded pad, and two graded parking areas to accommodate a total of 40 parking spaces is being proposed. |
| Location | Los Flores Ranch Park, US Highway 101 Exit 161; 34.817622°N/120.341159°W |
| Assessor's Parcel No. | 101-060-002 |
| General Plan Designation | Santa Barbara County: Agriculture II (A-II-100) City of Santa Maria: Community Facilities (CF) |
| Zoning | Santa Barbara County: Agriculture II (A-II-100) City of Santa Maria: Public Facilities (PF) |
| Size of Site | 5.0 acres |
| Present Use | Undeveloped grazing land |
| Proposed Uses | City of Santa Maria Police Department Outdoor Shooting Range |
| Access | US Highway 101 Exit 161; Caltrans-owned frontage road |
| Surrounding Uses/Zoning | |
| North | Agriculture II/A-II-100 |
| South | Agriculture II/A-II-100 |

| | |
|--------------------------------|--|
| East | Agriculture II/A-II-100 |
| West | Agriculture II/A-II-100 |
| Parking | Proposed: 40, graded unpaved lot |
| Building Coverage | Mobile classroom: 2040 s.f. Live Fire House: 2500 s.f. |
| Storm Water Retardation | Existing natural basin |
| Applicant/Agent/Owner | City of Santa Maria Public Works Department |
| Procedure | Planning Commission hearing to adopt a Mitigated Negative Declaration of environmental impacts for the special project Los Flores Ranch Shooting Facility. |

GENERAL AREA DESCRIPTION:

The project site is located on 5.0 acres in an unincorporated area of northern Santa Barbara County on the Los Flores Ranch property in the Solomon Hills, approximately 1.1 miles south of Exit 161 and 0.5 to the east. The site is bordered by US Highway 101 to the west and is surrounded by undeveloped rural fields designated by Santa Barbara County as A-II-100 (Agricultural) in all directions. The topography of the site is characterized by gently rolling hills and valleys, which ranges from 950 feet above mean sea level (msl) to 1080 feet above msl, with no significant features on-site or within the vicinity. Although US Highway 101 can be seen from the unnamed access road leading up to the project site, the project site is partially obscured due to its location in shallow canyon flanked by gently rolling hills. The project site features non-native annual grassland, coastal scrub, and oak woodland to the east of the project site.

ENVIRONMENTAL SETTING:

The project site is undeveloped agricultural land primarily used for grazing in an unincorporated area of northern Santa Barbara County on the Los Flores Ranch property in the Solomon Hills and is surrounded by undeveloped rural fields designated by Santa Barbara County as A-II-100 (Agricultural) in all directions. The topography of the site is characterized by gently rolling hills and valleys. The substrate of the project site is comprised of Gaviota sandy loam and Corralitos loamy sand, which is commonly occurring on alluvial fans and mountain slopes. The vegetation occurring on the project site comprise of two prevalent vegetation communities: non-native annual grassland, and coastal scrub. A cluster of oak trees exists on the eastern perimeter of the project site.

A biological survey was conducted to document the existing site conditions and to evaluate the potential for presence of sensitive biological resources, including sensitive plant and animal species, sensitive plant communities, and habitat for nesting birds protected by federal and state laws. During the survey, an inventory of all plant and animal species observed was compiled and an evaluation of the potential for jurisdictional

aquatic features to be present was conducted. The potential presence of sensitive vegetation communities, nesting birds, and potentially jurisdictional waters and wetlands was noted during the reconnaissance survey.

PROJECT DESCRIPTION:

The proposed project is an outdoor shooting range for the exclusive use of the Santa Maria Police Department and 80 of the Police Department's police officers for the purposes of live-fire training and firearms qualification maintenance. The general public will not have access to this facility. The project would develop an outdoor shooting range with four shooting lanes ranging from 12,394 square feet to 13,314 square feet, one live fire shooting house with a 2,500 square feet building, one mobile classroom on a graded pad of 2040 square feet, and two graded parking areas of 10,500 square feet each to accommodate a total of 40 parking spaces. The four pistol ranges would be separated by berms and backed by bullet collection walls. Both the live fire shooting house and mobile classroom will be painted with non-reflective, and unobtrusive beige colors to blend with the natural surroundings and mitigate the visual impact of the facility. Firearms training would occur up to ten times a month on the project site, with a maximum of 20 police officers on site at any given time.

PROJECT REVIEW:

The environmental impacts associated with the development of the site were determined using the City of Santa Maria Staff Project Environmental Checklist (attached), on-site inspection, various computer models, and information provided by the applicant. Potentially significant adverse environmental impacts were identified in the area of *Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, and Noise*.

IMPACT SUMMARY TABLE

| | Proposed Project |
|---------------------------------------|---|
| Size of Site | 5.0 acres |
| Size of Buildings | one live fire shooting house: 2,500 s.f. one mobile classroom: 2040 s.f. |
| Water Demand ⁽¹⁾ | 0 acre-feet per year |
| Sewage Generation ⁽¹⁾ | 0 gallons per day |
| Average Daily Trips ⁽¹⁾⁽²⁾ | 6 |
| P.M. Peak Trips ⁽¹⁾⁽²⁾ | 20 |

| | |
|---|--|
| <u>Unmitigated</u> Long Term Emissions: ⁽³⁾ Reactive Hydrocarbons Nitrogen Oxides | <0.1 pounds/day <0.1 pounds/day |
| <u>Noise</u> Temporary: Operational: | 55-85 dBA 140-160 dBA |

(1) Information provided by project applicant.

(2) ITE Trip Generation Manual 9th edition Volume 3: Data

(3) CalEEMod v.2016.3.2, summer emissions reports.

The following discussion of the potential adverse environmental impacts includes mitigation measures which would reduce all identified impacts to a level of insignificance, and are recommended to be included in the conditions of approval for the project. If the decision makers wish to delete a mitigation measure which is proposed to mitigate a significant impact, an alternative mitigation measure should be agreed to by the applicant and made part of the project. Verification that these mitigation measures have been implemented will be monitored as described in Section 8 of the City of Santa Maria's Environmental Procedures. The monitoring checklist is included at the end of this report.

Air Quality

Temporary air quality impacts are common during project construction. The SBCAPCD has not established construction emissions thresholds. Ozone precursors NO_x and ROG, as well as CO, would be emitted by the operation of construction equipment while fugitive dust (PM₁₀) would be emitted by activities that disturb the soil, such as grading, excavation, and roadway and building construction. The projected annual emissions of all criteria pollutants during construction activities would be well below the SBCAPCD's threshold of 25 tons-per-year for ROG and NO_x when phased during the project construction period. However, because the Santa Barbara County portion of the SCCAB is a nonattainment area for the state PM₁₀ threshold, standard construction dust and emission control measures would be required for all projects involving earthmoving activities regardless of size or duration. In accordance with standard practices, such construction emission control measures would be shown on grading and building plans. These requirements have been required as mitigation measure AQ-1 and AQ-2, below. According to the SBCAPCD's Scope and Content of Air Quality Sections in Environmental Documents (June 2017), implementation of required dust control measures results in fugitive dust emissions that have a less-than-significant effect on air quality. Specific control measures to reduce particulate emissions, as prescribed by the SBCAPCD, would also be included as conditions of approval for the project, as necessary.

AQ-1 Fugitive Dust Control Measures. The project proponent shall implement the Santa Barbara County Air Pollution Control District's Standard Fugitive Dust Control Measures, where applicable:

1. During construction, use water trucks or sprinkler systems to keep areas of vehicle movement damp to prevent dust from leaving the site
2. Minimize amount of disturbed area and reduce on-site vehicle speeds to 15 miles per hour or less.
3. For fill material, cover, keep moist, or treat soil stock piled for more than two days, and tarp trucks transporting fill material to and from the site.
4. Install gravel pads at access points to prevent tracking of mud onto public roads.
5. After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, re-vegetating, or by spreading soil binders until the area is paved or otherwise developed.
6. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary.

AQ-2 Diesel Idling. The project proponent shall comply with the requirements of Section 2485 of Title 13 of the California Code of Regulations, which limits idling from diesel-fueled commercial motor vehicles with gross vehicular weight ratings of more than 10,000 pounds and licensed for operation on highways. Vehicles subject to the requirements shall be subject to the following:

1. Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and,
2. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 1,000 feet of a sensitive receptor, whenever feasible;
3. Shall not conduct staging and queuing within 1,000 feet of a sensitive receptor, whenever feasible; and
4. Shall comply with the 5 minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use Off-Road Diesel regulations.

Biological Resources

Special-Status Plants

Based on the literature review, 43 special status plant species were documented within the *Sisquoc, California* USGS 7.5-minute quadrangle and the eight surrounding quadrangles (Appendix D). No special status plants were observed during the reconnaissance-level field survey. Thirty-seven species were eliminated from the analysis due to a lack of suitable habitat, unsuitable soils, and/or the project's location outside of the known distribution and/or elevation range of the species (e.g., special status plants that are associated with coastal habitats, serpentine soils, or highly alkaline soils that are not present in the BSA). Six special status plant species were determined to have potential to occur within the BSA considering the presence of suitable habitat and soil conditions. Mitigation Measures BIO-1, BIO-2, and BIO-3 are included to minimize potential impacts to special-status plants during project construction activities.

Special-Status Animals

Based on the database and literature review, previous studies and observations, 27 special status animal species were documented within the *Sisquoc, California* USGS 7.5-minute topographic quadrangle and the eight surrounding quadrangles (Appendix D). Eighteen special status species were eliminated from further analysis due to the absence of suitable habitat within the BSA or because the BSA occurred outside of the species' known range. Nine special status wildlife species (five mammals, one bird, and three reptiles), were determined to have potential to occur within the BSA based upon known ranges, habitat preferences, species occurrence records in the vicinity of the BSA, and presence of suitable habitat. Mitigation Measures BIO-3, BIO-4, BIO-5, and BIO-6 are included to minimize potential impacts to special-status animals during project construction activities.

BIO-1 Worker Environmental Awareness Training

Prior to the start of any construction activities, all construction personnel shall attend a worker environmental awareness training from a qualified biologist. The training shall include the identification of all special status plant and animal species with potential to occur on the project site, a description of their habitats, their regulatory statuses, and all measures being implemented to avoid and minimize impacts.

BIO-2 Special Status Plant Mitigation Measures

BIO-2(a) Pre-Construction Surveys

Prior to construction within suitable habitat, (including staging and mobilization) and when plants with potential to occur are in a phenological stage conducive to positive identification (i.e., usually during the blooming period for the species), a qualified botanist should conduct surveys for special status plant species. Reference sites must be visited to document target species are detectable prior to site surveys and/or confirm that phenology of species known to bloom and co-occur with target species is suitable for

detection if a publically accessible reference site is not available for a given species. Valid botanical surveys will be considered current for up to five years; if construction has not commenced within five years of the most recent survey, botanical surveys must be repeated. Surveys must be completed during blooming periods for the species with potential to occur onsite and reference site visits must confirm that the species are identifiable in the survey year.

BIO-2(b) Special Status Plant Species Avoidance

If state listed, federally listed, or non-listed CRPR 1B.1 species are discovered within the survey area, an impact analysis to evaluate how the project would directly impact the special status plants shall be completed. If feasible, development would be re-designed in coordination with a qualified biologist to avoid impacting these plant species. Rare plants that are not within the immediate disturbance footprint, but are located within 50 feet of disturbance limits will be flagged and fenced off by a qualified biologist before construction activities start, to avoid impacts to special status plant species. If avoidance of state listed or federally listed plants species is not feasible, impacts must be fully offset through implementation of a restoration plan that results in no net loss (see measure B-2(c)). Note that prior to implementing activities that result in impacts to listed plants, consultation with CDFW and/or USFWS and acquisition of any required permits must also be completed.

BIO-2(c) Restoration Plan for Special Status Plant Species

If avoidance of non-listed CRPR 1B.1 species is not feasible, all impacts will be mitigated at a minimum ratio of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration. The restoration plan shall include, at a minimum, the following components:

- Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type);
- Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved];
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values);
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan [including species to be used, container sizes, seeding rates, etc.]);
- Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (activities, responsible parties, schedule);
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year, along with performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, and

annual monitoring reports for a minimum of five years at which time the project proponent shall demonstrate that performance standards/success criteria have been met;

- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80% survival of container plants and 70% absolute cover by vegetation type. Absolute cover will be determined in comparison to a reference plot for native species.
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria;
- Notification of completion of compensatory mitigation; and
- Contingency measures (e.g. initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

BIO-3 Best Management Practices

The following Best Management Practices (BMPs) would be implemented for project construction activities within work areas:

- No pets or firearms should be allowed at the project site during construction activities.
- During project activities, all trash that may attract predators should be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris should be removed from work areas.
- Pallets or secondary containment areas for any chemicals, drums, or bagged materials should be provided. Should material spills occur, materials and/or contaminants should be cleaned from the project site.
- All vehicles and equipment should be in good working condition and free of leaks.
- Construction work should be restricted to daylight hours (7:00 AM to 7:00 PM) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species.
- All open trenches should be constructed with appropriate exit ramps to allow species that accidentally fall into a trench to escape. Trenches will remain open for the shortest period necessary to complete required work.
- All project related vehicles should observe a 20 mile-per-hour speed limit in all project areas.
- Erosion control and landscaping specifications should allow only natural-fiber, biodegradable meshes and coir rolls, (i.e. no plastic-mesh temporary erosion control measures) to prevent impacts to the environment and to fish and terrestrial wildlife.
- During construction, the project will make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species.

- Equipment and vehicles must be free of caked on mud and weed seeds/propagules before accessing and leaving the project site.

BIO-4 Special Status Reptile Preconstruction Surveys

Preconstruction surveys for coast patch-nosed snake, California legless lizard, and Blainville's horned lizard shall be conducted by a qualified biologist in areas of suitable habitat within the project site. Surveys shall include visual inspections and raking/sifting as necessary to locate individuals prior to ground disturbance activities, and relocate individuals to suitable areas outside the project footprint. The qualified biologist shall receive approval from the City, in consultation with CDFW if needed, to identify a relocation site that is nearby with habitat suitable for the species. If individuals are identified during surveys, the qualified biologist shall:

- Store all individuals in an appropriate container (insulated with lid);
- Transfer individuals within four hours of capture;
- Release in appropriate/comparable habitat (in coordination with the City, who may choose to consult with CDFW regarding release sites);
- Document translocation effort through photos, GPS salvage and relocation sites, and standard measurements (temperature, time); and
- Provide the City with a final report of translocation efforts once completed.

BIO-5 Nesting Bird Surveys and Avoidance

Initial site disturbance shall be prohibited during the general avian nesting season (February 1 – August 30), if feasible. If nesting season avoidance is not feasible, a qualified biologist shall conduct a preconstruction nesting bird survey to determine the presence/absence, location, and status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. Buffer size shall consider the species involved and relevant level of tolerance to adjacent activity, the location of the nest relative to proposed activities, and site conditions that naturally buffer the location, such as vegetation screening, topography, etc. To avoid the destruction of active nests and to protect the reproductive success of birds protected by MBTA and CFGC, nesting bird surveys shall be performed not more than 14 days prior to initial project activities or vegetation clearance. In the event that active nests are discovered, a suitable buffer shall be established around such active nests and no construction within the buffer allowed until a qualified biologist has determined that the nest is no longer active (e.g. the nestlings have fledged and are no longer reliant on the nest). No project activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 30 and February 1.

BIO-6 American Badger Impact Avoidance and Minimization

Prior to initiation of ground disturbance and vegetation removal for the project, a qualified biologist should complete a survey for badger dens. In order to avoid the potential direct take of adults and nursing young, no ground disturbance should occur within 50 feet of an active badger den as determined by a qualified biologist between March 1 and June 30. Construction activities between July 1 and March 1 should comply with the following measures to avoid direct take of adult and weaned juvenile badgers:

- Conduct a biological survey of the anticipated disturbance areas between 2 weeks and 4 weeks prior to construction. The survey should cover the entire area proposed for disturbance. Surveys should focus on both old and new den sites. If dens are too long to see the end, motion-activated wildlife cameras should be used to determine occupancy status. If the camera method is used, cameras must be used for four consecutive nights to make a determination on den activity and occupancy status.
- Inactive dens should be excavated by hand with a shovel to prevent badgers from reusing them during construction.
- Badgers should be discouraged from using currently active dens prior to the grading of the site by partially blocking the entrance of the den with sticks, debris and soil for 3 to 5 days or through use of a 1-way door. After badgers have stopped using active dens within the development area, the dens should be hand excavated with a shovel to prevent re-use.

Cultural Resources

According to the City's General Plan Resources Management Element, the Santa Maria Valley is not a major archaeological or paleontological resource area, as only a few sites have been recorded or discovered in the area. A Phase I Archaeological Survey was completed for the project (Rincon 2018). The survey included a literature search of the California Historical Resources Information System at the Central Coastal Information Center (CCIC) located at University of California, Santa Barbara, and an intensive pedestrian field survey. The results of the CCIC records search identified no previously recorded cultural resources on the project site, and the pedestrian field survey identified no cultural resources on the project site (Rincon 2018).

In the event of an accidental discovery or recognition of any human remains, California State Health and Safety Code Section 7050.5 stipulates that no further disturbances shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to CEQA regulations and Public Resources Code Section 5097.98. With adherence to State Health and Safety Code Section 7050.5, which stipulates the process to be followed when human remains are encountered, and Mitigation Measure CR-1, impacts related to the disturbance of archaeological resources and human remains.

CR-1 Unanticipated Discovery of Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

CR-2 Inadvertent Discovery of Paleontological Resources

Inadvertent Discovery of Paleontological Resources. Should any vertebrate fossils or potentially significant finds (e.g., numerous well-preserved invertebrate or plant fossils) be encountered during work on the site, all activities in the immediate vicinity of the find shall cease until a qualified paleontologist evaluates the find for its scientific value. If deemed significant, the paleontological resource(s) shall be salvaged and deposited in an accredited and permanent scientific institution where they will be properly curated and preserved.

CR-3 Unanticipated Discovery of Human Remains

The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determines origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.

Hazards and Hazardous Materials

The project would result in occasional transport and use of firearms and ammunitions by the City of Santa Maria Police Department, which would lead to potential lead exposure to the officers from the lead-based bullet projectiles and the primer that ignites in a firearm barrel. Scientific research has demonstrated that lead is a toxic substance and that lead exposure can result in multiple long-term detrimental impacts to human and environmental health. A Lead Exposure Management Memorandum prepared by Rincon Consultants for project operations addresses best management practices and recommendations to minimize risks associated with firing lead bullets, including hygiene and safety practices for the shooters, and are included as part of Mitigation Measure HAZ-1. Mitigation measures such as lead removal, reclamation, and recycling, along with an Environmental Stewardship Plan modeled after EPA's "Best Management Practices

for Lead at Outdoor Shooting Ranges”, are included as part of mitigation measure HAZ-2 to reduce the potential of releasing lead into the environment and will be required as part of the project.

HAZ-1 Hygiene and Safety Practices for Shooters. The following best management practices (BMPs) at a shooting range can minimize the risks associated with the firing of lead bullets:

1. The following BMPs should be implemented to reduce lead exposure: Wash hands thoroughly with cold water and soap after shooting or spending time in the shooting area. Cold water is preferable because warm water enlarges pores, increasing the potential for lead compounds to enter the skin.
2. While on the range, refrain from actions that bring your hands into contact with your mouth or nose, such as eating, drinking, or smoking.
3. Clothes and shoes should be changed at the range after shooting, housekeeping or maintenance activities, and placed in an airtight bag for transport to prevent lead from being tracked into cars and homes. At home, range clothes should be stored separately from other clothes and washed separately from other laundry. Alternately, disposable shoe coverings can be used while shooting or performing housekeeping or maintenance activities and then discarded when leaving the range.
4. Range personnel or anyone who spends a great amount of time at the range should regularly consult a physician regarding lead exposure.

HAZ-2 Range Design and Operational Practices. The following specific considerations should be taken regarding the SMDP shooting range’s design and operation to reduce lead contamination and exposure:

1. Lead exposure safety guidelines, including best hygiene practices for shooters described above, should be displayed in clear signage.
2. Dry sweeping should not occur in the range as this will generate airborne lead dust. Instead, wet wiping or mopping for non-porous surfaces and HEPA vacuuming for porous surfaces.
3. An *Environmental Stewardship Plan* should be developed prior to range opening and should be implemented throughout the life of the range. An example template of an Environmental Stewardship Plan is included in Appendix E of the EPA’s report *Best Management Practices for Lead at Outdoor Shooting Ranges*. The City of Santa Maria will require implementation and tracking operations in accordance with the Stewardship Plan.
4. Soil used at the berms shall be tested annually to ensure the pH level is in the desired range of 6.5 and 8.5 to reduce lead migration. Testing should occur in the uppermost layer to a depth of 24 inches from the surface. Lime and phosphate may be added to adjust the pH to be within the range.

5. Ensure that the uppermost surface does not contain rocks or debris, which may increase ricochet and bullet fragmentation.
6. To ensure that lead is not considered *abandoned* within the meaning of the RCRA statute, spent bullets and bullet fragments shall regularly be physically removed from berms and backstop. Removing bullet fragments may involve:
 - a. Hand raking and sifting (by personnel with proper protective gear and a breathing apparatus per OSHA standards) the surface layer of the berm to remove spent bullets and fragments from the soil while leaving the soil in place, or removal and replacement of affected portions of the berm. Once collected, lead must be taken to a recycler or reused and should be stored on-site for extended periods of time.
 - b. Purchasing or renting mechanical separation machinery. Various types of screening or shaking machines and vacuums are available to rent or purchase
 - c. Hiring a professional reclamation company. Lead reclamation companies claim to recover 75-95% of the lead in soils through a variety of methods dependent on the site characteristics.
7. Lead reclamation should occur approximately every one to five years. The exact frequency of how often lead removal should take place depends on the site conditions (i.e.: pH of soil as discussed above) and number of rounds fired. Approximately 100,000 rounds per firing lane can occur before lead reclamation. Therefore, record keeping procedures to monitor the number of rounds fired shall be established.
8. All activities at the range with respect to BMPs and lead reclamation and recycling shall be documented for the life of the range.

Hydrology and Water Quality

The project may result in groundwater exposure to lead via particles moving through soil, surface water, or groundwater. Lead from the bullet fragments may have potential to dissolve into water and be transported off-site through groundwater or storm water. Although there are no jurisdictional waters or drainages on the project site or immediate vicinity thereby reducing the potential to contaminate surface or navigable waters, there is still a possibility of contaminated soil being transported off-site through wind or storm water erosion (Rincon Consultants 2018). A Lead Exposure Management Memorandum prepared by Rincon Consultants for project operations addresses best management practices and recommendations for bullet and shot containment techniques for preventing lead migration. The potential for lead exposure, with mitigation measure HYD-1 incorporated, would have a less than significant effect on water quality.

HYD-1 Range Design and Operational Practices. The following specific considerations should be taken regarding the SMDP shooting range's design and operation to reduce lead contamination and exposure:

1. Dry sweeping should not occur in the range as this will generate airborne lead dust. Instead, wet wiping or mopping for non-porous surfaces and HEPA vacuuming for porous surfaces.
2. An *Environmental Stewardship Plan* should be developed prior to range opening and should be implemented throughout the life of the range. An example template of an Environmental Stewardship Plan is included in Appendix E of the EPA's report *Best Management Practices for Lead at Outdoor Shooting Ranges*. The City of Santa Maria will require implementation and tracking operations in accordance with the Stewardship Plan.
3. Soil used at the berms shall be tested annually to ensure the pH level is in the desired range of 6.5 and 8.5 to reduce lead migration. Testing should occur in the uppermost layer to a depth of 24 inches from the surface. Lime and phosphate may be added to adjust the pH to be within the range.
4. Ensure that the uppermost surface does not contain rocks or debris, which may increase ricochet and bullet fragmentation.
5. To ensure that lead is not considered *abandoned* within the meaning of the RCRA statute, spent bullets and bullet fragments shall regularly be physically removed from berms and backstop. Removing bullet fragments may involve:
 - a. Hand raking and sifting (by personnel with proper protective gear and a breathing apparatus per OSHA standards) the surface layer of the berm to remove spent bullets and fragments from the soil while leaving the soil in place, or removal and replacement of affected portions of the berm. Once collected, lead may must be taken to a recycler or reused and should be stored on-site for extended periods of time.
 - b. Purchasing or renting mechanical separation machinery. Various types of screening or shaking machines and vacuums are available to rent or purchase
 - c. Hiring a professional reclamation company. Lead reclamation companies claim to recover 75-95% of the lead in soils through a variety of methods dependent on the site characteristics.
6. Lead reclamation should occur approximately every one to five years. The exact frequency of how often lead removal should take place depends on the site conditions (i.e.: pH of soil as discussed above) and number of rounds fired. Approximately 100,000 rounds per firing lane can occur before lead reclamation. Therefore, record keeping procedures to monitor the number of rounds fired shall be established.
7. All activities at the range with respect to BMPs and lead reclamation and recycling shall be documented for the life of the range.

Noise

Mitigation measures NOI-1 and NOI-2 have been incorporated to minimize all potential impacts related to construction noise. These measures include adherence to City construction work hours, implementation of noise control for stationary equipment, and proper maintenance of all equipment to avoid unnecessary increased noise levels. Construction-related noise would be limited in duration and nature, and the project does not propose land uses that would generate excessive noise during project operation. Furthermore, the distance from the freeway and the existing ambient noise levels from the freeway (70 dB), would render any construction noise to be less than perceptible to the public travelling along the highway.

The use of firearms during training and certification have the potential to generate noise resulting from gunshot, ranging from 140 dB to 160 dB, above the acceptable threshold for comfortable noise levels. Best management practice and procedures to reducing audial harm to police officers during training and certification activities have been incorporated into Mitigation Measure NOI-3.

NOI-1 During project construction, construction activity shall be limited to the hours between 7:00 a.m. and 7:00 p.m. on weekdays, and between 8:00 a.m. and 6:00 p.m. on Saturdays in accordance with the City Noise Element. No construction shall occur on Sundays or State or Federal Holidays. Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities without mechanical equipment are not subject to these restrictions.

Stationary construction equipment that generates noise that exceeds 65 dBA at the project boundaries shall be shielded with the most modern noise control devices (i.e. mufflers, lagging, and/or motor enclosures). Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed-air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used.

NOI-2 All equipment shall be properly maintained to ensure that no additional noise, due to worn or improperly maintained parts, is generated. Stockpiling and vehicle staging areas shall be located as far as practical from sensitive noise receptors. Every effort shall be made to create the greatest distance between noise sources and sensitive receptors during construction activities.

NOI-3 All officers and police personnel on the project site shall adhere to outdoor range safety measures for hearing protection, including ear plugs and/or ear muffs, to avoid repeated exposure to noise above 140 dB.

ENVIRONMENTAL RECOMMENDATION:

Based on the information available at the time of preparation this report and, without benefit of additional information which may come to light at the public hearing, the Environmental Officer recommends that a Mitigated Negative Declaration be filed for Los Flores Ranch Shooting Facility project based upon information contained in SP2018-0013.

PREPARED BY:



City of Santa Maria
Community Development Department
110 South Pine Street, #101
Santa Maria, CA 93458



Ivana Yeung, Environmental Analyst

4/8/19

Date



Chuen Ng, Environmental Officer

4/5/19

Date



**CITY OF SANTA MARIA
ENVIRONMENTAL CHECKLIST / INITIAL STUDY
Las Flores Ranch Shooting Facility
(SP2018-0013)**

1. Project Title and Location

Las Flores Ranch Shooting Facility

6245 Dominion Road

Santa Maria, California 93454

Assessor's Parcel Number: 101-060-002

2. Lead Agency, Contact and Preparer

City of Santa Maria

Community Development Department

110 South Pine Street, Suite 101

Santa Maria, California 93458

Ivana Yeung, Associate Planner

(805) 925-0951 ext. 2552

3. Project Sponsor's Name and Address

Eric Riddiough

City of Santa Maria, Public Works Department

110 South Pine Street, Suite 101

Santa Maria, CA 93458

4. General Plan Land Use Classification

The project site is located in the San Antonio Rural Region of Santa Barbara County on land owned by the City of Santa Maria. The site is designated in the Santa Barbara County Comprehensive Plan as Agriculture II (A-II-100). However, City land use regulations as Community Facilities (CF) apply to the site because the project site is owned by the City of Santa Maria. The County's land use regulations do not apply to the project site.

5. Zoning Designation

The project site is zoned Public Facility (PF) in the City of Santa Maria and Agriculture II (A-II-100) in the County of Santa Barbara.

6. Project Description

The proposed project is an outdoor shooting range for the exclusive use of the Santa Maria Police Department and 80 of the Police Department's police officers for the purposes of live-fire training and firearms qualification maintenance. The general public will not have access to this facility. The site would be accessed via US Highway 101 at Exit 161 and Caltrans-owned frontage road immediately east of US Highway 101 leading up to the project site (**Figure 1**). The shooting range is on an approximately 5-acre site in the southern portion of the City's 1,774-acre Los Flores Ranch property in the Solomon Hills (**Figure 2**).

The project would develop an outdoor shooting range with four shooting lanes ranging from 12,394 square feet to 13,314 square feet, one live fire shooting house with a 2,500 square feet building, one mobile classroom on a graded pad of 2040 square feet, and two graded parking areas of 10,500 square feet each to accommodate a total of 40 parking spaces (**Figure 3**). The four pistol ranges would be separated by berms and backed by bullet collection walls. Both the live fire shooting house and mobile classroom will be painted with non-reflective, and unobtrusive beige colors to blend with the natural surroundings and mitigate the visual impact of the facility. Firearms training would occur up to ten times a month on the project site, with a maximum of 20 police officers on site at any given time. Police Department training events as aforementioned would include the following: SWAT team training occurring twice a month; general firearms training for police officers, and a firearms qualification for the officers occurring quarterly in the year. Operating hours during training days are from 7:00 a.m. to 10:00 p.m. Night-shooting operations occurring at dusk and after sunset would be illuminated by portable spotlights and a portable generator; lighting and generator will be stored off-site. No water and sewer services are proposed at this site.

The project proposes to disturb approximately 5 acres, requiring a 1,723 cubic yards of cut material and 1,723 cubic yards of fill material (**Figure 4**). Approximately 1756 cubic yards of Class II base comprised of aggregate pervious material will be used for the outdoor pistol ranges (628 cubic yards), access roads and paths (702 cubic yards), parking areas (260 cubic yards), live fire shooting house pad edges (108 cubic yards), and ditch lining (58 cubic yards). No trees will be removed during the grading of the project site and the construction of the shooting facilities. Erosion controls include fiber rolls, which will be installed above the construction area prior to the construction of brow ditches; and silt fences, which will be installed below the construction area for the duration of construction.

7. Surrounding Land Uses and Setting

The project is located on five acres in the southern portion of the 1,774-acre Los Flores Ranch property in the Solomon Hills. The Los Flores Ranch property is county land designated for agricultural uses and is owned by the City of Santa Maria. The project site is currently vacant, with a regional park to the north, and future proposed Integrated Waste Management Facility landfill to the west with a Community Facility land use designation.

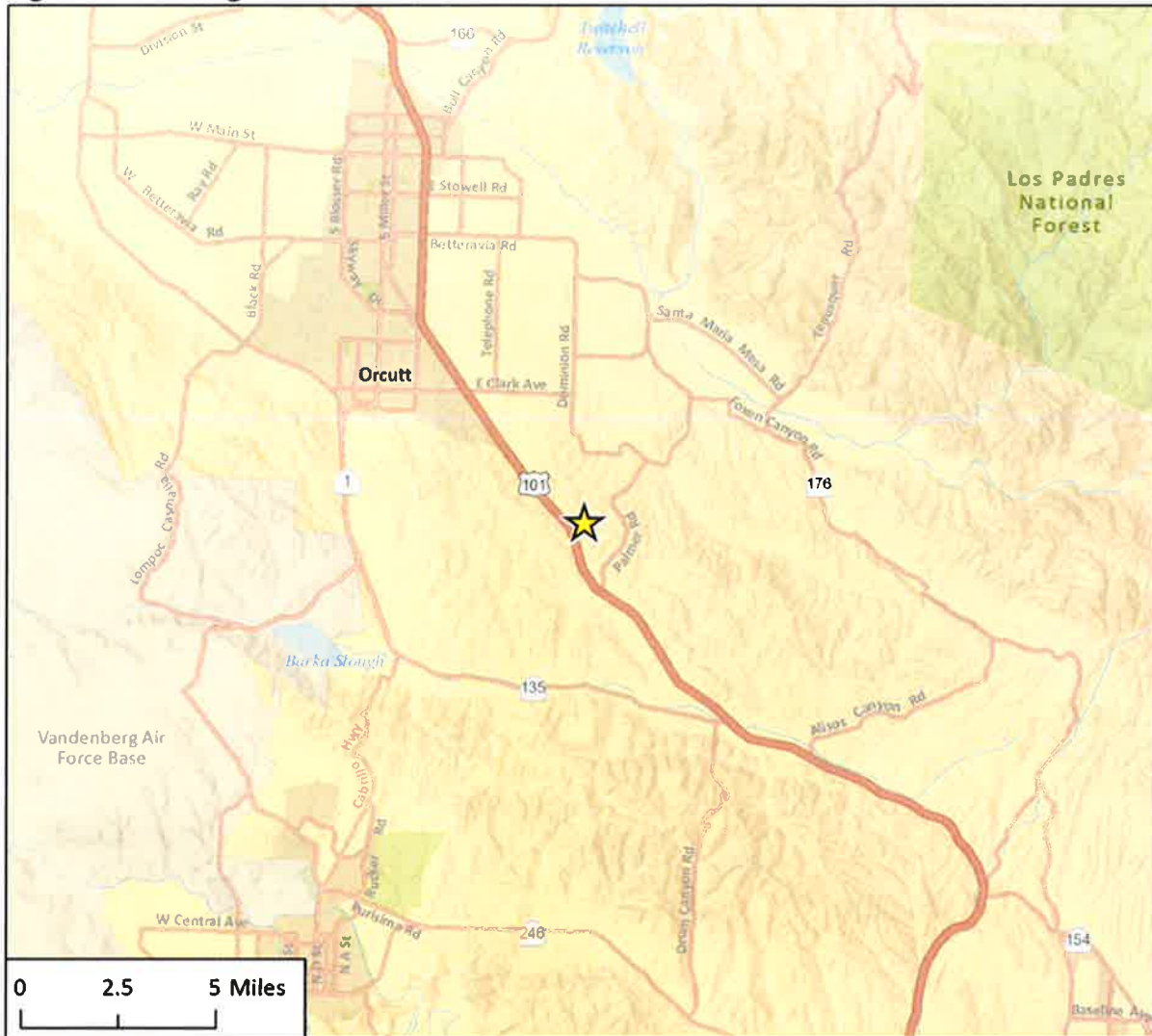
Figure 1 shows the regional location of the project site in southeast Santa Maria.

Figure 2 shows the project site location relative to land uses in the vicinity.

8. Public Agencies Whose Approval is Required

County of Santa Barbara Department of Public Works
California Department of Fish and Wildlife

Figure 1 Regional Location



★ Project Location



Figure 2 Project Site Location

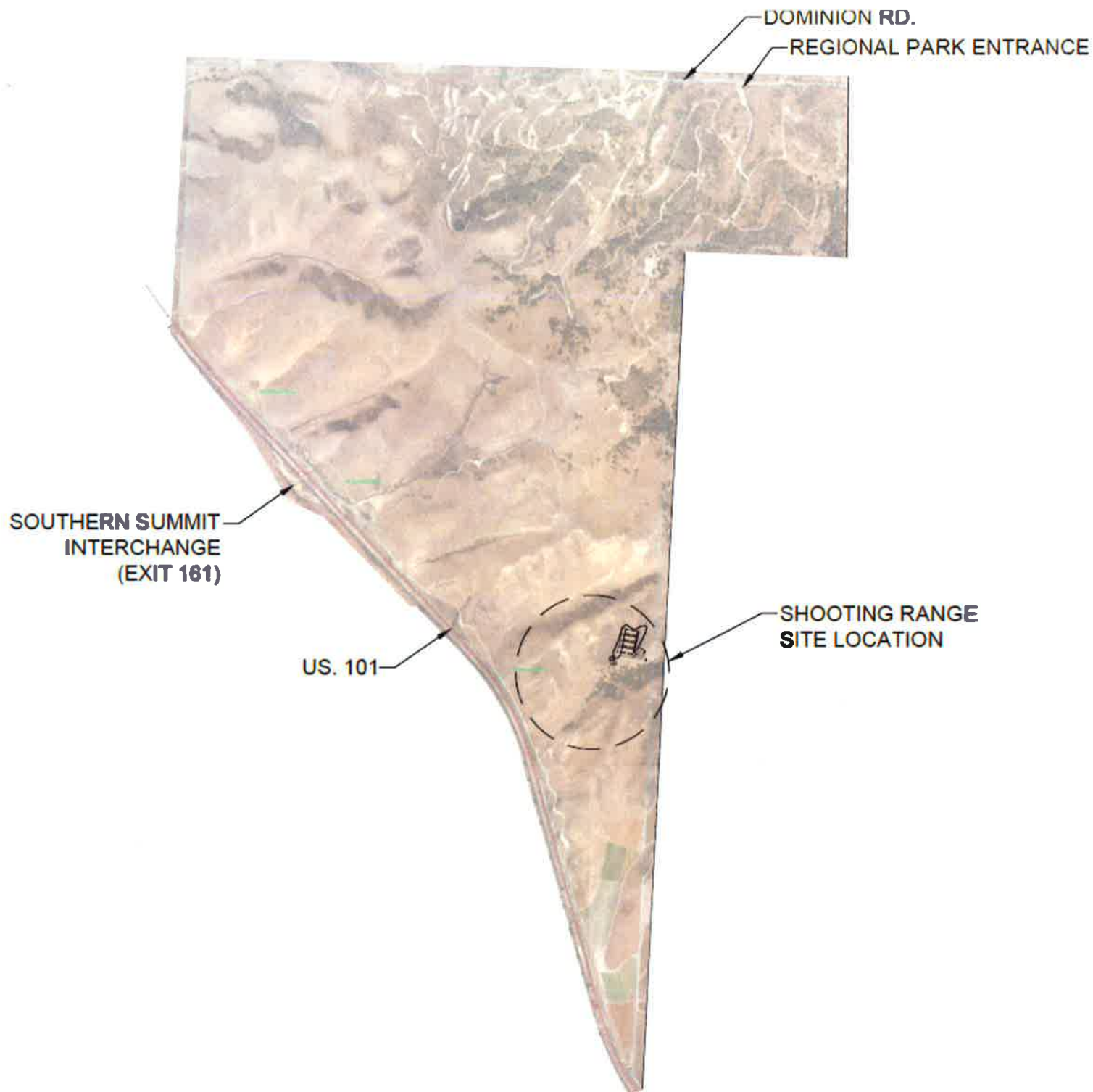
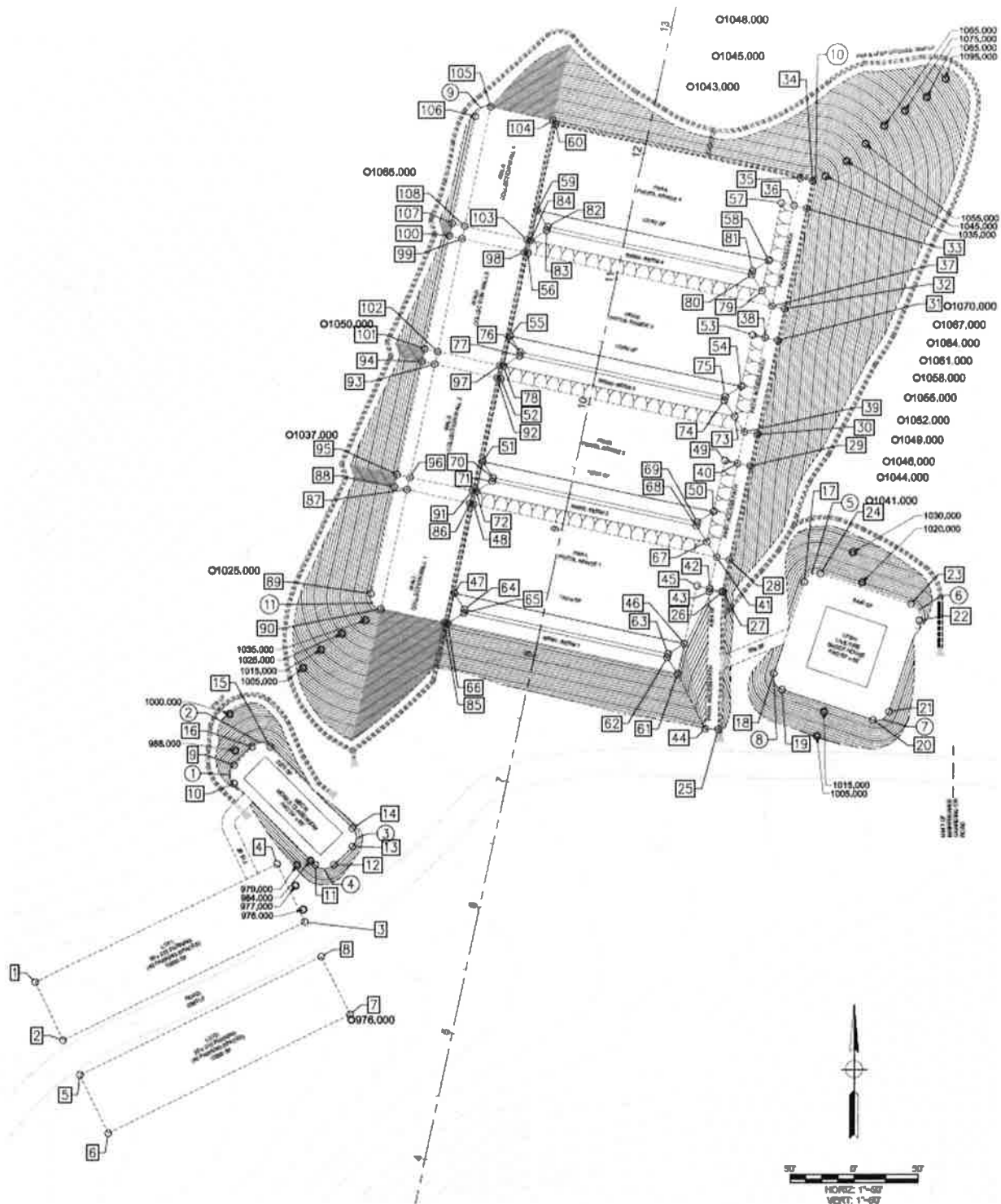


Figure 3 Proposed Site Plan



Figure 4 Grading Plan



1. AESTHETICS/VISUAL RESOURCES

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

Setting:

The project site is located on 5.0 acres in an unincorporated area of northern Santa Barbara County on the Los Flores Ranch property in the Solomon Hills, approximately 1.1 miles south of Exit 161 and 0.5 to the east. The site is bordered by US Highway 101 to the west and is surrounded by undeveloped rural fields designated by Santa Barbara County as A-II-100 (Agricultural) in all directions. The topography of the site is characterized by gently rolling hills and valleys, which ranges from 950 feet above mean sea level (msl) to 1080 feet above msl, with no significant features on-site or within the vicinity. Although US Highway 101 can be seen from the unnamed access road leading up to the project site, the project site is partially obscured due to its location in shallow canyon flanked by gently rolling hills. The project site features non-native annual grassland, coastal scrub, and oak woodland to the east of the project site.

Impact Discussion:

- The project site is partially obscured from US Highway 101 due to its location within a shallow canyon, flanked by the Solomon Hills. On the larger scale, the development of the 5.0 acre site within the 1,774-acre Los Flores Ranch property in the Solomon Hills would not change or otherwise adversely affect views from surrounding residences and roadways, including US Highway 101, or from the neighboring regional open space park. *Impacts to any scenic vista as a result of the project would be less than significant.*
- According to the City's General Plan and the California Scenic Highway Mapping System, no designated State or local scenic highway corridors are identified in the project area. Additionally, no locally important scenic resources have been identified in the project area. *Therefore, the project would not result in any impacts to scenic resources within a state scenic highway.*
- The project site is located in an area with rural character adjacent to County land primarily characterized by an abundance of expansive agricultural lands. The project would result in non-agricultural use and increase in community facility use on the project site. The proposed open space firing range, live fire shoot house, mobile classroom and graded parking area would not substantially degrade the existing visual character or quality of the site and its surroundings because the project location is partially obscured by the surrounding hills with visual buffer of 0.5 mile. *This impact would be less than significant.*

- d. The project site is comprised of open air firing ranges with a mobile trailer training classroom, live fire shoot house, and graded parking lot. The proposed structures will be painted neutral matte colors to be compatible with surrounding environs, and will not create substantial light or glare that would impact daytime views. Project implementation at this phase will not include any night time uses extending beyond 10 p.m., and will not affect nighttime views of the area. Should future night time uses be proposed at the site, the lighting fixtures would be required to be designed and located as necessary to minimize light and glare to off-site locations in accordance with the Santa Maria Municipal Code Section 12-33.307 (Glare) and the Engineering Division standard specifications (S-106 Streetlights). *Therefore, the project would result in less than significant impacts associated with light and glare.*

Mitigation measure(s) incorporated into the project: None required.

2. AGRICULTURE AND FOREST RESOURCES

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | X | |
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | X |
| 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))? | | | | X |
| d. Result in the loss of forest land or conversion of forest land to non-forest use? | | | | X |
| 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? | | | | X |

Setting:

Agriculture has historically played an important role in the economy and development of the City of Santa Maria and the Santa Maria Valley. The majority of the land under agricultural production is located in the unincorporated areas surrounding the City of Santa Maria. The project site is located in County unincorporated land previously designated as AS-II-100 for agricultural uses prior to being purchased by the City of Santa Maria for the intention of Community Facility uses. The site is not currently used, and has not been historically used, for productive agricultural purposes. The topography and environs of the project site is typified by rolling hills covered by non-native grasses and Coastal Scrub, rocky outcrops and oak woodland and would not be considered suitable agricultural land.

Impact Discussion:

- a. According to the Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) Important Farmland Map for Santa Barbara County (DOC2016), the site and immediate vicinity is mapped as Grazing Land. Grazing Land is identified as land on which existing vegetation is suited to the grazing of livestock. However, the project site is only a small portion of a larger area designated as Grazing Land, and would have less than significant impact on grazing resources. The project site does not include land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as designated by the FMMP; *therefore, no conversion of these lands would result from the project.*
- b. There is no active farmland on the project site or immediate vicinity. The project site was designated as Agricultural II with the County of Santa Barbara but is now City-owned and designated as Community Facility (CF). The project site nor immediate vicinity are under a Land Conservation (Williamson) Act contract; *therefore, the project would not result in a conflict with the existing zoning for agricultural use, or a Williamson Act contract.*
- c.-d. The project site does not support forest land or timberland and is designated as Community Facility (CF), and is not located within forest land and nor adjacent to forest land. Onsite vegetation primarily consists of non-native annual grassland, and coastal scrub. A cluster of oak woodland exists to the east of the site, but is not considered forest land. The implementation of the project would not result in a conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; nor would the result in the loss of forest land or conversion of forest land to non-forest use. *Therefore, there would be no impact.*
- e. According to the Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) Important Farmland Map for Santa Barbara County (DOC2016), the site is mapped as Grazing Land and does not modify any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project site is only a small portion of a larger area designated as Grazing Land, and would have less than significant impact on grazing resources. The project would not convert land under active Williamson Act contract, or land designated or zoned for agricultural use, forest land, or timberland. *Therefore, no impact to farmland or agricultural resources would occur.*

Mitigation Measure(s) incorporated into the project: None required.

3. AIR QUALITY

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| a. Conflict with or obstruct implementation of the applicable air quality plan? | | | | X |
| b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | | X | |

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | | X | |
| d. Expose sensitive receptors to substantial pollutant concentrations? | | | | X |
| e. Create objectionable odors affecting a substantial number of people? | | | | X |

Setting:

The project site is located in the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura counties.

Criteria Pollutant Regulation. In accordance with the California Clean Air Act, the California Air Resources Board (CARB) regulated the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. Local control in air quality management is provided by CARB through multi-county and county-level Air Pollution Control Districts (APCDs). CARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide. The project site is located in the Santa Barbara County portion of the SCCAB and is under jurisdiction of the Santa Barbara County Air Pollution Control District (SBCAPCD). SBCAPCD administers many programs under the ARB review and permit authority over stationary point sources of air pollution.

Federal and state standards have been established for six criteria pollutants, including ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulates less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}), and lead (Pb) (refer to Table 2). California air quality standards are identical to or stricter than federal standards for all criteria pollutants. Table 1 illustrates the current Federal and State Ambient Air Quality Standards.

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) 0.070 ppm (8-hr avg) |
| Carbon Monoxide | 9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg) | 9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg) |
| Nitrogen Dioxide | 0.053 ppm (annual avg) | 0.18 ppm (1-hr avg) 0.030 ppm (annual avg) |
| Sulfur Dioxide | 0.030 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg) | 0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg) |
| Lead | 1.5 µg/m ³ (calendar quarter) | 1.5 µg/m ³ (30-day avg) |
| Particulate Matter (PM ₁₀) | 150 µg/m ³ (24-hr avg) | 20 µg/m ³ (annual avg) 50 µg/m ³ (24-hr avg) |
| Particulate Matter (PM _{2.5}) | 12 µg/m ³ (annual avg) 35 µg/m ³ (24-hr avg) | 12 µg/m ³ (annual avg) |

ppm= parts per million

µg/m³ = micrograms per cubic meter

Source: California Air Resources Board 2016.

Current Ambient Air Quality. SBCAPCD monitors air pollutant levels to assure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the air basin is classified as being in *attainment* or as *non-attainment*.

Table 2 summarizes the annual air quality data for the local airshed. The CARB maintains over 60 air quality monitoring stations throughout California, including 18 stations in Santa Barbara County. Of the 18 stations in Santa Barbara County, eight are managed by SBCAPCD, and ten are managed by CARB and private industry. The nearest monitoring station to the project site is located in the City of Santa Maria and is currently managed by ARB. The station is located at 906 South Broadway and approximately two miles southeast of the project site. Air quality parameters monitored at this station include O₃, PM₁₀ and PM_{2.5}, NO₂, wind speed, wind direction, and ambient temperature (ATM). The data collected at this station is considered to be generally representative of the baseline air quality experienced at the project site.

The primary pollutants of concern in Santa Barbara County are ozone (O₃) and particulate matter (PM₁₀). In addition to these pollutants, PM_{2.5} and NO₂ levels are monitored and recorded at monitoring stations within the County. Table 2 provides the number of days of State or Federal exceedance in a given year, that the standard would have been exceeded had sampling occurred every day of the year. The major local sources for PM₁₀ are agricultural operations, vehicle dust, grading, and dust produced by high winds. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction in the presence of sunlight between nitrogen oxides (NO_x) and reactive organic gases (ROG). Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In Santa Barbara County, the major sources of ROG are motor vehicles, coating and solvent operations, oil and gas operations, and pesticide and fertilizer usage; and the major sources of NO_x are the marine shipping industrial operations, on-road motor vehicles, and fuel combustion by various industrial sources (SBCAPCD 2016 Ozone Plan). According to the CARB 2015 State and National Area Designation Maps, the County is in non-attainment for the State O₃ and PM₁₀ standards.

Table 2
Ambient Air Quality Data at the Santa Maria – 906 S. Broadway Station

| Pollutant | 2015 | 2016 | 2017 |
|---|-------|-------|-------|
| Ozone, ppm – Hourly Maximum | 0.066 | 0.062 | 0.068 |
| Number of days of State exceedances (>0.09 ppm) | 0 | 0 | 0 |
| Ozone, ppm – Eight Hour (State) | 0.055 | 0.056 | 0.063 |
| Number of days of State exceedances (>0.070 ppm) | 0 | 0 | 0 |
| Number of days of Nation exceedances (>0.070 ppm) | 0 | 0 | 0 |
| Particulate Matter <10 microns, µg/m³– Worst 24 Hours | 66.4 | 78.6 | 106.9 |
| Number of samples of State exceedances (>50 µg/m ³) | 10 | 16 | 22 |
| Number of samples of Federal exceedances (>150 µg/m ³) | 0 | 0 | 0 |
| Particulate Matter <2.5 microns, µg/m³– Worst 24 Hours | 19.2 | 19.4 | 19.9 |
| Number of samples of Federal exceedances (>35 µg/m ³) | 0 | 0 | 0 |
| Nitrogen Dioxide, ppm – Hourly Maximum | 46.1 | 36 | 44.1 |
| Number of samples of State exceedances (>0.18 ppm) | 0 | 0 | 0 |

Source: CARB, 2015-2017 Top 4 Summary

Sensitive Receptors. Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. The majority of sensitive receptor locations are residences, schools, and hospitals. The proposed shooting facility is located in a remote regional open space removed from the urbanized area. No impact to sensitive receptors would occur.

Impact Discussion:

- a. The 2013 Santa Barbara County Clean Air Plan (CAP) prepared by SBCAG and SBCAPCD addresses the attainment and maintenance of state and federal ambient air quality standards within the SCCAB. In order to be determined to be consistent with the Clean Air Plan, a project's direct and indirect emissions must be accounted for in the growth assumptions of the Clean Air Plan, 2013 CAP (SBCAPCD 2015). Vehicle use and emissions are directly related to population. However, the project is reserved for the exclusive use by the existing City of Santa Maria Police Department and will not be open to the public. The project would not increase the City's population, nor attract additional residents that would result in an increase of vehicular use. Populations that remain within the CAP and SBCAG forecasts are accounted for with regards to SBCAPCD emissions inventories. The project would be consistent with the 2013 CAP and would not conflict or obstruct its implementation. *Therefore, project impacts would be less than significant.*
- b-d. Chapter 5 of the Santa Barbara County Environmental Thresholds and Guidelines Manual, as revised in February 2018, (County of Santa Barbara Planning and Development 2018) addresses the significance of a project's direct and indirect emissions for both short-term (construction) and long-term (operational) impacts.

Construction Emissions. Project-related construction activities would require ground-disturbing activities, including grading throughout the 5-acre site. Ground-disturbing activities have the potential to generate short-term emissions and fugitive dust. Emissions of ozone precursors (NO_x and ROC) during project construction would result primarily from the on-site use of heavy construction equipment and construction vehicle trips. Estimated construction air emissions were calculated for the proposed project using the California Emissions Estimator Model (CalEEMod version: CalEEMod.2016.3.1). Because many aspects of the proposed project are unknown at this time, construction details were conservatively estimated based on information provided by the applicant and by the CalEEMod defaults to capture worst-case scenario emissions; therefore, it is possible that actual project construction emissions may vary based on the finalized design and construction plans. The results of the CalEEMod are included in Appendix A.

As discussed in the Santa Barbara County Environmental Thresholds and Guidelines Manual, no quantitative threshold has been established for short-term, construction related fugitive dust (PM₁₀); however, Santa Barbara County is currently classified as non-attainment the state PM₁₀ standard. The SBCAPCD requires dust control measures for all discretionary construction activities; therefore, the SBCAPCD's standard fugitive dust control measures have been incorporated as mitigation measures to reduce fugitive dust generated during construction. The Santa Barbara County Environmental Thresholds and Guidelines Manual also states that the SBCAPCD has not established short-term thresholds for NO_x or ROC emissions generated by construction equipment. Due to the non-attainment status of the air basin for ozone and the proximity of several sensitive receptors immediately adjacent to the project site, the project should also be required to implement measures recommended by the SBCAPCD to reduce construction-related emissions of ozone precursors (NO_x and ROC) and measures to reduce diesel particulate matter (DPM) emissions to the maximum extent feasible. Compliance with these measures is part of the standard regulatory process, routinely required for all new development in the county, and serves to reduce adverse but less than significant air quality impacts during the short-term construction period. Construction emissions would not violate any SBCAPCD air quality standard, and compliance with the SBCAPCD's standard mitigation for fugitive dust and ozone precursors would ensure the project would not cumulatively contribute substantially to the County's non-attainment status; *therefore, construction impacts would be less than significant with mitigation.*

Table 3
Temporary Construction Emissions

| Land Use | Maximum Emissions (tons/year) | | | |
|---------------------|-------------------------------|-----------------|-----|------------------|
| | ROG | NO _x | CO | PM ₁₀ |
| 2019 | 0.4 | 3.5 | 2.8 | 0.3 |
| SBCAPCD Thresholds | 25 | 25 | n/a | n/a |
| Threshold Exceeded? | No | No | n/a | n/a |

n/a = not available

Source: CalEEMod v.2016.3.2, annual emissions reports. Modeling results contained in Appendix A.

Operational Emissions. Long-term emissions are contributed primarily by off-site mobile sources. Mobile emissions are based on the estimated volume and types of project-generated vehicle trips, of which there would be less than 40 trips per week. The emissions from these aspects of the project operations were estimated with the CalEEMod. Table 4

summarizes the operational emissions that would result from the project, and compares the emissions with the significance criteria suggested by the SBCAPCD for evaluating air emissions.

Table 4
Operational Emissions

| Source | Maximum Emissions (lbs/day) | | | | | |
|--------------------------------|-----------------------------|-----------------|------------------|-------------------|------------|-----------------|
| | ROG | NO _x | PM ₁₀ | PM _{2.5} | CO | SO _x |
| Area Source | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Energy | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mobile | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| <i>Threshold (all sources)</i> | 240 | 240 | 80 | n/a | n/a | n/a |
| Threshold Exceeded? | No | No | No | n/a | n/a | n/a |
| <i>Threshold (mobile only)</i> | 25 | 25 | n/a | n/a | n/a | n/a |
| Threshold Exceeded? | No | No | n/a | n/a | n/a | n/a |

Source: CalEEMod v.2016.3.2, summer emissions reports. Modeling results contained in Appendix A.

According to Chapter 5 of the Santa Barbara County Environmental Thresholds and Guidelines Manual, as revised in February 2018, (County of Santa Barbara Planning and Development 2018) a proposed project would not have a significant impact on air quality if operation of the project would:

- emit (from all project sources, mobile and stationary), less than the daily trigger for offsets for any pollutant (currently 55 pounds per day for NO_x and ROG, and 80 pounds per day for PM₁₀);
- emit less than 25 pounds per day of oxides of nitrogen (NO_x) or reactive organic compounds (ROC) from motor vehicle trips only;
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and,
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and be consistent with the adopted federal and state Air Quality Plans.

The Santa Barbara County Environmental Thresholds and Guidelines Manual also states that a project would have a significant air quality impact if it causes, by adding to the existing background CO levels, a carbon monoxide *hot spot* where the California one-hour standard of 20 parts-per-million carbon monoxide is exceeded.

The above thresholds address long-term emissions associated with the operational phase of a project. The results of the unmitigated estimated operational emission calculations for the proposed project indicate that, during operation, the project is conservatively estimated to generate approximately 1 pound of ozone precursors (ROC plus NO_x) per day, which does not exceed the SBCAPCD's threshold of 55 pounds per day. Additionally, the project would generate approximately 1 pound per day of fugitive PM₁₀, which does not exceed the SBCAPCD's threshold of 80 pounds per day. Lastly, operation of the project would generate approximately 1 pound per day of CO, which would not exceed the SBCAPCD's threshold of 20 pounds per day. Operational emissions generated by the project would not violate any SBCAPCD air quality standard or contribute substantially to the County's non-attainment status; *therefore, operational impacts would be less than significant.*

- e. Construction activities have the potential to emit odors from diesel equipment, paints, solvents, fugitive dust, and adhesives. Odors from construction activities would be intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, the project would not result in objectionable odors affecting a substantial number of people. The project does not involve development of any uses with potential to cause significant odor impacts. A potential objectionable odor of gunpowder would affect the participants utilizing the firing range only. No sensitive receptors, residential uses or commercial uses are in proximity of the project. *The project would not result in objectionable odors affecting a substantial number of people and no impacts would result.*

Mitigation Measure(s) incorporated into the project:

AQ-1 Fugitive Dust Control Measures. The project proponent shall implement the Santa Barbara County Air Pollution Control District's Standard Fugitive Dust Control Measures, where applicable:

1. During construction, use water trucks or sprinkler systems to keep areas of vehicle movement damp to prevent dust from leaving the site
2. Minimize amount of disturbed area and reduce on-site vehicle speeds to 15 miles per hour or less.
3. For fill material, cover, keep moist, or treat soil stock piled for more than two days, and tarp trucks transporting fill material to and from the site.
4. Install gravel pads at access points to prevent tracking of mud onto public roads.
5. After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, re-vegetating, or by spreading soil binders until the area is paved or otherwise developed.
6. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary.

AQ-2 Diesel Idling. The project proponent shall comply with the requirements of Section 2485 of Title 13 of the California Code of Regulations, which limits idling from diesel-fueled commercial motor vehicles with gross vehicular weight ratings of more than 10,000 pounds and licensed for operation on highways. Vehicles subject to the requirements shall be subject to the following:

1. Shall not idle the vehicle's primary diesel engine for greater than 5-minutes at any location, except as noted in Subsection (d) of the regulation; and,
2. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 1,000 feet of a sensitive receptor, whenever feasible;
3. Shall not conduct staging and queuing within 1,000 feet of a sensitive receptor, whenever feasible; and
4. Shall comply with the 5-minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use Off-Road Diesel regulations.

4. BIOLOGICAL RESOURCES

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| 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 Game or U.S. Fish and Wildlife Service? | | X | | |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | | X |
| c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | X |
| 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? | | | X | |
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | X |
| 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? | | | | X |

Setting:

The project site is located on 5.0 acres in an unincorporated area of northern Santa Barbara County on the Los Flores Ranch property in the Solomon Hills. The site is bordered by US Highway 101 to the west and is surrounded by undeveloped rural fields designated by Santa Barbara County as A-II-100 (Agricultural) in all directions. The topography of the site is characterized by gently rolling hills and valleys. The substrate of the project site is comprised of Gaviota sandy loam and Corralitos loamy sand, which is commonly occurring on alluvial fans and mountain slopes. The vegetation occurring on the project site comprise of two prevalent vegetation communities: non-native annual grassland, and coastal scrub. Non-native annual grassland habitat is prevalent on the project site and makes up approximately of 3.7 acres in the center of the project site. Dominant non-native grass species are slender ripgut brome (*Bromus diandrus*), wild oat (*Avena barbata*), red brome (*Bromus madritensis* L. ssp. *rubens*), and Italian ryegrass (*Festuca perennis*). In addition, herbaceous perennials were observed intermixed with these species including turkey-mullein (*Croton setiger*), and deerweed (*Acmispon glaber*). There are also small patches of purple needlegrass (*Stipa*

pulchra) intermixed, though not present in abundance or extent typical of needlegrass grassland. The coastal scrub habitat type was found on the northeast and western edge of the project site. Coastal scrub occurs on dry slopes and alluvial fans, where soils are shallow. The dominant scrub species within the two scrub areas are black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), sawtooth goldenbush (*Hazardia squarrosa*), and California sagebrush (*Artemisia californica*). Other species present in this habitat type include deerweed.

Rincon Consultants, Inc. (Rincon) prepared a Biological Resources Assessment for the Los Flores Shooting Range Project dated August 8, 2018. Prior to the site visit, Rincon biologists queried the USFWS Information for Planning and Consultation System (IPaC; USFWS 2018a), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2018a), the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (2018), and the National Oceanic and Atmospheric Administration (NOAA), Species List Tool. These searches were conducted to obtain comprehensive information regarding state and federally listed species as well as other special status species considered to have potential to occur within the *Sisquoc, California* USGS 7.5-minute topographic quadrangle and the surrounding eight quadrangles (*Casmalia, Orcutt, Surf, Lompoc, Los Alamos, Tranquillon Mountain, Lompoc Hills* and *Santa Rosa Hills*).

On August 8, 2018, Rincon biologist Jamie Deutsch conducted a field reconnaissance survey of the Biological Survey Area (BSA), which is comprised of the project impact area and a minimum 25-foot buffer. The survey consisted of conducting meandering pedestrian transects throughout the BSA. Mr. Deutsch surveyed the entire BSA on foot and recorded all biological resources encountered on site. The survey was conducted to document the existing site conditions and to evaluate the potential for presence of sensitive biological resources, including sensitive plant and animal species, sensitive plant communities, and habitat for nesting birds protected by federal and state laws. During the survey, an inventory of all plant and animal species observed was compiled and an evaluation of the potential for jurisdictional aquatic features to be present was conducted.

Wildlife activity was moderate during the reconnaissance survey. Vegetation onsite likely supports a suite of common avian, mammalian, and reptilian wildlife. The coastal scrub habitat supports passerine species such as Bewick's wren (*Thryomanes bewickii*) and wrentit (*Chamaea fasciata*). Other birds observed in the general area included species such as red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and prairie falcon (*Falco mexicanus*). No raptor nests were detected within the BSA, however, foraging habitat for several raptor species is present on-site. Additional wildlife species observed during the site visit include California ground squirrel (*Otospermophilus beecheyi*) and western fence lizard (*Sceloporus occidentalis*).

The potential presence of sensitive vegetation communities, nesting birds, and potentially jurisdictional waters and wetlands was noted during the reconnaissance survey. Based on findings of the literature review and observations during the field visit, Rincon also analyzed habitat suitability for specific special status plants and animals that could be present. Results of the survey are summarized herein and used in evaluating potential impacts to existing or potentially occurring biological resources within the BSA. Special status species were not observed within the BSA during the reconnaissance survey.

Impact Discussion:

- a. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, IPaC, CNPS, species occurrence records from other sites in the vicinity of the survey area, previous reports for the project site, and the results of surveys of the project site. A Floral and Faunal Compendium is provided in Rincon's Biological Resources Assessment (refer to Appendix C), and Special Status Species Evaluation (Appendix D).

Special-Status Plants

Based on the literature review, 43 special status plant species were documented within the *Sisquoc, California* USGS 7.5-minute quadrangle and the eight surrounding quadrangles (Appendix D). No special status plants were observed during the reconnaissance-level field survey. Thirty-seven species were eliminated from the analysis due to a lack of suitable habitat, unsuitable soils, and/or the project's location outside of the known distribution and/or elevation range of the species (e.g., special status plants that are associated with coastal habitats, serpentine soils, or highly alkaline soils that are not present in the BSA). Six special status plant species were determined to have potential to occur within the BSA considering the presence of suitable habitat and soil conditions.

Table 5
Plant Species and Legal Status

| Species Name | Legal Status Federal/State/CNPS Rank* |
|--|--|
| Hoover's bent grass (<i>Agrostis hooveri</i>) | None/None/1B.2 |
| Seaside bird's-beak (<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>) | None/Endangered/1B.1 |
| Mesa horkelia (<i>Horkelia cuneata</i> var. <i>puberula</i>) | None/None/1B.1 |
| Kellogg's horkelia (<i>Horkelia cuneata</i> var. <i>sericea</i>) | None/None/1B.1 |
| Southern curly-leaved monardella (<i>Monardella sinuata</i> ssp. <i>sinuata</i>) | None/None/1B.2 |
| Black-flowered figwort (<i>Scrophularia atrata</i>) | None/None/1B.2 |

*CRPR (CNPS California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

Ground-disturbing activities associated with project components may result in direct impacts (removal) to special status plant species. Additionally, indirect impacts could occur due to the spread of invasive, non-native species from construction equipment. Invasive, non-native plant species can out-compete native species and/or alter habitat towards a state that is unsuitable for special status species. To avoid and minimize adverse impacts to special status plants, avoidance and minimization measures are recommended for project activities in areas of suitable habitat. Mitigation Measure BIO-2 would reduce potential impacts to special-status species to less than significant; *therefore, potential impacts related to special status plants would be less than significant with mitigation.*

Special-Status Animals

Based on the database and literature review, previous studies and observations, 27 special status animal species were documented within the *Sisquoc, California* USGS 7.5-minute topographic quadrangle and the eight surrounding quadrangles (Appendix D). Eighteen special status species were eliminated from further analysis due to the absence of suitable habitat within the BSA or because the BSA occurred outside of the species' known range.

Nine special status wildlife species (five mammals, one bird, and three reptiles), were

determined to have potential to occur within the BSA based upon known ranges, habitat preferences, species occurrence records in the vicinity of the BSA, and presence of suitable habitat.

Table 6
Animal Species and Legal Status

| Species Name | Legal Status |
|--|---------------------------------------|
| Pallid bat (<i>Antrozous pallidus</i>) | California Species of Special Concern |
| Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) | California Species of Special Concern |
| Western mastiff bat (<i>Eumops perotis californicus</i>) | California Species of Special Concern |
| Western red bat (<i>Lasiurus blossevillei</i>) | California Species of Special Concern |
| American badger (<i>Taxidea taxus</i>) | California Species of Special Concern |
| Loggerhead shrike (<i>Lanius ludovicianus</i>) | California Species of Special Concern |
| Northern California legless lizard (<i>Anniella pulchra</i>) | California Species of Special Concern |
| Coast horned lizard (<i>Phrynosoma blainvillii</i>) | California Species of Special Concern |
| Coast patch-nosed snake (<i>Salvadora hexalepis virgultea</i>) | California Species of Special Concern |

Pallid bat, Townsend's big-eared bat, western mastiff bat, western red bat

No roosting habitat for special status bats was found on the BSA, and therefore no direct impacts to roosting bats is anticipated from project activities. The project would result in the loss of potential foraging habitat for these species. The loss of five acres of foraging habitat in the context of the larger 1,778-acre Los Flores Ranch open space surrounding the BSA and adjacent rural landscape would not result in a substantial reduction in available foraging habitat. Therefore, no additional measures would be required for special status bats.

Coast patch-nosed snake, California legless lizard, and Blainville's horned lizard

Direct impacts to coast patch-nosed snake, California legless lizard, and Blainville's horned lizard such as mortality or injury could occur during initial ground-disturbing activities, if animals are present within the proposed disturbance area. The project could also remove scrub habitats potentially suitable for these species. Mitigation measures BIO-3 and BIO-4 are recommended to minimize potential effects to less than significant.

American badger

Although no evidence of American badgers was found onsite during the field survey, suitable habitat was identified within the BSA. American badgers are also highly mobile and are expected to be present throughout the region. American badgers could be found onsite at any time of the year. Direct impacts could result if ground-disturbing activities directly affect an occupied American badger den. Impacts to American badgers could be significant if breeding American badgers with offspring are present within the proposed disturbance area during project implementation. The project would also remove suitable foraging habitat, although the loss of a few acres of foraging habitat in the context of the larger site and

adjacent rural landscape would not result in a substantial reduction in available foraging habitat. Mitigation measures BIO-3 and BIO-6 are recommended to minimize potential effects to less than significant.

Special Status and Other Nesting Birds

The loggerhead shrike is a Species of Special Concern based on CNPS data review and site survey that has potential to nest and forage within the Study Area. Numerous additional common species may also nest in the study area, and raptors are expected forage there as well. The project would result in the loss of five acres potential foraging habitat, though in the context of the larger 1,778-acre Los Flores Ranch open space site and adjacent rural landscape, would not result in a substantial reduction in available foraging habitat. Many species of nesting birds are protected under the Migratory Bird Treaty Act and California Fish and Game Code. Mitigation measures BIO-3 and BIO-5 are recommended to avoid impacts to special status birds and other nesting birds.

The project site is undisturbed. Project ground-disturbing activities could result in potential direct and indirect impacts to special status species, if the species are present during the ground-disturbing activities. Potential direct impacts include: injury, mortality, or damage to nesting habitats. Potential indirect impacts include loss of foraging habitat. Permanent modifications to the habitat and loss of potential foraging and nesting habitat for nesting birds, with the implementation mitigation measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5 are recommended to minimize potential effects; *the impact of the project would be less than significant with mitigation incorporated.*

- b. The proposed project would not impact any riparian habitat or sensitive natural community. There are no sensitive plant communities within the BSA. No construction, demolition, or impacts to any riparian or sensitive natural community are proposed and the construction of the project is not anticipated to affect any offsite riparian or sensitive natural communities. *Therefore, there would be no impact.*
- c. The BSA does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) or any Waters of the State that would fall under the jurisdiction of the CDFW or the Regional Water Quality Control Board. *Therefore, there would be no impact.*
- d. The proposed project would involve the construction of multiple new structures that may result in barriers to wildlife movement. Specifically, movement between patches of oak woodland, coastal scrub and non-native annual grassland would be altered by the project, with more limited movement than current conditions, but only within the project footprint. The addition of these structures combined with the layout of the outdoor shooting areas, represents the loss of five acres of small-scale movement areas in the context of the larger 1,778-acre Los Flores Ranch open space area surrounding the BSA and the adjacent rural landscape, and thus would not result in a substantial reduction in available foraging habitat. There is no perimeter fencing that is proposed for the facility, and no night lighting will be used. The project would not adversely affect wildlife movement or native wildlife nursery sites. *Impacts to the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or use of native wildlife nursery sites, would be less than significant.*
- e. There are no local policies or ordinances in the City's General Plan, Resources Management Element (2001-06) that would conflict with the project. Furthermore, the proposed project will not remove any trees on the project site, and the existing trees in place will be protected during the construction activities. *Therefore, there would be no impact.*

- f. There are no habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans in effect for the project site. *Therefore, there would be no impact.*

Mitigation Measure(s) incorporated into the project:

BIO-1 Worker Environmental Awareness Training

Prior to the start of any construction activities, all construction personnel shall attend a worker environmental awareness training from a qualified biologist. The training shall include the identification of all special status plant and animal species with potential to occur on the project site, a description of their habitats, their regulatory statuses, and all measures being implemented to avoid and minimize impacts.

BIO-2 Special Status Plant Mitigation Measures

BIO-2(a) Pre-Construction Surveys

Prior to construction within suitable habitat, (including staging and mobilization) and when plants with potential to occur are in a phenological stage conducive to positive identification (i.e., usually during the blooming period for the species), a qualified botanist should conduct surveys for special status plant species. Reference sites must be visited to document target species are detectable prior to site surveys and/or confirm that phenology of species known to bloom and co-occur with target species is suitable for detection if a publically accessible reference site is not available for a given species. Valid botanical surveys will be considered current for up to five years; if construction has not commenced within five years of the most recent survey, botanical surveys must be repeated. Surveys must be completed during blooming periods for the species with potential to occur onsite and reference site visits must confirm that the species are identifiable in the survey year.

BIO-2(b) Special Status Plant Species Avoidance

If state listed, federally listed, or non-listed CRPR 1B.1 species are discovered within the survey area, an impact analysis to evaluate how the project would directly impact the special status plants shall be completed. If feasible, development would be re-designed in coordination with a qualified biologist to avoid impacting these plant species. Rare plants that are not within the immediate disturbance footprint, but are located within 50 feet of disturbance limits will be flagged and fenced off by a qualified biologist before construction activities start, to avoid impacts to special status plant species. If avoidance of state listed or federally listed plants species is not feasible, impacts must be fully offset through implementation of a restoration plan that results in no net loss (see measure B-2(c)). Note that prior to implementing activities that result in impacts to listed plants, consultation with CDFW and/or USFWS and acquisition of any required permits must also be completed.

BIO-2(c) Restoration Plan for Special Status Plant Species

If avoidance of non-listed CRPR 1B.1 species is not feasible, all impacts will be mitigated at a minimum ratio of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration. The restoration plan shall include, at a minimum, the following components:

- Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type);

- Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved];
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values);
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan [including species to be used, container sizes, seeding rates, etc.]);
- Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (activities, responsible parties, schedule);
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year, along with performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, and annual monitoring reports for a minimum of five years at which time the project proponent shall demonstrate that performance standards/success criteria have been met;
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80% survival of container plants and 70% absolute cover by vegetation type. Absolute cover will be determined in comparison to a reference plot for native species.
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria;
- Notification of completion of compensatory mitigation; and
- Contingency measures (e.g. initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

BIO-3 Best Management Practices

The following Best Management Practices (BMPs) would be implemented for project construction activities within work areas:

- No pets or firearms should be allowed at the project site during construction activities.
- During project activities, all trash that may attract predators should be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris should be removed from work areas.
- Pallets or secondary containment areas for any chemicals, drums, or bagged materials should be provided. Should material spills occur, materials and/or contaminants should be cleaned from the project site.
- All vehicles and equipment should be in good working condition and free of leaks.
- Construction work should be restricted to daylight hours (7:00 AM to 7:00 PM) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species.
- All open trenches should be constructed with appropriate exit ramps to allow species that accidentally fall into a trench to escape. Trenches will remain open for the shortest period necessary to complete required work.
- All project related vehicles should observe a 20 mile-per-hour speed limit in all project areas.

- Erosion control and landscaping specifications should allow only natural-fiber, biodegradable meshes and coir rolls, (i.e. no plastic-mesh temporary erosion control measures) to prevent impacts to the environment and to fish and terrestrial wildlife.
- During construction, the project will make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species.
- Equipment and vehicles must be free of caked on mud and weed seeds/propagules before accessing and leaving the project site.

BIO-4 Special Status Reptile Preconstruction Surveys

Preconstruction surveys for coast patch-nosed snake, California legless lizard, and Blainville's horned lizard shall be conducted by a qualified biologist in areas of suitable habitat within the project site. Surveys shall include visual inspections and raking/sifting as necessary to locate individuals prior to ground disturbance activities, and relocate individuals to suitable areas outside the project

footprint. The qualified biologist shall receive approval from the City, in consultation with CDFW if needed, to identify a relocation site that is nearby with habitat suitable for the species. If individuals are identified during surveys, the qualified biologist shall:

- Store all individuals in an appropriate container (insulated with lid);
- Transfer individuals within four hours of capture;
- Release in appropriate/comparable habitat (in coordination with the City, who may choose to consult with CDFW regarding release sites);
- Document translocation effort through photos, GPS salvage and relocation sites, and standard measurements (temperature, time); and
- Provide the City with a final report of translocation efforts once completed.

BIO-5 Nesting Bird Surveys and Avoidance

Initial site disturbance shall be prohibited during the general avian nesting season (February 1 – August 30), if feasible. If nesting season avoidance is not feasible, a qualified biologist shall conduct a preconstruction nesting bird survey to determine the presence/absence, location, and status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. Buffer size shall consider the species involved and relevant level of tolerance to adjacent activity, the location of the nest relative to proposed activities, and site conditions that naturally buffer the location, such as vegetation screening, topography, etc. To avoid the destruction of active nests and to protect the reproductive success of birds protected by MBTA and CFGC, nesting bird surveys shall be performed not more than 14 days prior to initial project activities or vegetation clearance. In the event that active nests are discovered, a suitable buffer shall be established around such active nests and no construction within the buffer allowed until a qualified biologist has determined that the nest is no longer active (e.g. the nestlings have fledged and are no longer reliant on the nest). No project activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 30 and February 1.

BIO-6 American Badger Impact Avoidance and Minimization

Prior to initiation of ground disturbance and vegetation removal for the project, a qualified biologist should complete a survey for badger dens. In order to avoid the potential direct take of adults and nursing young, no ground disturbance should occur within 50 feet of an active badger den as determined by a qualified biologist between March 1 and June 30. Construction activities between July 1 and March 1 should comply with the following measures to avoid direct take of adult and weaned juvenile badgers:

- Conduct a biological survey of the anticipated disturbance areas between 2 weeks and 4 weeks prior to construction. The survey should cover the entire area proposed for disturbance. Surveys should focus on both old and new den sites. If dens are too long to see the end, motion-activated wildlife cameras should be used to determine occupancy status. If the camera method is used, cameras must be used for four consecutive nights to make a determination on den activity and occupancy status.
- Inactive dens should be excavated by hand with a shovel to prevent badgers from reusing them during construction.
- Badgers should be discouraged from using currently active dens prior to the grading of the site by partially blocking the entrance of the den with sticks, debris and soil for 3 to 5 days or through use of a 1-way door. After badgers have stopped using active dens within the development area, the dens should be hand excavated with a shovel to prevent re-use.

5. CULTURAL RESOURCES

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | | | | X |
| b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | | X | | |
| c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | X |
| d. Disturb any human remains, including those interred outside of formal cemeteries? | | X | | |

Setting:

The Santa Maria Valley is within lands traditionally occupied by the Chumash until European contact in the mid-18th century. Areas within close proximity to perennial water sources tend to have higher archeological sensitivity. The project site is not located within close proximity to any blue-line streams or bodies of water.

The establishment of Mission San Luis Obispo to the north and Mission La Purisima Concepcion near the city of Lompoc was the beginning of development and settlement in the Santa Maria area. Industrialization and the connection of the Pacific Coast Railroad to the city of Santa Maria further stimulated commercial and residential growth in the area. Historical resources in Santa Maria consist

of several landmarks and structures. The City has officially designated 10 historic structures and landmarks, with additional sites designated by the Landmark Committee, none of which are located onsite.

Based on the geologic map of Santa Maria and Twitchell dam quadrangles (Diblee 1994), the project site is underlain by wind-deposited sand, classified as Older Alluvium, deposited in the Late Pleistocene period. Older Alluvium is considered to have high paleontological sensitivity (U.S. Department of Transportation [U.S. DOT] 2004). Fossils that have been historically encountered in formations of this age include tide-pool and rock-cliff mollusks and barnacles in marine deposits (Woodring et al 1950).

A Phase I Archaeological Survey was completed for the project (Rincon 2018). The survey included a literature search of the California Historical Resources Information System at the Central Coastal Information Center (CCIC) located at University of California, Santa Barbara, and an intensive pedestrian field survey. The results of the CCIC records search identified no previously recorded cultural resources on the project site, and the pedestrian field survey identified no cultural resources on the project site (Rincon 2018).

Impact Discussion:

- a. The project site does not contain, nor is it located near, any historic resources identified in the National Register of Historic places or California Register of Historic Resources. The project site is not identified on the City's Landmark Map or on the City's Objects of Historic Merit Map. *Therefore, no substantial adverse change to a historical resource would occur.*
- b. The Phase 1 Archeological Study determined that no known Native American resources have been recorded within the boundary of the project area, and no artifacts have been identified or recovered from the project vicinity. However, ground disturbance associated with construction could uncover previously unknown buried archeological deposits. As such, a standard discovery clause would be required as a mitigation measure for the project. In the event that unknown archaeological artifacts are encountered during grading, the discovery clause will require construction activity to cease until the resource can be evaluated by a qualified archaeologist and an appropriate plan for preservation of the resource can be developed. Including this standard condition of approval will ensure that any impacts to archaeological resources would be less than significant. *Therefore, the impact would be less than significant with mitigation measures.*
- c. The project site is underlain by Older Alluvium, which is considered to have high sensitivity for paleontological resources (Diblee 1994, U.S. DOT 2004). Fossils that have been historically encountered in formations of this age include tide-pool and rock-cliff mollusks and barnacles in marine deposits (Woodring et al 1950). The project site is undeveloped and implementation of the project would result in approximately 1,723 cubic yards of cut material. The project will include a mitigation measure stipulating that work will halt if any paleontological resources are discovered. Including this standard condition of approval will ensure that any impacts to a unique paleontological resource or site, or unique geologic feature would be less than significant. *Therefore, the impact would be less than significant with mitigation measures.*
- d. There are no known human remains at the site, including those interred outside of formal cemeteries. In the event of an accidental discovery or recognition of any human remains, California State Health and Safety Code Section 7050.5 stipulates that no further disturbances shall occur until the County Coroner has made the necessary findings regarding their origin and disposition per CEQA regulations and Public Resources Code Section

5097.98. The project will include Mitigation Measure CR-3 describing State Health and Safety Code Section 7050.5, which stipulates the process to be followed when human remains are encountered. *Therefore, the impact would be less than significant with mitigation measures.*

Mitigation Measure(s) incorporated into the project:

CR-1 Unanticipated Discovery of Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

CR-2 Inadvertent Discovery of Paleontological Resources

Inadvertent Discovery of Paleontological Resources. Should any vertebrate fossils or potentially significant finds (e.g., numerous well-preserved invertebrate or plant fossils) be encountered during work on the site, all activities in the immediate vicinity of the find shall cease until a qualified paleontologist evaluates the find for its scientific value. If deemed significant, the paleontological resource(s) shall be salvaged and deposited in an accredited and permanent scientific institution where they will be properly curated and preserved.

CR-3 Unanticipated Discovery of Human Remains

The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determines origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to

be prehistoric, the Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.

6. GEOLOGY AND SOILS

| Would the project: a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| i. 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? Refer to Division of Mines and Geology Special Publication 42. | | | X | |
| ii. Strong seismic ground shaking? | | | X | |
| iii. Seismic-related ground failure, including liquefaction? | | | X | |

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| iv. Landslides? | | | X | |
| b. Result in substantial soil erosion or the loss of topsoil? | | | X | |
| 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? | | | X | |
| d. Be located on expansive soil, as defined in Table 18-1-B of the most recent Uniform Building Code (1994), creating substantial risks to life or property? | | | X | |
| 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? | | | | X |

Setting:

The project site is located within the Santa Maria Valley, an east-west trending alluvial valley bounded to the north by the San Rafael Range and to the south by the Casmalia Range and the Solomon Hills. The Santa Maria River traverses the valley from east to west, emptying into the Pacific Ocean just west of the town of Guadalupe. The Santa Maria River is formed by the convergence of the Cuyama and the Sisquoc Rivers at Fugler Point near Garey.

The Santa Maria basin is a significant hydrocarbon (i.e. oil and gas) producing coastal (and off-shore) basin in California. The basin lies at the juncture between the northwest-trending southern Coast Range province and the east-west-trending Transverse Range province. The basin contains a relatively thick Miocene through Holocene age sequence of sedimentary rocks, some of which are prolific petroleum producing formations, and others that are highly productive ground water aquifers.

The Santa Maria Valley is located within a structural fold and thrust fault area; the axes of most of the structural elements in the region run northwest-southeast, parallel to the valley. The Santa Maria basin and adjacent southern Coast Ranges have been subjected to considerable uplift during the last 2 to 5 million years and are considered to be seismically active. Relatively little direct evidence of active faulting (such as offset of bedding or structures observed at a surface fault) has been observed in the region; however, broad bands of seismicity unrelated to surface faults and other evidence indicate the region is seismically active. The topography of the site is characterized by gently rolling hills and valleys. The substrate of the project site is comprised of Gaviota sandy loam and Corralitos loamy sand, which is commonly occurring on alluvial fans and mountain slopes.

Impact Discussion:

a.

- i. *Earthquake Faults.* According to Figure SE-2 of the City's General Plan Safety Element, the project site is located approximately one mile south of the Santa Maria Fault. Based on Table SE-1 – Active and Potentially Active Faults Central California Coast Area, the Santa Maria Fault has a Potentially Active status. This fault does not

qualify for Earthquake Fault Zone status under the Alquist-Priolo Earthquake Fault Zoning Act (Department of Conservation 2015). *Therefore, a less than significant impact would result.*

- ii. *Seismic Groundshaking.* The City is divided into two seismic zones: Zone A which is underlain by Holocene age alluvium and Zone B which is underlain by Pleistocene age non-marine terrace deposits. The project site is located in Zone B, which is the least hazardous zone with respect to groundshaking potential. *Therefore, a less than significant impact would result.*
 - iii. *Liquefaction.* Liquefaction potential is generally low in the City due to the relatively deep groundwater levels that are ordinarily over 70 feet below the ground surface. According to Figure SE-2 of the City's General Plan Safety Element, the project site is not located in an area with perched groundwater which could cause liquefaction during an earthquake. *Therefore, a less than significant impact would result.*
 - iv. *Landslides.* According to Figure SE-2 of the City's General Plan Safety Element, the project site does not contain steep slopes or escarpments which could present landslide hazards in the area. *Therefore, a less than significant impact would result.*
- b. The majority of the project site comprised of the outdoor shooting range would be located on relatively flat land. The project site is surrounded by gently sloped, rolling hills. Grading activities would include 1,723 cubic yards of cut and fill material. Approximately 1756 cubic yards of Class II base comprised of aggregate pervious material will be used for the outdoor pistol ranges (628 cubic yards), access roads and paths (702 cubic yards), parking areas (260 cubic yards), live fire shooting house pad edges (108 cubic yards), and ditch lining (58 cubic yards). No trees will be removed during the grading of the project site and the construction of the shooting facilities. Erosion controls include fiber rolls, which will be installed above the construction area prior to the construction of brow ditches; and silt fences, which will be installed below the construction area for the duration of construction. With these best management practices, impacts related to erosion would be less than significant. The project scope would result in less than significant impacts associated with earth moving and grading over an extended timeframe. Substantial loss of topsoil would not occur, and *therefore less than significant impact would result.*
- c. *Subsidence.* The primary substrates and underlying soils of the area are Gaviota sandy loam and Corralitos loamy sand, which is commonly occurring on alluvial fans and mountain slopes. Sandy loam and loamy sand is classified by the National Resources Conservation Service as Type C soils, which are the least stable and are soils from which water is freely seeping. However, the majority of the project site comprised of the outdoor shooting range located on relatively flat land, surrounded by gently sloped, rolling hills. Groundwater pumping activities do not take place on, or in the vicinity of, the project site. There is low risk of subsidence in the City of Santa Maria and, therefore, on the project site. *Therefore, a less than significant impact would result.*

Expansive Soils. According to Figure SE-2 of the City's General Plan Safety Element, the project site is not located in an area with expansive soils. The City of Santa Maria uses the standards in the California Building Code (CBC) to establish foundation and design requirements for buildings to withstand the magnitude of earthquakes that occur in the area. The project would be required to comply with the CBC and would be developed in compliance with all other applicable local, state, and federal building code and construction standards. Therefore, the project would not result in exposure of people or structures to potential substantial adverse effects or instability associated with geologic conditions in the area, *and a less than significant impact would result.*

- d. According to Figure SE-2 of the City's General Plan Safety Element, the project site is not located in an area with expansive soils and future development on the site would be required to comply with the most recent Uniform Building Code standards. *Therefore, impacts associated with expansive soils would be less than significant.*
- e. The project would not have a septic tank onsite, nor any onsite wastewater-generating facilities or connections to sewers. *Therefore, the project would not result in any impacts related to the exposure of people or structures to potential substantial adverse effects associated with soils that are incapable of supporting septic tanks and alternative wastewater disposal systems.*

Mitigation Measure(s) incorporated into the project: None required

7. GREENHOUSE GAS EMISSIONS

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | | | X | |
| b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | | | X | |

Setting:

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented AB 32, the *California Global Warming Solutions Act of 2006*. AB 32 codifies the Statewide goal of reducing GHG emissions to 1990, levels by 2020, (essentially a 15 percent reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide GHG emissions. Furthermore, on September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law. SB 32 extends GHG reduction goals beyond the initial target year of 2020, in AB 32, directing the California Air Resources Board (CARB) to ensure that GHGs are reduced to 40 percent below the 1990 level by 2030. The proposed project would be constructed and occupied before 2020. For this reason, the GHG reduction targets and local criteria developed in the earlier AB 32 context are used in this analysis.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change. Therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. *Cumulatively considerable* means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355). The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (such as a Climate Action Plan). The Santa Barbara County Air Pollution Control District (SBCAPCD) proposes GHG thresholds for stationary sources of 10,000 MT of CO₂e per year (SBCAPCD 2015).

Impact Discussion:

- a-b. Construction Emissions. Construction of the project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. For the project, site grading would involve 1,723 cubic yards of balanced cut and fill material. Emissions associated with the construction period were estimated based on the CalEEMod default for the construction schedule and equipment used during project construction, and based on the project parameters provided by the City of Santa Maria Public Works Department. Site grading would require a fleet of up to 5 heavy equipment trucks to grade over a period of up to three weeks. Construction activity associated with the project would generate an estimated 475 metric tons of CO₂e. Besides being below the threshold of 10,000 MT of CO₂e, construction emissions are temporary and would not have long-term impacts as a stationary source. *Therefore, impact would be less than significant.*

On-Site Operational Emissions. At the conclusion of construction, an open-air firing range, mobile training classroom, and a live-fire house without any utility connection will remain. The facilities do not generate operational emissions; *therefore there would be no impact.*

Direct Emissions from Mobile Combustion. Emissions from vehicles driving to and from the site was based on information from City Police Department indicating that the proposed shooting facility is proposed to generate no more than 20 trips ten times a month to the facility for training purposes. Emissions of CO₂ and CH₄ from transportation sources were quantified using CalEEMod based on the closest land use type: City Park. Because CalEEMod does not calculate N₂O emissions from mobile sources, N₂O emissions were quantified using the California Climate Action Registry General Reporting Protocol (January 2009) direct emissions factors for mobile combustion (refer to Appendix A for calculations). Emission rates for N₂O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol. Due to the low number of trips (up to 20 trips ten times a month) generated by this project, and the fact that the shooting range is exclusively for Police Department use and is not open to the public, *the impact would be less than significant.*

Combined Annual Construction, Operational, and Mobile GHG Emissions. Emissions associated with construction activity (approximately 475 metric tons CO₂e) are amortized over 50 years (the anticipated lifetime of the project). Table 7 combines the construction and operational GHG emissions associated with development for the project:

**Table 7
Combined Annual Emissions of Greenhouse Gases**

| Emission Source | Annual Emissions (MT CO₂e) |
|--|--|
| Construction | 5 |
| Operational | |
| Area | <0.1 |
| Energy | <0.1 |
| Solid Waste | <0.1 |
| Water | <0.1 |
| Mobile | |
| From CO ₂ and CH ₄ | 23.4 |
| From N ₂ O | <0.1 |
| Total | 28.9 |

Sources: See Appendix A for calculations and for GHG emission factor assumptions.

The County of Santa Barbara adopted the ECAP for the County of Santa Barbara in May 2015 (County of Santa Barbara 2015). This plan applies to unincorporated areas of Santa Barbara County and not incorporated cities such as Santa Maria. The Santa Barbara County Association of Governments (SBCAG) has incorporated a sustainable community strategy into its Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is designed to help the region achieve its SB 375 GHG emissions reduction target. The SBCAG 2040 RTP/SCS demonstrates that the SBCAG region would achieve its regional emissions reduction targets for the 2020 and 2035 target years.

The project develops an open-air firing range, mobile training classroom, and a live-fire house without any utility connection. Due to the nature of the project buildings, which are essentially shell buildings, any resultant GHG emissions would be negligible. The project would be consistent with goals in the SBCAG 2040 RTP/SCS because it would not significantly contribute GHG emissions and would not conflict with any State regulations intended to reduce GHG emissions statewide. *Therefore, the project would be consistent with applicable plans and programs designed to reduce GHG emission and impacts would be less than significant.*

Mitigation Measure(s) incorporated into the project: None Required.

8. HAZARDS AND HAZARDOUS MATERIALS

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | X | | |
| 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? | | X | | |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | | X |
| d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | | | X |
| 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 for people residing or working in the project area? | | | | X |
| f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | | X |
| g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | X |
| h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | | X |

Setting:

While the project site is owned and operated by the City of Santa Maria, the site is located within Santa Barbara County, outside of the incorporated City of Santa Maria. The project site is designated by the County of Santa Barbara as Agriculture II (A-II-100) and is undeveloped. Based on a search of the California Department of Toxic Substance Control's EnviroStar database and the State Water Resources Control Board's Geotracker system (DTSC 2018, SWRCB 2018), there are no environmental cleanup sites within the project area. The project is not located within 2 miles of any public airport or private airstrip, nor any existing school.

Impact Discussion:

- a. In the City of Santa Maria, the use and storage of hazardous materials is primarily regulated by the Uniform Fire Code. Transport of hazardous materials and waste on public streets is primarily regulated by the California Vehicle Code and the City's Municipal Code. Storage and disposal of hazardous wastes is primarily regulated by the Santa Barbara County Environmental Health Services Division (EHS) through their Hazardous Waste Generator Program as authorized by the State Health and Safety Code.

The project would result in occasional transport and use of firearms and ammunitions by the City of Santa Maria Police Department, which would lead to potential lead exposure to the officers from the lead-based bullet projectiles and the primer that ignites in a firearm barrel. Scientific research has demonstrated that lead is a toxic substance and that lead exposure can result in multiple long-term detrimental impacts to human and environmental health (Laidlaw et al 2017).

The proposed project develops an outdoor shooting range for the exclusive use by the City of Santa Maria Police Department, and is not open to the general public. Therefore, the project would not result in lead exposure to the general public, but would be limited to Police Department officers and their infrequent use of the shooting facility for training and practice. The shooting range is outdoors, so lead particles, fumes, and dust are dispersed more widely and therefore reduces lead concentrations. Full metal jacket lead bullets will be required, which ejects fewer lead particles and fragments in comparison to bullets without lead jackets. Finally, the distance of the collection berms from the firing line (approximately 200 feet) is at a distance where lead dust would not be exposed to shooters. A Lead Exposure Management Memorandum prepared by Rincon Consultants for project operations addresses best management practices and recommendations to minimize risks associated with firing lead bullets, including hygiene and safety practices for the shooters (Rincon 2018, Appendix C). The implementation of best management practices outlined in the memorandum, in addition to the infrequency of transport and usage of firearms and ammunitions, would result in a less than significant hazard to the officers, and to the environment. *Therefore, there would be a less than significant impact with mitigation measures.*

- b. The proposed project develops an outdoor shooting range for the exclusive use by the City of Santa Maria Police Department, and is not open to the general public. The project may result in soil or groundwater exposure to lead via particles moving through soil, surface water, or groundwater. Lead from the bullet fragments may have potential to dissolve into water and be transported off-site through groundwater or storm water. Although there are no jurisdictional waters or drainages on the project site or immediate vicinity thereby reducing the potential to contaminate surface or navigable waters, there is still a possibility of contaminated soil being transported off-site through wind or storm water erosion (Rincon Consultants 2018). A Lead Exposure Management Memorandum was prepared by Rincon Consultants for project operations in includes best management practices for bullet and shot containment techniques for preventing lead migration. Mitigation measures such as lead removal, reclamation, and recycling, along with an Environmental Stewardship Plan modeled after EPA's *Best Management Practices for Lead at Outdoor Shooting Ranges*, are included as part of mitigation measure HAZ-2 to reduce the potential of releasing lead into the environment and will be required as part of the project. *Therefore, potential impacts to the public resulting release of hazardous materials into the environment would be less than significant with mitigation measures.*

- c. The project site is not located within a quarter mile of any school. The project also does not involve development of any uses or operations that would result in the emission of hazardous materials. *Therefore, the project would not emit hazardous materials within one-quarter mile of an existing or proposed school, resulting in no impact.*
- d. According to California Department of Toxic Substances Control's Hazardous Waste and Substances Site List (Cortese List), the project site has not been identified as a hazardous materials site pursuant to Government Code Section 65962.5. *Therefore, the project would not result in any hazard to the public or the environment associated with identified hazardous materials sites and there would be no impact.*
- e. The project site is located approximately five miles southeast of the Santa Maria Public Airport. According to the City's General Plan Safety Element, the Airport Area of Influence is divided into three areas of major concern including, height restrictions, safety, and noise. These areas of concern define three hazard zones around the airport. According to Figure SE-6 and Figure SE-7 the Safety Element, the project site is located outside of the airport hazard and safety zones. The proposed project is located outside of all airport hazard and safety zones and the building height and design of the proposed project would not obstruct airport operations. Therefore, there would be no safety hazard associated with the Santa Maria Public Airport for people residing or working in the project area. *The project would not result in airport hazards and there would be no impact.*
- f. The project site is not located in the vicinity of a private airstrip. Therefore, the project would not result in a safety hazard for people residing or working in the project area and *there would be no impact.*
- g. Vehicular access for the project would be provided from a driveway from Palmer Road. Pursuant to the Santa Maria Municipal Code, the minimum clear width of the access driveway must be at least 26 feet. Compliance with these requirements would ensure that access to and evacuation from the site is not impaired in the event of an emergency. The project does not include any other characteristics or physical features that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. All access and circulation routes would be in compliance with local and State safety regulations. *Therefore, this impact would be less than significant.*
- h. While the project site is located in an undeveloped rural area not characterized with residential uses intermixed with wildland areas, the site includes non-native grasslands and coastal scrub and is therefore considered wildland. The project is an outdoor shooting range developed exclusively for the use by the City's Police Department, and not open to the public. Police officers undergoing training and certification would be shooting within the designated outdoor shooting lanes and firing into collection berms, and not into open fields or grassland where the potential of starting a wildfire may occur. Therefore, the project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, and *no impact would occur.*

Mitigation Measure(s) incorporated into the project:

HAZ-1 Hygiene and Safety Practices for Shooters. The following best management practices (BMPs) at a shooting range can minimize the risks associated with the firing of lead bullets:

- 1. The following BMPs should be implemented to reduce lead exposure: Wash hands thoroughly with cold water and soap after shooting or spending time in the shooting area. Cold water is preferable because warm water enlarges pores, increasing the potential for lead compounds to enter the skin.

2. While on the range, refrain from actions that bring your hands into contact with your mouth or nose, such as eating, drinking, or smoking.
3. Clothes and shoes should be changed at the range after shooting, housekeeping or maintenance activities, and placed in an airtight bag for transport to prevent lead from being tracked into cars and homes. At home, range clothes should be stored separately from other clothes and washed separately from other laundry. Alternately, disposable shoe coverings can be used while shooting or performing housekeeping or maintenance activities and then discarded when leaving the range.
4. Range personnel or anyone who spends a great amount of time at the range should regularly consult a physician regarding lead exposure.

HAZ-2 Range Design and Operational Practices. The following specific considerations should be taken regarding the SMDP shooting range's design and operation to reduce lead contamination and exposure:

1. Lead exposure safety guidelines, including best hygiene practices for shooters described above, should be displayed in clear signage.
2. Dry sweeping should not occur in the range as this will generate airborne lead dust. Instead, wet wiping or mopping for non-porous surfaces and HEPA vacuuming for porous surfaces.
3. An *Environmental Stewardship Plan* should be developed prior to range opening and should be implemented throughout the life of the range. An example template of an Environmental Stewardship Plan is included in Appendix E of the EPA's report *Best Management Practices for Lead at Outdoor Shooting Ranges*. The City of Santa Maria will require implementation and tracking operations in accordance with the Stewardship Plan.
4. Soil used at the berms shall be tested annually to ensure the pH level is in the desired range of 6.5 and 8.5 to reduce lead migration. Testing should occur in the uppermost layer to a depth of 24 inches from the surface. Lime and phosphate may be added to adjust the pH to be within the range.
5. Ensure that the uppermost surface does not contain rocks or debris, which may increase ricochet and bullet fragmentation.
6. To ensure that lead is not considered "abandoned" within the meaning of the RCRA statute, spent bullets and bullet fragments shall regularly be physically removed from berms and backstop. Removing bullet fragments may involve:
 - a. Hand raking and sifting (by personnel with proper protective gear and a breathing apparatus per OSHA standards) the surface layer of the berm to remove spent bullets and fragments from the soil while leaving the soil in place, or removal and replacement of affected portions of the berm. Once collected, lead may must be taken to a recycler or reused and should be stored on-site for extended periods of time.
 - b. Purchasing or renting mechanical separation machinery. Various types of screening or shaking machines and vacuums are available to rent or purchase
 - c. Hiring a professional reclamation company. Lead reclamation companies claim to recover 75-95% of the lead in soils through a variety of methods dependent on the site characteristics.

7. Lead reclamation should occur approximately every one to five years. The exact frequency of how often lead removal should take place depends on the site conditions (i.e.: pH of soil as discussed above) and number of rounds fired. Approximately 100,000 rounds per firing lane can occur before lead reclamation. Therefore, record keeping procedures to monitor the number of rounds fired shall be established.
8. All activities at the range with respect to BMPs and lead reclamation and recycling shall be documented for the life of the range.

9. HYDROLOGY AND WATER QUALITY

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| a. Violate any water quality standards or waste discharge requirements? | | | X | |
| b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | | X |
| c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | | | X | |
| d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | | X | |
| e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | X | |
| f. Otherwise substantially degrade water quality? | | | X | |
| g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | X |
| h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | | | | X |
| i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | X | |
| j. Inundation by seiche, tsunami, or mudflow? | | | | X |

Setting:

The project site is located within the Santa Maria Watershed, one of the largest coastal drainage basins in California, and includes all areas tributary to the Cuyama, Siquoc, and Santa Maria Rivers. The Santa Maria Watershed overlies the Santa Maria Valley Groundwater Basin, covering more than 280 square miles in the southwestern corner of San Luis Obispo County and the northwestern corner of Santa Barbara County. Historically, the City pumped water from the Santa Maria Valley Groundwater Basin as its sole water supply until the City began receiving State Water Project (SWP) water from the Central Coast Water Authority (CCWA) in 1997. The Santa Maria Valley Groundwater Basin is currently under a court-ordered Stipulation that allows the City to derive its water supply from local groundwater, associated return flows from imported SWP water that may be recaptured in the Basin, and a share of the yield of Twitchell Reservoir operations. The closest body of water to the project site is the Santa Maria River, located approximately 2 miles northeast of the project site.

Impact Discussion:

- a. Full development of the site including grading and construction would comply with the adopted standards contained within the City of Santa Maria's Municipal Code, Section 8-12 (wastewater) and 8-12A (stormwater). Section 8-12A.04 also incorporates the *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (Central Coast Regional Water Quality Control Board, Resolution No. R3-2013-0032). By incorporating design provisions in compliance with Section 8-12 (wastewater), 8-12A (stormwater), and 8-12A.04 (*Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*), along with permit review and approval procedures by the City, the project would not violate water quality standards and waste discharge requirements. *Therefore, this impact is less than significant.*
- b. No water service is being proposed for the outdoor shooting facility at this time. Portable bathroom facilities, including a handwashing station for officers after firearms handling, are proposed for the site. Any water use for the site would be transported by the Police Department during or prior to training days. The project would not affect groundwater supplies and would not impact to groundwater recharge; *therefore, there would be no impact on groundwater supplies or levels.*
- c. The project would not substantially alter the existing drainage pattern of the site or area, and does not alter the course of any stream or river. The closest stream or river to the project site is the Sisquoc River, approximately six miles away. Stormwater from the project site will be collected through drainage channels incorporated the design of the grading plan and project site plan. The natural pattern of drainage would be retained by the project design, as the project is located within a natural canyon flanked by gently sloping hills. An approved Erosion and Sediment Control Detail Plan incorporates fiber rolls and silt fences for soil/slope stabilization to control and prevent erosion from the forces of wind and water. A Storm Water Control Plan will also be prepared for the project to demonstrate compliance with the applicable requirements, and the plan must be approved by the City Utilities Department as part of the grading and building plan review and approval process. Implementation of these requirements would minimize potential effects related to erosion or siltation. *Therefore, a less than significant impact would occur.*
- d. The project would not substantially alter the existing drainage pattern of the site or area, and does not alter the course of any stream or river. The closest stream or river to the project site is the Sisquoc River, approximately six miles away. Stormwater from the project site will be collected through drainage channels incorporated the design of the grading plan and project

site plan. The natural pattern of drainage would be retained by the project design, as the project is located within a natural canyon flanked by gently sloping hills. Grading activities that include 1,723 cubic yards of cut and fill material for building pads would follow the natural curvature of the existing project site, cutting minimally into the hillsides to create a flat graded pad for the outdoor shooting range and accessory buildings. The only alteration to the drainage pattern would that the flow would be concentrated into the project's channel ditches, rather than falling as a sheet flow into the canyon and subsequently downhill. The project site would have minimal impervious services, including an unpaved parking lot and open range firing lanes. Due to the grading and drainage design incorporated into the project site, the project would not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. *Therefore, this impact would be less than significant.*

- e. No water service is being proposed for the outdoor shooting facility at this time. Portable bathroom facilities, including a handwashing station for officers after firearms handling, are proposed for the site. Any water use for the site would be transported by the Police Department during or prior to training days. Because the project site exceeds one acre, the City and the Regional Water Quality Control Board stormwater management regulations require that a Stormwater Pollution Prevention Plan (SWPPP) be provided to address runoff water for the site. The best management practices outlined SWPPP, such as sediment control, soil stabilization, storm drain inlet protection, would minimize the contribution of runoff water. The City Public Works Department has identified the basin in which the stormwater would collect is more than adequate to contain to catch runoff that would otherwise not be collected through the pervious surfaces of the project. The project would not exceed the capacity of stormwater drainage systems or provide substantial additional sources of polluted runoff; *therefore, this impact would be less than significant.*
- f. The project may result in groundwater exposure to lead via particles moving through soil, surface water, or groundwater. Lead from the bullet fragments may have potential to dissolve into water and be transported off-site through groundwater or storm water. Although there are no jurisdictional waters or drainages on the project site or immediate vicinity thereby reducing the potential to contaminate surface or navigable waters, there is still a possibility of contaminated soil being transported off-site through wind or storm water erosion (Rincon Consultants 2018). A Lead Exposure Management Memorandum prepared by Rincon Consultants for project operations addresses best management practices and recommendations for bullet and shot containment techniques for preventing lead migration. The potential for lead exposure, with mitigation measure HYD-1 incorporated, would have a less than significant effect on water quality. *Therefore, potential impacts to water quality would be less than significant with mitigation measures.*
- g, h. Flood hazard areas are determined by the *Federal Emergency Management Agency* (FEMA), and are shown on *Flood Insurance Rate Map* (FIRMs). Flood hazard areas include land that would be inundated by the flood event having a one percent chance of being equaled or exceeded in any given year (i.e. a 100-year flood). According to FIRM Panel 06083C0180F, effective September 30, 2005, the project site is located in Zone X, outside of the 0.2 percent annual chance floodplain (500-year flood). The project would not place any structures or housing within a 100-year floodplain, and would not affect the floodplain elevation offsite. *Therefore, there would no significant impact.*
- i. Twitchell Dam is the closest potential source of dam inundation in the City of Santa Maria, located approximately 7.5 miles east of the project site. Twitchell Dam is not used for perennial water storage. The dam was constructed by the Bureau of Reclamation in 1958, and is primarily used for groundwater recharge and flood control. Based on the San Luis

Obispo County *Dam and Levee Failure Evacuation Plan* (San Luis Obispo County February 2016:127), the project site is approximately 1.6 miles from the nearest point along the Santa Maria River that would be subject to inundation in the event of dam failure. Therefore, the project would not result in exposure of people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. *Therefore, the impact is less than significant.*

- j. The project area is approximately 11 miles from the Pacific Ocean. There is no danger of inundation by a seiche or tsunami. According to Figure SE-2 (Geologic Hazards Map) of the City's General Plan Safety Element, there are also no steep slopes within the project area. *Therefore, there would be no impact related to inundation by seiche, tsunami, or mudflow.*

Mitigation Measure(s) incorporated into the project:

HYD-1 Range Design and Operational Practices. The following specific considerations should be taken regarding the SMDP shooting range's design and operation to reduce lead contamination and exposure:

1. Dry sweeping should not occur in the range as this will generate airborne lead dust. Instead, wet wiping or mopping for non-porous surfaces and HEPA vacuuming for porous surfaces.
2. An *Environmental Stewardship Plan* should be developed prior to range opening and should be implemented throughout the life of the range. An example template of an Environmental Stewardship Plan is included in Appendix E of the EPA's report *Best Management Practices for Lead at Outdoor Shooting Ranges*. The City of Santa Maria will require implementation and tracking operations in accordance with the Stewardship Plan.
3. Soil used at the berms shall be tested annually to ensure the pH level is in the desired range of 6.5 and 8.5 to reduce lead migration. Testing should occur in the uppermost layer to a depth of 24 inches from the surface. Lime and phosphate may be added to adjust the pH to be within the range.
4. Ensure that the uppermost surface does not contain rocks or debris, which may increase ricochet and bullet fragmentation.
5. To ensure that lead is not considered *abandoned* within the meaning of the RCRA statute, spent bullets and bullet fragments shall regularly be physically removed from berms and backstop. Removing bullet fragments may involve:
 - a. Hand raking and sifting (by personnel with proper protective gear and a breathing apparatus per OSHA standards) the surface layer of the berm to remove spent bullets and fragments from the soil while leaving the soil in place, or removal and replacement of affected portions of the berm. Once collected, lead may must be taken to a recycler or reused and should be stored on-site for extended periods of time.
 - b. Purchasing or renting mechanical separation machinery. Various types of screening or shaking machines and vacuums are available to rent or purchase
 - c. Hiring a professional reclamation company. Lead reclamation companies claim to recover 75-95% of the lead in soils through a variety of methods dependent on the site characteristics.

6. Lead reclamation should occur approximately every one to five years. The exact frequency of how often lead removal should take place depends on the site conditions (i.e.: pH of soil as discussed above) and number of rounds fired. Approximately 100,000 rounds per firing lane can occur before lead reclamation. Therefore, record keeping procedures to monitor the number of rounds fired shall be established.
7. All activities at the range with respect to BMPs and lead reclamation and recycling shall be documented for the life of the range.

10. LAND USE AND PLANNING

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

Setting:

The project site is located in a CF (Community Facility) General Plan Land Use Designation and corresponding PF (Public Facility) zoning district. The purpose of a CF land use designation is to provide for necessary facilities for use by the public. Types of uses that are within the CF designation include schools and government buildings, while the PF zoning district allows for governmental buildings and facilities designed for public use and accommodation. The proposed project corresponds with the intended uses of this site in conformance with the land use element and other elements of the General Plan.

The project site is undeveloped and formerly Agriculture II (A-II-100) in the County of Santa Barbara prior to its acquisition by the City of Santa Maria. The shooting range is on an approximately 5-acre site in the southern portion of the City's 1,774-acre Los Flores Ranch property in the Solomon Hills. The CF designation for the Los Flores Ranch property allows for its planned future use as the site of the City's future Integrated Waste Management Facility, in addition to a regional park on the northern portion of the 1,774-acre site. Surrounding the project site are agricultural uses (AC, A-II-100) as designated by the County of Santa Barbara.

Impact Discussion:

- a-b. The project would result in development of an outdoor shooting range for the training of the City's Police Department officers. Police officers must demonstrate competence and maintain marksmanship certification as a requirement of their position. In turn, their training would benefit the community. The Los Flores Ranch property was purchased by the City for

the intention planning and zoning specifically for community facilities. The project would not conflict with any local programs, plans, or ordinances, or divide an established community. *Therefore, no impact would occur.*

- c. There are no adopted habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans in effect on the project site. *Therefore, no impact would occur.*

Mitigation Measure(s) incorporated into the project: None required.

11. MINERAL RESOURCES

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| 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? | | | | X |
| 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? | | | | X |

Setting:

The City of Santa Maria's primary mineral resources are sand, rock, and oil. The Santa Maria River channel is considered to be a valuable mineral resource. The River contains the largest resources of Portland Cement Concrete-grade aggregate and almost 90 percent of the available alluvial sand and gravel resources in the Santa Barbara-San Luis Obispo County region. The Santa Maria basin is also a significant hydrocarbon (i.e. oil and gas) producing basin in California, historically allowing for the development of the oil industry throughout the region. Many of the areas oil wells have since been capped and abandoned due to the development and urbanization of the City. The project site is located south of the City's areas designated for operational, existing, or abandoned oil facilities.

Impact Discussion:

- a-b. Within the City of Santa Maria, the primary resources suitable for mining and conservation are sand, rock, and oil (City of Santa Maria's Resources Management Element of the General Plan, 2001). The Santa Maria River channel is considered to be a valuable mineral resource for sand and rock. The project site is approximately 13 miles southeast of the Santa Maria River. The project site is also located outside the City-designated Areas of Operational, Existing, or Abandoned Oil Facilities. According to Figure RME-4 of the City's General Plan Resource Management Element, the project site is located in Mineral Resource Zone 3 (MRZ-3). This zone is designated for areas where adequate information indicates that significant mineral deposits are present or areas with a high likelihood of mineral deposits existing. As such, the project would not result in the loss of availability of a valuable known mineral resource or locally important mineral resource recovery site. *Therefore, there would be no impact.*

Mitigation Measure(s) incorporated into the project: None required.

12. NOISE

| Would the project result in: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | X | | |
| b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | X | | |
| c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | X | |
| d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | X | |
| 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 expose people residing or working in the project area to excessive noise levels? | | | | X |
| f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |

Setting:

Community noise levels are typically measured in terms of A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Equivalent noise level (Leq) is the average noise level on an energy basis for a specific time period. The duration of noise and the time of day at which it occurs are important factors in determining the impact of noise on communities. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (Ldn) account for the time of day and duration of noise generation. These indices are time-weighted average values equal to the amount of acoustic energy equivalent to a time-varying sound over a 24-hour period.

Regulatory Setting. The City of Santa Maria General Plan Noise Element includes noise compatibility standards for noise exposure by land use. These include interior and exterior noise standards as shown in Table 8.

**Table 8
Interior and Exterior Noise Standards**

| Land Use Categories | | Standard dB CNEL | |
|---------------------------|---|------------------|----------|
| Category | Uses | Interior | Exterior |
| Residential | Single Family, Duplex, Multiple Family, Mobile Home | 45 | 60 |
| Noise-Sensitive Land Uses | Motel, Hospital, School, Nursing Home, Church, Library, and Other | 45 | 60 |
| Commercial | Retail, Restaurant, Professional Offices | 55 | 65 |
| Industrial | Manufacturing, Utilities, Warehousing, Agriculture | 65 | 70 |
| Open Space | Passive Outdoor Recreation | -- | 65 |

Source: City of Santa Maria General Plan Noise Element, Table N-4

Impact Discussion:

- a. The project site is located in a rural area and is surrounded by agricultural land, with US Highway 101 approximately 0.5 mile west of the site. The project would develop an outdoor shooting range, live fire house, mobile training classroom and parking lot for 40 vehicles. Construction of the project may generate noise and groundborne vibration associated with construction equipment and vehicle use, shown in Table 9, below:

Table 9: Typical Noise Levels for Construction Equipment

| Equipment | Typical Noise Level (dBA)* 50 feet from Source |
|------------------------|---|
| Backhoes, excavators | 80–85 |
| Concrete pumps, mixers | 82–85 |
| Cranes (moveable) | 81 |
| Pick-up truck | 55 |
| Dump truck | 76 |
| Equipment/tool van | 55 |
| Dozer | 82 |
| Compactors | 82 |
| Water truck | 76 |
| Grader | 85 |
| Drill rigs | 70–85 |
| Pneumatic tools | 85 |
| Rock transport | 76 |
| Roller | 80 |
| Hole auger | 84 |
| Line truck and trailer | 55 |

*dBA = A-weighted decibels

Source: U.S. Environmental Protection Agency 1971.

Mitigation measures NOI-1 and NOI-2 have been incorporated to minimize all potential impacts related to construction noise. These measures include adherence to City construction work hours, implementation of noise control for stationary equipment, and proper maintenance of all equipment to avoid unnecessary increased noise levels. Construction-related noise would be limited in duration and nature, and the project does not propose land uses that would generate excessive noise during project operation. Furthermore, the distance from the freeway and the existing ambient noise levels from the freeway (70 dB), would render any construction noise to be less than perceptible to the public travelling along the highway.

During project operation, the project would not generate a substantial increase in ambient noise levels due to the low frequency of vehicular trips into the hillsides, up to 20 trips no more than ten times a month. The use of firearms during training and certification have the potential to generate noise resulting from gunshot, ranging from 140 dB to 160 dB, above the acceptable threshold for comfortable noise levels. Best management practice and procedures to reducing audial harm to police officers during training and certification activities have been incorporated into Mitigation Measure NOI-3. Due to the project site's distance outside of city limits (5 miles) and to US Highway 101 (0.5 mile), it is unlikely that gunshot noises would be perceptible; *therefore the project would not have noise impacts to the general public and impacts would be less than significant with mitigation measures.*

- b. The project does not propose pile driving or other high impact activities that would generate substantial groundborne noise or groundborne vibration during construction. Heavy equipment would generate groundborne noise and vibration but these activities would be limited in duration and consistent with other standard construction activities, and addressed with mitigation measures NOI-1 and NOI-2. *Therefore, impacts related to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels would be less than significant.*
- c. The project does not propose land uses that would generate excessive noise. The project site is located 5 miles outside of city limits and 0.5 mile away from US Highway 101. Due to the relative distance US Highway 101, in addition to the ambient noise existing on the freeway (70 dB), it is unlikely that any noise generated by training exercises could be perceived by any of the adjacent properties in the vicinity. The hills in which the project site is nestled serves also serve as a natural audial buffer, which further mitigates any operational noise from the shooting range. *Therefore, the impact would be less than significant.*
- d. Construction-related noise would be limited in duration and nature, and the project does not propose land uses that would generate excessive noise during project operation. Furthermore, the distance from the freeway and the existing ambient noise levels from the freeway (70 dB), would render any construction noise to be less than perceptible to the public travelling along the highway. *Therefore, substantial temporary increase in the project vicinity above levels existing without the project would be less than significant.*
- e. The project is not located within the airport land use plan and is outside of the city limits. *Therefore there would be no impact.*
- f. The project site is not located within the vicinity of a private airstrip. *Therefore, there would be no impact.*

Mitigation Measure(s) incorporated into the project:

NOI-1 Construction Activity. During project construction, construction activity shall be limited to the hours between 7:00 a.m. and 7:00 p.m. on weekdays, and between 8:00 a.m. and 6:00 p.m. on Saturdays in accordance with the City Noise Element. No construction shall occur on Sundays or State or Federal Holidays. Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities without mechanical equipment are not subject to these restrictions.

Stationary construction equipment that generates noise that exceeds 65 dBA at the project boundaries shall be shielded with the most modern noise control devices (i.e. mufflers, lagging, and/or motor enclosures). Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed-air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used.

NOI-2 Equipment Maintenance. All equipment shall be properly maintained to ensure that no additional noise, due to worn or improperly maintained parts, is generated. Stockpiling and vehicle staging areas shall be located as far as practical from sensitive noise receptors. Every effort shall be made to create the greatest distance between noise sources and sensitive receptors during construction activities.

NOI-3 Operational. All officers and police personnel on the project site shall adhere to outdoor range safety measures for hearing protection, including ear plugs and/or ear muffs, to avoid repeated exposure to noise above 140 dB.

13. POPULATION AND HOUSING

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

Setting:

Since the early 1990s, the City of Santa Maria has experienced a consistent increase in population, largely due to a growing migrant workforce for nearby agriculture. The City of Santa Maria is one of the fastest growing areas in Santa Barbara County, due in part to the affordable housing it provides relative to the Cities of Santa Barbara and San Luis Obispo County. The City has also developed a number of programs and policies to further encourage growth and development.

Impact Discussion:

- a. The proposed project is a shooting facility outside of an urbanized area and will not create population growth as it serves the existing Police Department and is for training purposes only. *No impact would occur.*
- b.-c. The proposed project is a shooting facility outside of an urbanized area on undeveloped land. There is no existing housing on the proposed site. The project will not displace any housing nor necessitate the construction of replacement housing. *No impact would occur.*

Mitigation Measure(s) incorporated into the project: None required.

14. PUBLIC SERVICES

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---------------------------------------|---|-------------------------------------|------------------|
| a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| i. Fire protection? | | | X | |
| ii. Police protection? | | | X | |
| iii. Schools? | | | | X |
| iv. Parks? | | | | X |
| v. Other public facilities? | | | | X |

Setting:

The project site is owned by the City of Santa Maria and therefore under City jurisdiction and is served by the City of Santa Maria Police Department, headquartered at 222 East Cook Street. However, the City Police Department has a mutual aid agreement with County Sheriff's Department. If Sheriff's Department officers are closer to the Los Flores Ranch property, they may be contacted for a response until the City Police Department can arrive.

Although the project site is owned by the City of Santa Maria, the project site is located within the Santa located within the Santa Barbara County Fire Protection District pursuant to Health and Safety Code § 13146. Therefore, the Santa Barbara County Fire Department (SBCFD) would primarily serve the project site and the City of Santa Maria would secondarily serve the project site. Upon annexation of the project site however, the City of Santa Maria would be responsible for the provision of fire protection services pursuant to Health and Safety Code § 13146. SBCFD may continue to provide fire protection services to the project site should the City of Santa Maria contract such services to SBCFD.

Impact Discussion:

- a.
 - i. The project proposes to build an outdoor shooting facility and conduct training exercises for the City of Santa Maria Police Department. Training activities would occur no more than ten times a month, with police officers firing full-metal jacket bullets into collection

- berms. Due to the infrequency of training activities and the nature of the land use, the project would not result in a substantial impact nor require the need for additional fire protection beyond what is provided by SBCFD; *the impact is less than significant.*
- ii. The remote location of the project site would create an incremental increase in demand for City police protection services, should the need arise. However, the changes in demand would not require any changes police services that already that serve the property. *Therefore, impacts associated police protection would be less than significant.*
 - iii.-v. The proposed project will not increase the demand for school, park or public facilities as the project site is a Public Facility serving the Police Department only. *No impact would occur.*

Mitigation Measure(s) incorporated into the project: None required.

15. RECREATION

| Would the project: | 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? | | | | X |
| 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? | | | | X |

Setting:

The City of Santa Maria's recreation system is comprised of several local parks and recreational facilities, which are managed by the Department of Recreation and Parks. The Department operates 234 acres of developed parkland in 27 neighborhood and community parks. The entrance to Los Flores Ranch Park is located approximately one mile northwest of the project site, and is the largest regional park in the City of Santa Maria.

Impact Discussion:

- a-b. The project would serve the Police Department in fulfilling their training needs only and would not increase the use of neighborhood and regional parks, or require the construction or expansion of regional parks. *No impact would occur.*

Mitigation Measure(s) incorporated into the project: None required.

16. TRANSPORTATION/TRAFFIC

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| a. Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | | X | |
| b. Exceeds, either individually, or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | | | X | |
| c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | X |
| d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | X |
| e. Result in inadequate emergency access? | | | X | |
| f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | | | | X |

Setting:

The project is located adjacent to US Highway 101, and north of Palmer Road. The site would be accessed via US Highway 101 at Exit 161, which is an unsignalized intersection leading to county unincorporated land. Travel would continue southbound on a paved frontage road within Caltrans right-of-way, paralleling US Highway 101 on the east for approximately 1 mile until a locked gate is reached. Past the gate and leading up to the project site approximately 0.5 mile east of US Highway 101, access to the project site would be via an unpaved, unnamed perimeter ranch road owned by the City. The perimeter ranch road is the only access for ingress and egress to the project site. Although the project is outside of City limits, the property is owned by the City as a public facility specifically for Police Department training. The City's General Plan Circulation Element considers LOS D as an acceptable level of service for all arterials, collectors, and signalized intersections. Santa Barbara County's Congestion Management Program (CMP) LOS standards is also LOS D.

Impact Discussion:

- Based on the trip generation rates for the most applicable land use by the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th ed. Vol. 2: Data), Land Use 411: City Park, the proposed shooting range is forecast to generate five Average Daily Trips (ADT), with four P.M. peak hour trips, on the weekdays. The project would generate 22 ADT on Saturdays and five ADT on Sundays. However, the actual trip generation expected by the Police Department would be up to 20 trips no more than ten times a month. The number of trips was determined by the City Public Works Department as not substantial in relation to the existing traffic load and capacity of the street system such that it would cause adverse

impacts to the City or county's transportation and circulation system, nor does it exceed the threshold of 50 peak trips that would warrant an additional traffic study and analysis. *Therefore, this impact would be less than significant.*

- b. The proposed project would generate up to 20 trips no more than ten times a month by the Police Department traveling from the City of Santa Maria to use the facilities for training. The intersection is currently operating at LOS A; the addition of 20 trips in a single day is not enough to change the LOS nor cause delays or cumulative impacts for Exit 161 at US Highway 101. The number of trips was determined by the City Public Works Department to contribute so few trips that the impact exceeds neither individually, nor cumulatively a level of service standard established (LOS D). *Therefore, this impact would be less than significant.*
- c. The project site is not located within the Airport Area of Influence of the Santa Maria Public Airport or any other airport. As such, the project would not affect airport operations, and would have no direct or indirect effects on air traffic; *therefore, no impact would result.*
- d. No new roadways are being proposed; therefore, the project would not result in any sharp curves, dangerous intersections, or incompatible uses that would result in roadway hazards on or in the vicinity of the site; *and no impact would result.*
- e. The proposed project would utilize the existing access points to the project site, with a centrally located parking area internal to the site. The project access and circulation would be designed to comply with all safety standards in the City's Municipal Code. *As such, the project would not result in inadequate emergency access and this impact would be less than significant.*
- f. The project would not result in a substantial increase in traffic on local public transit, bicycle, or pedestrian facilities as it is outside of City limits and the project site is not open to the general public. Therefore, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities and *would have no impact.*

Mitigation Measure(s) incorporated into the project: None required.

17. UTILITIES AND SERVICE SYSTEMS

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | X | |
| b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | X | |

| Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | X | |
| d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | X | |
| e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | X | |
| f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | X | |
| g. Comply with federal, state, and local statutes and regulations related to solid waste? | | | X | |

Setting:

The City of Santa Maria operates its own wastewater collection and treatment system. The City's wastewater collection system consists of eight wastewater basins with associated trunk sewers and one treatment plant. The Department of Utilities is responsible for delivering water, treating wastewater, refuse collection, recycling, operating the Santa Maria Regional Landfill and its Household Hazardous Waste Facility, street sweeping, and regulatory compliance. The Water Resources Operation and Maintenance Section is responsible for supplying residents with potable water for domestic, industrial, and fire protection purposes. Solid Waste Collection and Disposal Services consist of six distinct areas: refuse collection/residential; refuse collection/commercial; landfill disposal operations; street sweeping; recycling operations; and regulatory compliance.

Impact Discussion:

a.,b.,d.,e.

No water service is being proposed for the outdoor shooting facility at this time. Portable bathroom facilities, including a handwashing station for officers after firearms handling, are proposed for the site. Any water use for the site would be transported by the Police Department during or prior to training days, and subsequently hauled away for off-site disposal and treatment. *Therefore, the impact would be less than significant.*

- c. Stormwater from the project site will be collected through drainage channels incorporated the design of the grading plan and project site plan. The natural pattern of drainage would be retained by the project design, as the project is located within a natural canyon flanked by gently sloping hills. Grading activities that include 1,723 cubic yards of cut and fill material for building pads would follow the natural curvature of the existing project site, cutting minimally into the hillsides to create a flat graded pad for the outdoor shooting range and accessory buildings. The only alteration to the drainage pattern would be that the flow would be concentrated into the project's channel ditches, rather than falling as a sheet flow into the

canyon and subsequently downhill. The project site would have minimal impervious services, including an unpaved parking lot and open range firing lanes. Due to the grading and drainage design incorporated into the project site, the project would not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. *Therefore, this impact would be less than significant.*

- f-g. The City of Santa Maria currently disposes of solid waste at the Santa Maria Regional Landfill and has planned, permitted, and initiated development of a new landfill in the City – the Santa Maria Integrated Waste Management Facility (Los Flores Ranch Landfill; Facility No. 42-AA-0076). The new facility will have a design capacity of approximately 131 million cubic yards of waste with an estimated closure date of 2015. The permit for the new facility is consistent with the Santa Barbara County Integrated Waste Management Plan, which was approved by the *California Department of Resource Recycling and Recovery* (CalRecycle) on October 18, 2011, as well as the standards adopted by the CalRecycle, pursuant to *Public Resources Code* (PRC) 44010. In addition, the design and planned operation of the facility is consistent with the State Minimum Standards for Solid Waste Handling and Disposal as determined by the enforcement agency based on review of the January 11, 2011, Joint Technical Document, pursuant to PRC 44009. Furthermore, the new facility must be maintained in compliance with the flammable clearance provisions of Chapter 5 (commencing with Section 4371) of Part 2 of Division 4 as enforced by Santa Barbara County Fire Department (PRC 44151). The project would rely on the City's solid waste services and facilities and with the development of the new landfill, the proposed development would not result in need for new or expanded solid waste facilities. Additionally, the new facility, as permitted, is consistent with and would be required to comply with applicable federal, state, and local regulations regarding solid waste. *Therefore, impacts associated with solid waste and the need for new or expanded solid waste facilities would be less than significant.*

Mitigation Measure(s) incorporated into the project: None required.

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CONSULTATION AND DATA SOURCES

CONSULTATION SOURCES

City Departments Consulted

| | |
|-------------------------------------|-------------------------|
| <input type="checkbox"/> | Administrative Services |
| <input type="checkbox"/> | Attorney |
| <input checked="" type="checkbox"/> | Fire |
| <input type="checkbox"/> | Library |
| <input type="checkbox"/> | City Manager |
| <input checked="" type="checkbox"/> | Police |
| <input checked="" type="checkbox"/> | Public Works |
| <input type="checkbox"/> | Utilities |
| <input type="checkbox"/> | Recreation and Parks |

County Agencies/Departments Consulted

| | |
|--------------------------|--------------------------------|
| <input type="checkbox"/> | Air Pollution Control District |
| <input type="checkbox"/> | Association of Governments |
| <input type="checkbox"/> | Flood Control District |
| <input type="checkbox"/> | Environmental Health |
| <input type="checkbox"/> | Fire (Hazardous Materials) |
| <input type="checkbox"/> | LAFCO |
| <input type="checkbox"/> | Public Works |
| <input type="checkbox"/> | Planning and Development |
| <input type="checkbox"/> | Other (list) |

Special Districts Consulted

| | |
|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Santa Maria Public Airport |
| <input type="checkbox"/> | Airport Land Use Commission |
| <input type="checkbox"/> | Cemetery |
| <input type="checkbox"/> | Santa-Maria Bonita School District |
| <input type="checkbox"/> | Santa Maria Joint Union High School |
| <input type="checkbox"/> | Laguna County Sanitation District |
| <input type="checkbox"/> | Cal Cities Water Company |

State/Federal Agencies Consulted

| | |
|--------------------------|------------------------------------|
| <input type="checkbox"/> | Army Corps of Engineers |
| <input type="checkbox"/> | Caltrans |
| <input type="checkbox"/> | CA Fish and Wildlife |
| <input type="checkbox"/> | Federal Fish and Wildlife |
| <input type="checkbox"/> | FAA |
| <input type="checkbox"/> | Regional Water Quality Control Bd. |
| <input type="checkbox"/> | Integrated Waste Management Bd. |
| <input type="checkbox"/> | Other (list) |

DATA SOURCES

General Plan

| | |
|-------------------------------------|------------------------------|
| <input checked="" type="checkbox"/> | Land Use Element |
| <input checked="" type="checkbox"/> | Circulation Element |
| <input checked="" type="checkbox"/> | Safety Element |
| <input checked="" type="checkbox"/> | Noise Element |
| <input type="checkbox"/> | Housing Element |
| <input checked="" type="checkbox"/> | Resources Management Element |

Other

| | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Agricultural Preserve Maps |
| <input checked="" type="checkbox"/> | Archaeological Maps/Reports |
| <input checked="" type="checkbox"/> | Architectural Elevations |
| <input checked="" type="checkbox"/> | Biology Reports |
| <input checked="" type="checkbox"/> | CA Oil and Gas Maps |
| <input checked="" type="checkbox"/> | FEMA Maps (Flood) |
| <input checked="" type="checkbox"/> | Grading Plans |
| <input checked="" type="checkbox"/> | Site Plan |
| <input checked="" type="checkbox"/> | Topographic Maps |
| <input checked="" type="checkbox"/> | Aerial Photos |
| <input checked="" type="checkbox"/> | Traffic Studies |
| <input checked="" type="checkbox"/> | Trip Generation Manual (ITE) |
| <input type="checkbox"/> | URBEMIS Air Quality Model |
| <input checked="" type="checkbox"/> | Zoning Maps |
| <input checked="" type="checkbox"/> | Other (list) |
| | <ul style="list-style-type: none"> California Emissions Estimator Model (CalEEMod) v. 2016.3.1 |

MANDATORY FINDINGS OF SIGNIFICANCE

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| 1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | X | | |
| 2. 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.) | | | X | |
| 3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | X | |

Discussion:

- a. Based on the information and analysis provided throughout this Initial Study, the project, the project would not substantially degrade the quality of the environment and would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of California history or prehistory. The project's impacts would be less than significant with mitigation measures incorporated.
- b. As described in the discussion of environmental checklist Sections I through XVIII, all environmental issues considered in this Initial Study were found to have the status of 'less than significant impact with mitigation measures incorporated', or better. Cumulative impacts of several resource areas have been addressed in the individual resource sections, including Section III, Air Quality and Section VII, Noise, (CEQA Guidelines Section 15064(h)(3)). These impacts would be less than significant at the project level and cumulatively. Some of the other resource areas were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts, such as Population and Housing, Public Services, Recreation, Mineral Resources, Land Use, and Housing and Population. Therefore, the project would not contribute to cumulative impacts related to these issues. Other issues (e.g., Geology/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. Therefore, implementation of the project would result in less than significant environmental impacts.
- c. Effects to human beings are generally associated with air quality, noise, traffic safety, geology/soils, and hazards/hazardous materials. As discussed in this Initial Study, the project

would result in less than significant impacts in relation to these issues with standard regulatory compliance. Therefore, the project would not cause substantial adverse effects on human beings, either directly or indirectly.

SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS

| | | | |
|-------------------------------------|----------------------------------|-------------------------------------|-------------------------------|
| <input type="checkbox"/> | Aesthetics/Visual Resources | <input type="checkbox"/> | Land Use and Planning |
| <input type="checkbox"/> | Agriculture and Forest Resources | <input type="checkbox"/> | Mineral Resources |
| <input checked="" type="checkbox"/> | Air Quality | <input checked="" type="checkbox"/> | Noise |
| <input checked="" type="checkbox"/> | Biological Resources | <input type="checkbox"/> | Population and Housing |
| <input checked="" type="checkbox"/> | Cultural Resources | <input type="checkbox"/> | Public Services |
| <input type="checkbox"/> | Geology and Soils | <input type="checkbox"/> | Recreation |
| <input type="checkbox"/> | Greenhouse Gas Emissions | <input type="checkbox"/> | Transportation/Traffic |
| <input checked="" type="checkbox"/> | Hazards and Hazardous Materials | <input type="checkbox"/> | Utilities and Service Systems |

DETERMINATION

On the basis of the Initial Study, the staff of the Community Development Department:

- ☐ Finds that the proposed project is a Class **CATEGORICAL EXEMPTION** and no further environmental review is required.
- ☐ Finds that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- ☒ Finds 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 in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ Finds that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- ☐ Finds that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to acceptable standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An **ENVIRONMENTAL IMPACT REPORT (EIR)/SUBSEQUENT EIR/SUPPLEMENTAL EIR/ADDENDUM** is required, but it must analyze only the effects that remain to be addressed.
- ☐ Finds that although the proposed project could have a significant effect on the environment, because all significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to acceptable 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.


Ivana Yeung, Associate Planner


Chuen Ng, Director of Community Development

Date

4/8/19.

Date

4/5/19



City of Santa Maria
Community Development Department
110 South Pine Street, Suite 101
Santa Maria, CA 93458
805-925-0951

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Summary Report

Los Flores Shooting Facility
Santa Barbara-North of Santa Ynez, Summary Report**1.0 Project Characteristics**

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-----------|------|--------|-------------|--------------------|------------|
| City Park | 5.00 | Acre | 5.00 | 217,800.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------|----------------------------|--------------------------|-------|---------------------------|-------|
| Urbanization | Rural | Wind Speed (m/s) | 3.1 | Precipitation Freq (Days) | 37 |
| Climate Zone | 4 | | | Operational Year | 2019 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MW hr) | 702.44 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments

Only CalEEMod defaults were used.

Project Characteristics -

Land Use -

2.0 Peak Daily Emissions

Peak Daily Construction Emissions**Peak Daily Construction Emissions**

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Summary Report

[illegible]

Peak Daily Operational Emissions

Peak Daily Operational Emissions

[illegible]

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Summary Report

3.0 Annual GHG Emissions**Annual GHG****Annual GHG**

| | | Unmitigated | | | | Mitigated | | | |
|--------------|------------------------|-------------|-------------|-------------|----------|-----------|-------------|-------------|----------|
| | | CO2 | CH4 | N2O | CO2e | CO2 | CH4 | N2O | CO2e |
| GHG Activity | Year | MT/yr | | | | | | | |
| Construction | 2019 | 473.3855 | 0.0905 | 0.0000 | 475.6480 | 473.3851 | 0.0905 | 0.0000 | 475.6476 |
| Construction | 2020 | 25.4364 | 6.7000e-003 | 0.0000 | 25.6039 | 25.4363 | 6.7000e-003 | 0.0000 | 25.6039 |
| Operational | 2019 | 30.1465 | 6.0700e-003 | 6.0000e-005 | 30.3153 | 30.1465 | 6.0700e-003 | 6.0000e-005 | 30.3153 |
| | Total | | | | | | | | |
| | Significance Threshold | | | | | | | | |
| | Exceed Significance? | | | | | | | | |

Los Flores Shooting Facility
Santa Barbara-North of Santa Ynez County, Mitigation Report

Construction Mitigation Summary

| Phase | ROG | NOx | CO | SO2 | Exhaust PM10 | Exhaust PM2.5 | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|------|------|------|------|-----------------|------------------|----------|--------------|-----------|------|------|------|
| Percent Reduction | | | | | | | | | | | | |
| Architectural Coating | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Building Construction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Grading | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Site Preparation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

OFFROAD Equipment Mitigation

| Equipment Type | Fuel Type | Tier | Number Mitigated | Total Number of Equipment | DPF | Oxidation Catalyst |
|---------------------------|-----------|-----------|------------------|---------------------------|-----------|--------------------|
| Air Compressors | Diesel | No Change | 0 | 1 | No Change | 0.00 |
| Concrete/Industrial Saws | Diesel | No Change | 0 | 1 | No Change | 0.00 |
| Cranes | Diesel | No Change | 0 | 1 | No Change | 0.00 |
| Excavators | Diesel | No Change | 0 | 4 | No Change | 0.00 |
| Forklifts | Diesel | No Change | 0 | 3 | No Change | 0.00 |
| Generator Sets | Diesel | No Change | 0 | 1 | No Change | 0.00 |
| Graders | Diesel | No Change | 0 | 1 | No Change | 0.00 |
| Pavers | Diesel | No Change | 0 | 2 | No Change | 0.00 |
| Paving Equipment | Diesel | No Change | 0 | 2 | No Change | 0.00 |
| Rollers | Diesel | No Change | 0 | 2 | No Change | 0.00 |
| Rubber Tired Dozers | Diesel | No Change | 0 | 6 | No Change | 0.00 |
| Tractors/Loaders/Backhoes | Diesel | No Change | 0 | 10 | No Change | 0.00 |
| Welders | Diesel | No Change | 0 | 1 | No Change | 0.00 |

| Equipment Type | ROG | NOx | CO | SO2 | Exhaust PM10 | Exhaust PM2.5 | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------------------|--------------|--------------|--------------|--------------|--------------|---------------|-------------------|--------------|--------------|--------------|--------------|--------------|
| Unmitigated tons/yr | | | | | | | Unmitigated mt/yr | | | | | |
| Air Compressors | 2.18000E-003 | 1.51500E-002 | 1.64800E-002 | 3.00000E-005 | 1.00000E-003 | 1.00000E-003 | 0.00000E+000 | 2.29793E+000 | 2.29793E+000 | 1.80000E-004 | 0.00000E+000 | 2.30238E+000 |
| Concrete/Industrial Saws | 4.62000E-003 | 3.58900E-002 | 3.70200E-002 | 6.00000E-005 | 2.29000E-003 | 2.29000E-003 | 0.00000E+000 | 5.37657E+000 | 5.37657E+000 | 3.80000E-004 | 0.00000E+000 | 5.38603E+000 |
| Cranes | 5.06700E-002 | 6.03910E-001 | 2.30580E-001 | 5.80000E-004 | 2.55900E-002 | 2.35500E-002 | 0.00000E+000 | 5.21334E+001 | 5.21334E+001 | 1.65000E-002 | 0.00000E+000 | 5.25458E+001 |
| Excavators | 8.86000E-003 | 9.11800E-002 | 1.10950E-001 | 1.80000E-004 | 4.40000E-003 | 4.05000E-003 | 0.00000E+000 | 1.57653E+001 | 1.57653E+001 | 4.99000E-003 | 0.00000E+000 | 1.58900E+001 |
| Forklifts | 5.51300E-002 | 4.92370E-001 | 4.11950E-001 | 5.30000E-004 | 3.81300E-002 | 3.50800E-002 | 0.00000E+000 | 4.73511E+001 | 4.73511E+001 | 1.49800E-002 | 0.00000E+000 | 4.77257E+001 |
| Generator Sets | 5.10200E-002 | 4.34160E-001 | 4.28140E-001 | 7.60000E-004 | 2.59400E-002 | 2.59400E-002 | 0.00000E+000 | 6.49989E+001 | 6.49989E+001 | 4.11000E-003 | 0.00000E+000 | 6.51017E+001 |
| Graders | 1.95000E-003 | 2.63200E-002 | 7.35000E-003 | 3.00000E-005 | 8.40000E-004 | 7.80000E-004 | 0.00000E+000 | 2.38636E+000 | 2.38636E+000 | 7.60000E-004 | 0.00000E+000 | 2.40523E+000 |
| Pavers | 4.73000E-003 | 5.05900E-002 | 5.21700E-002 | 8.00000E-005 | 2.46000E-003 | 2.26000E-003 | 0.00000E+000 | 7.43429E+000 | 7.43429E+000 | 2.40000E-003 | 0.00000E+000 | 7.49440E+000 |
| Paving Equipment | 3.73000E-003 | 3.85400E-002 | 4.56200E-002 | 7.00000E-005 | 1.93000E-003 | 1.77000E-003 | 0.00000E+000 | 6.44238E+000 | 6.44238E+000 | 2.08000E-003 | 0.00000E+000 | 6.49447E+000 |
| Rollers | 3.75000E-003 | 3.74600E-002 | 3.40800E-002 | 5.00000E-005 | 2.39000E-003 | 2.20000E-003 | 0.00000E+000 | 4.14873E+000 | 4.14873E+000 | 1.34000E-003 | 0.00000E+000 | 4.18228E+000 |
| Rubber Tired Dozers | 3.57400E-002 | 3.80340E-001 | 1.34950E-001 | 2.70000E-004 | 1.85500E-002 | 1.70600E-002 | 0.00000E+000 | 2.41592E+001 | 2.41592E+001 | 7.64000E-003 | 0.00000E+000 | 2.43503E+001 |
| Tractors/Loaders/Backhoes | 7.53400E-002 | 7.56410E-001 | 7.45720E-001 | 1.01000E-003 | 5.04800E-002 | 4.64400E-002 | 0.00000E+000 | 9.03441E+001 | 9.03441E+001 | 2.85900E-002 | 0.00000E+000 | 9.10588E+001 |
| Welders | 4.42500E-002 | 1.86740E-001 | 2.07780E-001 | 2.90000E-004 | 1.14500E-002 | 1.14500E-002 | 0.00000E+000 | 2.16454E+001 | 2.16454E+001 | 3.61000E-003 | 0.00000E+000 | 2.17357E+001 |

| Equipment Type | ROG | NOx | CO | SO2 | Exhaust PM10 | Exhaust PM2.5 | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|--------------|--------------|--------------|--------------|--------------|---------------|-----------------|--------------|--------------|--------------|--------------|--------------|
| Mitigated tons/yr | | | | | | | Mitigated mt/yr | | | | | |
| Air Compressors | 2.18000E-003 | 1.51500E-002 | 1.64800E-002 | 3.00000E-005 | 1.00000E-003 | 1.00000E-003 | 0.00000E+000 | 2.29793E+000 | 2.29793E+000 | 1.80000E-004 | 0.00000E+000 | 2.30237E+000 |
| Concrete/Industrial Saws | 4.62000E-003 | 3.58900E-002 | 3.70200E-002 | 6.00000E-005 | 2.29000E-003 | 2.29000E-003 | 0.00000E+000 | 5.37657E+000 | 5.37657E+000 | 3.80000E-004 | 0.00000E+000 | 5.38603E+000 |
| Cranes | 5.06700E-002 | 6.03910E-001 | 2.30580E-001 | 5.80000E-004 | 2.55900E-002 | 2.35500E-002 | 0.00000E+000 | 5.21333E+001 | 5.21333E+001 | 1.65000E-002 | 0.00000E+000 | 5.25457E+001 |
| Excavators | 8.86000E-003 | 9.11800E-002 | 1.10950E-001 | 1.80000E-004 | 4.40000E-003 | 4.05000E-003 | 0.00000E+000 | 1.57653E+001 | 1.57653E+001 | 4.99000E-003 | 0.00000E+000 | 1.58900E+001 |
| Forklifts | 5.51300E-002 | 4.92370E-001 | 4.11950E-001 | 5.30000E-004 | 3.81300E-002 | 3.50800E-002 | 0.00000E+000 | 4.73511E+001 | 4.73511E+001 | 1.49800E-002 | 0.00000E+000 | 4.77257E+001 |
| Generator Sets | 5.10200E-002 | 4.34160E-001 | 4.28140E-001 | 7.60000E-004 | 2.59400E-002 | 2.59400E-002 | 0.00000E+000 | 6.49988E+001 | 6.49988E+001 | 4.11000E-003 | 0.00000E+000 | 6.51016E+001 |
| Graders | 1.95000E-003 | 2.63200E-002 | 7.35000E-003 | 3.00000E-005 | 8.40000E-004 | 7.80000E-004 | 0.00000E+000 | 2.38635E+000 | 2.38635E+000 | 7.60000E-004 | 0.00000E+000 | 2.40523E+000 |
| Pavers | 4.73000E-003 | 5.05900E-002 | 5.21700E-002 | 8.00000E-005 | 2.46000E-003 | 2.26000E-003 | 0.00000E+000 | 7.43428E+000 | 7.43428E+000 | 2.40000E-003 | 0.00000E+000 | 7.49439E+000 |
| Paving Equipment | 3.73000E-003 | 3.85400E-002 | 4.56200E-002 | 7.00000E-005 | 1.93000E-003 | 1.77000E-003 | 0.00000E+000 | 6.44237E+000 | 6.44237E+000 | 2.08000E-003 | 0.00000E+000 | 6.49446E+000 |
| Rollers | 3.75000E-003 | 3.74600E-002 | 3.40800E-002 | 5.00000E-005 | 2.39000E-003 | 2.20000E-003 | 0.00000E+000 | 4.14873E+000 | 4.14873E+000 | 1.34000E-003 | 0.00000E+000 | 4.18227E+000 |
| Rubber Tired Dozers | 3.57400E-002 | 3.80340E-001 | 1.34950E-001 | 2.70000E-004 | 1.85500E-002 | 1.70600E-002 | 0.00000E+000 | 2.41592E+001 | 2.41592E+001 | 7.64000E-003 | 0.00000E+000 | 2.43503E+001 |
| Tractors/Loaders/Balckhoes | 7.53400E-002 | 7.56400E-001 | 7.45720E-001 | 1.01000E-003 | 5.04800E-002 | 4.64400E-002 | 0.00000E+000 | 9.03440E+001 | 9.03440E+001 | 2.85900E-002 | 0.00000E+000 | 9.10587E+001 |
| Welders | 4.42500E-002 | 1.86740E-001 | 2.07780E-001 | 2.90000E-004 | 1.14500E-002 | 1.14500E-002 | 0.00000E+000 | 2.16454E+001 | 2.16454E+001 | 3.61000E-003 | 0.00000E+000 | 2.17357E+001 |

| Equipment Type | ROG | NOx | CO | SO2 | Exhaust PM10 | Exhaust PM2.5 | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Percent Reduction | | | | | | | | | | | | |
| Air Compressors | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 4.34333E-006 |
| Concrete/Industrial Saws | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 |
| Cranes | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.15089E-006 | 1.15089E-006 | 0.00000E+000 | 0.00000E+000 | 1.14186E-006 |
| Excavators | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.26861E-006 | 1.26861E-006 | 0.00000E+000 | 0.00000E+000 | 1.25865E-006 |
| Forklifts | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.26713E-006 | 1.26713E-006 | 0.00000E+000 | 0.00000E+000 | 1.25718E-006 |
| Generator Sets | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.23079E-006 | 1.23079E-006 | 0.00000E+000 | 0.00000E+000 | 1.07524E-006 |
| Graders | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 4.19048E-006 | 4.19048E-006 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 |
| Pavers | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.34512E-006 | 1.34512E-006 | 0.00000E+000 | 0.00000E+000 | 1.33433E-006 |
| Paving Equipment | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.55222E-006 | 1.55222E-006 | 0.00000E+000 | 0.00000E+000 | 1.53977E-006 |
| Rollers | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 2.39104E-006 |
| Rubber Tired Dozers | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 8.27841E-007 | 8.27841E-007 | 0.00000E+000 | 0.00000E+000 | 1.23202E-006 |
| Tractors/Loaders/Balckhoes | 0.00000E+000 | 1.32203E-005 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 1.10688E-006 | 1.10688E-006 | 0.00000E+000 | 0.00000E+000 | 1.20801E-006 |
| Welders | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 0.00000E+000 | 9.23985E-007 | 9.23985E-007 | 0.00000E+000 | 0.00000E+000 | 1.38022E-006 |

Fugitive Dust Mitigation

| Yes/No | Mitigation Measure | Mitigation Input | Mitigation Input | Mitigation Input |
|--------|--|------------------|------------------|---------------------|
| No | Soil Stabilizer for unpaved Roads | PM10 Reduction | PM2.5 Reduction | |
| No | Replace Ground Cover of Area Disturbed | PM10 Reduction | PM2.5 Reduction | |
| No | Water Exposed Area | PM10 Reduction | PM2.5 Reduction | Frequency (per day) |

| | | | | | | | |
|----|-------------------------|-----------------------|------|------------------------|------|--|--|
| No | Unpaved Road Mitigation | Moisture Content % | | Vehicle Speed (mph) | 0.00 | | |
| No | Clean Paved Road | % PM Reduction | 0.00 | | | | |

| Phase | Source | Unmitigated | | Mitigated | | Percent Reduction | |
|-----------------------|---------------|-------------|-------|-----------|-------|-------------------|-------|
| | | PM10 | PM2.5 | PM10 | PM2.5 | PM10 | PM2.5 |
| Architectural Coating | Fugitive Dust | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Architectural Coating | Roads | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Building Construction | Fugitive Dust | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Building Construction | Roads | 0.09 | 0.02 | 0.09 | 0.02 | 0.00 | 0.00 |
| Demolition | Fugitive Dust | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Demolition | Roads | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Grading | Fugitive Dust | 0.03 | 0.01 | 0.03 | 0.01 | 0.00 | 0.00 |
| Grading | Roads | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving | Fugitive Dust | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving | Roads | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Site Preparation | Fugitive Dust | 0.05 | 0.02 | 0.05 | 0.02 | 0.00 | 0.00 |
| Site Preparation | Roads | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Operational Percent Reduction Summary

| Category | ROG | NOx | CO | SO2 | Exhaust PM10 | Exhaust PM2.5 | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|------|------|------|------|--------------|---------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | | | | | | | | | | | | |
| Architectural Coating | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Consumer Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electricity | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hearth | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Landscaping | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Natural Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water Indoor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water Outdoor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Operational Mobile Mitigation

Project Setting:

| Mitigation | Category | Measure | % Reduction | Input Value 1 | Input Value 2 | Input Value |
|------------|----------|-------------------------------------|-------------|---------------|---------------|-------------|
| No | Land Use | Increase Density | 0.00 | | | |
| No | Land Use | Increase Diversity | -0.01 | 0.13 | | |
| No | Land Use | Improve Walkability Design | 0.00 | | | |
| No | Land Use | Improve Destination Accessibility | 0.00 | | | |
| No | Land Use | Increase Transit Accessibility | 0.25 | | | |
| No | Land Use | Integrate Below Market Rate Housing | 0.00 | | | |
| | Land Use | Land Use SubTotal | 0.00 | | | |

| | | | | | |
|----|---------------------------|--|------|--|------|
| No | Neighborhood Enhancements | Improve Pedestrian Network | | | |
| No | Neighborhood Enhancements | Provide Traffic Calming Measures | | | |
| No | Neighborhood Enhancements | Implement NEV Network | 0.00 | | |
| | Neighborhood Enhancements | Neighborhood Enhancements Subtotal | 0.00 | | |
| No | Parking Policy Pricing | Limit Parking Supply | 0.00 | | |
| No | Parking Policy Pricing | Unbundle Parking Costs | 0.00 | | |
| No | Parking Policy Pricing | On-street Market Pricing | 0.00 | | |
| | Parking Policy Pricing | Parking Policy Pricing Subtotal | 0.00 | | |
| No | Transit Improvements | Provide BRT System | 0.00 | | |
| No | Transit Improvements | Expand Transit Network | 0.00 | | |
| No | Transit Improvements | Increase Transit Frequency | 0.00 | | |
| | Transit Improvements | Transit Improvements Subtotal | 0.00 | | |
| | | Land Use and Site Enhancement Subtotal | 0.00 | | |
| No | Commute | Implement Trip Reduction Program | | | |
| No | Commute | Transit Subsidy | | | |
| No | Commute | Implement Employee Parking "Cash Out" | | | |
| No | Commute | Workplace Parking Charge | | | |
| No | Commute | Encourage Telecommuting and Alternative Work Schedules | 0.00 | | |
| No | Commute | Market Commute Trip Reduction Option | 0.00 | | |
| No | Commute | Employee Vanpool/Shuttle | 0.00 | | 2.00 |
| No | Commute | Provide Ride Sharing Program | | | |
| | Commute | Commute Subtotal | 0.00 | | |

| | | | | | |
|----|-------------|------------------------------|------|--|--|
| No | School Trip | Implement School Bus Program | 0.00 | | |
| | | Total VMT Reduction | 0.00 | | |

Area Mitigation

| Measure Implemented | Mitigation Measure | Input Value |
|---------------------|--|-------------|
| No | Only Natural Gas Hearth | |
| No | No Hearth | |
| No | Use Low VOC Cleaning Supplies | |
| No | Use Low VOC Paint (Residential Interior) | 50.00 |
| No | Use Low VOC Paint (Residential Exterior) | 100.00 |
| No | Use Low VOC Paint (Non-residential Interior) | 250.00 |
| No | Use Low VOC Paint (Non-residential Exterior) | 250.00 |
| No | Use Low VOC Paint (Parking) | 250.00 |
| No | % Electric Lawnmower | |
| No | % Electric Leafblower | |
| No | % Electric Chainsaw | |

Energy Mitigation Measures

| Measure Implemented | Mitigation Measure | Input Value 1 | Input Value 2 |
|---------------------|----------------------------------|---------------|---------------|
| No | Exceed Title 24 | | |
| No | Install High Efficiency Lighting | | |
| No | On-site Renewable | | |

| Appliance Type | Land Use Subtype | % Improvement |
|----------------|------------------|---------------|
| ClothWasher | | 30.00 |
| DishWasher | | 15.00 |
| Fan | | 50.00 |
| Refrigerator | | 15.00 |

Water Mitigation Measures

| Measure Implemented | Mitigation Measure | Input Value 1 | Input Value 2 |
|---------------------|--|---------------|---------------|
| No | Apply Water Conservation on Strategy | | |
| No | Use Reclaimed Water | | |
| No | Use Grey Water | | |
| No | Install low-flow bathroom faucet | 32.00 | |
| No | Install low-flow Kitchen faucet | 18.00 | |
| No | Install low-flow Toilet | 20.00 | |
| No | Install low-flow Shower | 20.00 | |
| No | Turf Reduction | | |
| No | Use Water Efficient Irrigation Systems | 6.10 | |
| No | Water Efficient Landscape | | |

Solid Waste Mitigation

| Mitigation Measures | Input Value |
|---------------------|-------------|
|---------------------|-------------|

| | |
|--|--|
| Institute Recycling and Composting Services Percent Reduction in Waste Disposed | |
|--|--|

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

Los Flores Shooting Facility
Santa Barbara-North of Santa Ynez County, Annual**1.0 Project Characteristics**

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-----------|------|--------|-------------|--------------------|------------|
| City Park | 5.00 | Acre | 5.00 | 217,800.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|-------------------------|----------------------------|-------------------------|-------|---------------------------|-------|
| Urbanization | Rural | Wind Speed (m/s) | 3.1 | Precipitation Freq (Days) | 37 |
| Climate Zone | 4 | | | Operational Year | 2019 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MWhr) | 702.44 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---------------------------|-------------------|---------------|-----------|
| tblProjectCharacteristics | UrbanizationLevel | Urban | Rural |

2.0 Emissions Summary

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

2.1 Overall Construction

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2019 | 0.3836 | 3.5197 | 2.7636 | 5.2600e-003 | 0.1609 | 0.1809 | 0.3418 | 0.0626 | 0.1697 | 0.2323 | 0.0000 | 473.3855 | 473.3855 | 0.0905 | 0.0000 | 475.6480 |
| 2020 | 0.0179 | 0.1660 | 0.1758 | 2.9000e-004 | 2.6100e-003 | 8.9300e-003 | 0.0115 | 7.0000e-004 | 8.3200e-003 | 9.0100e-003 | 0.0000 | 25.4364 | 25.4364 | 6.7000e-003 | 0.0000 | 25.6039 |
| Maximum | 0.3836 | 3.5197 | 2.7636 | 5.2600e-003 | 0.1609 | 0.1809 | 0.3418 | 0.0626 | 0.1697 | 0.2323 | 0.0000 | 473.3855 | 473.3855 | 0.0905 | 0.0000 | 475.6480 |

Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2019 | 0.3836 | 3.5197 | 2.7636 | 5.2600e-003 | 0.1609 | 0.1809 | 0.3418 | 0.0626 | 0.1697 | 0.2323 | 0.0000 | 473.3851 | 473.3851 | 0.0905 | 0.0000 | 475.6476 |
| 2020 | 0.0179 | 0.1660 | 0.1758 | 2.9000e-004 | 2.6100e-003 | 8.9300e-003 | 0.0115 | 7.0000e-004 | 8.3200e-003 | 9.0100e-003 | 0.0000 | 25.4363 | 25.4363 | 6.7000e-003 | 0.0000 | 25.6039 |
| Maximum | 0.3836 | 3.5197 | 2.7636 | 5.2600e-003 | 0.1609 | 0.1809 | 0.3418 | 0.0626 | 0.1697 | 0.2323 | 0.0000 | 473.3851 | 473.3851 | 0.0905 | 0.0000 | 475.6476 |

[illegible]

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|--|--|
| 1 | 1-1-2019 | 3-31-2019 | 1.0891 | 1.0891 |
| 2 | 4-1-2019 | 6-30-2019 | 0.9260 | 0.9260 |
| 3 | 7-1-2019 | 9-30-2019 | 0.9362 | 0.9362 |
| 4 | 10-1-2019 | 12-31-2019 | 0.9388 | 0.9388 |
| 5 | 1-1-2020 | 3-31-2020 | 0.1801 | 0.1801 |
| | | Highest | 1.0891 | 1.0891 |

2.2 Overall Operational

Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 2.0500e-003 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0129 | 0.0443 | 0.1284 | 2.6000e-004 | 0.0213 | 3.7000e-004 | 0.0217 | 5.7300e-003 | 3.5000e-004 | 6.0800e-003 | 0.0000 | 23.4135 | 23.4135 | 1.3700e-003 | 0.0000 | 23.4478 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0893 | 0.0000 | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 6.6436 | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |
| Total | 0.0150 | 0.0443 | 0.1284 | 2.6000e-004 | 0.0213 | 3.7000e-004 | 0.0217 | 5.7300e-003 | 3.5000e-004 | 6.0800e-003 | 0.0893 | 30.0572 | 30.1465 | 6.0700e-003 | 6.0000e-005 | 30.3153 |

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

2.2 Overall Operational**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 2.0500e-003 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0129 | 0.0443 | 0.1284 | 2.6000e-004 | 0.0213 | 3.7000e-004 | 0.0217 | 5.7300e-003 | 3.5000e-004 | 6.0800e-003 | 0.0000 | 23.4135 | 23.4135 | 1.3700e-003 | 0.0000 | 23.4478 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0893 | 0.0000 | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 6.6436 | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |
| Total | 0.0150 | 0.0443 | 0.1284 | 2.6000e-004 | 0.0213 | 3.7000e-004 | 0.0217 | 5.7300e-003 | 3.5000e-004 | 6.0800e-003 | 0.0893 | 30.0572 | 30.1465 | 6.0700e-003 | 6.0000e-005 | 30.3153 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.0 Construction Detail**Construction Phase**

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| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Demolition | Demolition | 1/1/2019 | 1/28/2019 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 1/29/2019 | 2/4/2019 | 5 | 5 | |
| 3 | Grading | Grading | 2/5/2019 | 2/14/2019 | 5 | 8 | |
| 4 | Building Construction | Building Construction | 2/15/2019 | 1/2/2020 | 5 | 230 | |
| 5 | Paving | Paving | 1/3/2020 | 1/28/2020 | 5 | 18 | |
| 6 | Architectural Coating | Architectural Coating | 1/29/2020 | 2/21/2020 | 5 | 18 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

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| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 6 | 15.00 | 0.00 | 0.00 | 8.30 | 6.40 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 8.30 | 6.40 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 0.00 | 8.30 | 6.40 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 91.00 | 36.00 | 0.00 | 8.30 | 6.40 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 8.30 | 6.40 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 18.00 | 0.00 | 0.00 | 8.30 | 6.40 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0351 | 0.3578 | 0.2206 | 3.9000e-004 | | 0.0180 | 0.0180 | | 0.0167 | 0.0167 | 0.0000 | 34.6263 | 34.6263 | 9.6300e-003 | 0.0000 | 34.8672 |
| Total | 0.0351 | 0.3578 | 0.2206 | 3.9000e-004 | | 0.0180 | 0.0180 | | 0.0167 | 0.0167 | 0.0000 | 34.6263 | 34.6263 | 9.6300e-003 | 0.0000 | 34.8672 |

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3.2 Demolition - 2019**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 5.3000e-004 | 4.6000e-004 | 4.0300e-003 | 1.0000e-005 | 9.3000e-004 | 1.0000e-005 | 9.3000e-004 | 2.5000e-004 | 1.0000e-005 | 2.5000e-004 | 0.0000 | 0.7807 | 0.7807 | 3.0000e-005 | 0.0000 | 0.7815 |
| Total | 5.3000e-004 | 4.6000e-004 | 4.0300e-003 | 1.0000e-005 | 9.3000e-004 | 1.0000e-005 | 9.3000e-004 | 2.5000e-004 | 1.0000e-005 | 2.5000e-004 | 0.0000 | 0.7807 | 0.7807 | 3.0000e-005 | 0.0000 | 0.7815 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0351 | 0.3578 | 0.2206 | 3.9000e-004 | | 0.0180 | 0.0180 | | 0.0167 | 0.0167 | 0.0000 | 34.6263 | 34.6263 | 9.6300e-003 | 0.0000 | 34.8671 |
| Total | 0.0351 | 0.3578 | 0.2206 | 3.9000e-004 | | 0.0180 | 0.0180 | | 0.0167 | 0.0167 | 0.0000 | 34.6263 | 34.6263 | 9.6300e-003 | 0.0000 | 34.8671 |

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3.2 Demolition - 2019**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 5.3000e-004 | 4.6000e-004 | 4.0300e-003 | 1.0000e-005 | 9.3000e-004 | 1.0000e-005 | 9.3000e-004 | 2.5000e-004 | 1.0000e-005 | 2.5000e-004 | 0.0000 | 0.7807 | 0.7807 | 3.0000e-005 | 0.0000 | 0.7815 |
| Total | 5.3000e-004 | 4.6000e-004 | 4.0300e-003 | 1.0000e-005 | 9.3000e-004 | 1.0000e-005 | 9.3000e-004 | 2.5000e-004 | 1.0000e-005 | 2.5000e-004 | 0.0000 | 0.7807 | 0.7807 | 3.0000e-005 | 0.0000 | 0.7815 |

3.3 Site Preparation - 2019**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0452 | 0.0000 | 0.0452 | 0.0248 | 0.0000 | 0.0248 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0108 | 0.1139 | 0.0552 | 9.0000e-005 | | 5.9800e-003 | 5.9800e-003 | | 5.5000e-003 | 5.5000e-003 | 0.0000 | 8.5422 | 8.5422 | 2.7000e-003 | 0.0000 | 8.6097 |
| Total | 0.0108 | 0.1139 | 0.0552 | 9.0000e-005 | 0.0452 | 5.9800e-003 | 0.0512 | 0.0248 | 5.5000e-003 | 0.0303 | 0.0000 | 8.5422 | 8.5422 | 2.7000e-003 | 0.0000 | 8.6097 |

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3.3 Site Preparation - 2019**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6000e-004 | 1.4000e-004 | 1.2100e-003 | 0.0000 | 2.8000e-004 | 0.0000 | 2.8000e-004 | 7.0000e-005 | 0.0000 | 8.0000e-005 | 0.0000 | 0.2342 | 0.2342 | 1.0000e-005 | 0.0000 | 0.2344 |
| Total | 1.6000e-004 | 1.4000e-004 | 1.2100e-003 | 0.0000 | 2.8000e-004 | 0.0000 | 2.8000e-004 | 7.0000e-005 | 0.0000 | 8.0000e-005 | 0.0000 | 0.2342 | 0.2342 | 1.0000e-005 | 0.0000 | 0.2344 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0452 | 0.0000 | 0.0452 | 0.0248 | 0.0000 | 0.0248 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0108 | 0.1139 | 0.0552 | 9.0000e-005 | | 5.9800e-003 | 5.9800e-003 | | 5.5000e-003 | 5.5000e-003 | 0.0000 | 8.5422 | 8.5422 | 2.7000e-003 | 0.0000 | 8.6097 |
| Total | 0.0108 | 0.1139 | 0.0552 | 9.0000e-005 | 0.0452 | 5.9800e-003 | 0.0512 | 0.0248 | 5.5000e-003 | 0.0303 | 0.0000 | 8.5422 | 8.5422 | 2.7000e-003 | 0.0000 | 8.6097 |

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3.3 Site Preparation - 2019**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6000e-004 | 1.4000e-004 | 1.2100e-003 | 0.0000 | 2.8000e-004 | 0.0000 | 2.8000e-004 | 7.0000e-005 | 0.0000 | 8.0000e-005 | 0.0000 | 0.2342 | 0.2342 | 1.0000e-005 | 0.0000 | 0.2344 |
| Total | 1.6000e-004 | 1.4000e-004 | 1.2100e-003 | 0.0000 | 2.8000e-004 | 0.0000 | 2.8000e-004 | 7.0000e-005 | 0.0000 | 8.0000e-005 | 0.0000 | 0.2342 | 0.2342 | 1.0000e-005 | 0.0000 | 0.2344 |

3.4 Grading - 2019**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0262 | 0.0000 | 0.0262 | 0.0135 | 0.0000 | 0.0135 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0103 | 0.1134 | 0.0652 | 1.2000e-004 | | 5.5900e-003 | 5.5900e-003 | | 5.1400e-003 | 5.1400e-003 | 0.0000 | 10.6569 | 10.6569 | 3.3700e-003 | 0.0000 | 10.7412 |
| Total | 0.0103 | 0.1134 | 0.0652 | 1.2000e-004 | 0.0262 | 5.5900e-003 | 0.0318 | 0.0135 | 5.1400e-003 | 0.0186 | 0.0000 | 10.6569 | 10.6569 | 3.3700e-003 | 0.0000 | 10.7412 |

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3.4 Grading - 2019**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.1000e-004 | 1.9000e-004 | 1.6100e-003 | 0.0000 | 3.7000e-004 | 0.0000 | 3.7000e-004 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3123 | 0.3123 | 1.0000e-005 | 0.0000 | 0.3126 |
| Total | 2.1000e-004 | 1.9000e-004 | 1.6100e-003 | 0.0000 | 3.7000e-004 | 0.0000 | 3.7000e-004 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3123 | 0.3123 | 1.0000e-005 | 0.0000 | 0.3126 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0262 | 0.0000 | 0.0262 | 0.0135 | 0.0000 | 0.0135 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0103 | 0.1134 | 0.0652 | 1.2000e-004 | | 5.5900e-003 | 5.5900e-003 | | 5.1400e-003 | 5.1400e-003 | 0.0000 | 10.6569 | 10.6569 | 3.3700e-003 | 0.0000 | 10.7412 |
| Total | 0.0103 | 0.1134 | 0.0652 | 1.2000e-004 | 0.0262 | 5.5900e-003 | 0.0318 | 0.0135 | 5.1400e-003 | 0.0186 | 0.0000 | 10.6569 | 10.6569 | 3.3700e-003 | 0.0000 | 10.7412 |

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3.4 Grading - 2019**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 2.1000e-004 | 1.9000e-004 | 1.6100e-003 | 0.0000 | 3.7000e-004 | 0.0000 | 3.7000e-004 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3123 | 0.3123 | 1.0000e-005 | 0.0000 | 0.3126 |
| Total | 2.1000e-004 | 1.9000e-004 | 1.6100e-003 | 0.0000 | 3.7000e-004 | 0.0000 | 3.7000e-004 | 1.0000e-004 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3123 | 0.3123 | 1.0000e-005 | 0.0000 | 0.3126 |

3.5 Building Construction - 2019**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2692 | 2.4030 | 1.9567 | 3.0700e-003 | | 0.1470 | 0.1470 | | 0.1383 | 0.1383 | 0.0000 | 268.0188 | 268.0188 | 0.0653 | 0.0000 | 269.6511 |
| Total | 0.2692 | 2.4030 | 1.9567 | 3.0700e-003 | | 0.1470 | 0.1470 | | 0.1383 | 0.1383 | 0.0000 | 268.0188 | 268.0188 | 0.0653 | 0.0000 | 269.6511 |

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3.5 Building Construction - 2019**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0206 | 0.4988 | 0.1802 | 9.8000e-004 | 0.0239 | 3.8800e-003 | 0.0277 | 6.8900e-003 | 3.7100e-003 | 0.0106 | 0.0000 | 96.2210 | 96.2210 | 7.3700e-003 | 0.0000 | 96.4053 |
| Worker | 0.0367 | 0.0320 | 0.2789 | 6.0000e-004 | 0.0641 | 4.3000e-004 | 0.0645 | 0.0170 | 4.0000e-004 | 0.0174 | 0.0000 | 53.9931 | 53.9931 | 2.0800e-003 | 0.0000 | 54.0451 |
| Total | 0.0572 | 0.5308 | 0.4592 | 1.5800e-003 | 0.0879 | 4.3100e-003 | 0.0923 | 0.0239 | 4.1100e-003 | 0.0280 | 0.0000 | 150.2141 | 150.2141 | 9.4500e-003 | 0.0000 | 150.4503 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2692 | 2.4030 | 1.9567 | 3.0700e-003 | | 0.1470 | 0.1470 | | 0.1383 | 0.1383 | 0.0000 | 268.0185 | 268.0185 | 0.0653 | 0.0000 | 269.6508 |
| Total | 0.2692 | 2.4030 | 1.9567 | 3.0700e-003 | | 0.1470 | 0.1470 | | 0.1383 | 0.1383 | 0.0000 | 268.0185 | 268.0185 | 0.0653 | 0.0000 | 269.6508 |

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3.5 Building Construction - 2019**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0206 | 0.4988 | 0.1802 | 9.8000e-004 | 0.0239 | 3.8800e-003 | 0.0277 | 6.8900e-003 | 3.7100e-003 | 0.0106 | 0.0000 | 96.2210 | 96.2210 | 7.3700e-003 | 0.0000 | 96.4053 |
| Worker | 0.0367 | 0.0320 | 0.2789 | 6.0000e-004 | 0.0641 | 4.3000e-004 | 0.0645 | 0.0170 | 4.0000e-004 | 0.0174 | 0.0000 | 53.9931 | 53.9931 | 2.0800e-003 | 0.0000 | 54.0451 |
| Total | 0.0572 | 0.5308 | 0.4592 | 1.5800e-003 | 0.0879 | 4.3100e-003 | 0.0923 | 0.0239 | 4.1100e-003 | 0.0280 | 0.0000 | 150.2141 | 150.2141 | 9.4500e-003 | 0.0000 | 150.4503 |

3.5 Building Construction - 2020**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 2.1200e-003 | 0.0192 | 0.0169 | 3.0000e-005 | | 1.1200e-003 | 1.1200e-003 | | 1.0500e-003 | 1.0500e-003 | 0.0000 | 2.3161 | 2.3161 | 5.7000e-004 | 0.0000 | 2.3302 |
| Total | 2.1200e-003 | 0.0192 | 0.0169 | 3.0000e-005 | | 1.1200e-003 | 1.1200e-003 | | 1.0500e-003 | 1.0500e-003 | 0.0000 | 2.3161 | 2.3161 | 5.7000e-004 | 0.0000 | 2.3302 |

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3.5 Building Construction - 2020**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.4000e-004 | 4.0000e-003 | 1.4000e-003 | 1.0000e-005 | 2.1000e-004 | 2.0000e-005 | 2.3000e-004 | 6.0000e-005 | 2.0000e-005 | 8.0000e-005 | 0.0000 | 0.8397 | 0.8397 | 6.0000e-005 | 0.0000 | 0.8413 |
| Worker | 2.9000e-004 | 2.5000e-004 | 2.1600e-003 | 1.0000e-005 | 5.6000e-004 | 0.0000 | 5.7000e-004 | 1.5000e-004 | 0.0000 | 1.5000e-004 | 0.0000 | 0.4590 | 0.4590 | 2.0000e-005 | 0.0000 | 0.4594 |
| Total | 4.3000e-004 | 4.2500e-003 | 3.5600e-003 | 2.0000e-005 | 7.7000e-004 | 2.0000e-005 | 8.0000e-004 | 2.1000e-004 | 2.0000e-005 | 2.3000e-004 | 0.0000 | 1.2988 | 1.2988 | 8.0000e-005 | 0.0000 | 1.3007 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 2.1200e-003 | 0.0192 | 0.0169 | 3.0000e-005 | | 1.1200e-003 | 1.1200e-003 | | 1.0500e-003 | 1.0500e-003 | 0.0000 | 2.3161 | 2.3161 | 5.7000e-004 | 0.0000 | 2.3302 |
| Total | 2.1200e-003 | 0.0192 | 0.0169 | 3.0000e-005 | | 1.1200e-003 | 1.1200e-003 | | 1.0500e-003 | 1.0500e-003 | 0.0000 | 2.3161 | 2.3161 | 5.7000e-004 | 0.0000 | 2.3302 |

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3.5 Building Construction - 2020**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.4000e-004 | 4.0000e-003 | 1.4000e-003 | 1.0000e-005 | 2.1000e-004 | 2.0000e-005 | 2.3000e-004 | 6.0000e-005 | 2.0000e-005 | 8.0000e-005 | 0.0000 | 0.8397 | 0.8397 | 6.0000e-005 | 0.0000 | 0.8413 |
| Worker | 2.9000e-004 | 2.5000e-004 | 2.1600e-003 | 1.0000e-005 | 5.6000e-004 | 0.0000 | 5.7000e-004 | 1.5000e-004 | 0.0000 | 1.5000e-004 | 0.0000 | 0.4590 | 0.4590 | 2.0000e-005 | 0.0000 | 0.4594 |
| Total | 4.3000e-004 | 4.2500e-003 | 3.5600e-003 | 2.0000e-005 | 7.7000e-004 | 2.0000e-005 | 8.0000e-004 | 2.1000e-004 | 2.0000e-005 | 2.3000e-004 | 0.0000 | 1.2988 | 1.2988 | 8.0000e-005 | 0.0000 | 1.3007 |

3.6 Paving - 2020**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0122 | 0.1266 | 0.1319 | 2.1000e-004 | | 6.7800e-003 | 6.7800e-003 | | 6.2300e-003 | 6.2300e-003 | 0.0000 | 18.0254 | 18.0254 | 5.8300e-003 | 0.0000 | 18.1711 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0122 | 0.1266 | 0.1319 | 2.1000e-004 | | 6.7800e-003 | 6.7800e-003 | | 6.2300e-003 | 6.2300e-003 | 0.0000 | 18.0254 | 18.0254 | 5.8300e-003 | 0.0000 | 18.1711 |

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3.6 Paving - 2020**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.3000e-004 | 3.7000e-004 | 3.2000e-003 | 1.0000e-005 | 8.3000e-004 | 1.0000e-005 | 8.4000e-004 | 2.2000e-004 | 1.0000e-005 | 2.3000e-004 | 0.0000 | 0.6810 | 0.6810 | 2.0000e-005 | 0.0000 | 0.6816 |
| Total | 4.3000e-004 | 3.7000e-004 | 3.2000e-003 | 1.0000e-005 | 8.3000e-004 | 1.0000e-005 | 8.4000e-004 | 2.2000e-004 | 1.0000e-005 | 2.3000e-004 | 0.0000 | 0.6810 | 0.6810 | 2.0000e-005 | 0.0000 | 0.6816 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0122 | 0.1266 | 0.1319 | 2.1000e-004 | | 6.7800e-003 | 6.7800e-003 | | 6.2300e-003 | 6.2300e-003 | 0.0000 | 18.0254 | 18.0254 | 5.8300e-003 | 0.0000 | 18.1711 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0122 | 0.1266 | 0.1319 | 2.1000e-004 | | 6.7800e-003 | 6.7800e-003 | | 6.2300e-003 | 6.2300e-003 | 0.0000 | 18.0254 | 18.0254 | 5.8300e-003 | 0.0000 | 18.1711 |

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3.6 Paving - 2020**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.3000e-004 | 3.7000e-004 | 3.2000e-003 | 1.0000e-005 | 8.3000e-004 | 1.0000e-005 | 8.4000e-004 | 2.2000e-004 | 1.0000e-005 | 2.3000e-004 | 0.0000 | 0.6810 | 0.6810 | 2.0000e-005 | 0.0000 | 0.6816 |
| Total | 4.3000e-004 | 3.7000e-004 | 3.2000e-003 | 1.0000e-005 | 8.3000e-004 | 1.0000e-005 | 8.4000e-004 | 2.2000e-004 | 1.0000e-005 | 2.3000e-004 | 0.0000 | 0.6810 | 0.6810 | 2.0000e-005 | 0.0000 | 0.6816 |

3.7 Architectural Coating - 2020**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.1800e-003 | 0.0152 | 0.0165 | 3.0000e-005 | | 1.0000e-003 | 1.0000e-003 | | 1.0000e-003 | 1.0000e-003 | 0.0000 | 2.2979 | 2.2979 | 1.8000e-004 | 0.0000 | 2.3024 |
| Total | 2.1800e-003 | 0.0152 | 0.0165 | 3.0000e-005 | | 1.0000e-003 | 1.0000e-003 | | 1.0000e-003 | 1.0000e-003 | 0.0000 | 2.2979 | 2.2979 | 1.8000e-004 | 0.0000 | 2.3024 |

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3.7 Architectural Coating - 2020**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 5.2000e-004 | 4.4000e-004 | 3.8400e-003 | 1.0000e-005 | 1.0000e-003 | 1.0000e-005 | 1.0100e-003 | 2.7000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8172 | 0.8172 | 3.0000e-005 | 0.0000 | 0.8179 |
| Total | 5.2000e-004 | 4.4000e-004 | 3.8400e-003 | 1.0000e-005 | 1.0000e-003 | 1.0000e-005 | 1.0100e-003 | 2.7000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8172 | 0.8172 | 3.0000e-005 | 0.0000 | 0.8179 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.1800e-003 | 0.0152 | 0.0165 | 3.0000e-005 | | 1.0000e-003 | 1.0000e-003 | | 1.0000e-003 | 1.0000e-003 | 0.0000 | 2.2979 | 2.2979 | 1.8000e-004 | 0.0000 | 2.3024 |
| Total | 2.1800e-003 | 0.0152 | 0.0165 | 3.0000e-005 | | 1.0000e-003 | 1.0000e-003 | | 1.0000e-003 | 1.0000e-003 | 0.0000 | 2.2979 | 2.2979 | 1.8000e-004 | 0.0000 | 2.3024 |

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3.7 Architectural Coating - 2020**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 5.2000e-004 | 4.4000e-004 | 3.8400e-003 | 1.0000e-005 | 1.0000e-003 | 1.0000e-005 | 1.0100e-003 | 2.7000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8172 | 0.8172 | 3.0000e-005 | 0.0000 | 0.8179 |
| Total | 5.2000e-004 | 4.4000e-004 | 3.8400e-003 | 1.0000e-005 | 1.0000e-003 | 1.0000e-005 | 1.0100e-003 | 2.7000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8172 | 0.8172 | 3.0000e-005 | 0.0000 | 0.8179 |

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|---------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0129 | 0.0443 | 0.1284 | 2.6000e-004 | 0.0213 | 3.7000e-004 | 0.0217 | 5.7300e-003 | 3.5000e-004 | 6.0800e-003 | 0.0000 | 23.4135 | 23.4135 | 1.3700e-003 | 0.0000 | 23.4478 |
| Unmitigated | 0.0129 | 0.0443 | 0.1284 | 2.6000e-004 | 0.0213 | 3.7000e-004 | 0.0217 | 5.7300e-003 | 3.5000e-004 | 6.0800e-003 | 0.0000 | 23.4135 | 23.4135 | 1.3700e-003 | 0.0000 | 23.4478 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|-----------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| City Park | 9.45 | 113.75 | 83.70 | 56,125 | 56,125 |
| Total | 9.45 | 113.75 | 83.70 | 56,125 | 56,125 |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|-----------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| City Park | 6.60 | 5.50 | 6.40 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| City Park | 0.546962 | 0.032250 | 0.203301 | 0.133652 | 0.025574 | 0.006384 | 0.017070 | 0.018005 | 0.002749 | 0.002622 | 0.007451 | 0.002735 | 0.001244 |

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

[illegible]

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

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5.2 Energy by Land Use - NaturalGas**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

5.3 Energy by Land Use - Electricity**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|--------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

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5.3 Energy by Land Use - Electricity**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|--------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail**6.1 Mitigation Measures Area**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|-------------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 2.0500e-003 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |
| Unmitigated | 2.0500e-003 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |

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6.2 Area by SubCategory**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 2.0500e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |
| Total | 2.0500e-003 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |

Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 2.0500e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |
| Total | 2.0500e-003 | 0.0000 | 5.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 9.0000e-005 | 9.0000e-005 | 0.0000 | 0.0000 | 1.0000e-004 |

7.0 Water Detail

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|-------------|-------------|--------|
| Category | MT/yr | | | |
| Mitigated | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |
| Unmitigated | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |

7.2 Water by Land Use**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|--------------------|--------------------|---------------|
| Land Use | Mgal | MT/yr | | | |
| City Park | 0 / 5.95741 | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |
| Total | | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

7.2 Water by Land Use**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|--------------------|--------------------|---------------|
| Land Use | Mgal | MT/yr | | | |
| City Park | 0 / 5.95741 | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |
| Total | | 6.6436 | 2.7000e-004 | 6.0000e-005 | 6.6673 |

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|-------------|--------|--------|
| | MT/yr | | | |
| Mitigated | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |
| Unmitigated | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

8.2 Waste by Land Use**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|--------------|----------------|---------------|--------------------|---------------|---------------|
| Land Use | tons | MT/yr | | | |
| City Park | 0.43 | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |
| Total | | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |

Mitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|--------------|----------------|---------------|--------------------|---------------|---------------|
| Land Use | tons | MT/yr | | | |
| City Park | 0.43 | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |
| Total | | 0.0893 | 4.4300e-003 | 0.0000 | 0.2000 |

9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|



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Date: October 17, 2018

To: Eric Riddiough, P.E., City of Santa Maria Public Works Department

Project: Los Flores Shooting Range Project

From: Karly Kaufman , MESM, Richard Daulton, MURP

E-mail: kkaufman@rinconconsultants.com, rdaulton@rinconconsultants.com

cc: Ryan Hostetter, Rodger Olds, Ivana Yeung

Re: Lead Exposure Management

The purpose of this memorandum is to evaluate potential lead exposure health and environmental effects and best management practices to reduce lead exposure, in support of the California Environmental Quality Act (CEQA) environmental review process for the proposed Santa Maria Police Department (SMPD) outdoor shooting range at the Los Flores Ranch property. The information contained in this memorandum is based on published literature and personal communication with Officer Ken Reed from the Arroyo Grande Police Department.

This memorandum summarizes: (1) lead and human health impacts; (2) lead exposure at shooting ranges; (3) environmental impacts; and, (4) best management practices to reduce lead exposure.

Environmental and Regulatory Setting

Lead, chemical element Pb, is a heavy metal characterized as being dense, soft, and malleable. Scientific research has demonstrated that lead is a toxic substance and that lead exposure can result in multiple long-term detrimental impacts to human and environmental health (Laidlaw et al 2017).

There are an estimated 9,000 non-military outdoor shooting ranges in operation in the United States (NIOSH 2012). Individuals present at a shooting range, including shooters and staff, can potentially be exposed to health risks from lead exposure. Research has indicated that higher than normal blood lead levels (BLLs) are widespread for individuals that regularly use shooting ranges. Based on a review of 36 separate research articles of BLLs from shooters at firing ranges, the majority of the 36 articles reported at least one BLL that exceeded 20 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$) and all 36 studies indicated BLLs of shooters exceeded 2 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$). For reference, the geometric mean of BLL in the U.S. adult population was measured at 1.2 $\mu\text{g}/\text{dL}$ and the current reference level recommended by the U.S. Centers for Disease Control and Prevention/National Institute of Occupational Safety and Health is 5 $\mu\text{g}/\text{dL}$ (Laidlaw et. al. 2017).

There are two main sources of lead exposure from firearms: the lead-based bullet projectiles themselves and the primer that ignites in a firearm barrel to provide propulsion. Primer is composed of approximately 35 percent lead styphnate and lead peroxide. Lead particles, dust, and fumes from the primer and bullet fragments are ejected from the gun barrel at high pressures during ignition (Laidlaw et. al. 2017). Therefore, lead exposure at shooting ranges can occur through the following pathways:

- Inhalation: Inhalation of lead particles, dust, and fumes by a shooter or range employees.
- Ingestion: fine and coarse particulates from the bullet fragments and primer can attach to hands, clothing, firearms, and other surfaces. Through direct contact with hands, lead particulates can be inadvertently ingested.
- Environmental exposure: changing of targets or other soil disturbing activities at the range can lead to exposure to lead that has accumulated in soil or dust, which can lead to inhalation or inadvertent ingestion.

There are several regulatory human exposure limits for airborne lead exposure set by federal agencies. The Occupational Safety and Health Administration (OSHA) has established two different limits for airborne exposure to lead (29 Code of Federal Regulations 1910.1025). The action level for airborne lead exposure is 30 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) as an 8-hour time weighted average and the permissible exposure limit for airborne exposure to lead is 50 $\mu\text{g}/\text{m}^3$ as an 8-hour time weighted average. The National Institute for Occupational Safety and Health (NIOSH) recommended exposure limit for airborne lead is also 50 $\mu\text{g}/\text{m}^3$ as an 8-hour time weighted average.

The Resource Conservation and Recovery Act (RCRA), implemented by the U.S. Environmental Protection Agency (EPA), is the public law that sets the framework for the proper management of hazardous waste. Under RCRA, lead bullets/shot are not considered a hazardous waste subject to the requirement of the law at the time it is discharged from a firearm because it is used for its intended purpose. However, lead bullets/shot can be considered a regulated hazardous waste if it is abandoned and forgotten. Therefore, range operators are at risk to legal action under RCRA if they fail to routinely recover and reclaim lead, do not take steps to minimize lead release or migration, or if they abandon lead in berms (EPA 2005, EPA n.d.).

Analysis of Proposed Project

The proposed project involves an outdoor shooting range for use by SMPD. The site plans include four pistol ranges separated by berms and backed by bullet collection walls. The project itself includes several design and operational features that would serve to reduce human lead exposure compared to other types of shooting ranges. First, the project is an outdoor shooting range. At outdoor ranges, lead particles, fumes, and dust disperse more widely, and therefore reduce lead concentrations, compared to

indoor ranges where air is confined indoors. Second, members of the public and children would not be allowed to use the range. Therefore, the project would not result in lead exposure to the general public but would be limited to SMPD employees that sporadically utilize the range for training and practice and to range employees. Third, although the range will allow lead bullets, the range would require that only full metal jacket lead bullets be used. Full metal jacket lead bullets involve a lead core which is mostly encased in a shell of harder material except at the base of the bullet. By requiring the use of full metal jacket bullets, fewer lead particles and fragments would be ejected from the bullet compared to lead bullets without jackets. Fourth, due to the distance of the collection berms from the firing line (approximately 200 feet), dust ejected from the berm when the berm is struck by a bullet would likely not reach shooters and expose them to lead via the ejected dust. Nonetheless, range users and employees will be exposed to lead. Recommendations to reduce human exposure to lead are provided in the following section.

The project may result in soil or groundwater exposure to lead through several pathways. Lead-containing bullet particles themselves can move through soil, surface water, or groundwater and lead from bullet fragments can also dissolve into water and be transported off-site through groundwater or stormwater. There are no jurisdictional waters or drainages on or adjacent to the site (Rincon Consultants 2018). Therefore, the project does not have the potential to result in contamination of surface or navigable waters. Nonetheless, contaminated soil may be transported off-site through wind or stormwater erosion, stormwater can carry contaminated soil from the site, and dissolved lead can migrate through soils to groundwater which can be carried off-site. The migration rate of lead is affected by the physical characteristics of the soil. Generally, lead reacts more and may become more mobile under acidic conditions (pH less than 6) or higher alkaline (pH greater than 8) conditions.¹ Therefore, the idea soil pH at a shooting range is 6.5 to 8.5 (EPA 2005). According to the Biological Resources Assessment prepared for the project site, on site soils include Gaviota Sandy Loam and Corralitos Loamy Sand (Rincon Consultants 2018). Gaviota Sandy Loam tends to be medium acidic (pH 6) and Corralitos Loamy Sand tends to be neutral (pH 7) (USDA 2018). Recommendations for bullet and shot containment techniques and for preventing lead migration are provided in the following section.

Best Management Practices and Recommendations

The following best management practices (BMPs) at a shooting range can minimize the risks associated with the firing of lead bullets. The BMPs are divided into two categories: (1) hygiene and safety practices for shooters, and (2) range design and operational practices.

Hygiene and Safety Practices for Shooters

- The following BMPs should be implemented to reduce lead exposure: Wash hands thoroughly with cold water and soap after shooting or spending time in the shooting area. Cold water is preferable because warm water enlarges pores, increasing the potential for lead compounds to enter the skin.
- While on the range, refrain from actions that bring your hands into contact with your mouth or nose, such as eating, drinking, or smoking.
- Clothes and shoes should be changed at the range after shooting, housekeeping or maintenance activities, and placed in an airtight bag for transport to prevent lead from being tracked into cars and homes. At home, range clothes should be stored separately from other clothes and washed

¹ Acidity is measured as pH on a scale between 1 (most acidic) and 14 (most alkaline, or basic) where 7 is termed neutral.

separately from other laundry. Alternately, disposable shoe coverings can be used while shooting or performing housekeeping or maintenance activities and then discarded when leaving the range.

- Range personnel or anyone who spends a great amount of time at the range should regularly consult a physician regarding lead exposure.

Range Design and Operational Practices

The following specific considerations should be taken regarding the SMDP shooting range's design and operation to reduce lead contamination and exposure:

- Lead exposure safety guidelines, including best hygiene practices for shooters described above, should be displayed in clear signage.
- Dry sweeping should not occur in the range as this will generate airborne lead dust. Instead, wet wiping or mopping for non-porous surfaces and HEPA vacuuming for porous surfaces.
- An "Environmental Stewardship Plan" should be developed prior to range opening and should be implemented throughout the life of the range. An example template of an Environmental Stewardship Plan is included in Appendix E of the EPA's report "Best Management Practices for Lead at Outdoor Shooting Ranges." An employee or team of employees should be assigned the responsibility of implementing and tracking operations in accordance with the Stewardship Plan.
- Soil used at the berms should be tested annually to ensure the pH level is in the desired range of 6.5 and 8.5 to reduce lead migration. Testing should occur in the uppermost layer to a depth of 24 inches from the surface. Lime and phosphate may be added to adjust the pH to be within the range.
- Ensure that the uppermost surface does not contain rocks or debris, which may increase ricochet and bullet fragmentation.
- To ensure that lead is not considered "abandoned" within the meaning of the RCRA statute, spent bullets and bullet fragments should regularly be physically removed from berms and backstop.

Removing bullet fragments may involve:

- Hand raking and sifting (by personnel with proper protective gear and a breathing apparatus per OSHA standards) the surface layer of the berm to remove spent bullets and fragments from the soil while leaving the soil in place, or removal and replacement of affected portions of the berm. Once collected, lead must be taken to a recycler or reused and should be stored on-site for extended periods of time.
- Purchasing or renting mechanical separation machinery. Various types of screening or shaking machines and vacuums are available to rent or purchase
- Hiring a professional reclamation company. Lead reclamation companies claim to recover 75-95% of the lead in soils through a variety of methods dependent on the site characteristics.
- Lead reclamation should occur approximately every one to five years. The exact frequency of how often lead removal should take place depends on the site conditions (i.e.: pH of soil as discussed above) and number of rounds fired. Approximately 100,000 rounds per firing lane can occur before lead reclamation. Therefore, record keeping procedures to monitor the number of rounds fired should be established.
- All activities at the range with respect to BMPs and lead reclamation and recycling should be documented for the life of the range.

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Los Flores Shooting Range Project

Phase I Cultural Resources Study

prepared for

City of Santa Maria

Eric Riddiough, P.E.

Public Works Department

110 South Pine Street #221

Santa Maria, California 93458

prepared by

Rincon Consultants, Inc.

209 East Victoria Street

Santa Barbara, California 93101

August 2018

To Whom It May Concern:

Subject Phase I Archaeological Study for the Los Flores Shooting Range Project, City of Santa Maria, California - Negative Findings

Please be advised that a survey has been conducted on the above referenced project. It has been determined that there are no cultural resources present on this property. The project site has been plotted on the attached United State Geological Survey (USGS) 7.5-minute topographic quadrangle (quad) map for your information (Attachment 1).

County: Santa Barbara
USGS 7.5-minute Quad: Sisquoc
Date: 2018
Township: 09 N
Range: 33 W
Address: 6245 Dominion Road
Santa Maria, California 93454
Other Locational Data: Quad Section 34
Assessor's Parcel Number(s): 101-060-002
Owner and Address: City of Santa Maria
110 S. Pine Street, #221
Santa Maria, California 93458
Survey Type: Pedestrian
Date of Survey: 8/8/18
Field Crew: Fieldwork was completed by Mr. Dustin Merrick, B.A.

Project Location and Description

The Project consists of an outdoor shooting range for the exclusive use of the Santa Maria Police Department (no public access) on an approximately 5-acre site in the southern portion of the City's Los Flores Ranch property (Attachment 1). The facility would include four pistol ranges, a live fire shooting house, a mobile classroom, and a graded parking area with a total of 40 spaces. The site would be accessed using existing access roads on the Los Flores Ranch.

Records Search

On August 8, 2018, Ms. Megan Szromba conducted a search of the California Historical Resources Information System at the Central Coastal Information Center (CCIC) located at University of California, Santa Barbara. The search was conducted to identify previously recorded cultural resources (prehistoric or historic), as well as prior cultural resources work within a 0.5-mile radius of the project site. The records search also included a review of the National Register of Historic Places (NRHP), the California Register of Historic Places (CRHR), the California State Historic Resources Inventory list, and a review of all available historical maps and aerial photographs. The results of the CCIC record search are provided in Attachment 2.



The CCIC records search identified six previously conducted cultural resources studies within the 0.5-mile radius of the project site (Attachment 2). Of those six studies, two studies (SR-02662 and SR-00343) encompass a portion of the project site and are discussed in further detail below.

SR-00343

Report SR-00343 summarizes the findings of a survey for alternative transmission alignments for the Pacific Gas and Electric Company and the Southern California Edison Companies in 1979. The survey encompasses approximately 31 miles of proposed power pole construction from Orcutt in the Santa Maria Valley south to Point Conception. During the survey, a number of cultural resources were discovered including a possible prehistoric cemetery and a potential rock shelter site. None of the resources identified during this study are located within the current project site.

SR-02662

Report SR-02662 consists of a Phase I cultural survey conducted on four parcels as part of a proposed development for John L. Wallace & Associates. The survey was conducted in 2001 by Robert Gibson and Jeff Parsons of Gibson's Archaeological Consulting. The survey discovered a prehistoric artifact scatter consisting of weathered shellfish fragments, fire-affected rock, and a single chert flake on the first parcel. The authors surveyed an alternate location that would avoid impacts to the prehistoric site. None of the resources identified during this study are located within the current project site.

Results of the CCIC record search indicate that three cultural resources have been documented within a 0.5-mile radius of the project site; none of these resources lie within the project site. All three cultural resources date to the historic period and are associated with the West Cat Canyon Oil Field. A brief description of each of these resources is provided below.

P-42-003928 (CA-SBA-003928H)

This archaeological site consists of a late nineteenth or early twentieth century trash scatter composed of shell, bottle glass, and ceramic dishware. The site was recorded in 2007 by Applied EarthWorks, Inc. The refuse scatter appears to be associated with early oil development in the West Cat Canyon Oil Field and is considered to be a contributing element of the West Cat Canyon Oil Field Archaeological District (P-42-041180 [see below]).

P-42-008873

This isolated historical feature consists of an abandoned oil well or monument topped with a brass cap. The feature was recorded by Applied EarthWorks, Inc., in 2014. The brass cap measures 3 ½ inches in diameter and is embossed "Union Oil Company of California" with "Bell 2" stamped in the center.

P-42-041180

P-42-041180 is an archaeological district recorded by Applied EarthWorks, Inc. in 2015 and 2017. The resource contains the remains of the West Cat Canyon Oil Field that was in use during the early twentieth century. The district consists of a group of oil wells and associated historic archaeological deposits, refuse dumps, and isolated oil extraction and production features. The district covers an



area of approximately 5,247 acres and has been recommended eligible for the NRHP under Criteria A, C, and D.

Native American Coordination

Rincon Archaeologist Dustin Merrick contacted the Native American Heritage Commission (NAHC) on August 7, 2018 to request a Sacred Lands File search of the project site. The NAHC responded August 17, 2018 with negative results; however, Mr. Merrick sent tentative letters to the local Native American contacts identified by the NAHC as potentially having knowledge of the project site on August 15, 2018.

As of August 22, 2018, Rincon has not received any additional responses to consultation requests. All correspondence can be found in Attachment 3.

Pedestrian Survey

Rincon Archaeologist Dustin Merrick conducted a field survey of the project site on August 8, 2018. Mr. Merrick walked the entirety of the area in 15-meter transects and examined all areas of exposed ground surface for prehistoric artifacts (e.g., chipped stone tools and production debris, stone milling tools, ceramics), historic debris (e.g., metal, glass, ceramics), or soil discoloration that might indicate the presence of a cultural midden. Mr. Merrick recorded project site characteristics and survey conditions using a field notebook and a digital camera. Copies of the digital photographs are on file with Rincon's Santa Barbara office.

The pedestrian survey identified no prehistoric or historic cultural resources within the project site. The project site is largely undeveloped and consists of grassland dominated by slender wild oats, red brome, and Italian ryegrass, as well as bunchgrass, purple needlegrass (*Nassella pulchra*) California croton, deerweed, black mustard, and fiddleneck (Attachment 4, Photographs 1 and 2). Coastal scrub dominated by Black Sage (*Salvia mellifera*) is located north and west of the project boundary with oak woodland to the east. Ground visibility in the project site was poor (less than 10%) due to the density of the vegetation. However, exposed soils associated with numerous animal burrows were examined to assess the underlying sediments for cultural remains. This examination found no evidence to indicate the presence of buried subsurface archaeological deposits in the project site. Exposed bedrock was observed on the northern border of the project site (Photograph 3).

Findings and Recommendations

The results of the CCIC records search identified no previously recorded cultural resources on the project site. No cultural resources were identified during the pedestrian survey. Due to the fact that no cultural resources were identified during the Phase I study, Rincon recommends a finding of **no impact to historical resources** and **no impact to archaeological resources** under the California Environmental Quality Act (CEQA) and the City of Santa Maria General Plan Resources Management Element for the current project. Rincon recommends a standard unanticipated discovery measure, presented below, in the event of a discovery of cultural resources during the execution of the current project.



Unanticipated Discovery of Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

Unanticipated Discovery of Human Remains

The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determines origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.

Please do not hesitate to contact Rincon with any questions regarding this archaeological study.

Sincerely,

Rincon Consultants, Inc.

Christopher A. Duran, M.A., RPA
Principal Investigator

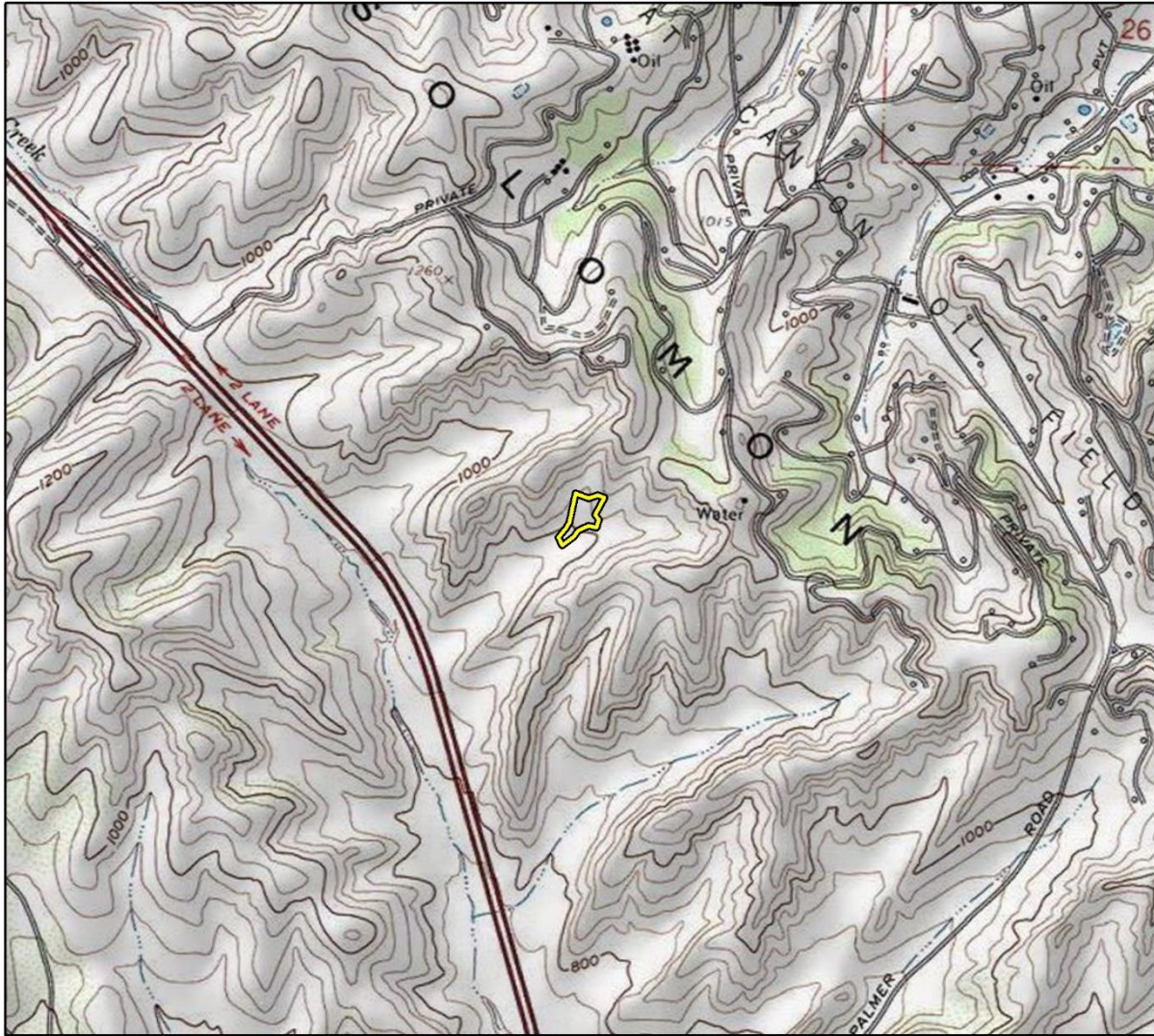
Dustin Merrick, B.A.
Associate Archaeologist

Attachments

1. USGS Quad Map with Survey Area Identified
2. Summary of Record Search Results
3. Native American Outreach
4. Site Photographs

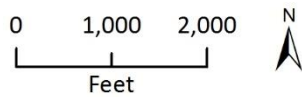
Attachment 1

USGS Quad Map with Survey Area Identified

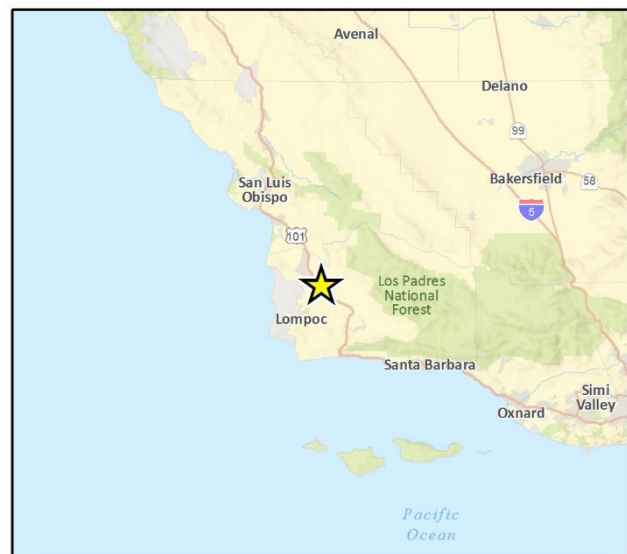


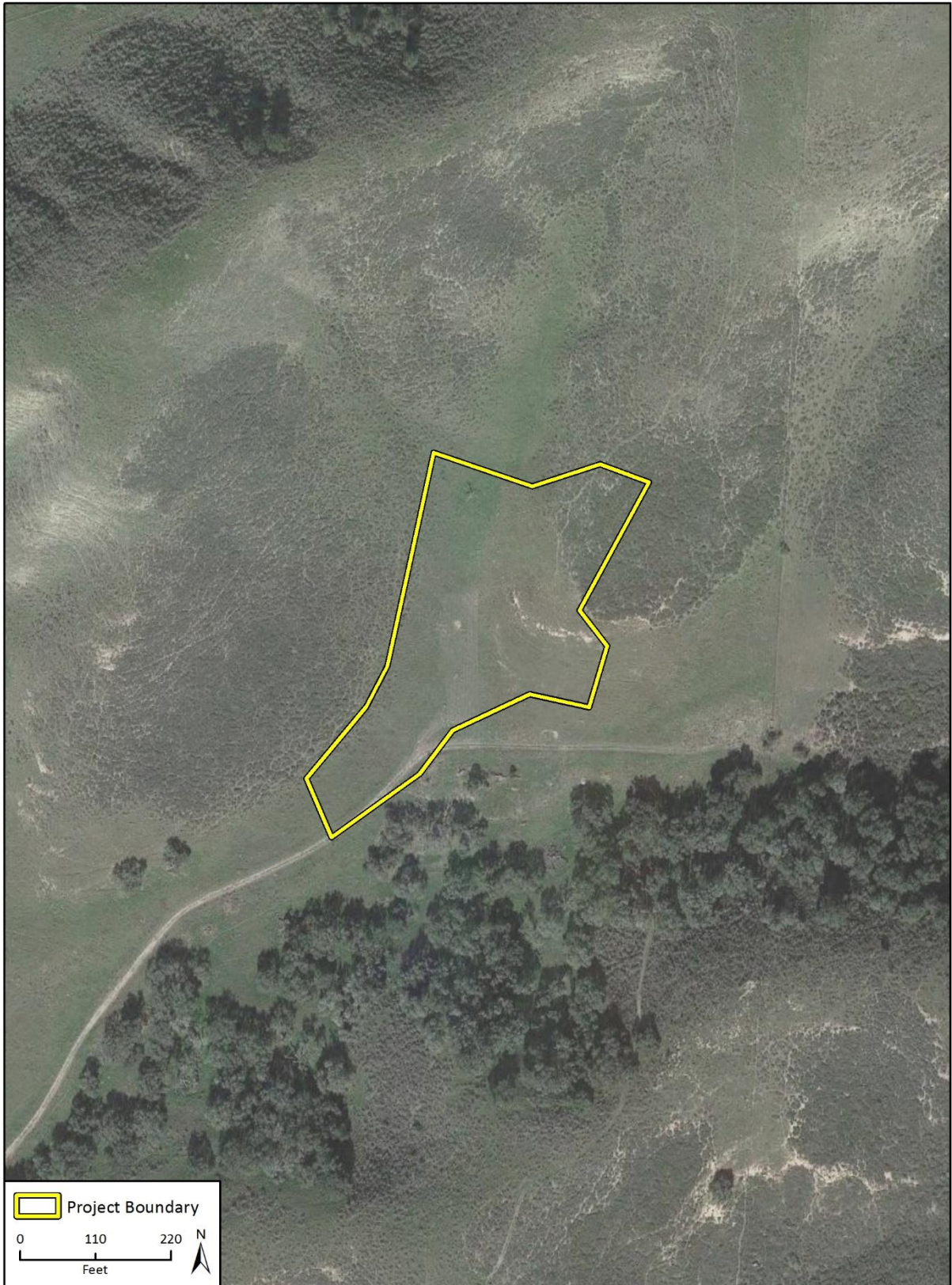
Imagery provided by National Geographic Society, Esri and its licensors © 2018. Sisquoc Quadrangle. T09N R33W S34. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

 Project Location



GRFfig 1 Proj Location Map





Imagery provided by Google and its licensors © 2018.

Crng 2 Project Boundary

Attachment 2

Summary of Records Search Results

Attachment 3

Native American Outreach

Attachment 4

Site Photographs



Photograph 1 Southern boundary of project site facing northwest



Photograph 2 Eastern border of project site facing south



Photograph 3 Exposed bedrock on northern border of project site facing northwest



Los Flores Shooting Range Project

Biological Resources Assessment

prepared for

City of Santa Maria

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110 S. Pine Street #221

Santa Maria, California 93458

Via email: eriddiough@cityofsantamaria.org

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August 2018

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Executive Summary

The proposed project site (site) is located within the Los Flores Ranch property, located in the Solomon Hills in northwest Santa Barbara County. The site is southeast of the unincorporated community of Orcutt, north of the town of Los Alamos, and immediately east of Highway 101. The approximately 5-acre project site is within Assessor's Parcel Number (APN) 101-060-002 and is located north of Palmer Road.

The proposed project would develop an approximately 5-acre portion of the Los Flores Ranch into a shooting range for the City of Santa Maria Police Department. This report has been prepared to assist the City of Santa Maria in meeting the requirements of the California Environmental Quality Act.

Two vegetation communities were identified within the Biological Study Area (BSA): coastal scrub and non-native annual grassland. Six special status plant species have the potential to be present based on presence of suitable habitat: Hoover's bent grass (*Agrostis hooveri*); seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*); mesa horkelia (*Horkelia cuneata* var. *puberula*); Kellogg's horkelia (*Horkelia cuneata* var. *sericea*); southern curly-leaved monardella (*Monardella sinuata* ssp. *sinuata*); and black-flowered figwort (*Scrophularia atrata*).

Nine special status wildlife species have potential to occur within the BSA. These include: northern California legless lizard (*Anniella pulchra*), Blainville's (coast) horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgulata*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillei*), and American badger (*Taxidea taxus*). For some of these species, foraging habitat is present, but roosting habitat is not. In addition, vegetation within and adjacent to the project site offers potential nesting habitat for bird species that are protected under the federal Migratory Bird Treaty Act and California Fish and Game Code.

Direct and indirect impacts to these species are not expected with implementation of proposed avoidance and minimization measures incorporated into the project. No impacts to jurisdictional waters are expected from the proposed project. There is no federally designated critical habitat within the BSA. All impacts resulting from the project are further described herein.

1 Introduction

Rincon Consultants, Inc. (Rincon) was retained by the City of Santa Maria (City) to prepare this Biological Resources Assessment (BRA) for the Santa Maria Los Flores Shooting Range Project (project). An Environmental Impact Report (EIR) for the Los Flores Integrated Waste Management Facility (IWMF) previously evaluated a large area of the Los Flores Ranch, which included this site, and included several technical studies focused on biological resources. The proposed project differs from the project analyzed in the EIR. Thus, this report documents the current existing conditions and biological resources within the project site and evaluates the potential for project-related impacts to biological resources on-site and in the vicinity as a result of the proposed project. This report has been prepared to assist the City in meeting the requirements of the California Environmental Quality Act (CEQA).

1.1 Project Location

The proposed project site is a small portion of the Los Flores Ranch property, located in the Solomon Hills in northwest Santa Barbara County. The site is southeast of the unincorporated community of Orcutt, north of the town of Los Alamos, and immediately east of Highway 101 (Figure 1). The approximately 5-acre project site is within Assessor's Parcel Number (APN) 101-060-002, and is north of Palmer Road. The closest mountain range is the Sierra Madre Mountains to the east of the site. The approximate center of the project site is at latitude 34.817622°N and longitude -120.341159°W (WGS-84 datum). The project site is depicted on the *Sisquoc*, California United States Geological Survey (USGS) 7.5-minute topographic quadrangle, in Meridian San Bernardino, Township 9 North, Range 33 West, Section 34. The site is currently zoned for integrated land fill and open space/recreational use. The IWMF, which will be located north of the area studied for this project, has not yet been constructed and is not in use.

The Biological Study Area (BSA) analyzed in this BRA includes the project impact area plus a minimum 25-foot buffer. The BSA for the proposed project is presented in Figure 2.

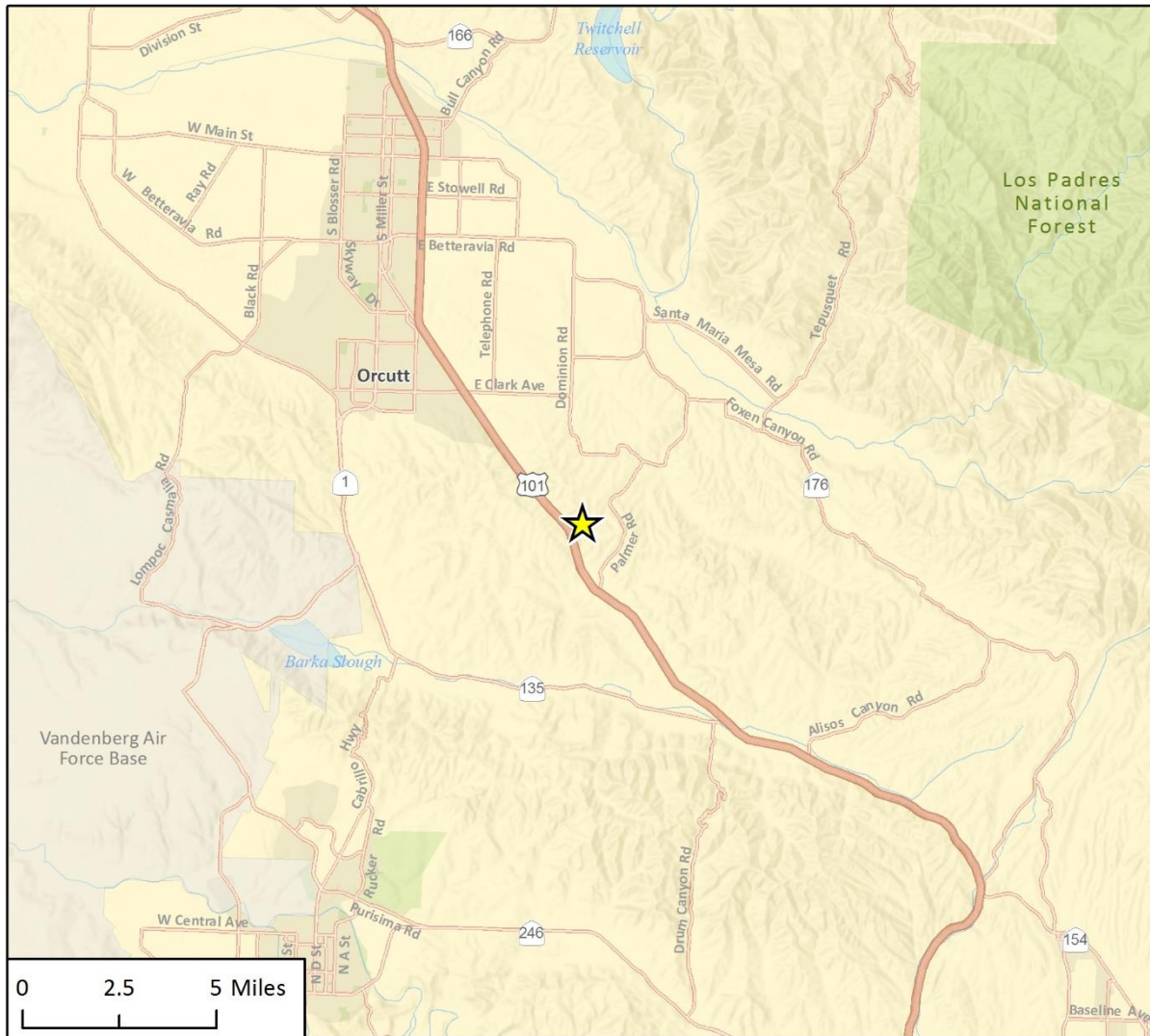
1.2 Project Description

The project consists of an outdoor shooting range for the exclusive use of the Santa Maria Police Department (no public access) on an approximately 5-acre site in the southern portion of the City's Los Flores Ranch property (Figure 2). The facility would include four pistol ranges, a live fire shooting house, a mobile classroom, and a graded parking area with a total of 40 spaces. The site would be accessed using existing access roads on the Los Flores Ranch.

1.3 Previous Technical Studies

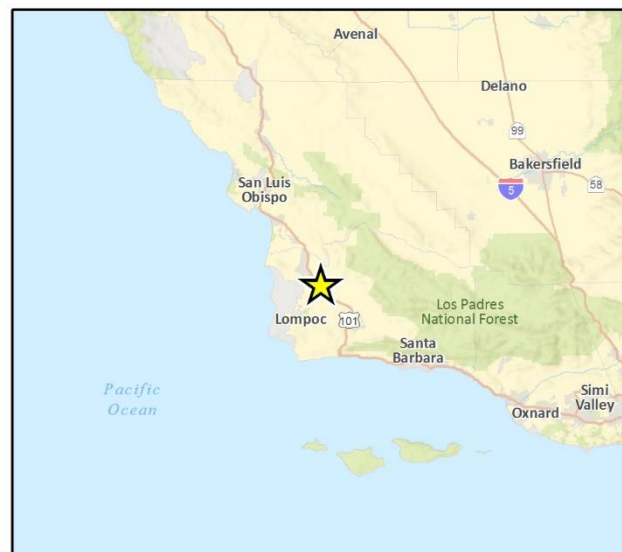
An EIR was completed for the IWMF, and the total land area that was included in that environmental review included the approximately 1,774-acre Los Flores Ranch Property. The BSA that was analyzed as part of this BRA is completely within the boundaries of the

Figure 1 Regional Location Map



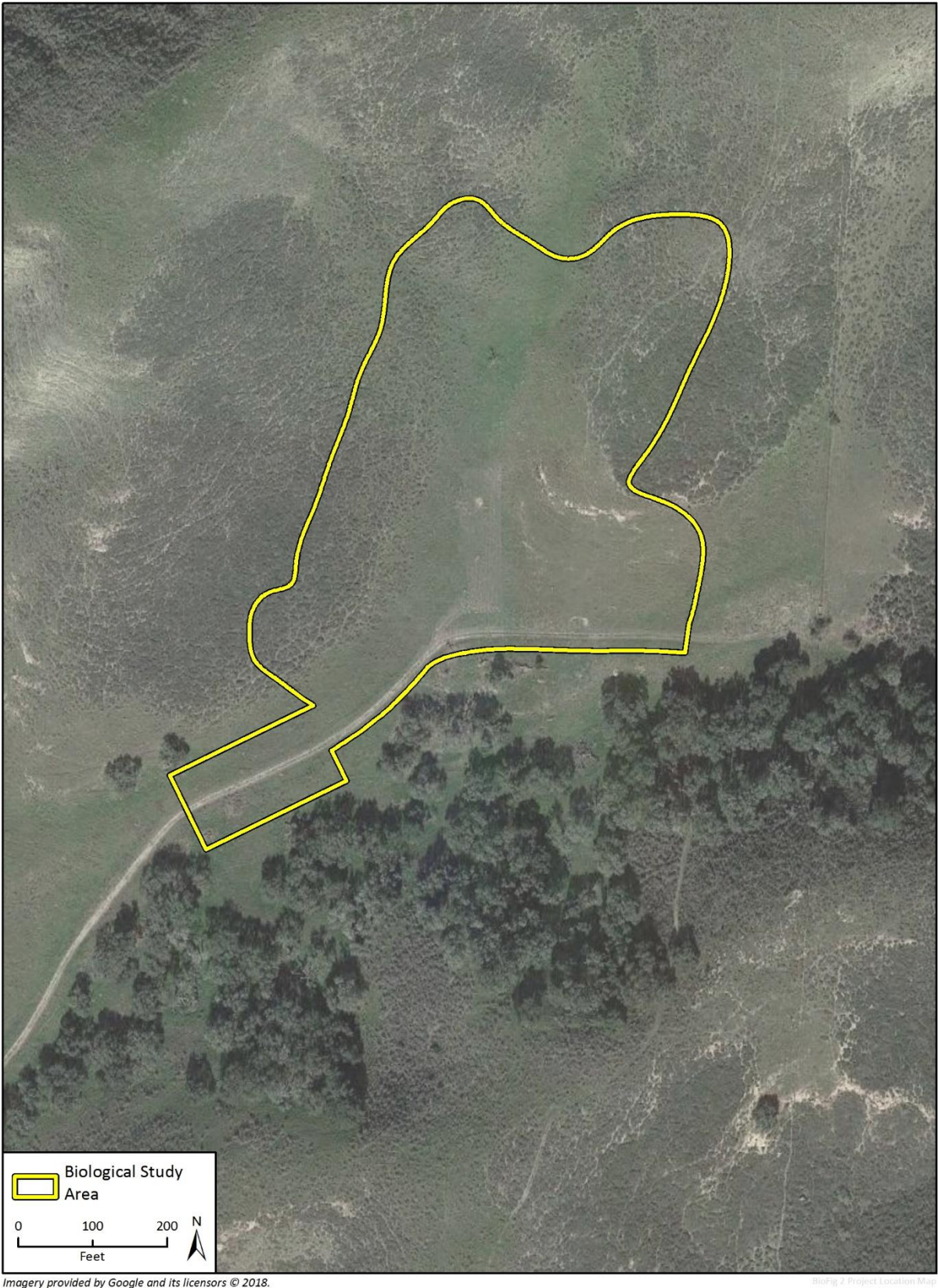
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★ Project Location



BioFig 1: Vicinity Map

Figure 2 Biological Study Area



Los Flores Ranch, and thus many of the technical studies that were conducted for the 2010 EIR are applicable to this project site and provide biological information that informed the analysis of the resources on this project. Section 2.2 lists several of the technical study references that were used for this review.

2 Methodology

2.1 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by Federal, State, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the City).

Although the project is within the County of Santa Barbara, the parcel is owned by the City. City land use regulations apply to the project site because the Los Flores Ranch property is owned by the City. The County's land use regulations do not apply to the site. The City General Plan's Resource Management Element includes goals and policies regarding biological resources. Many of the policies are focused on urban and street trees, and green belts/preservation around the Santa Maria River and Orcutt Creek, which are not applicable to this project. Additionally, there are policies requiring a biological assessment by a qualified biologist in areas where rare or endangered plants or animals are known or could be expected to exist, as well as development of an ordinance establishing the means to preserve "locally important" trees and identified plant and animal habitats.

2.1.1 Definition of Special Status Species

For the purposes of this report, special status species include:

- Species listed, proposed for listing, or candidates for listing as threatened or endangered under by the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) the Federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the project
- Species listed as candidate, rare, threatened, or endangered under the California Endangered Species Act (CESA) or Native Plant Protection Act
- Species designated as Fully Protected or Species of Special Concern by the California Department of Fish and Wildlife (CDFW)
- Plants ranked on California Rare Plant Ranks (CRPR) 1 and 2, per the following definitions:
 - Rank 1A = Plants presumed extinct in California
 - Rank 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
 - Rank 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened)
 - Rank 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known)
 - Rank 2 = Rare, threatened or endangered in California, but more common elsewhere

CRPR 1B and 2 plant species are typically regarded as rare, threatened, or endangered under the CEQA by lead CEQA agencies and were considered as such in this document. CRPR 3 and 4 plant species are typically not considered for analysis under CEQA except where they are designated as rare or otherwise protected by local governments or where cumulative impacts could result in population-level effects.

2.1.2 Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- City of Santa Maria General Plan, Resources Management Element (2001-06)

2.1.3 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

- a) Have substantial adverse effects, 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.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 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.

2.2 Literature Review

Prior to the site visit, Rincon biologists queried the USFWS Information for Planning and Consultation System (IPaC; USFWS 2018a), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2018a), the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (2018), and the National Oceanic and Atmospheric Administration (NOAA), Species List Tool. These searches were conducted to obtain comprehensive information regarding state and federally listed species as well as other special status species considered to have potential to occur within the *Sisquoc, California* USGS 7.5-minute topographic quadrangle and the surrounding eight quadrangles (*Casmalia, Orcutt, Surf, Lompoc, Los Alamos, Tranquillon Mountain, Lompoc Hills* and *Santa Rosa Hills*).

In addition, the following resources were also reviewed for information about the BSA:

- Aerial photographs of the BSA and vicinity;
- *Sisquoc, California* USGS 7.5-minute topographic quadrangle;
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA, NRCS 2018a);
- USFWS Critical Habitat Portal (USFWS 2018b);
- CDFW Special Animals List (CDFW 2018b);
- CDFW Special Plants List (CDFW 2018c);
- Focused Biological Surveys and Wetland Delineation for the Santa Maria Integrated Waste Management Facility, Los Flores Ranch, Santa Barbara County, California, (Rincon, July 2009); and
- Results of Upland Habitat and Aquatic Surveys for the California Tiger Salamander (*Ambystoma californiense*) Year 1: November 2010-April 2011 (Hunt, 2011)

2.3 Field Reconnaissance Survey

On August 8, 2018, Rincon biologist Jamie Deutsch conducted a field reconnaissance survey of the BSA. The survey was conducted between 2:30 pm and 3:30 pm. The temperature was 79 degrees Fahrenheit throughout the survey and wind speed was zero to five miles per hour.

The survey consisted of conducting meandering pedestrian transects throughout the BSA. Mr. Deutsch surveyed the entire BSA on foot and recorded all biological resources encountered on site. The survey was conducted to document the existing site conditions and to evaluate the potential for presence of sensitive biological resources, including sensitive plant and animal species, sensitive plant communities, and habitat for nesting birds protected by federal and state laws. During the survey, an inventory of all plant and animal species observed was compiled and an evaluation of the potential for jurisdictional aquatic features to be present was conducted.

The potential presence of sensitive vegetation communities, nesting birds, and potentially jurisdictional waters and wetlands was noted during the reconnaissance survey. Based on findings of the literature review and observations during the field visit, Rincon also analyzed habitat suitability for specific special status plants and animals that could be present. Results of the survey are summarized herein and used in evaluating potential impacts to existing or potentially occurring biological resources within the BSA.

3 Existing Conditions

This section summarizes the results of the literature review and reconnaissance-level field survey. Discussions regarding the general environmental setting, vegetation communities present, plants and animals observed, potential special status species issues, and other possible constraints due to the biological resources on site are presented below. Representative photographs of the BSA are provided in Appendix B. A complete list of all plant and animal species observed on site during the field survey is presented as Appendix C.

3.1 Physical Characteristics

The BSA is located within the Los Flores Ranch in northwestern Santa Barbara County approximately 16 miles east of the Pacific Ocean. The area is characterized by a Mediterranean climate with mild, wet winters and warm, dry summers. The topography of the area surrounding the BSA consists of gently rolling hills and low valleys. Elevations on the BSA range from approximately 981 feet above mean sea level to approximately 1,076 feet above mean sea level. Highway 101 is about one third of a mile to the west, and an existing dirt road provides access to the project site.

3.1.1 Watershed and Drainages

The BSA is in the San Antonio Creek watershed (Hydrologic Unit Code [HUC] 18060009; EPA 2018). No drainages or other jurisdictional waters run through or are located within the BSA.

3.1.2 Soils

According to the USDA, NRCS Web Soil Survey data for the Northern Santa Barbara, California survey area (2018), two soil map units occur within the BSA: GmG – Gaviota sandy loam, 30 to 75 percent slopes; and, CuC – Corralitos loamy sand, 2 to 9 percent slopes (Figure 3). These soils are loamy sands and sandy loams commonly occurring on alluvial fans and mountain slopes, and are described below.

Gaviota Sandy Loam (GmG), 30 to 75 Percent Slopes

Gaviota sandy loam, 30 to 75 percent slopes, is a somewhat excessively drained sandy loam. It is formed on mountain slopes derived from residuum weathered from sandstone. A typical soil profile has sandy loam to a depth of 12 inches, and unweathered bedrock below to 22 inches. Available water storage is very low (about 1.4 inches) and the runoff class is medium. There is no frequency of flooding and no frequency of ponding. Minor components of this soil include Arnold, Gilroy and Rock outcrop, occupying approximately 10%, 5%, and 5% respectively. This map unit is not classified as hydric (USDA, NRCS 2018b).

Corralitos Loamy Sand (CuC), 2 to 9 Percent Slopes

Corralitos loamy sand, 2 to 9 percent slopes, is a somewhat excessively drained loamy sand. It is formed on alluvial fans derived from sandy alluvium. A typical soil profile has loamy sand to a depth of 32 inches, and stratified sand to loamy sand below to 60 inches. Available water storage is low

Figure 3 Soil Map



Imagery provided by Google and its licensors © 2018.

Soils data provided by Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey 2018.

Biological Study Map

(about 4.8 inches) and the runoff class is very low. There is no frequency of flooding and no frequency of ponding. Minor components of this soil include Arnold, Corralitos, sand and unnamed, occupying approximately 5% each, respectively. This map unit is not classified as hydric (USDA, NRCS 2018b).

3.2 Vegetation

This section describes the characteristics, extents, and locations of vegetation communities within the BSA, including dominant plant species observed within each community. Two vegetation communities were identified: non-native annual grassland and coastal scrub (Figure 4). Within these communities, thirteen plant species were observed during the reconnaissance-level survey (Appendix C).

The vegetation classification system used for this report is based on *A Manual of California Vegetation, Second Edition* (MCV2; Sawyer et al. 2009) and *Preliminary Descriptions of the Terrestrial Communities of California* (Holland 1986); but has been modified as needed to accurately describe the existing habitats observed on-site. Approximate acreages of vegetation communities found within the BSA are shown in Table 1, and the aerial extents of the vegetation communities identified on-site are presented on Figure 4. Vegetation types are discussed in greater detail below.

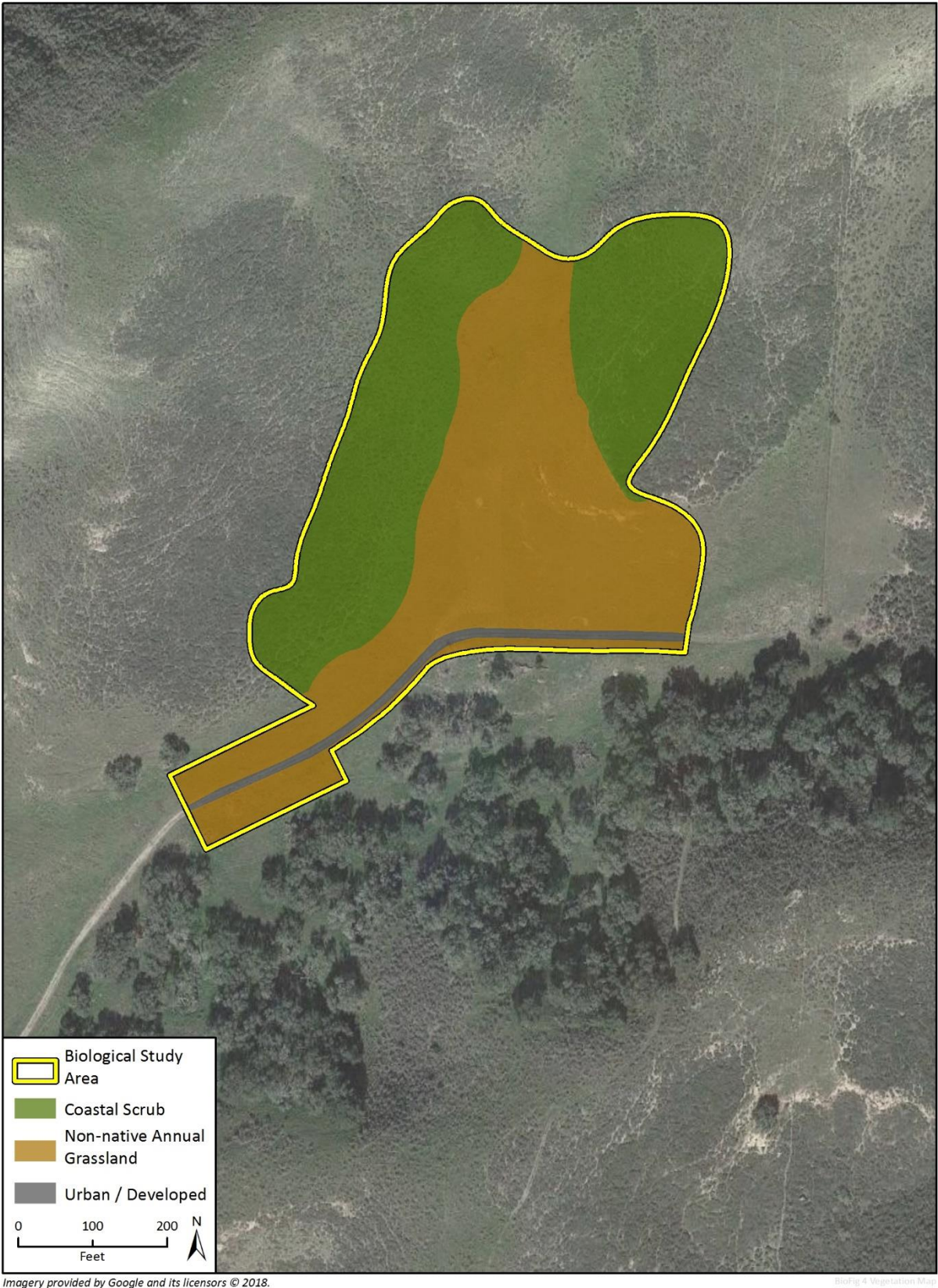
Table 1 Vegetation Acreages within the BSA

| Vegetation Community | Coverage within the BSA (acres) |
|-----------------------------|---------------------------------|
| Non-native annual grassland | 3.70 |
| Coastal Scrub | 3.26 |
| Total | 6.96 |

Non-native Annual Grassland

The dominant vegetation community present within the BSA is non-native annual grassland (Figure 4). It makes up approximately 3.7 acres of the BSA. The non-native annual grassland habitat type within the BSA corresponds most closely with the *Avena (barbata, fatua)* Herbaceous Semi Natural Alliance described by Sawyer et al. (2009) and is most similar to the Non-native Grassland habitat type described by Holland (1986). This habitat type is found in the center of the BSA. Non-native annual grasslands occur mostly on flat plains to gently rolling foothills. They commonly occur on rangelands and in openings in woodlands. Regionally, non-native annual grasslands occur on seasonally dry hillsides and valleys in the interior valleys of the Coast Ranges, and along the coast of central and southern California, as well as some of the off-shore islands. The dominant grass species within the area in the BSA are slender ripgut brome (*Bromus diandrus*), wild oat (*Avena barbata*), red brome (*Bromus madritensis* L. ssp. *rubens*), and Italian ryegrass (*Festuca perennis*). In addition, herbaceous perennials were observed intermixed with these species including turkey-mullein (*Croton setiger*), and deerweed (*Acmispon glaber*). There are also small patches of purple needlegrass (*Stipa pulchra*) intermixed, though not present in abundance or extent typical of needlegrass grassland. These small patches do not function as a separate vegetation community within the BSA.

Figure 4 Vegetation Habitat Map



Coastal Scrub

The coastal scrub habitat type occurs on the northeast side and the western edge of the BSA, and occupies approximately 3.26 acres (Figure 4). This habitat most closely resembles Sagebrush Scrub Community Alliance in the Manual of California Vegetation, 2nd Edition system (Sawyer et al. 2009) and the Central (Lucian) Coastal Scrub in the Holland system (Holland, 1986). Coastal scrub commonly occurs on dry slopes and alluvial fans, where soils are shallow. The dominant scrub species within the two scrub areas in the BSA are black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), sawtooth goldenbush (*Hazardia squarrosa*), and California sagebrush (*Artemisia californica*). Other species present in this habitat type include deerweed.

3.3 General Wildlife

Wildlife activity was moderate during the reconnaissance survey. Vegetation onsite likely supports a suite of common avian, mammalian, and reptilian wildlife. The coastal scrub habitat supports passerine species such as Bewick's wren (*Thryomanes bewickii*) and wrentit (*Chamaea fasciata*). Other birds observed in the general area included species such as red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and prairie falcon (*Falco mexicanus*). No raptor nests were detected within the BSA, however, foraging habitat for several raptor species is present on-site. Additional wildlife species observed during the site visit include California ground squirrel (*Otospermophilus beecheyi*) and western fence lizard (*Sceloporus occidentalis*). See Appendix C for a full list of species observed within the BSA.

4 Sensitive Biological Resources

Local, state, and federal agencies regulate special status species and other sensitive biological resources and require an assessment of their presence or potential presence to be conducted on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed on the project site, and evaluates the potential for the project site to support additional sensitive biological resources. Nesting birds, including raptors, protected by the MBTA and CFGC Sections 3503 and 3503.5, including common species, are also discussed in this section.

4.1 Special Status Species

Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB, species occurrence records from other sites in the vicinity of the survey area, previous reports for the project site, and the results of surveys of the project site. For the purpose of this report, special status species were defined in Section 2.1.1.

The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. Alternatively, although suitable habitat is present, previous protocol-level surveys have not identified the species on site. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDDB, other reports) on the site recently (within the last 5 years).

Based on the agency database and literature review, and the results of the reconnaissance survey of the BSA, Rincon evaluated 70 special status species (43 special status plant species and 27 special status animal species) and twelve sensitive natural communities documented within the *Sisquoc*, California USGS 7.5-minute topographic quadrangle containing the BSA and the eight surrounding quadrangles (*Casmalia*, *Orcutt*, *Surf*, *Lompoc*, *Los Alamos*, *Tranquillon Mtn*, *Lompoc Hills* and *Santa*

Rosa Hills). Each of these 70 species was evaluated for its potential to occur in the BSA (see Appendix D).

4.1.1 Special Status Plant Species

Based on the literature review, 43 special status plant species were documented within the *Sisquoc, California* USGS 7.5-minute quadrangle and the eight surrounding quadrangles (Appendix D). No special status plants were observed during the reconnaissance-level field survey. Thirty-seven species were eliminated from the analysis due to a lack of suitable habitat, unsuitable soils, and/or the project's location outside of the known distribution and/or elevation range of the species (e.g., special status plants that are associated with coastal habitats, serpentine soils, or highly alkaline soils that are not present in the BSA). Protocol floristic surveys were conducted in 2007 through 2009 across the Los Flores Ranch site in support of the EIR for the Los Flores IWMF (Rincon, 2009); the results of these surveys were also used in evaluating potential presence of special status plant species in the BSA. However, the previous survey results are aging, and previous negative survey results from surveys more than three to five years old may require an updated survey to confirm the species are absent, particularly for annual and short-lived perennial plants. Thus, although the previous surveys completed in 2007 through 2009 were negative for this area of the Los Flores Ranch site, six special status plants were determined to have a low potential to occur within the BSA due to the presence of suitable habitat and time elapsed since the previous negative survey:

- Hoover's bent grass (*Agrostis hooveri*)
- Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*)
- Mesa horkelia (*Horkelia cuneata* var. *puberula*)
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)
- Southern curly-leaved monardella (*Monardella sinuata* ssp. *sinuata*)
- Black-flowered figwort (*Scrophularia atrata*)

These species can occur in grassland and scrub habitats with sandy soils. They were not observed during the reconnaissance level field survey in 2018, and were not previously reported from the site during past botanical surveys (Rincon 2009), but due to the late timing of the 2018 survey after many of these species would have finished flowering, the small stature of several of the perennial species, and annual habitat of some of the species, there remains a low potential for these six plant species to be present on the project site.

4.1.2 Special Status Animal Species

Based on the database and literature review, previous studies and observations, 27 special status animal species were documented within the *Sisquoc, California* USGS 7.5-minute topographic quadrangle and the eight surrounding quadrangles (Appendix D). Eighteen special status species were eliminated from further analysis due to the absence of suitable habitat within the BSA or because the BSA occurred outside of the species' known range.

Nine special status wildlife species (five mammals, one bird, and three reptiles), were determined to have potential to occur:

- Pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Western mastiff bat (*Eumops perotis californicus*)

- Western red bat (*Lasiurus blossevillii*)
- American badger (*Taxidea taxus*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Northern California legless lizard (*Anniella pulchra*)
- Coast horned lizard (*Phrynosoma blainvillii*)
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*)

The potential for each species' presence in the BSA was based on the presence of specific habitat requirements within and adjacent to the BSA. A discussion for each of the species with potential to occur is presented below. Additionally, California tiger salamander (CTS) is discussed below to summarize why this species is not expected, with consideration for the regional distribution of this species.

Pallid Bat, SSC

The pallid bat occurs in grasslands, shrublands, woodlands and forests, and is most common in open, dry habitats with rocky areas for roosting. They may also roost during the day in caves, crevices, mines, tree cavities, and buildings, and at night in more open areas such as porches and the sides of buildings. They occur throughout most of the western United States, including parts of Washington and Oregon, and extend eastward to Wyoming, western Colorado and parts of Texas. They also occur throughout Baja California and northern Mexico. They are present year-round in most of California except the highest elevations of the Sierra Nevada, and they hibernate in winter near their summer day roosts. Maternal colonies form in early April and may have 12 to 100 individuals. They are nocturnal and have an activity peak 90 to 190 minutes after sunset and a second peak shortly before dawn. It is possible that they could forage throughout most habitats on-site and could roost in tree cavities in the surrounding area. No potential roost sites occur within the BSA, but pallid bats could roost nearby and forage over the BSA.

Townsend's Big-eared Bat, SSC

The Townsend's big-eared bat inhabits scrubland and coniferous forests, and they prefer wet areas. Maternal colonies are in mines, caves, tunnels and buildings and the males roost individually. They hibernate in the winter (October through April) in caves and mines. Breeding is in the winter and young are born in May and June. They occur throughout the western United States, western British Columbia, and throughout central Mexico. They are found throughout California except for the higher elevations of the Sierra Nevada. It is possible that they could forage throughout the BSA, but the lack of extensive aquatic habitats indicates the habitat on-site may only be marginally suitable. Suitable roosts are not present in the BSA, but Townsend's big-eared bats could roost in highway underpasses near the site, these bats are known to forage over long distances (Western Bat Working Group 2017), and this species could forage over the BSA.

Western Mastiff Bat, SSC

The western mastiff bat occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. This bat catches and feeds on insects in flight, and individuals have been recorded as feeding from ground to tree-level. However, over rugged terrain these bats typically forage at much greater heights (60 meters or 195 feet) above the ground. Distribution of the western mastiff bat is likely driven in part by landscape features; specifically, the species typically requires areas

with significant rock features with suitable crevices under exfoliating rock slabs or crevices in large boulders offer suitable roosting habitat (Western Bat Working Group 2017). The species may also roost in buildings. Roosts are typically high above the ground, with a clear vertical drop of at least 3 meters below the entrance to allow for flight. They are uncommon residents in southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through southern California, and from the coast eastward to the Colorado Desert. They are non-migratory. Western mastiff bats apparently move among alternate daytime roosts, and commonly share roosts with other large bats. No potential roost sites occur within the Project site, but they could roost nearby and forage over the BSA.

Western Red Bat, SSC

The western red bat forages over grasslands, shrublands, open woodlands, and agricultural areas. They roost in trees, and occasionally in shrubs with dense foliage and an open understory, in forests and woodlands that often are near streams, fields, or urban areas. Individuals are solitary and aggregate only during mating and migration. Roost sites are generally hidden from view from all directions except below; lack obstruction beneath, allowing the bat to drop downward for flight; and typically lack lower perches that would allow visibility by predators (Western Bat Working Group 2017). They are found throughout the coast of central and southern California, the Central Valley, Baja California, desert areas of the southwestern states, and Mexico. They migrate between summer and winter ranges (March-May and September-October). In California, their winter range is along the coast south of San Francisco Bay. Mating is in August and September, and young are born May through early July. Suitable foraging habitat exists in oak woodland, coastal scrub, and grassland habitats at and in the vicinity of the BSA. No potential roost sites occur within the project site due to lack of dense foliage, small stature of the shrubs in the coastal scrub habitat without a clear opening below for entry and exit, and limited leaf litter, but they could roost nearby and forage over the BSA.

Loggerhead Shrike, SSC

The loggerhead shrike forages in grasslands, agricultural areas, and other semi-open habitats. Nesting is in coastal scrub and riparian habitats. They breed in southern Canada, and throughout the United States and Mexico. They winter in southern Oregon eastward to Virginia and into southern Mexico. They are present year-round in Santa Barbara County. This species was not observed on the BSA, but suitable habitat exists and they could occur in scrub and grassland habitats. It is possible that they could use the BSA for foraging and nesting.

California Legless Lizard, SSC

The California legless lizard occurs in a wide variety of habitat types throughout central and southern California, except for the Sierra Nevada and desert areas (Jennings and Hayes 1994). It is a fossorial species that burrows in loose sand and loamy soils. They appear to be active just below the soil surface in the morning and evening, and occasionally they may be found at night above the surface (Miller 1944). Due to these habits, this species is difficult to detect. They can be found under cover objects such as boards, logs and rocks during the spring. Since suitable habitat is present in the BSA and this species is relatively common in this region, it is possible that they occur on-site but were not detected during the survey.

Blainville's Horned Lizard, SSC

Blainville's (coast) horned lizard can be found in grasslands, coniferous forests, woodlands, and chaparral, in open areas and patches of loose soil. The annual grassland and coastal scrub habitats provide suitable habitat and soils for this species. Although this species has not been seen in the BSA, the species has been documented elsewhere on the Los Flores Ranch site, and this species has a high potential to occur within the BSA.

Coast Patch-nosed Snake, SSC

The coast patch-nosed snake is found in coastal chaparral, desert scrub, washes, sandy flats and rocky areas. The snake is widely distributed throughout the lowlands, up to 2120 meters (7000 feet), of southern California from the coast to the eastern border. The snake is an opportunistic feeder with prey items including lizards, small mammals, and eggs of lizards and snakes. The snake is active and diurnal, and uses shrubs, rock crevices and the burrows of other animals. Scrub and patches of friable soils provide suitable habitat. This species has potential to occur in the BSA.

American Badger, SSC

The American badger occurs in grassland, shrubland, and forest habitats with friable soils and adequate rodent prey base. They dig burrows for cover and as maternal dens. They occur throughout the western United States and east to Ohio, Missouri, Oklahoma and eastern Texas. They are also present in parts of Canada, and throughout California except for the northwestern coast. They breed in summer and early fall, and young are born in March and April. The young are weaned in June and disperse from the maternal den in the late summer. They are active throughout the year and are diurnal and nocturnal. No individual badgers were seen during the survey, but it is likely that they occur on the site based on regional distribution, presence of friable soils, and a suitable prey base.

California Tiger Salamander

Although the BSA is suitable upland habitat for California tiger salamander (CTS) and the project is between two regions where the species is known to occur, this species is not expected to occur in the BSA due to negative results for detection of the species after extensive protocol survey efforts for this species as part of the EIR for the IWMF project. Upland drift fence surveys were conducted in 2006/2007 (Rincon 2009); Year 1 protocol CTS surveys were conducted in the winter of 2010/2011 (Hunt 2011); and Year 2 protocol CTS surveys were conducted in the winter of 2011/2012 (Hunt 2012). No CTS were detected in the Los Flores Ranch area, and the protocol surveys concluded that CTS would not likely occur at the site and that the species would not likely occur east of Highway 101, as that creates a barrier for dispersal from any known CTS breeding pools south and east of the Los Flores Ranch across Highway 101. Furthermore, the USFWS issued a letter concurring with the negative findings of the aforementioned protocol-level CTS surveys (USFWS 2012). Therefore, this species is not expected to occur on the Los Flores Ranch.

4.1.3 Nesting Birds

There is suitable nesting habitat for birds in both the coastal scrub and grassland habitats in the BSA, as well as oak woodland habitat in close proximity to the BSA. These areas provide nesting habitat, foraging habitat, and overwintering habitat for birds protected under the Migratory Bird Treaty Act (MBTA) and CFGC, including raptors. As discussed above, the BSA contains suitable foraging habitat

and potential nesting habitat for loggerhead shrike (*Lanius ludovicianus*), a California Species of Special Concern, and is also suitable for numerous other passerine species to nest and to forage, and for raptors to forage. Prairie falcon (*Falco mexicanus*), red-tailed hawk, American kestrel, and other raptors could forage in open areas of the BSA, and a prairie falcon was observed foraging during the study. The BSA lacks suitable trees to support nesting raptors, and no large stick nests were observed during the survey of the BSA. However, just to the south of the BSA there are suitable trees that could potentially support nesting raptors and other tree-nesting birds in close proximity to the project site. Some bird species are sensitive to nearby disturbance while building nests, laying eggs, and incubating even when their nest sites are not directly impacted.

4.2 Sensitive Plant Communities and Critical Habitats

The CNDDDB lists twelve sensitive natural communities in the nine quadrangles queried including and surrounding the BSA (Appendix D). None of these communities is found in the vicinity of the BSA, and none of the sensitive natural communities are present within the BSA.

CDFW previously tracked sensitive natural communities and kept records of their occurrences in the CNDDDB. However, while CDFW works to transition fully to a vegetation alliance-based system consistent with national standards, the Sensitive Natural Communities List in the CNDDDB has not been maintained and no new information has been added in recent years. Therefore, vegetation types on site were also compared with the List of Vegetation Alliances and Associations (CDFW 2018d). According to the CDFW Vegetation Program, Alliances with State ranks of S1-S3, and certain other associations, are considered to be imperiled, and thus, potentially of special concern. Plant communities are also considered special status biological resources if they have limited distributions, have high value for sensitive wildlife, contain special status species, or are particularly susceptible to disturbance. None of the vegetation alliances ranked as potentially of special concern are present in the Study Area.

Additionally, no designated critical habitats for federally listed species are present in the BSA.

4.3 Jurisdictional Waters and Wetlands

As described in Sections 3.1 and 3.3, no jurisdictional waters or drainages and no riparian areas occur within the BSA.

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return.

Wildlife movement corridors can be both large and small scale. Regionally, the BSA is not located within an Essential Connectivity Area (ECA) as mapped in the report *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (CDFW 2010). ECAs represent principle connections between Natural Landscape Blocks. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance ecological connectivity. ECAs are mapped based on coarse ecological condition indicators, rather than the

needs of particular species and thus serve the majority of species in each region. Small scale habitat corridors are present on site and include habitat linkages and topographic features that facilitate movement. The habitat patches on-site and in the vicinity (e.g. coastal scrub, oak woodland) serve as small-scale wildlife corridors.

4.5 Resources Protected By Local Policies and Ordinances

There are no local policies or ordinances in the City's General Plan, Resources Management Element (2001-06) that would require additional protective measures beyond those outlined in Section 5.

5 Impact Analysis and Mitigation Measures

5.1 Special-Status Species

The proposed project would have a significant effect on biological resources if it would:

- 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.
- Substantially affect a rare or endangered species of animal, plant or the habitat of the species.

5.1.1 Special Status Plants

Six special status plant species were determined to have potential to occur within the BSA considering the presence of suitable habitat and soil conditions. Ground-disturbing activities associated with project components may result in direct impacts (removal) to special status plant species. Additionally, indirect impacts could occur due to the spread of invasive, non-native species from construction equipment. Invasive, non-native plant species can out-compete native species and/or alter habitat towards a state that is unsuitable for special status species. For example, the spread of certain weed species can reduce the biodiversity of native habitats through displacement of vital pollinators, potentially eliminating special status plant species, or through competition with native plants for water and light.

To avoid and minimize adverse impacts to special status plants, the following avoidance and minimization measures are recommended for project activities in areas of suitable habitat.

Bio-1 Worker Environmental Awareness Training

Prior to the start of any construction activities, all construction personnel shall attend a worker environmental awareness training from a qualified biologist. The training shall include the identification of all special status plant and animal species with potential to occur on the project site, a description of their habitats, their regulatory statuses, and all measures being implemented to avoid and minimize impacts.

Bio-2(a) Special Status Plant Preconstruction Surveys

Prior to construction within suitable habitat, (including staging and mobilization) and when plants with potential to occur are in a phenological stage conducive to positive identification (i.e., usually during the blooming period for the species), a qualified botanist should conduct surveys for special status plant species. Reference sites must be visited to document target species are detectable prior to site surveys and/or confirm that phenology of species known to bloom and co-occur with target species is suitable for detection if a publically accessible reference site is not available for a given species. Valid botanical surveys will be considered current for up to five years; if construction has not commenced within five years of the most recent survey, botanical surveys must be repeated.

Surveys must be completed during blooming periods for the species with potential to occur onsite and reference site visits must confirm that the species are identifiable in the survey year.

Bio-2(b) Special Status Plant Species Avoidance

If state listed, federally listed, or non-listed CRPR 1B.1 species are discovered within the survey area, an impact analysis to evaluate how the project would directly impact the special status plants shall be completed. If feasible, development would be re-designed in coordination with a qualified biologist to avoid impacting these plant species. Rare plants that are not within the immediate disturbance footprint, but are located within 50 feet of disturbance limits will be flagged and fenced off by a qualified biologist before construction activities start, to avoid impacts to special status plant species. If avoidance of state listed or federally listed plants species is not feasible, impacts must be fully offset through implementation of a restoration plan that results in no net loss (see measure B-2(c)). Note that prior to implementing activities that result in impacts to listed plants, consultation with CDFW and/or USFWS and acquisition of any required permits must also be completed.

Bio-2(c) Restoration Plan for Special Status Plant Species

If avoidance of non-listed CRPR 1B.1 species is not feasible, all impacts will be mitigated at a minimum ratio of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration. The restoration plan shall include, at a minimum, the following components:

- Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type);
- Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved];
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values);
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan [including species to be used, container sizes, seeding rates, etc.]);
- Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (activities, responsible parties, schedule);
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year, along with performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, and annual monitoring reports for a minimum of five years at which time the project proponent shall demonstrate that performance standards/success criteria have been met;
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80% survival of container plants and 70% absolute cover by vegetation type. Absolute cover will be determined in comparison to a reference plot for native species.
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria;
- Notification of completion of compensatory mitigation; and

- Contingency measures (e.g. initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

5.1.2 Special Status Animals

Nine special status animal species have potential to occur within the BSA based upon known ranges, habitat preferences, species occurrence records in the vicinity of the BSA, and presence of suitable habitat. Special status species were not observed within the BSA during the reconnaissance survey.

Pallid bat, Townsend's big-eared bat, western mastiff bat, western red bat

No roosting habitat for special status bats was found on the BSA, and therefore no direct impacts to roosting bats is anticipated from project activities. The project would result in the loss of potential foraging habitat for these species. The loss of a few acres of foraging habitat in the context of the larger Los Flores Ranch open space surrounding the BSA and adjacent rural landscape would not result in a substantial reduction in available foraging habitat. Therefore no additional measures would be required for special status bats.

Coast patch-nosed snake, California legless lizard, and Blainville's horned lizard

Direct impacts to coast patch-nosed snake, California legless lizard, and Blainville's horned lizard such as mortality or injury could occur during initial ground-disturbing activities if animals are present within the proposed disturbance area. The project could also remove scrub habitats potentially suitable for these species. Measures are recommended to minimize potential effects.

American badger

No evidence of American badgers was found onsite during the field survey. However, suitable habitat is located within the BSA. American badgers are also highly mobile and are expected to be present throughout the region. American badgers could be found onsite at any time of the year. Direct impacts could result if ground-disturbing activities directly affect an occupied American badger den. Impacts to American badgers could be significant if breeding American badgers with offspring are present within the proposed disturbance area during project implementation. The project would also remove suitable foraging habitat, although the loss of a few acres of foraging habitat in the context of the larger site and adjacent rural landscape would not result in a substantial reduction in available foraging habitat.

Special Status and Other Nesting Birds

The project has potential to result in direct impacts to nesting birds, including special status birds, if they are nesting within the project site and/or immediate vicinity during construction activities. As mentioned in Section 4.1.2, one State Species of Special Concern bird species (loggerhead shrike) has potential to nest and forage within the Study Area. Numerous additional common species may also nest in the study area, and raptors are expected to forage there. The project would result in the loss of some potential foraging habitat, though in the context of the larger site and adjacent rural landscape, would not result in a substantial reduction in available foraging habitat. Many species of nesting birds are protected under the Migratory Bird Treaty Act and California Fish and Game Code. Mitigation measures are recommended to avoid impacts to special status birds and other nesting birds.

To avoid and minimize adverse impacts to special status animals, the following measures are recommended for project activities in areas of suitable habitat.

Bio-3 Best Management Practices

The following Best Management Practices (BMPs) would be implemented for project construction activities within work areas:

- No pets or firearms should be allowed at the project site during construction activities.
- During project activities, all trash that may attract predators should be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris should be removed from work areas.
- Pallets or secondary containment areas for any chemicals, drums, or bagged materials should be provided. Should material spills occur, materials and/or contaminants should be cleaned from the project site.
- All vehicles and equipment should be in good working condition and free of leaks.
- Construction work should be restricted to daylight hours (7:00 AM to 7:00 PM) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species.
- All open trenches should be constructed with appropriate exit ramps to allow species that accidentally fall into a trench to escape. Trenches will remain open for the shortest period necessary to complete required work.
- All project related vehicles should observe a 20 mile-per-hour speed limit in all project areas.
- Erosion control and landscaping specifications should allow only natural-fiber, biodegradable meshes and coir rolls, (i.e. no plastic-mesh temporary erosion control measures) to prevent impacts to the environment and to fish and terrestrial wildlife.
- During construction, the project will make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species.
- Equipment and vehicles must be free of caked on mud and weed seeds/propagules before accessing and leaving the project site.

Bio-4 Special Status Reptile Preconstruction surveys

Preconstruction surveys for coast patch-nosed snake, California legless lizard, and Blainville's horned lizard shall be conducted by a qualified biologist in areas of suitable habitat within the project site. Surveys shall include visual inspections and raking/sifting as necessary to locate individuals prior to ground disturbance activities, and relocate individuals to suitable areas outside the project footprint. The qualified biologist shall receive approval from the City, in consultation with CDFW if needed, to identify a relocation site that is nearby with habitat suitable for the species. If individuals are identified during surveys, the qualified biologist shall:

- Store all individuals in an appropriate container (insulated with lid);
- Transfer individuals within four hours of capture;
- Release in appropriate/comparable habitat (in coordination with the City, who may choose to consult with CDFW regarding release sites);
- Document translocation effort through photos, GPS salvage and relocation sites, and standard measurements (temperature, time); and

- Provide the City with a final report of translocation efforts once completed.

Bio-5 Nesting Bird Surveys and Avoidance

Initial site disturbance shall be prohibited during the general avian nesting season (February 1 – August 30), if feasible. If nesting season avoidance is not feasible, a qualified biologist shall conduct a preconstruction nesting bird survey to determine the presence/absence, location, and status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. Buffer size shall consider the species involved and relevant level of tolerance to adjacent activity, the location of the nest relative to proposed activities, and site conditions that naturally buffer the location, such as vegetation screening, topography, etc. To avoid the destruction of active nests and to protect the reproductive success of birds protected by MBTA and CFGC, nesting bird surveys shall be performed not more than 14 days prior to initial project activities or vegetation clearance. In the event that active nests are discovered, a suitable buffer shall be established around such active nests and no construction within the buffer allowed until a qualified biologist has determined that the nest is no longer active (e.g. the nestlings have fledged and are no longer reliant on the nest). No project activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 30 and February 1.

Bio-6 American Badger Impact Avoidance and Minimization

Prior to initiation of ground disturbance and vegetation removal for the project, a qualified biologist should complete a survey for badger dens. In order to avoid the potential direct take of adults and nursing young, no ground disturbance should occur within 50 feet of an active badger den as determined by a qualified biologist between March 1 and June 30. Construction activities between July 1 and March 1 should comply with the following measures to avoid direct take of adult and weaned juvenile badgers:

- Conduct a biological survey of the anticipated disturbance areas between 2 weeks and 4 weeks prior to construction. The survey should cover the entire area proposed for disturbance. Surveys should focus on both old and new den sites. If dens are too long to see the end, motion-activated wildlife cameras should be used to determine occupancy status. If the camera method is used, cameras must be used for four consecutive nights to make a determination on den activity and occupancy status.
- Inactive dens should be excavated by hand with a shovel to prevent badgers from reusing them during construction.
- Badgers should be discouraged from using currently active dens prior to the grading of the site by partially blocking the entrance of the den with sticks, debris and soil for 3 to 5 days or through use of a 1-way door. After badgers have stopped using active dens within the development area, the dens should be hand excavated with a shovel to prevent re-use.

5.2 Sensitive Plant Communities

The proposed project would have a significant effect on biological resources if it would:

- Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

The proposed project would not impact any riparian habitat or sensitive natural community. There are no sensitive plant communities within the BSA. No construction, demolition, or impacts to any riparian or sensitive natural community are proposed and the construction of the project is not anticipated to affect any offsite riparian or sensitive natural communities.

5.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The BSA does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) or any Waters of the State that would fall under the jurisdiction of the CDFW or the Regional Water Quality Control Board.

5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

- Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

The proposed project would involve the construction of multiple new structures that may result in some barriers to wildlife movement. Specifically, movement between patches of oak woodland, coastal scrub and non-native annual grassland would be altered by the project, with more limited movement than current conditions, but only within the project footprint. The addition of these structures combined with the layout of the outdoor shooting areas, represents the loss of a few acres of small-scale movement areas in the context of the larger Los Flores Ranch open space surrounding the BSA and the adjacent rural landscape, and thus would not result in a substantial reduction in available foraging habitat.

There is no perimeter fencing that is proposed for the facility, and no night lighting will be used.

The project would not adversely affect wildlife movement or native wildlife nursery sites.

5.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

No trees would be removed during project activities. There are no local policies or ordinances in the City's General Plan, Resources Management Element (2001-06) that would conflict with the project.

5.6 Adopted or Approved Plans

The proposed project would have a significant effect on biological resources if it would:

- 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 proposed project would not conflict with any adopted or approved habitat conservation plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans. Therefore no minimization or mitigation measures are recommended.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, review of CNDDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDDB, may vary with regard to accuracy and completeness. In particular, the CNDDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Setting

Regulatory Setting

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e., California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Central Coast Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; Species of Special Concern; nesting birds);

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material into wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters (typically a navigable water). The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through avoidance and minimization to the extent practicable, followed by compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements

(WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The RWQCB administers actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any federally threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is restricted to direct mortality of a listed species and the law does not prohibit indirect harm by way of habitat modification. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated.

The CDFW also enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibits take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided.

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act. CDFW administers these requirements.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species in special consideration when

decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Perennial, intermittent, and ephemeral streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq.* of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream or lake.

Local Jurisdiction

The proposed project is located within the County of Santa Barbara, however the Los Flores Ranch property is owned by the City. Since the City owns the Los Flores Ranch that contains the project site, the City's regulations and policies apply to the project. The project is not subject to County of Santa Barbara regulations and policies.

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Appendix B

Site Photographs



Photograph 1. View of BSA, facing west from the northeast portion of site. Oak woodland in the background is outside the BSA, to its south.



Photograph 2. View of BSA, facing south from the northeast portion of project site.



Photograph 3. View of BSA, facing west from the northeast portion of project site.



Photograph 4. View of BSA, facing southwest from the northeast portion of project site.



Photograph 5. View of BSA, facing northwest from the east portion of project site.



Photograph 6. View of BSA, facing west from the northeast portion of project site.

Appendix C

Floral and Faunal Compendium

Plant Species Observed within the BSA on August 8, 2018

| Scientific Name | Common Name | Native or Introduced |
|--|------------------------|---|
| Shrubs | | |
| <i>Artemisia californica</i> | California sagebrush | Native |
| <i>Baccharis pilularis</i> | Coyote brush | Native |
| <i>Encelia californica</i> | bush sunflower | Native |
| <i>Frangula californica</i> | California coffeeberry | Native |
| <i>Hazardia squarrosa</i> | sawtooth goldenbush | Native |
| <i>Salvia mellifera</i> | Black sage | Native |
| Herbs | | |
| <i>Acmispon glaber</i> | Deerweed | Native |
| <i>Amsinckia</i> sp. | Fiddleneck | Native |
| <i>Brassica nigra</i> | Black mustard | Introduced; Cal-IPC ¹ Rating: Moderate |
| <i>Croton setiger</i> | Turkey-mullein | Native |
| <i>Erigeron bonariensis</i> | asthmaweed | Introduced |
| Grasses | | |
| <i>Avena barbata</i> | Slender wild oats | Introduced |
| <i>Bromus diandrus</i> | Ripgut brome | Introduced |
| <i>Bromus madritensis</i> ssp. <i>rubens</i> | Red brome | Introduced |
| <i>Festuca perennis</i> | Italian ryegrass | Introduced |
| <i>Stipa pulchra</i> | Purple needlegrass | Native |

¹ Cal-IPC – California Invasive Plant Council Inventory, 2018 rankings

Animal Species Observed Within the BSA on August 8, 2018

| Scientific Name | Common Name |
|---------------------------------|----------------------------|
| Birds | |
| <i>Buteo jamaicensis</i> | Red-tailed hawk |
| <i>Cathartes aura</i> | Turkey vulture |
| <i>Thryomanes bewickii</i> | Bewick's wren |
| <i>Chamaea fasciata</i> | Wrentit |
| <i>Corvus brachyrhynchos</i> | American crow |
| <i>Falco mexicanus</i> | Prairie falcon |
| Mammals | |
| <i>Otospermophilus beecheyi</i> | California ground squirrel |
| Reptiles | |
| <i>Sceloporus occidentalis</i> | Western fence lizard |

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Appendix D

Special Status Species Evaluation Tables

Special Status Plant Species in the Regional Vicinity of the Project Site

| Scientific Name Common Name | Status Fed/State ESA G-Rank/S-Rank CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|--|--|-----------------------|---|
| <i>Agrostis hooveri</i> Hoover's bent grass | None/None G2/S2 1B.2 | Chaparral, cismontane woodland, closed-cone coniferous forest, valley and foothill grassland. Sandy sites. 60-765 m. perennial herb. Blooms Apr-Jul | Moderate potential | Suitable grassland habitat is present in the BSA. This species is known to occur in the Solomon Hills. However, this species was not previously detected in the Study Area during previous protocol level botanical surveys. |
| <i>Ancistrocarphus keilii</i> Santa Ynez groundstar | None/None G1/S1 1B.1 | Chaparral, cismontane woodland. Sandy soils. 40-130 m. annual herb. Blooms Mar-Apr | Not expected | The BSA is outside the known elevational range of this species. It is known from only three collections and appears to be confined to the Santa Ynez River. |
| <i>Aphanisma blitoides</i> aphanisma | None/None G3G4/S2 1B.2 | Coastal bluff scrub, coastal dunes, coastal scrub. On bluffs and slopes near the ocean in sandy or clay soils. 3-305 m. annual herb. Blooms Feb-Jun | Not expected | The BSA does not contain suitable coastal habitat. This species is known to occur at the coastline and within associated coastal bluffs. |
| <i>Arctostaphylos crustacea</i> ssp. <i>eastwoodiana</i> Eastwood's brittle-leaf manzanita | None/None G4T2/S2 1B.1 | Chaparral. In maritime chaparral on sandy soils, in the La Purisima Ridge, Burton Mesa, and Point Sal areas. 150-245 m. perennial evergreen shrub. Blooms Mar | Not expected | No suitable maritime chaparral habitat exists in the BSA. Additionally, this perennial species would have been observed during the site survey if present. |
| <i>Arctostaphylos pechoensis</i> Pecho manzanita | None/None G2/S2 1B.2 | Closed-cone coniferous forest, chaparral, coastal scrub. Grows on siliceous shale with other chaparral associates. 60-855 m. perennial evergreen shrub. Blooms Nov-Mar | Not expected | The BSA does not contain suitable soil conditions and does not contain siliceous shale. Additionally, this perennial species would have been observed during the site survey if present. |
| <i>Arctostaphylos purissima</i> La Purisima manzanita | None/None G2/S2 1B.1 | Chaparral, coastal scrub. Sandstone outcrops, sandy soil. 60-470 m. perennial evergreen shrub. Blooms Nov-May | Not expected | No suitable maritime chaparral habitat exists in the BSA, and no manzanitas were present in the coastal scrub within the study area. This perennial species would have been observed during the site survey if present. During floristic surveys of the entire Los Flores Ranch property, species was only detected in the northern portion of the ranch (outside the BSA) (Rincon 2009). |
| <i>Arctostaphylos refugioensis</i> Refugio manzanita | None/None G3/S3 1B.2 | Chaparral. On sandstone. 60-765 m. perennial evergreen shrub. Blooms Dec-Mar(May) | Not expected | No suitable sandstone soils on site. This species is not expected to occur on the project site. |

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| Scientific Name Common Name | Status Fed/State ESA G-Rank/S-Rank CRPR | Habitat Requirements | Potential to Occur | Rationale |
|--|--|--|-----------------------|---|
| <i>Arctostaphylos rudis</i> sand mesa manzanita | None/None G2/S2 1B.2 | Chaparral, coastal scrub. On sandy soils in Lompoc/Nipomo area. 20-335 m. perennial evergreen shrub. Blooms Nov-Feb | Not Expected | Suitable coastal scrub habitats with sandy soils occur on the BSA. However, this perennial species would have been observed during the site survey if present, and no manzanitas were present in the coastal scrub within the study area. During floristic surveys of the entire Los Flores Ranch property, species was not detected (Rincon 2009). |
| <i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch | None/None G5T2/S2 1B.2 | Coastal scrub. Clay soils. 50-385 m. annual herb. Blooms Mar-Jun | Not expected | Suitable soils do not exist on the BSA. |
| <i>Atriplex coulteri</i> Coulter's saltbush | None/None G3/S1S2 1B.2 | Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m. perennial herb. Blooms Mar-Oct | Not expected | Suitable alkaline or clay soils do not occur on site. This species is not expected to occur on the project site. |
| <i>Atriplex pacifica</i> south coast saltscale | None/None G4/S2 1B.2 | Coastal scrub, coastal bluff scrub, playas, coastal dunes. Alkali soils. 1-400 m. annual herb. Blooms Mar-Oct | Not expected | Suitable alkaline or clay soils do not occur on site. This species is not expected to occur on the project site. |
| <i>Calochortus fimbriatus</i> late-flowered mariposa-lily | None/None G3/S3 1B.3 | Chaparral, cismontane woodland, riparian woodland. Dry, open coastal woodland, chaparral; on serpentine. 270-1435 m. perennial bulbiferous herb. Blooms Jun-Aug | Not expected | Suitable serpentine soils do not occur on site. This species is not expected to occur on the project site. |
| <i>Chenopodium littoreum</i> coastal goosefoot | None/None G2/S2 1B.2 | Coastal dunes. 10-30 m. annual herb. Blooms Apr-Aug | Not expected | Suitable coastal dune habitat not present on site. This species is not expected to occur. |
| <i>Chorizanthe rectispina</i> straight-awned spineflower | None/None G2/S2 1B.3 | Chaparral, cismontane woodland, coastal scrub. Often on granite in chaparral. 45-1040 m. annual herb. Blooms Apr-Jul | Not expected | Suitable coastal scrub habitat exists on site, but reports of this species in Santa Barbara County are reportedly the result of mis-identification (SBBG 2012). Specimens reportedly of straight-awned spineflower were later annotated to the common <i>C. uniaristata</i> by expert Dr. James Reveal. <i>C. rectispina</i> is not known to occur in Santa Barbara County. This species is not expected to occur |
| <i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water-hemlock | None/None G5T4/S2 2B.1 | Marshes and swamps, fresh or brackish water. 0-200 m. perennial herb. Blooms Jul-Sep | Not expected | No suitable wetland habitat present on site. This species is not expected to occur. |

| Scientific Name Common Name | Status Fed/State ESA G-Rank/S-Rank CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|--|--|-----------------------|--|
| <i>Cirsium rhothophilum</i> surf thistle | None/ Threatened G1/S1 1B.2 | Coastal dunes, coastal bluff scrub. Open areas in central dune scrub; usually in coastal dunes. 3-60 m. perennial herb. Blooms Apr-Jun | Not expected | Project site outside known elevational range of this species. Species not expected to occur. |
| <i>Cirsium scariosum</i> var. <i>loncholepis</i> La Graciosa thistle | Endangered/ Threatened G5T1/S1 1B.1 | Coastal dunes, coastal scrub, brackish marshes, valley and foothill grassland, cismontane woodland. Lake edges, riverbanks, other wetlands; often in dune areas. Mesic, sandy sites. 4-220 m. perennial herb. Blooms May-Aug | Not expected | No suitable mesic habitat present on site. This species is not expected to occur. |
| <i>Cladium californicum</i> California saw-grass | None/None G4/S2 2B.2 | Meadows and seeps, marshes and swamps (alkaline or freshwater). Freshwater or alkaline moist habitats. -20-2135 m. perennial rhizomatous herb. Blooms Jun-Sep | Not expected | No suitable wetland habitat present on site. This species' local distribution is extremely limited and the nearest record is from the vicinity of Los Alamos. This species is not expected to occur. |
| <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> seaside bird's-beak | None/ Endangered G5T2/S2 1B.1 | Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, coastal dunes. Sandy, often disturbed sites, usually within chaparral or coastal scrub. 30-520 m. annual herb (hemiparasitic). Blooms Apr-Oct | Low Potential | Suitable habitat exists in coastal scrub areas, and it is known from the area from Lompoc to Buellton. During floristic surveys of the entire Los Flores Ranch property, species was not detected (Rincon 2009). However, the surveys have aged, and it is possible the species has recruited to the site. |
| <i>Deinandra increscens</i> ssp. <i>villosa</i> Gaviota tarplant | Endangered/ Endangered G4G5T2/S2 1B.1 | Coastal scrub, valley and foothill grassland, coastal bluff scrub. Known from coastal terrace near Gaviota; sandy blowouts amid sandy loam soil; grassland/coast scrub ecotone. 10-430 m. annual herb. Blooms May-Oct | Not Expected | Suitable grassland and coastal scrub habitat with sandy loam soils present in BSA. All known occurrences of this species are west of the Los Flores Ranch. During floristic surveys of the entire Los Flores Ranch property, species was not detected (Rincon 2009). |
| <i>Delphinium parryi</i> ssp. <i>blochmaniae</i> dune larkspur | None/None G4T2/S2 1B.2 | Chaparral, coastal dunes (maritime). On rocky areas and dunes. 18-305 m. perennial herb. Blooms Apr-Jun | Not expected | No suitable rocky areas or dunes are present within the coastal scrub habitat on site. |
| <i>Delphinium umbraculorum</i> umbrella larkspur | None/None G3/S3 1B.3 | Cismontane woodland, chaparral. Mesic sites. 215-2075 m. perennial herb. Blooms Apr-Jun | Not expected | No suitable mesic habitats occur on site and the project is outside the known elevational range of this species. |
| <i>Diplacus vandenbergensis</i> Vandenberg monkeyflower | Endangered/ None G1/S1 1B.1 | Cismontane woodland, chaparral, coastal dunes. Sandy, often disturbed areas. 75-120 m. annual herb. Blooms Apr-Jun | Not expected | The project site is outside the known range of this species. No suitable habitat occurs on site. This species is not expected to occur. |

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| Scientific Name Common Name | Status Fed/State ESA G-Rank/S-Rank CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|--|--|-----------------------|--|
| <i>Dithyrea maritima</i> beach spectaclepod | None/ Threatened G1/S1 1B.1 | Coastal dunes, coastal scrub. Sea shores, on sand dunes, and sandy places near the shore. 3-65 m. perennial rhizomatous herb. Blooms Mar-May | Not expected | The project site is outside the known range of this species, which occurs along the immediate coast. No suitable habitat occurs on site. This species is not expected to occur. |
| <i>Dudleya blochmaniae</i> <i>ssp. blochmaniae</i> Blochman's dudleya | None/None G3T2/S2 1B.1 | Coastal scrub, coastal bluff scrub, chaparral, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. 5-450 m. perennial herb. Blooms Apr-Jun | Not expected | No rocky slopes or suitable soils present on site. This species is not expected to occur. |
| <i>Erigeron blochmaniae</i> Blochman's leafy daisy | None/None G2/S2 1B.2 | Coastal dunes, coastal scrub. Sand dunes and hills. 0-185 m. perennial rhizomatous herb. Blooms Jun-Aug | Not expected | No suitable habitat occurs on site for this species. Project site outside known elevational range of this species. Species not expected to occur. |
| <i>Eriodictyon capitatum</i> Lompoc yerba santa | Endangered/ Rare G2/S2 1B.2 | Closed-cone coniferous forest, chaparral. Sandy soils on terraces. 60-505 m. perennial evergreen shrub. Blooms May-Sep | Not expected | No suitable coniferous forest or chaparral habitat occurs on site. Species not expected to occur. |
| <i>Horkelia cuneata</i> var. <i>puberula</i> mesa Horkelia | None/None G4T1/S1 1B.1 | Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m. perennial herb. Blooms Feb-Jul(Sep) | Low Potential | Suitable coastal scrub habitat with sandy soils present within the project site. During floristic surveys of the entire Los Flores Ranch property, species was only detected in the northern portion of the ranch (outside the BSA) (Rincon 2009). |
| <i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia | None/None G4T1?/S1? 1B.1 | Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 5-430 m. perennial herb. Blooms Apr-Sep | Low Potential | Suitable coastal scrub habitat with sandy soils present within the project site. During floristic surveys of the entire Los Flores Ranch property, species was not detected (Rincon 2009). However, the surveys have aged, and it is possible the species has recruited to the site. |
| <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields | None/None G4T2/S2 1B.1 | Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m. annual herb. Blooms Feb-Jun | Not expected | No suitable mesic or alkaline habitats occur on site. This species is not expected to occur. |
| <i>Layia carnosa</i> beach layia | Endangered/ Endangered G2/S2 1B.1 | Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-30 m. annual herb. Blooms Mar-Jul | Not expected | No suitable habitat for this species occurs on site. The project site is outside the known range of this species, which occurs at the immediate coast. |

| Scientific Name Common Name | Status Fed/State ESA G-Rank/S-Rank CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|--|---|-----------------------|---|
| <i>Layia heterotricha</i> pale-yellow layia | None/None G2/S2 1B.1 | Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. 90-1800 m. annual herb. Blooms Mar-Jun | Not expected | No suitable alkaline or clay soils occur on site. The local distribution of this species is extremely limited. |
| <i>Lonicera subspicata</i> var. <i>subspicata</i> Santa Barbara honeysuckle | None/None G5T2?/S2? 1B.2 | Chaparral, cismontane woodland, coastal scrub. 5-825 m. perennial evergreen shrub. Blooms May-Aug(Dec-Feb) | Not expected | Suitable habitat is present on-site, but this long-lived perennial shrub was not previously reported from the Los Flores Ranch during previous protocol-level botanical surveys. Additionally, this perennial species would have been observed during the site survey if present. |
| <i>Monardella hypoleuca</i> ssp. <i>hypoleuca</i> white-veined monardella | None/None G4T3/S3 1B.3 | Chaparral, cismontane woodland. Dry slopes. 50-1280 m. perennial herb. Blooms (Apr)May-Aug(Sep-Dec) | Not expected | No suitable chaparral or cismontane woodland habitat on site. This species is not expected to occur. |
| <i>Monardella sinuata</i> ssp. <i>sinuata</i> southern curly-leaved monardella | None/None G3T2/S2 1B.2 | Coastal dunes, coastal scrub, chaparral, cismontane woodland. Sandy soils. 20-305 m. annual herb. Blooms Apr-Sep | Low potential | Suitable sandy soils occur within the coastal scrub habitat on site. However, the species was not previously documented on Los Flores Ranch during 2007-2009 surveys. |
| <i>Monardella undulata</i> ssp. <i>arguelloensis</i> Point Arguello monardella | None/None G3T1/S1 1B.1 | Coastal bluff scrub, coastal dunes (stabilized), coastal scrub. Sandy substrate. 50-150 m. perennial shrub. Blooms May-Sep | Not expected | The project site is outside the known range of this species. The species is not expected to occur. |
| <i>Monardella undulata</i> ssp. <i>crispa</i> crisp monardella | None/None G3T2/S2 1B.2 | Coastal dunes, coastal scrub. Often on the borders of open, sand areas, usually adjacent to typical backdune scrub vegetation. 5-125 m. perennial rhizomatous herb. Blooms Apr-Aug(Dec) | Not expected | The project site is outside the known range of this species, which is limited to coastal dune environments and not reported from as far inland as the BSA. |
| <i>Monardella undulata</i> ssp. <i>undulata</i> San Luis Obispo monardella | None/None G2/S2 1B.2 | Coastal dunes, coastal scrub. Stabilized sand of the immediate coast. 5-200 m. perennial rhizomatous herb. Blooms May-Sep | Not expected | The project site is outside the known elevational range of this species. Taxonomy of <i>Monardella</i> was recently revised, and some records from Santa Barbara County are now understood to be better grouped with other species. |
| <i>Nasturtium gambelii</i> Gambel's water cress | Endangered/Threatened G1/S1 1B.1 | Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-330 m. perennial rhizomatous herb. Blooms Apr-Oct | Not expected | No suitable wetland habitat exists on site. |

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| Scientific Name Common Name | Status Fed/State ESA G-Rank/S-Rank CRPR | Habitat Requirements | Potential to Occur | Rationale |
|--|--|---|-----------------------|--|
| <i>Scrophularia atrata</i> black-flowered figwort | None/None G2?/S2? 1B.2 | Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. 10-445 m. perennial herb. Blooms Mar-Jul | Low potential | Suitable sandy soils exists within the coastal scrub habitat. However, the species was not previously documented on Los Flores Ranch during 2007-2009 surveys. |
| <i>Senecio aphanactis</i> chaparral ragwort | None/None G3/S2 2B.2 | Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m. annual herb. Blooms Jan-Apr(May) | Not expected | No suitable alkaline soils or flats exist on site. |
| <i>Symphyotrichum defoliatum</i> San Bernardino aster | None/None G2/S2 1B.2 | Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 2-2040 m. perennial rhizomatous herb. Blooms Jul-Nov | Not expected | No suitable vernal mesic grasslands or habitat adjacent to ditches, springs, or streams present. |
| <i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran maiden fern | None/None G5T3/S2 2B.2 | Meadows and seeps. Along streams, seepage areas. 60-930 m. perennial rhizomatous herb. Blooms Jan-Sep | Not expected | No suitable mesic habitat exists on site. |

Regional Vicinity refers to within a 9-quadrant search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species

SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind3.

CRPR (CNPS California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:

.1=Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Special Status Animal Species in the Regional Vicinity of the Project Site

| Scientific Name Common Name | Status Fed/State ESA G-Rank/SRank CDFW | Habitat Requirements | Potential to Occur | Rationale |
|--|---|---|-----------------------|---|
| Invertebrates | | | | |
| <i>Branchinecta lynchi</i> vernal pool fairy shrimp | Threatened/None G3/S3 | Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools. | Not expected | No vernal pools in BSA. |
| <i>Danaus plexippus</i> pop. 1 monarch - California overwintering population | None/None G4T2T3/S2S3 | Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. | Not expected | No suitable winter roost habitat in BSA. |
| Fish | | | | |
| <i>Eucyclogobius newberryi</i> tidewater goby | Endangered/None G3/S3 SSC | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. | Not expected | Suitable habitat is not present in BSA. |
| <i>Gasterosteus aculeatus williamsoni</i> unarmored threespine stickleback | Endangered/ Endangered G5T1/S1 FP | Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (<24 C), clear water with abundant vegetation. | Not expected | Suitable habitat is not present in BSA. |
| <i>Oncorhynchus mykiss irideus</i> pop. 10 steelhead - southern California DPS | Endangered/None G5T1Q/S1 | Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions. | Not expected | Suitable habitat is not present in BSA. |
| Amphibians | | | | |
| <i>Ambystoma californiense</i> California tiger salamander | Threatened/ Threatened G2G3/S2S3 WL | Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding. | Not expected | Suitable aquatic habitat is not present in BSA. Upland habitat is present on-site, however, extensive protocol-level surveys of entire Los Flores Ranch have been conducted (Rincon 2009, Hunt 2011), and species not detected. |

City of Santa Maria
Los Flores Shooting Range Project

| Scientific Name Common Name | Status Fed/State ESA G-Rank/SRank CDFW | Habitat Requirements | Potential to Occur | Rationale |
|--|---|--|-----------------------|--|
| <i>Rana draytonii</i> California red-legged frog | Threatened/None G2G3/S2S3 SSC | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat. | Not expected | Suitable permanent or semi-permanent aquatic habitat does not exist on the BSA or nearby. |
| <i>Spea hammondi</i> western spadefoot | None/None G3/S3 SSC | Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. | Not expected | Suitable breeding habitat is not present on the BSA or nearby. |
| Reptiles | | | | |
| <i>Anniella pulchra</i> northern California legless lizard | None/None G3/S3 SSC | Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content. | High potential | Suitable habitat exists throughout most of the site and the site is within this species' range. |
| <i>Emys marmorata</i> western pond turtle | None/None G3G4/S3 SSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. | Not expected | Suitable permanent or semi-permanent aquatic habitat does not exist on the BSA; not likely to use terrestrial habitats on-site because off-site aquatic habitats are too far away. |
| <i>Phrynosoma blainvillii</i> coast horned lizard | None/None G3G4/S3S4 SSC | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. | High potential | Suitable habitat occurs within the BSA and surrounding areas. |
| <i>Salvadora hexalepis virgulata</i> coast patch-nosed snake | None/None G5T4/S2S3 SSC | Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites. | Moderate potential | Suitable scrub habitat in BSA and small mammal burrows are present. |
| <i>Thamnophis hammondi</i> two-striped gartersnake | None/None G4/S3S4 SSC | Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth. | Not expected | BSA does not contain suitable aquatic or riparian habitat for the species. |

| Scientific Name Common Name | Status Fed/State ESA G-Rank/SRank CDFW | Habitat Requirements | Potential to Occur | Rationale |
|--|---|--|-----------------------|--|
| Birds | | | | |
| <i>Agelaius tricolor</i> tricolored blackbird | None/Threatened G2G3/S1S2 SSC | Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. | Not expected | Suitable habitat is not present in BSA due to lack of permanent or semi-permanent aquatic sites with dense emergent vegetation and/or well-established riparian habitat. |
| <i>Charadrius alexandrinus nivosus</i> western snowy plover | Threatened/None G3T3/S2S3 SSC | Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. | Not expected | Suitable habitat is not present in BSA |
| <i>Aquila chrysaetos</i> Golden eagle | None/None FP | Nests in cliffs and rocky ledges, and forages in grasslands and open areas | Not expected | Suitable foraging habitat present in BSA. Nesting habitat not present. A golden eagle was observed flying over the site during biological surveys in 2008 (Rincon 2009). |
| <i>Falco peregrinus anatum</i> American peregrine falcon | Delisted/Delisted G4T4/S3S4 FP | Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site. | Not expected | Suitable habitat is not present in BSA |
| <i>Lanius ludovicianus</i> loggerhead shrike | None/None G4/S4 SSC | Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases. Scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. | High potential | Suitable nesting and foraging habitat are present within the BSA. |
| <i>Setophaga petechia</i> yellow warbler | None/None G5/S3S4 SSC | Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. | Not expected | Suitable habitat is not present in BSA. |
| <i>Sternula antillarum browni</i> California least tern | Endangered/ Endangered G4T2T3Q/S2 FP | Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas. | Not expected | Suitable habitat is not present in BSA. |

City of Santa Maria
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| Scientific Name Common Name | Status Fed/State ESA G-Rank/SRank CDFW | Habitat Requirements | Potential to Occur | Rationale |
|--|---|---|-----------------------|--|
| <i>Vireo bellii pusillus</i> least Bell's vireo | Endangered/ Endangered G5T2/S2 | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. | Not expected | Suitable habitat is not present in BSA. |
| Mammals | | | | |
| <i>Antrozous pallidus</i> pallid bat | None/None G5/S3 SSC | Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | Low potential | Foraging habitat present. No roosting habitat present in BSA. |
| <i>Corynorhinus townsendii</i> Townsend's big-eared bat | None/None G3G4/S2 SSC | Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance. | Low potential | Potential foraging habitat is present onsite, but roosting is unlikely; this species is present year-round in the site vicinity. |
| <i>Eumops perotis californicus</i> western mastiff bat | None/None G5T4/S3S4 SSC | Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels. | Low potential | Foraging habitat present. No roosting habitat present in BSA. |
| <i>Lasiurus blossevillii</i> western red bat | None/None G5/S3 SSC | Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. | Low potential | Foraging habitat present. No roosting habitat present in BSA. |
| <i>Neotoma lepida intermedia</i> San Diego desert woodrat | None/None G5T3T4/S3S4 SSC | Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes. | Not expected | No woodrat middens were observed in BSA. Project site is outside the range for species, and the woodrat species expected to occur in the project area is big eared woodrat (<i>Neotoma macrotis macrotis</i>). |

| Scientific Name Common Name | Status Fed/State ESA G-Rank/SRank CDFW | Habitat Requirements | Potential to Occur | Rationale |
|--|---|--|-----------------------|--|
| <i>Taxidea taxus</i> American badger | None/None G5/S3 SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. | Moderate potential | Suitable foraging and denning habitat is present in the BSA. Several ground squirrel burrows observed in BSA indicating a suitable prey base is available for the species. |
| Regional Vicinity refers to within a 9-quad search radius of site. | | | | |
| FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species FS=Federally Sensitive | | | | |
| SE = State Endangered ST = State Threatened SC = State Candidate SS=State Sensitive | | | | |
| SSC = CDFW Species of Special Concern SFP = State Fully Protected | | | | |
| G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind3. | | | | |

Sensitive Natural Communities in the Regional Vicinity of the BSA

| Name | Status G-Rank/SRank | Habitat Suitability/Observations |
|---|--------------------------------|---|
| Central Coast Arroyo Willow Riparian Forest | G3/S3.2 | Absent |
| Central Dune Scrub | G2/S2.2 | Absent |
| Central Foredunes | G1/S1.2 | Absent |
| Central Maritime Chaparral | G2/S2.2 | Absent |
| Coastal and Valley Freshwater Marsh | G3/S2.1 | Absent |
| Northern Coastal Salt Marsh | G3/S3.2 | Absent |
| Southern California Coastal Lagoon | GNR/SNR | Absent |
| Southern California Steelhead Stream | GNR/SNR | Absent |
| Southern California Threespine Stickleback Stream | GNR/SNR | Absent |
| Southern Cottonwood Willow Riparian Forest | G3/S3.2 | Absent |
| Southern Vernal Pool | GNR/SNR | Absent |
| Southern Willow Scrub | G3/S2.1 | Absent |

Los Flores Shooting Facility - Santa Barbara-North of Santa Ynez County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

Boilers

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

11.0 Vegetation
