



# Los Osos Habitat Conservation Plan

## Draft Environmental Impact Report

SCH# 2013091071

*prepared by*

**County of San Luis Obispo**  
Planning and Building Department  
976 Osos Street  
San Luis Obispo, California 93408

*prepared with the assistance of*

**Rincon Consultants, Inc.**  
1530 Monterey Street, Suite D  
San Luis Obispo, California 93401

**September 2019**



**RINCON CONSULTANTS, INC.**

Environmental Scientists | Planners | Engineers  
[rinconconsultants.com](http://rinconconsultants.com)

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## **Appendices**

Appendix A	Notice of Preparation and Comments Received During Public Scoping Period
Appendix B	Los Osos Habitat Conservation Plan

# Executive Summary

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Pursuant to the California Environmental Quality Act (CEQA), this Environmental Impact Report (EIR) evaluates the potential environmental impacts associated with implementation of the Los Osos Habitat Conservation Plan (LOHCP) and issuance of an incidental take permit (ITP) under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA) of 1973, as amended (16 United States Code [U.S.C.] §1531 et seq.) from the U.S. Fish and Wildlife Service (Service) to the County of San Luis Obispo (County) to allow ‘take’<sup>1</sup> of two federally listed animal species, as well as impacts to two federally listed plant species. These actions are collectively referred to as the “proposed project” or “project.” The proposed project involves discretionary actions that require approval of the County Planning Commission and the County Board of Supervisors. Therefore, the proposed project is subject to the environmental review requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines*, the purpose of this EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

Although the primary purpose of the LOHCP is to streamline the permitting of covered activities by providing a program for the protection and enhancement of habitat for listed species impacted by such activities, adoption of the LOHCP and issuance of an ITP would commit the County to a course of action that could adversely impact the environment. Therefore, this EIR has been prepared.

Because the issuance of a Section 10 ITP constitutes a discretionary federal action by the Service and is thus subject to NEPA, the Service has prepared an Environmental Assessment (EA) pursuant to the National Environmental Policy Act ([NEPA] 42 U.S.C. §§4321–4370 et seq.). The Service is the NEPA lead agency for this project and is processing the EA as a separate document.

It is noted that although two of the covered species in the LOHCP are also state listed species, in addition to being federally listed, the proposed project would avoid potential ‘take’<sup>2</sup> of such species, as defined by the California Endangered Species Act (CESA). Therefore, the project would not require issuance of a state ITP by the California Department of Fish and Wildlife (CDFW) under Fish and Game Code (FGC) Section 2080.

This section summarizes the project, potential environmental impacts associated with the project, required mitigation measures, and alternatives to the project. Additional detail regarding the project is located in Section 2, *Project Description*.

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<sup>1</sup> Under FESA, the term ‘take’ means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 U.S.C., §1532 (19)). Furthermore, the term ‘harm’ is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering” (16 U.S.C., §1532 (20); 50 C.F.R. §17.3).

<sup>2</sup> Under CESA, the term “take” means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (FGC §86).

## Project Synopsis

### Project Applicant

County of San Luis Obispo  
Planning and Building Department  
976 Osos Street  
San Luis Obispo, California 93408

### Lead Agency Contact Person

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### Project Description

The proposed project would include implementation of the LOHCP and issuance of an ITP for two federally listed species that occur in the LOHCP Area (Plan Area). The ITP issued for the LOHCP would cover the “take” of two animal species: the federally and state listed as endangered Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*) and the federally listed as endangered Morro shoulderband snail (*Helminthoglypta walkeriana*). The ITP would authorize take of any form, including harassment, injury, or mortality, that could result from covered activities. In addition, the LOHCP covers two plant species: the federally and state listed as endangered Indian Knob mountainbalm (*Eriodictyon altissimum*) and the federally listed as threatened Morro manzanita (*Arctostaphylos morroensis*). It is noted that the Morro shoulderband snail and Morro manzanita are not state listed as threatened or endangered, or candidate species for state listing.

An ITP is required for the undertaking of any activity by a non-federal landowner or entity that may result in the incidental take of a federally listed animal species in the Plan Area, but which is otherwise lawful. Implementation of the LOHCP would allow non-federal landowners or entities undertaking activities covered under the LOHCP to apply for a Certificate of Inclusion (COI), allowing for take of species under the ITP, as specified in the LOHCP.

The County would select an Implementing Entity (IE) that would contract with the County to implement most LOHCP components. The IE would be a non-profit conservation organization approved by the Service and the California Department of Fish and Wildlife (CDFW), and would be responsible for processing take/impact coverage applications for all projects, issue COIs for covered activities, and implementing the LOHCP, including the conservation program, on behalf of the County. The IE would also be responsible for ensuring individual applicants for COIs meet the requirements set forth in the LOHCP.

COIs would be available to applicants with projects in the Plan Area that meet the eligibility criteria set forth in the LOHCP. Signed COIs would extend the ITP’s take coverage to individual landowners and other entities for incidental take of the covered species as a result of development projects on their parcels during the permit term, provided the individuals meet the eligibility criteria in the LOHCP. Signed COIs would cover applicants for incidental take of Morro shoulderband snail and

Morro Bay kangaroo rat and impacts to Morro manzanita and Indian Knob mountainbalm as a result of development projects on their parcels during the 25-year permit term.

The LOHCP includes provisions for permit extension as long as take remains below the authorized amount specified in the ITP. Service regulations (50 CFR §13.22) allow a permit to remain in effect while the Service considers a renewal request, but only if the request is received at least 30 days prior to expiration. The LOHCP is summarily described below. Additional detail can be found in the LOHCP, which is hereby incorporated by reference in this EIR and included as Appendix B.

## Alternatives

As required by Section 15126(d) of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the project that could feasibly achieve similar objectives. This includes the following two alternatives:

- **Alternative 1 (No Project).** Under the No Project Alternative, the LOHCP would not be implemented. Activities would continue in a manner consistent with current practices. Project proponents would be required to prepare individual ITP applications, including HCPs.
- **Alternative 2 (Reduced Take).** Under the Reduced Take Alternative, the total amount of development that would be covered would be 266 acres, 50 percent of the maximum amount in the LOHCP Alternative. After the cap is reached, no additional permits would be issued and project proponents would instead need to prepare individual ITP applications, including HCPs, in order to receive take coverage.

Based on the alternatives analysis, the proposed project was determined to be the environmentally superior alternative. Refer to Section 6, *Alternatives*, for the complete alternatives analysis.

## Areas of Concern

Pursuant to Section 15123(b)(2) of the *CEQA Guidelines*, this EIR acknowledges the areas of controversy and issues to be resolved which are known to the County of San Luis Obispo or were raised during the scoping process. The County prepared and circulated a Notice of Preparation (NOP) for the EIR on September 20, 2013 and held two scoping meetings on October 8, 2013. Public comments and agency responses were due on November 20, 2013. The NOP and written comments are presented in Appendix A of this report and further discussed in Section 1, *Introduction*.

## Summary of Impacts and Mitigation Measures

A Class I, Significant and Unavoidable, impact is an impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per Section 15093 of the *CEQA Guidelines*. **This project would not result in any significant and unavoidable (Class I) impacts.**

In accordance with the *CEQA Guidelines*, Table 1 and Table 2 identify the following types of potential impacts associated with the project:

- **Class II, Less than Significant Impact with Incorporation of Mitigation:** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation

measures. Such an impact requires Findings to be made under Section 15091 of the *CEQA Guidelines*.

- **Class III, Less than Significant Impact:** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **Class IV, Beneficial Effect:** An effect that would reduce existing environmental problems or hazards.

Specifically, Table 1 provides a summary of the potential Class II environmental impacts of the project as well as the mitigation measures associated with each impact, which are to be implemented to reduce the environmental impacts to the maximum extent feasible. Table 2 lists the potential Class III environmental impacts under each issue area addressed in this EIR. For the Class III impacts identified in the EIR, no mitigation measures are required beyond the standard federal, state, and local requirements that would apply to the proposed project. These requirements include, but are not limited to, compliance with local development standards, implementation of local air district dust and emission control measures, state and local hazard and hazardous materials handling and response requirements, payment of state and local impact fees, preparation of a Stormwater Pollution Prevention Plan, inclusion of LID features, and implementation of Best Management Practices.

**Table 1 Less than Significant Impacts with Mitigation Incorporated (Class II)**

Impact	Mitigation Measures	Residual Impact
<b>Biological Resources</b>		
<b>Impact BIO-1.</b> Implementation of the project may result in impacts to special-status plant and animal species. Impacts would be Class II, less than significant with incorporation of mitigation.	<p><b>MM BIO-1(a). Biological Resources Screening and Assessment</b></p> <p>On a project-by-project basis, a preliminary biological resource screening shall be performed as part of the environmental review process to determine whether the project has any potential to impact biological resources other than covered species. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment to document the existing biological resources within the project footprint plus a buffer and to determine the potential impacts to those resources. The biological resources assessment shall evaluate the potential for impacts to all biological resources including, but not limited to: special status species, nesting birds, wildlife movement, sensitive plant communities, and other resources judged to be sensitive by local, state and/or federal agencies. Depending on the results of the biological resources assessment, design alterations, further technical studies (i.e., protocol surveys) and/or consultations with the Service, CDFW, and/or other local, state, and federal agencies may be required. As part of this evaluation, the biologist shall evaluate whether the LOHCP Preserve System provides suitable habitat for any non-covered impacted species. The LOHCP Preserve System may be considered for mitigation only where it provides the appropriate habitats and this approach would not result in conflicts with the needs of the covered species, the primary focus of the reserve.</p> <p><b>MM BIO-1(b). Special Status Plant Species Surveys</b></p> <p>If completion of the project-specific biological resources screening and assessment determines that non-covered special-status plant species have potential to occur on-site, surveys for special-status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity of</p>	Less than significant

Impact	Mitigation Measures	Residual Impact
	<p>each project (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific biological resources assessment. All plant surveys shall be conducted by a qualified biologist approved by County no more than one years prior to project implementation (annual grassland habitats may require yearly surveys). All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph or topographic map. Surveys shall be conducted in accordance with the most current protocols established by the Service, CDFW, and County. A report of the survey results shall be submitted to the County for review. If special status plant species are identified, MM BIO-1(c) shall apply.</p> <p><b>MM BIO-1(c). Special Status Plant Species Avoidance, Minimization and Mitigation</b></p> <p>If federally and/or state listed and/or CRPR 1 and 2 species are found during special status plant surveys (pursuant to mitigation measure MM BIO-1(b)), the project shall be redesigned to avoid impacting these plant species to the maximum extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special status, and if so, the same process as identified for CRPR 1 and 2 species shall apply.</p> <p>If special-status plant species cannot be avoided and would be impacted by a project, the biologist must also evaluate whether population-level effects would occur, and if habitats preserved in the LOHCP Preserve System are suitable for the species and known to be occupied. Species not known to be protected in the LOHCP Preserve System or for which habitats in the LOHCP Preserve System are not suitable would require additional mitigation at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to County for approval.</p> <p><b>MM BIO-1(d). Non-Covered Listed Species Habitat Assessment and Protocol Surveys</b></p> <p>Specific habitat assessment and survey protocol surveys are established for several federally and/or state listed as endangered and/or threatened animal species. If the results of the biological resources assessment determine that suitable habitat may be present for any such species not covered by the LOHCP, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or Service/NMFS protocols prior to issuance of any construction permits/project approvals.</p> <p>Alternatively, in lieu of conducting protocol surveys, the applicant may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable. If the target species is detected during protocol surveys, or protocol surveys are not conducted and presence assumed based on suitable habitat, mitigation MM BIO-1(e) shall apply.</p> <p><b>MM BIO-1(e). Non-Covered Listed Species Avoidance and Compensatory Mitigation</b></p> <p>If habitat is occupied or presumed occupied by non-covered federal and/or state listed species that could be impacted by the project, the applicant shall redesign the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the maximum extent feasible. If occupied or presumed occupied habitat cannot be avoided, the qualified biologist shall evaluate the total acreages for habitat that would be impacted. Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project</p>	



Impact	Mitigation Measures	Residual Impact
	<p>conditions. The applicant may also need to obtain separate take permits for species not covered by the HCP.</p> <p>If the LOHCP Preserve System is proposed for mitigation, the project biologist shall demonstrate that habitat is suitable and mitigation would not conflict with primary reserve goals. For example, certain restoration activities such as invasive species control can benefit many different species. If on- and/or off-site mitigation sites that are not part of the LOHCP Preserve System are identified, the applicant shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federally and/or state listed species. The HMMP shall identify long-term site management needs, routine monitoring techniques, and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the County for approval.</p> <p><b>MM BIO-1(f). Non-Covered Endangered/Threatened Species Avoidance and Minimization During Construction</b></p> <p>The following measures shall be applied to aquatic and terrestrial species, where appropriate. The County shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence and the results of the biological resources screening and assessment (mitigation measure MM BIO-1(a)).</p> <ul style="list-style-type: none"> <li>▪ Pre-construction surveys for non-covered federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the appropriate measures in the Biological Opinion or Habitat Conservation Plan/ITP issued by the Service/NMFS (relevant to federally listed species) and/or the ITP issued by the CDFW (relevant to state listed species) shall be implemented; or if such guidance is not in place for the activity, the qualified biologist shall recommend an appropriate course of action, which may include consultation with the Service, NMFS, and/or CDFW. The results of the pre-construction surveys shall be submitted to the County for review and approval prior to start of construction. As described in the LOHCP, this is not anticipated to commonly occur because the LOHCP has been designed to cover the species most likely to be impacted by project-level activities.</li> <li>▪ Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have Environmental Sensitive Area fencing installed between said area and the limits of disturbance.</li> <li>▪ All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed during the dry season, typically between April 1 and October 31, to avoid impacts to sensitive aquatic species.</li> <li>▪ All projects occurring within or adjacent to sensitive habitats that may support non-covered federally and/or state listed as endangered/threatened species shall have a qualified biologist present during all initial ground-disturbing/vegetation-clearing activities. Once initial ground-disturbing/vegetation-clearing activities have been completed, the biologist shall conduct daily pre-activity clearance surveys for endangered/threatened species. Alternatively, as outlined in project permits if applicable, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented.</li> </ul>	

Impact	Mitigation Measures	Residual Impact
	<ul style="list-style-type: none"> <li>▪ No non-covered endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or the Service/NMFS.</li> <li>▪ If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.</li> <li>▪ If at any time during construction of the project, a non-covered endangered/threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. At that point, a qualified biologist shall recommend an appropriate course of action, which may include consultation with the Service, NMFS and/or CDFW. Alternatively, the appropriate measures shall be implemented in accordance with the Biological Opinion or Habitat Conservation Plan/ITP issued by the Service (relevant to federally listed species) and/or the ITP issued by the CDFW (relevant to state listed species) and work can then continue as guided by those documents and the agencies as appropriate.</li> <li>▪ All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies.</li> <li>▪ No equipment shall be permitted to enter wetted portions of any affected drainage channel other than equipment necessary to conduct approved dewatering activities required for project construction.</li> <li>▪ All equipment operating within streambeds (restricted to conditions in which water is not present) shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access.</li> <li>▪ At the end of each work day, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment.</li> <li>▪ All trenches, pipes, culverts, or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.</li> </ul> <p><b>MM BIO-1(g). Non-Listed Special Status Animal Species Avoidance and Minimization</b></p> <p>Depending on the species identified in the Plan Area, the following measures shall be selected from among the following to reduce the potential for impacts to non-listed special-status animal species:</p> <ul style="list-style-type: none"> <li>▪ Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 100-foot buffer and shall identify all special-status animal species that may occur on-site. All non-listed special-status species shall be relocated from the site either through direct capture or through passive exclusion. A report of the pre-construction survey shall be submitted to the County for their review and approval prior to the start of construction.</li> <li>▪ A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special-status animal species unearthed by construction activities.</li> <li>▪ Upon completion of the project, a qualified biologist shall prepare a final compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.</li> <li>▪ If special-status bat species may be present and impacted by the project, or if maternal colonies may be present, within 30 days of the start of construction a qualified biologist shall conduct presence/absence surveys for special-status bats and maternal colonies, where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may</li> </ul>	

Impact	Mitigation Measures	Residual Impact
	<p>roost. If active bat roosts or colonies are present, the biologist shall evaluate the type of roost to determine the next step.</p> <ul style="list-style-type: none"> <li>▫ If a maternity colony is present, all construction activities shall be postponed within a 250-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed or as recommended by CDFW through consultation. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.</li> <li>▫ If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), alternative roosts, such as bat boxes if appropriate for the species, shall be designed and installed near the project site. The number and size of alternative roosts installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW.</li> <li>▫ If other active roosts are located, exclusion devices such as valves, sheeting, or flap-style one-way devices that allow bats to exit but not re-enter roosts discourage bats from occupying the site.</li> </ul> <p><b>MM BIO-1(h). Preconstruction Surveys for Nesting Birds</b></p> <p>For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the FGC, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist no more than 30 days prior to vegetation removal activities.</p> <p>A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles, shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively.</p> <p>If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 50 to 300 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest. The objective of the buffer shall be to reduce disturbance of nesting birds. All buffers shall be marked using high-visibility flagging or fencing, and, unless approved by the qualified biologist, no construction activities shall be allowed within the buffers until the young have fledged from the nest or the nest fails.</p> <p>For bald or golden eagle nests identified during the preconstruction surveys, an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the Service and CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing, and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31, if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use.</p> <p>A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the County for review and approval prior to the start of construction.</p> <p><b>MM BIO-1(i). Worker Environmental Awareness Program (WEAP)</b></p> <p>Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction</p>	

Impact	Mitigation Measures	Residual Impact
	<p>and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers and other personnel involved with construction of the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them.</p> <p><b>MM BIO-2. Herbicide Guidance</b></p> <p>The Adaptive Management Plan shall provide specific guidance regarding use of herbicides to minimize risk of overspray and avoid incidental impacts to covered species and their habitats. Specifically, the plan shall prohibit spraying when wind speed exceeds 10 miles per hour (mph) gusts or when rain is predicted within 24 hours. Situations in which pre-construction surveys for covered species will be conducted must be specifically identified. Specific herbicides proposed for use must be identified in consultation with the County and/or the Service and CDFW prior to use in the Plan Area.</p> <p><b>MM BIO-3. Prescribed Fire Guidance</b></p> <p>The Adaptive Management Plan shall provide specific guidance on how and where prescribed fire or fire surrogate treatments will be applied. This guidance must identify management conflicts between the covered species and other resources that result from the different adaptations of the four covered species to fire (e.g., of different return intervals), and a clear plan for addressing these conflicts throughout the design and implementation of treatments (e.g., limit treated area to sites occupied by only one covered species). If used, prescribed fires or fire surrogates must be conducted in a manner that considers needs of special-status species not covered by the LOHCP. At a minimum the plan shall include the following elements:</p> <ul style="list-style-type: none"> <li>a) Timing shall be outside nesting bird season (after August 31), and after temperatures have cooled.</li> <li>b) To limit the potential for short-term negative impacts to have long-term repercussions on small or isolated populations of sensitive plants and animals, design and implement prescribed burns or fire surrogates in small patches and retain refugia consisting of intact habitat adjacent to the treatment areas. Connecting occupied areas to treatment areas and adjacent occupied habitat will facilitate recolonization of restored habitat the restoration treatments.</li> <li>c) The Plan shall identify appropriate periods of time between fires (i.e., return intervals) to ensure that burned areas have sufficient time for recruitment and recovery of native flora and fauna before adjacent areas are treated. All covered species and other special-status species must be considered, and where conflicts exist in fire return intervals, the plan must identify a method of prioritizing needs. The plan must work to conserve special-status species not covered by the HCP where possible.</li> <li>d) The Plan must require development of a spatial database to track fire-related treatments to avoid too frequent treatment (e.g., inappropriately short fire return intervals).</li> <li>e) Known locations of non-listed special-status plants, animals, and lichens shall be considered when planning fire treatments to avoid short-term impacts to the entirety of any known occurrence.</li> </ul> <p><b>MM BIO-4. Avoidance and Minimization Measures for Non-Listed Special-Status Wildlife Species</b></p> <p>Avoidance and minimization measures can reduce take of individuals of non-listed special-status reptiles, as well as common reptiles during prescribed treatments such as burns, mechanical weed removal, and erosion control efforts. Ecological requirements and potential for impacts is variable among these species. Projects where work is completed above ground, does not use heavy equipment (e.g., use of hand tools, weed whacking, etc.), or does not result in ground disturbance are excluded from this measure. Any project</p>	

Impact	Mitigation Measures	Residual Impact
	<p>requiring use of heavy equipment (e.g., new trail construction, repair of erosion) shall have a County-approved biologist select measures from among the following, depending on the species identified in the treatment, to reduce the potential for impacts to special-status wildlife species:</p> <ul style="list-style-type: none"> <li>a) For special-status terrestrial reptiles, “coverboard” surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet and constructed of untreated plywood placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All special-status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transportation to relocation sites near but outside proposed restoration or management activity. All relocation sites shall consist of suitable habitat similar to the original habitat site, and as close as possible to but outside the treatment area. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by the project. Relocation shall occur on the same day as capture. All special-status species found and relocated shall be tallied and recorded in a database. CNDDB Field Survey Forms shall be submitted to the CFDW for special-status animal species relocated for restoration and management activities on an annual basis.</li> <li>b) Pre-construction clearance surveys shall be conducted within five days of the start of work (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 200-foot buffer, if feasible, and shall identify all special-status wildlife species that may occur onsite. All special-status wildlife species shall be relocated from the site through direct capture. Relocation efforts shall be documented and reported annually.</li> </ul> <p><b>MM BIO-5. Nesting Bird Avoidance Measures</b></p> <p>Activities with risk to nesting birds and raptors, including weed management activities expected to occur during the nesting season, must implement the following:</p> <ul style="list-style-type: none"> <li>a) Minimum avoidance distances for native birds likely to occur in the Plan Area must be provided for all management and restoration actions that could occur during nesting season. If activities cannot be conducted outside nesting season, the Adaptive Management Plan must identify how nesting birds will be protected through a pre-activity survey.</li> <li>b) For activities occurring during the nesting season (generally February 1 to August 31), surveys for nesting birds covered by the FGC and the Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire disturbance area plus a 500-foot survey buffer around the site. If active nests are located, all work shall be conducted outside a nest buffer zone from the nest. Nest buffer zone size shall be determined by the qualified biologist based on species and site conditions. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. If nests are identified subsequent to the initial nest survey, the above avoidance buffer measures shall apply. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.</li> </ul> <p><b>MM BIO-6. Rare Plant and Lichen Database</b></p> <p>Existing records for all special-status plants and lichens known to occur in the Plan Area shall be compiled and reviewed. As special-status plants or lichens are encountered through covered activities, they shall be documented and maintained in a database. This database shall be utilized to inform management decisions regarding prescribed fire, fire surrogate treatments, and invasive species control efforts. Management activities with potential to</p>	

Impact	Mitigation Measures	Residual Impact
	<p>impact individual rare plants and lichens shall be planned such that known occurrences of rare plants or lichens are never completely impacted by the activity. For example, a fire treatment or surrogate fire treatment could remove one patch of chaparral with splitting yarn lichen, but must not remove all shrubs with splitting yarn lichen from that occurrence. In this measure, separate occurrences are defined as those which are one-quarter mile apart or greater.</p> <p><b>MM BIO-7. Rare Plant Life Cycle Consideration</b></p> <p>Management activities with the potential to negatively impact rare plants, particularly annual plant species, should occur after seed has set, whenever possible.</p> <p><b>MM BIO-8. Pre-Construction Surveys for Badger Dens</b></p> <p>Any project requiring use of heavy equipment and resulting in ground disturbance (e.g., new trail construction, repair of erosion) shall complete a pre-construction survey for active badger dens not less than two weeks prior to the initiation of work. The surveys shall include a thorough walking survey of the entire site. The survey shall cover the entire area proposed for disturbance plus a 100-foot buffer.</p> <p>Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 100 feet around the active den shall be demarcated by flagging or construction fencing (fencing would be installed to leave the first foot above ground open to permit movement of badgers in and out of the buffer zone). If the den must be impacted, a biologist shall then use appropriate tracking and observation methods to determine when an active den is no longer in use. When the biologist confirms that the den is no longer in use, activity may proceed, or the den may be collapsed by the biologist if work will not proceed immediately to avoid the need for further follow-up surveys.</p> <p>A qualified biologist shall conduct a training session for all construction personnel prior to the start of project activities requiring the use of heavy equipment and resulting in ground disturbance. At a minimum, the training shall include a description of the species and their habitats, the specific measures that will be implemented to conserve and protect the species, and the project boundaries defining the work limit areas. Brochures, books, and briefings may be used in the training session.</p>	
<p><b>Impact BIO-2.</b></p> <p>Implementation of the project would have a substantial adverse effect on sensitive habitats, including riparian areas. Impacts would be Class II, less than significant with incorporation of mitigation.</p>	<p><b>MM BIO-9. Sensitive Vegetation Avoidance and Monitoring</b></p> <p>New trails shall occur in degraded habitat and avoid the high quality suitable habitat for covered species to the maximum extent possible. Where actions must occur in high quality suitable habitat, follow-up monitoring shall be conducted every other year for five years to ensure that no adverse effects to the remaining vegetation community along the trail occur. If problems are noted, the source of the problem shall be identified and remedial actions shall be taken to address the issue, and return the impacted area to its original condition.</p>	<p>Less than significant</p>

Impact	Mitigation Measures	Residual Impact
<b>Cultural Resources</b>		
<p><b>Impact CR-1.</b> Ground disturbance from implementation of the project would have the potential to disturb historical, archaeological, and/or paleontological resources. Impacts would be Class II, less than significant with incorporation of mitigation.</p>	<p><b>MM CR-1. Pre-Construction Cultural Resources Survey</b></p> <p>Prior to the implementation of covered activities associated with development of the Preserve System and which involve ground disturbance, the County and/or Implementing Entity shall contract with a County-qualified archaeologist to perform a Phase I cultural resources assessment. In the event that cultural resources are identified during the Phase I assessment, if the resource cannot be avoided, the implementing agency shall implement a Phase II subsurface testing program to determine the resource boundaries within the impact area, assess the integrity of the resource, and evaluate the site's significance through a study of its features and artifacts.</p> <p>If the site is determined significant, the County and/or Implementing Entity may choose to cap the resource area using culturally sterile and chemically neutral fill material. A qualified archaeologist shall be retained to monitor the placement of fill upon the site. If a significant site would not be capped, the results and recommendations of the Phase II study shall determine the need for a Phase III data recovery program designed to record and remove significant prehistoric or archaeological cultural materials that could otherwise be tampered with or impacted by activities covered under the LOHCP. If the site is determined to be not significant, no capping or further archaeological investigation shall be required, though archaeological monitoring may still be required. The results and recommendations of the Phase II and/or Phase III studies shall determine the need for construction monitoring and/or project redesign to minimize resource effect.</p> <p><b>MM CR-2. Archaeological Resource Construction Monitoring</b></p> <p>Prior to the commencement of construction activities for each project component undertaken as part of development or management of the LOHCP Preserve System, if areas within each project component are identified by a qualified professional as sensitive for cultural resources and archaeological monitoring of construction activities is recommended, the following procedures shall be followed:</p> <ul style="list-style-type: none"> <li>▪ An orientation meeting shall be conducted by an archaeologist, general contractor, subcontractor, and construction workers associated with earth disturbing activities. The orientation meeting shall describe the potential of exposing archaeological resources, the types of cultural materials that may be encountered, and directions on the steps that shall be taken if such a find is encountered.</li> <li>▪ A qualified archaeologist shall be present during all initial earth moving activities within the culturally sensitive areas.</li> </ul> <p><b>MM CR-3. Paleontological Resource Construction Monitoring</b></p> <p>Any excavations within the Preserve System mapped with Monterey Formation at the surface, or where excavations expose below ground units of the Monterey Formation (bedrock shale below Holocene alluvium) shall be monitored on a full-time basis by a qualified paleontological monitor. If no fossils are observed during the first 50 percent of excavations, paleontological monitoring may be reduced to weekly spot-checking under the discretion of the qualified paleontologist.</p> <p>If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data, and maps.</p>	<p>Less than significant</p>

Impact	Mitigation Measures	Residual Impact
<b>Hazards and Hazardous Materials</b>		
<b>Impact HAZ-1.</b> Construction of covered activities could potentially encounter unknown hazardous materials during ground disturbance. Individual projects would be required to undergo project-specific review to determine potential risks associated with known or unknown existing hazardous materials. Impacts would be Class II, less than significant with mitigation incorporated.	<b>MM HAZ-1. Contingency Plan</b> Prior to construction or site restoration, a Contingency Plan shall be prepared to address actions that would be taken during construction in the event that unexpected ordnance and/or contaminated soil or groundwater is discovered. The Contingency Plan shall include health and safety considerations, handling and disposal of wastes, reporting requirements, and emergency procedures. The Contingency Plan shall include a requirement that if evidence of contaminated materials is encountered during construction, construction would cease immediately and applicable requirements of the Comprehensive Environmental Release Compensation and Liability Act and the California Code of Regulations Title 22 regarding the disposal of waste would be implemented.	Less than significant
<b>Impact HAZ-4.</b> The project would include wildfire management as a conservation strategy but would also preserve vegetated land that can act as fuel for wildfire. The project would allow covered activities to occur in "high" and "very high" Fire Hazard Severity Zone and State Responsibility Areas. Impacts would be Class II, less than significant with mitigation incorporated.	<b>MM HAZ-2. Fire Management Plan</b> A fire management plan shall be prepared for all lands included in the Preserve System by the Implementing Entity, which addresses fire management and suppression based onsite-specific conditions. Each fire management plan is required to include the following: <ul style="list-style-type: none"> <li>▪ A map of fire access roads and gates</li> <li>▪ Identification of fuel load management methods, such as mowing, livestock grazing, and maintenance of unvegetated buffers, and criteria for their application</li> <li>▪ Criteria and procedures for prescribed fire for management purposes (burn plan)</li> <li>▪ A description of fire-suppression criteria, procedures, resources, and responsibilities, including criteria for selecting fire-fighting water sources</li> <li>▪ A discussion of restoration/rehabilitation of vegetation following a fire</li> </ul>	Less than significant
<b>Hydrology and Water Quality</b>		
<b>Impact HWQ-6.</b> The project may affect the quantity of available surface or groundwater. Impacts would be Class II, less than significant with mitigation incorporated.	<b>MM HWQ-1. Reduce Water Supply Demands</b> For covered activities, one or a combination of the following options shall be implemented to reduce use of water supplies: <ul style="list-style-type: none"> <li>▪ Irrigation shall use utilize recycled water supplies.</li> <li>▪ Retrofit offsite landscaped areas to utilize recycled water supplies.</li> <li>▪ Retrofit offsite public facilities (e.g., County offices, schools, libraries, etc.) that are in the same water service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the County in consultation with the applicable water service provider(s).</li> <li>▪ Retrofit other facilities in the water service area, as determined appropriate by the County, as well as including consent from the property</li> </ul>	Less than significant



Impact	Mitigation Measures	Residual Impact
	owner affected.	
	<p><b>MM HWQ-2. Dust Control Watering</b></p> <p>For construction activities, dust control shall be conducted using recycled water supplies or other dust suppressant substance/methodology to reduce use of water supplies. Also, for smaller projects, when appropriate and not near water bodies/creeks, consider scheduling construction during the rainy season, or after smaller rain events.</p> <p><b>MM HWQ-3. New Restrooms for Recreational Use</b></p> <p>Restrooms installed in the Preserve System as part of implementation of the LOHCP shall reduce demand for water through one of the following options:</p> <ul style="list-style-type: none"> <li>▪ Retrofit offsite facilities that are in the service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the County and applicable water service provider(s).</li> <li>▪ Omit development of any proposed restroom facility that cannot meet this requirement.</li> </ul>	
<b>Noise</b>		
<p><b>Impact N-1.</b></p> <p>Construction of covered activities would result in a temporary increase in ambient noise levels. Impacts would be Class II, less than significant with mitigation incorporated.</p>	<p><b>MM N-1. Project-Specific Noise Studies</b></p> <p>All construction work proposed outside of the County's construction noise exemption period (7:00 a.m. to 9:00 p.m. Monday through Friday and 8:00 a.m. and 5:00 p.m. on Saturday or Sunday) shall be accompanied by a noise study that includes measures to achieve the daytime and/or nighttime threshold for stationary equipment (50 dBA Leq during the day and 45 dBA Leq at night). Measures used to achieve the daytime and nighttime thresholds could include, but are not limited, the following:</p> <ul style="list-style-type: none"> <li>▪ Stationary construction equipment that generates noise that exceeds the thresholds at the boundaries of adjacent sensitive receptors shall be baffled to reduce noise and vibration levels</li> <li>▪ Construction equipment powered by internal combustion engines shall be properly muffled and maintained</li> <li>▪ Unnecessary idling of internal combustion engines shall be prohibited</li> <li>▪ Placement of stationary construction equipment such that emitted noise is directed away from sensitive noise receivers</li> <li>▪ Use of sound blankets on noise generating equipment</li> <li>▪ Construction of temporary sound barriers between the construction site and nearby sensitive receptors</li> <li>▪ Maximize the distance between construction equipment staging and parking areas and occupied residential areas</li> <li>▪ Use of electric air compressors and similar power tools, rather than diesel equipment</li> <li>▪ Placement of staging areas onsite to minimize offsite transportation of heavy construction equipment</li> <li>▪ Siting of staging areas to maximize the distance between activity and sensitive receptors (neighboring residences)</li> </ul> <p>The required noise study shall include, to the satisfaction of the County Department of Planning and Development, a Noise Mitigation and Monitoring Program, and demonstrating how the required thresholds would be achieved.</p> <p><b>MM N-2. Trail Signage</b></p> <p>Where trails cross through fences or barriers to remain, install a gate at these points in the Preserve System. The IE shall be responsible for ensuring that the gates are closed and locked during nighttime hours. In addition, all-weather signage shall be installed at trailheads to alert the user when trails are closed.</p>	Less than significant

**Table 2 Additional Impacts (Class III, Less than Significant Impacts; Class IV, Beneficial Effects; and No Impacts)**

Impact
<b>Air Quality</b>
<b>Impact AQ-1.</b> The project would not conflict with or obstruct implementation of the SLOAPCD 2001 Clean Air Plan. Impacts would be Class III, less than significant.
<b>Impact AQ-2.</b> Criteria pollutants generated by project construction would not exceed any applicable SLOAPCD thresholds. Impacts would be Class III, less than significant.
<b>Impact AQ-3.</b> The project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be Class III, less than significant.
<b>Impact AQ-4.</b> The project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be Class III, less than significant.
<b>Biological Resources</b>
<b>Impact BIO-3.</b> Implementation of the project would not substantially interfere with the movement of resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors. Impact would be Class IV, beneficial effect.
<b>Impact BIO-4.</b> Implementation of the project would not conflict with local policies or ordinances protecting biological resources. Impacts would be a Class III, less than significant.
<b>Cultural Resources</b>
<b>Impact CR-2.</b> The project would have the potential to disturb human remains. However, if human remains are discovered, implementation of state and local laws would avoid significant impacts. Impacts would be Class III, less than significant.
<b>Geology and Soils</b>
<b>Impact GEO-1.</b> The Plan Area is subject to various geological hazards, including seismic groundshaking and landslides, liquefaction, fault rupture, and expansive soils. Impacts would be Class III, less than significant.
<b>Impact GEO-2.</b> The covered activities could potentially result in soil erosion, topographic changes, loss of topsoil, or unstable soil conditions from project-related improvements; however, covered activities would be required to comply with state and local regulations to minimize impacts. Impacts would be Class III, less than significant.
<b>Impact GEO-3.</b> Expansive soil units may underlie portions of the Plan Area; however, compliance with County site-specific geotechnical studies would address expansive soils if present at the sites of covered activities. Impacts would be Class III, less than significant.
<b>Impact GEO-4.</b> The project would be consistent with the Geologic and Seismic Hazards goals and policies contained in the County's General Plan Safety Element. Impacts would be Class III, less than significant.
<b>Impact GEO-5.</b> The project would not preclude the future extraction of valuable mineral resources as no such resources are identified on or adjacent to the project site. No impact would occur.
<b>Greenhouse Gas Emissions</b>
<b>Impact GHG-1.</b> The project would not generate GHG emissions in excess of SLOAPCD thresholds such that it would result in adverse effects on the environment. Implementation of the LOHCP Preserve System would result in some initial GHG emissions, but such emissions would be offset by the long-term sequestration potential of restored and protected habitat. Impacts would be Class IV, beneficial effects.
<b>Hazards and Hazardous Materials</b>
<b>Impact HAZ-2.</b> No sites on the Cortese List are located on the Plan Area. Therefore, no related impacts would occur.
<b>Impact HAZ-3.</b> The project would not directly contribute to congestion of evacuation routes. impacts would be Class III, less than significant.

## Impact

### Hydrology and Water Quality

**Impact HWQ-1.** The project is not expected to adversely affect water quality. Impacts would be Class III, less than significant.

**Impact HWQ-2.** The project would create a slight increase in runoff but would not exceed the capacity of stormwater systems or cause substantial pollution. Impacts would be Class III, less than significant.

**Impact HWQ-3.** The project would not substantially affect soil absorption or substantially affect the amount or direction of surface runoff. Impacts would be Class III, less than significant.

**Impact HWQ-4.** The project would not substantially change drainage patterns or effect on- or off-site sedimentation/erosion or flooding. Impacts would be Class III, less than significant.

**Impact HWQ-5.** The project would not involve any activities within the 100-year flood zone. Impacts would be Class III, less than significant.

**Impact HWQ-7.** The project would not expose people to risk of loss, injury, or death involving flooding, or inundation by seiche, tsunami, or mudflow. Impacts be Class III, less than significant.

### Land Use and Planning

**Impact LU-1.** The project would be consistent with the policies and regulations in applicable land use plans. Impacts would be Class III, less than significant.

**Impact LU-2.** The project would not be incompatible with surrounding land uses. No impacts would occur.

### Noise

**Impact N-2.** Construction activities are not expected to cause substantial noise or vibration effects outside of the Plan Area. Impact would be Class III, less than significant.

### Public Services

**Impact PS-1.** Covered activities under the LOHCP would increase demand for police protection, fire protection, and school services in the Plan Area. Development expedited by the project would be subject to project-specific environmental review, payment of applicable fees, and compliance with fire safety requirements. Impacts would be Class III, less than significant.

### Transportation/Traffic

**Impact T-1.** Project-generated traffic would increase traffic volumes on area roadways and at intersections in and near the Plan Area. This increase would not exceed traffic projections analyzed under buildout of the EAP, and covered activities would also include roadway improvements and maintenance that could benefit roadway operations and LOS. Impacts would be Class III, less than significant.

**Impact T-2.** The project would not result in increased demand for alternative transportation beyond that projected under buildout of the EAP. Impacts would be Class III, less than significant.

# 1 Introduction

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The County of San Luis Obispo (County) prepared this Environmental Impact Report (EIR) to analyze the potential environmental impacts associated with: (1) implementation of the Los Osos Habitat Conservation Plan (LOHCP) and (2) issuance of an incidental take permit (ITP) under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA) of 1973, as amended (16 United States Code [U.S.C.] §1531 et seq.) from the U.S. Fish and Wildlife Service (Service) to the County. These actions are collectively referred to as the “proposed project” or “project.” The proposed project would enable development of private projects and capital projects, ongoing operations and maintenance at private and public facilities, fire hazard abatement, and conservation activities (collectively referred to as “covered activities”) in the area covered by the LOHCP (Plan Area), which is located within the unincorporated portion of San Luis Obispo County in the community of Los Osos. The project is described in detail in Section 2, *Project Description*.

This Introduction describes: (1) the purpose of and legal authority for the EIR; (2) the scope and content of the EIR; (3) lead, responsible, and trustee agencies; and (4) the environmental review process required under the California Environmental Quality Act (CEQA).

## 1.1 Purpose and Legal Authority

The proposed project involves discretionary actions that require approval of the County Planning Commission and the County Board of Supervisors. Therefore, the proposed project is subject to the environmental review requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines*, the purpose of this EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR has been prepared as a Program EIR pursuant to *CEQA Guidelines* Section 15168. A Program EIR is appropriate for multiple and phased projects. As stated in *CEQA Guidelines* Section 15165:

Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effect, the Lead Agency shall prepare a single program EIR for the ultimate project as described in Section 15168. Where an individual project is a necessary precedent for action on a larger project, or commits the Lead Agency to a larger project, with significant environmental effect, an EIR must address itself to the scope of the larger project. Where one project is one of several similar projects of a public agency, but is not deemed a part of a larger undertaking or a larger project, the agency may prepare one EIR for all projects, or one for each project, but shall in either case comment upon the cumulative effect.

The CEQA compliance process will culminate with County Planning Commission and County Board of Supervisors hearings to consider certification of a Final EIR (FEIR) as well as the project’s requested approvals.

## 1.2 Scope and Content

In accordance with the *CEQA Guidelines*, a Notice of Preparation (NOP) for this EIR was distributed for review by affected agencies and the public on September 20, 2013. The NOP is included in Appendix A of this EIR.

This EIR addresses potential environmental impacts associated with the project. Based on discussions among the public, consulting staff, and County staff during the scoping period, the County determined that the environmental issues addressed in this EIR include:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Transportation/Traffic

In preparing the EIR, pertinent County policies and guidelines, certified EIRs and adopted CEQA documents, and other background documents. A full reference list is contained in Section 7, *References and EIR Preparers*.

Section 6, *Alternatives*, was prepared in accordance with *CEQA Guidelines* Section 5126.6, which requires that an EIR examine a reasonable range of alternatives that are capable of avoiding or minimizing a project's significant effects while achieving most of the basic project objectives. Section 6 evaluates the CEQA required "no project" alternative and one alternative development scenario for the Plan Area. Section 6 also identifies the environmentally superior alternative among the alternatives assessed.

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. The *CEQA Guidelines* (14 CCR Section 15000, et seq.) provide the standard of adequacy in which this document is based. Section 15151 of the *CEQA Guidelines* states:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure.

## 1.3 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* define lead, responsible, and trustee agencies (*CEQA Guidelines* Section 15367). The County of San Luis Obispo is the lead agency under CEQA for the project because the County has the principal responsibility of certifying the FEIR and approving the proposed project.

A responsible agency refers to public agencies, other than the lead agency, that have discretionary approval over the project (*CEQA Guidelines* Section 15381). There are no responsible agencies under CEQA for the project.

A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. The California Department of Fish and Wildlife (CDFW) is a trustee agency because the CDFW has jurisdiction over state listed as endangered or threatened species, including those that be affected by project implementation.

## 1.4 Environmental Review Process

The environmental impact review process required under CEQA is summarized below and illustrated in Figure 1. The steps of the environmental impact review process appear below in sequential order.

- **Notice of Preparation (NOP) and Scoping Meeting(s).** Immediately after deciding that an EIR is required, the lead agency must file an NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082). The NOP must be posted in the County Clerk's office for 30 days. The County issued an NOP for the preparation of an EIR and notice of scoping meetings on September 20, 2013. Two public scoping meetings were held to solicit input on the scope and content of this EIR. The scoping meetings were held at the South Bay Community Center located at 2180 Palisades Avenue, Los Osos, California on October 8, 2013, with the first occurring from 3:30 p.m. to 5:30 p.m. and the second occurring from 7:00 p.m. and 9:00 p.m. The public review period for the NOP was 30 days and ended on November 20, 2013. The County received five comment letters based on the NOP, which are summarized in Table 3. Verbal comments were also received during public scoping meetings, which are summarized in Table 4. Written comments received during the public review period for the NOP are included in Appendix A of this EIR.
- **Draft EIR Prepared.** A Draft EIR must contain: (1) table of contents or index; (2) summary; (3) project description; (4) environmental setting; (5) significant impacts (direct, indirect, cumulative, and growth-inducing impacts, including any unavoidable impacts); (6) alternatives; (7) mitigation measures; and (8) irreversible changes.
- **Notice of Completion (NOC) and Notice of Availability (NOA).** Upon completion of a Draft EIR, a lead agency must file an NOC with the State Clearinghouse and prepare an NOA of a Draft EIR. The lead agency must submit the NOA to the County Clerk's office and send a copy of the NOA to anyone who requested it (*CEQA Guidelines* Section 15087). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: (1) publication in a newspaper of general circulation; (2) posting on and off the project site; and/or (3) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be

45 days, unless a shorter period is approved by the State Clearinghouse (PRC 21091). This Draft EIR will have a public review period of 45 days.

- **FEIR.** An FEIR must include: (1) the Draft EIR; (2) copies of comments received during public review; (3) list of persons and entities that commented on the Draft EIR; and (4) responses to comments.
- **Certification of FEIR.** Prior to deciding whether to certify an FEIR and/or approve a proposed project, the lead agency must ensure that: (1) the FEIR has been completed in compliance with CEQA; (2) the FEIR was presented to the decision-making body of the lead agency; and (3) the decision-making body reviewed and considered the information in the FEIR.
- **Lead Agency Project Decision.** A lead agency may: (1) disapprove a project because of its significant environmental effects; (2) require changes to a project to reduce and/or avoid significant environmental effects; or (3) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.
- **Findings/Statement of Overriding Considerations.** For each significant impact identified in an EIR, the lead and/or responsible agencies must find and document, based on substantial evidence, that either: (1) the project has been changed to avoid and/or substantially reduce the magnitude of the impact; (2) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or (3) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that set forth the specific social, economic or other reasons supporting the agency's decision. It is noted that the project would not result in significant and unavoidable impacts; therefore, a Statement of Overriding Considerations would not be required for this EIR.
- **Mitigation Monitoring and Reporting Program (MMRP).** When a lead agency makes findings on significant effects identified in the EIR, it must adopt an MMRP for mitigation measures that were adopted or made conditions of approval for a project to mitigate significant effects.
- **Notice of Determination (NOD).** A lead agency must file an NOD after deciding to certify an FEIR. A lead agency must file the NOD with the County Clerk's office. The NOD must be posted for 30 days and sent to anyone previously requesting notification. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges.

**Table 3 Written Comments Received During the Public Scoping Period**

Commenter	Comment/Request	Where Comment is Addressed
California Coastal Commission	Requests that the EIR clearly describes and evaluates how and why the Urban Service Line (USL) and/or the Urban Reserve Line (URL) may be amended to include or exclude certain areas based on the LOHCP.	Section 2.5, <i>Project Characteristics</i> , provides information regarding the USL and URL. The proposed project would not include or require amendments to the USL or URL.
	States that, per Condition 92 of the Los Osos Water Recycling Facility (LOWRF) coastal development permit, the LOHCP is required to "identify the habitat resources and quality of those resources on the remaining vacant properties within the South Bay Urban Area and the Los Osos Greenbelt."	Section 3.1.5.2 of the LOHCP identifies the vegetation communities and the quality of such habitat.

Commenter	Comment/Request	Where Comment is Addressed
	Requests that the EIR include a map and discussion of the physical characteristics of the study area, including the topography, soil types, migration corridors, and overall climate and microclimates of the Plan Area.	Section 3, <i>Environmental Setting</i> , includes a discussion of climate, topography, seismicity, and hydrology in the Plan Area. Existing biological resources conditions within the Plan Area are included in Section 4.2, <i>Biological Resources</i> . The reader is also referred to the LOHCP for additional details regarding the existing conditions of the Plan Area.
	Requests that the EIR include the results from a current biological assessment and wetland delineation of the Plan Area.	Impacts to biological resources (refer to Section 4.2, <i>Biological Resources</i> ) were assessed based on existing conditions described in the LOHCP.
	Requests that the EIR include the following information: <ul style="list-style-type: none"> <li>▪ A list of sensitive species and habitats that are known to occur and that could occur in the Plan Area</li> <li>▪ Protocol-level survey for those sensitive species likely to occur within the Plan Area</li> <li>▪ Habitat maps (including sensitive plant and animal species locations)</li> <li>▪ Discussion of seed banks</li> <li>▪ Observed and estimated wildlife use of the Plan Area</li> <li>▪ Nesting bird surveys including locations of rookeries/heronries. Protocol level surveys to be conducted for sensitive species/raptors, if present</li> <li>▪ Location of trees suitable for nesting or roosting and location of significant foraging habitat</li> <li>▪ A wetland delineation report and associated maps showing the boundaries of all delineated wetlands</li> </ul>	Existing biological resources are discussed in Section 4.2.1; more detailed information is provided in the LOHCP (Appendix B).
	Requests that the EIR include an analysis of the frequency of wildfires, floods, or other natural disasters affecting the Plan Area. The EIR should also discuss how the LOHCP will avoid and minimize impacts to natural resources and include appropriation mitigation measures.	Section 4.6, <i>Hazards and Hazardous Materials</i> , discusses existing conditions and potential impacts related to wildfires. Section 4.7, <i>Hydrology and Water Quality</i> , discusses existing conditions and potential impacts related to flooding, seiches, and tsunamis.
	Requests that the EIR provide an analysis of the historical ecology of the Plan Area to assist in evaluating the efficacy of the LOHCP.	Historic occurrences of biological resources in the Plan Area are included in the LOHCP (Appendix B).
Morro Bay National Estuary Program (MBNEP)	Provides information regarding reasonably foreseeable projects in the area.	Section 3.3, <i>Cumulative Development</i> , discusses past, present, and reasonably foreseeable future projects included in cumulative impacts analyses.
	Provides information on planning documents prepared by the MBNEP and how to obtain them.	Noted.

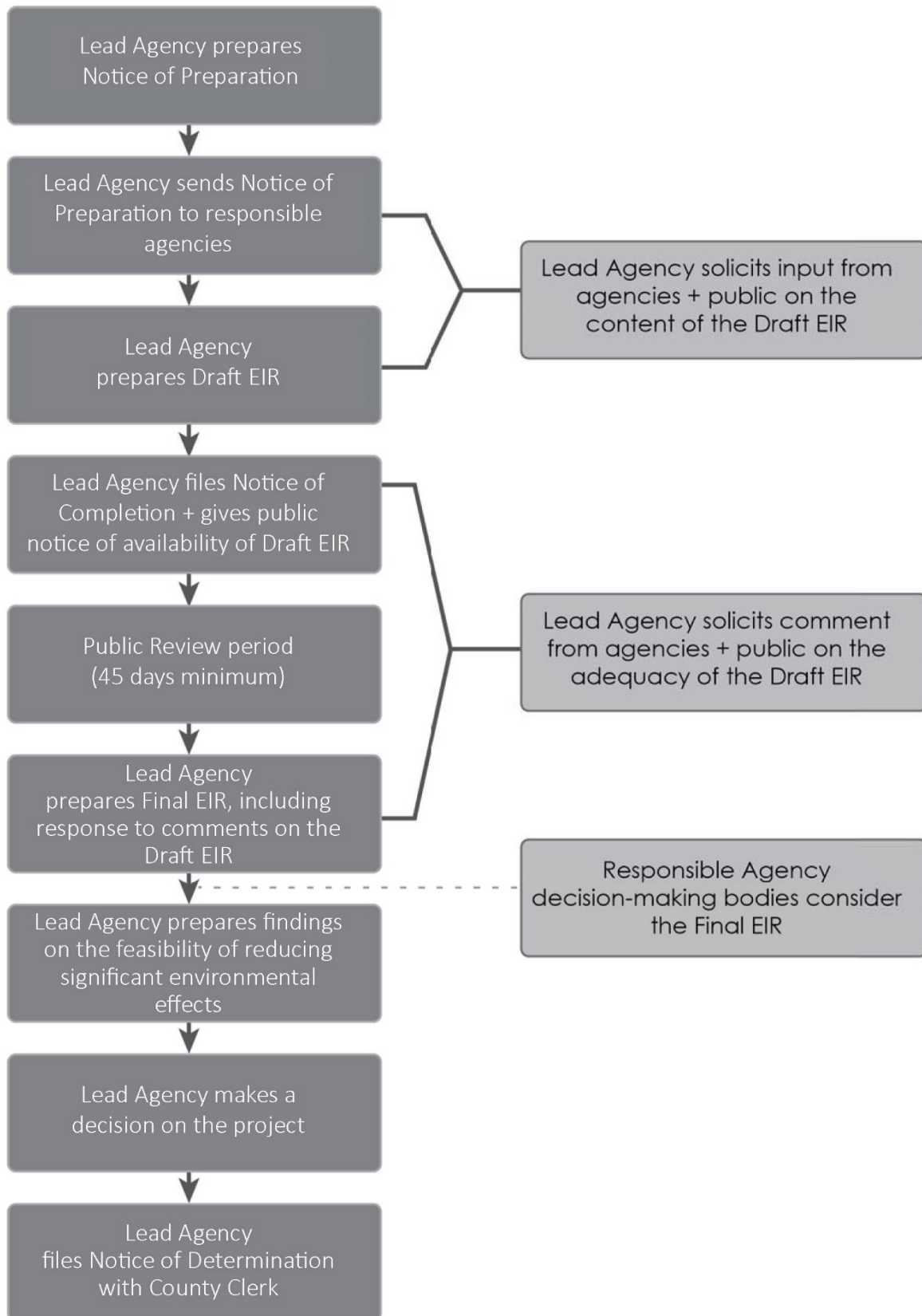


Commenter	Comment/Request	Where Comment is Addressed
Jeff Edwards	Requests that the LOHCP include the Los Osos Waste Water project monitoring data on the Morro shoulderband snail. Recent surveys suggest its presence reaches further than previously found.	Section 3.2.2.1 of the LOHCP (Appendix B) discusses the range of the Morro shoulderband snail, referencing annual construction monitoring reports for the Los Osos Wastewater Project through 2017.
	States that the Morro shoulderband snail was down-listed to “threatened” in 2006 and queries whether it should be delisted completely.	The potential delisting of species is not included in the scope of this project.
	States that the Morro Bay kangaroo rat should be a covered species in the LOHCP; at a minimum within the USL.	The Morro Bay kangaroo rat is included as a covered species in the LOHCP. Refer to Section 2, <i>Project Description</i> .
	Requests that covered capital projects in the LOHCP should include water resource and development and distribution projects identified in the Los Osos Basin Plan action programs. Other projects that should be covered activities include the potential for surface water discharge in Los Osos Creek as part of groundwater basin recharge.	Projects that would be allowed under the LOHCP are discussed in Section 2.5.2.2, <i>Covered Activities</i> .
	Requests that management of the invasive species <i>Asparagus asparagoides</i> be included in the LOHCP.	Projects that would be allowed under the LOHCP (including eradication and control of exotic plants) are discussed in Section 2.5.2.2, <i>Covered Activities</i> .
	Notes that discussion of growth-inducing impacts in the EIR should reflect limitations associated with water availability in Los Osos.	Refer to Section 2.1, <i>Project Background</i> , for a discussion of water supply limitations in the Plan Area.
	Requests that the term of the Incidental Take Permit be 30 years.	The ITP term was determined to be limited to 25 years by the County and the Service. Refer to Section 2, <i>Project Description</i> .
Julie Tacker	Requests that the Los Osos Community Services District conduct an informal consultation under FESA Section 7 to allow thinning of vegetation as a means to abate fire hazards.	Fire hazard abatement activities are included as a covered activity under the LOHCP. Refer to the Community Wildfire Protection Plan heading under Section 2.5.2.2, <i>Covered Activities</i> .
Los Osos Community Services District	Requests that potential impacts to listed species from the following routine Fire Department activities be considered: <ul style="list-style-type: none"> <li>▪ Hydrant maintenance involving flushing of large quantities of water</li> <li>▪ Vegetation clearance around hydrants</li> <li>▪ Enforcement of local weed abatement ordinance</li> <li>▪ Enforcement of local hazard abatement</li> <li>▪ Completion of large scale hazard abatement projects contained in the Los Osos Community Wildfire Protection Plan (CWPP)</li> </ul>	Activities allowed under the LOHCP are discussed in Section 2.5.2.2, <i>Covered Activities</i> .

**Table 4 Verbal Written Comments Received During the Public Scoping Period**

Topic	Comment/Request
Environmental/ Biological Resources	<ul style="list-style-type: none"> <li>▪ Baywood Fine Sands are not good for mitigation lands. Mitigation lands will need to be sourced from outside the Urban Reserve Line. As a result, the broader area of effect will need to be analyzed.</li> <li>▪ What about considering other habitats besides the Coastal Dune Scrub community?</li> <li>▪ How are other species going to be looked at? What is the mechanism to be used to evaluate potential presence? There may be other ‘endangered’ plants for inclusion in LOHCP – such as the salt marsh bird’s beak, and wildlife, such as the legless lizard. Please also consider Spinning Yarn lichen.</li> <li>▪ Has the Morro shoulderband snail been downgraded to threatened from endangered?</li> <li>▪ Are Morro Bay kangaroo rats extinct in the area and if so why are they being included in the LOHCP?</li> <li>▪ Under Population/Housing – are growth inducing impacts going to be discussed in environmental document?</li> <li>▪ Morro shoulderband snail – does that fact that more occurrences of this species than expected have been found during construction of the sewer mean that it might be delisted? If that occurs and the Morro Bay kangaroo rat is determined to be extinct, is the LOHCP needed for just two plants?</li> <li>▪ Information from the LOWRF EIR should be used for the setting in the CEQA document as it is a good source of information.</li> <li>▪ Growth inducement – should be considered attributable to the LOHCP/Basin Plan/WWTP in equal parts.</li> <li>▪ Another person disagreed with this and said it was not attributable to the LOHCP as growth could occur through the individual ITP process instead as is the case at the moment.</li> <li>▪ Is climate change going to be considered?</li> <li>▪ How will fire/fuel modification and manzanita removal be addressed?</li> </ul>
Alternatives	<ul style="list-style-type: none"> <li>▪ Suggested CEQA Alternative – considered landscape maintenance alternative that includes funding for acquisition/maintenance of previously unfunded/unmanaged lands for habitat conservation/enhancement, such as any surrounding greenbelt areas.</li> <li>▪ No Project Alternative – should be considered and analyzed in detail.</li> <li>▪ Would the bike lane area property (So. Bay Blvd) be a good candidate for preservation?</li> </ul>
Habitat Conservation Plan	<ul style="list-style-type: none"> <li>▪ Habitat preservation needs to be supported by an endowed fund. Costs for invasive weed (e.g., veldt grass) management of preserved lands should be included.</li> <li>▪ The LCP amendment for the area was not certified by the Coastal Commission previously.</li> <li>▪ Why isn’t a joint Natural Communities Conservation Plan being considered?</li> <li>▪ How will the LOHCP and EIR/NEPA be coordinated, including the development of a detailed project description?</li> <li>▪ In the past the greenbelt has been the cornerstone of the LOHCP. Will the LOHCP include parcels, description, mapping indicating which are to be preserved?</li> <li>▪ What is the timeline for completion of the LOHCP and associated environmental documentation? Will ‘delays’ be built in? What development timeframe will be used (e.g., 30-year planning horizon? Buildout?)</li> <li>▪ How much of the earlier LOHCP documents have survived?</li> <li>▪ How much of a lot needs to be preserved when species found? What will be the cost?</li> <li>▪ Will individual surveys of parcels continue to be required when applying for future development projects? If so, what is the benefit/cost savings associated with the LOHCP?</li> <li>▪ Should be noted that the Basin Plan still needs to be approved before development can occur. This could affect the timeline for implementation of the LOHCP.</li> <li>▪ California Department of Forestry and Fire Protection (CAL FIRE) activities should be considered for inclusion as covered activities under the LOHCP.</li> <li>▪ Should consider a 30+ year permit term for the LOHCP or tie it in with the payoff time of the</li> </ul>

Topic	Comment/Request
	sewer. <ul style="list-style-type: none"><li>▪ How expensive will future permits be as a result of the LOHCP process?</li><li>▪ What are the costs of these permits? Who is going to pay for the mitigation lands?</li><li>▪ How is mitigation land chosen?</li><li>▪ Will habitat areas need to be large or contiguous with areas to be protected?</li></ul>
Other	<ul style="list-style-type: none"><li>▪ The County has growth cap of 2.3% in place. Based on growth levels in other coastal communities this will likely be more like 1%.</li><li>▪ Willow is a protected wetland tree. The changeover to the sewer is going to affect the hydrological regime in the area and may result in impacts on willow groves. Will this be addressed?</li><li>▪ Water in Level of Severity III under Resource Management System – how can growth occur under this status?</li></ul>

**Figure 1 EIR Environmental Review Process**

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## 2 Project Description

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This section provides a description of the proposed project, including information about the project applicant, project location, major project characteristics, project objectives, and discretionary approvals needed for the project.

### 2.1 Project Background

The Estero Area Plan (EAP; County 2009a) was originally adopted by the County Board of Supervisors on March 1, 1988. The EAP has since been amended several times and remains the current general plan, circulation (transportation) element, and local coastal program for the communities of Los Osos, Cayucos, and surrounding rural areas in unincorporated San Luis Obispo County.

Since 1988, development in the Los Osos area has been limited. In January 1988, the Regional Water Quality Control Board (RWQCB) established wastewater discharge prohibitions for a 1,584-acre portion of Los Osos, which became known as the “prohibition zone,” to protect water quality, which was being degraded by the use of thousands of individual septic systems in this area. This “discharge moratorium” prohibited the County from issuing permits for any new or expanded septic systems that would result in a net increase in wastewater discharge in the prohibition zone. This effectively restricted most new construction or major expansion of existing development in the 1,584-acre prohibition zone until a new wastewater (sewer) system is operational.

An updated EAP was approved by the County Board of Supervisors on November 2, 2004 for submittal to the California Coastal Commission. However, the County subsequently modified the submittal of the updated EAP to the California Coastal Commission by removing the Los Osos urban area due to:

1. Lack of an approved communitywide Habitat Conservation Plan for Los Osos to address potential impacts to environmentally sensitive habitat throughout Los Osos;
2. Uncertainty regarding a communitywide sewer system; and
3. Uncertainty whether long-term groundwater supply would be enough to accommodate the projected buildout of Los Osos.

With approval of the LOHCP and certification of this EIR, the County will satisfy the requirement of providing a communitywide Habitat Conservation Plan.

In 2016, the Los Osos Water Recycling Facility (LOWRF), a wastewater treatment plant, was completed and began operation. Although existing developments are required to connect to the new wastewater system, vacant parcels in the prohibition zone cannot connect to the system until after the County approves an updated community plan for Los Osos. On September 12, 2019, the County released the Draft EIR for the Los Osos Community Plan (County 2019b). The latest (2015) Los Osos Community Plan establishes a vision for the future of Los Osos that guides growth and development through 2035 (County 2015a) and would replace the 2009 EAP. The Los Osos Community Plan Draft EIR states that development within the LOWRF service area, including in the

prohibition zone, would be connected to the LOWRF, which is anticipated to have sufficient capacity for development in the service area through 2035. Areas of development outside the LOWRF service area would utilize project-specific on-site wastewater treatment systems in compliance with the RWQCB (County 2015a). Operation of the LOWRF satisfies the requirement of the County to provide a communitywide sewer system.

With regard to water supply within Los Osos, the Draft EIR for the Los Osos Community Plan (County 2019a) determined impacts to water supply would be potentially significant, but mitigable, because development under the Community Plan would be limited to the sustainable capacity of the Groundwater Basin through the County's Growth Management Ordinance (County Municipal Code Title 26) and additional review standards tied to the Updated Basin Plan for the Los Osos Groundwater Basin (County et al. 2015). Implementation of the water supply mitigation measure from the Draft EIR for the Los Osos Community Plan would satisfy the requirement of the County to provide adequate groundwater supply to the community.

Adoption of the LOHCP and issuance of an ITP would offer a streamlined permitting process for covered activities that would include private development and redevelopment, as well as capital improvement projects, facilities operations and maintenance activities, and conservation program activities. The ITP, in combination with the lifting of the wastewater discharge moratorium as discussed above, would result in a "streamlining" of development in the Plan Area by reducing the length of time and costs associated with the FESA permitting process for covered activities. The LOHCP includes measures to mitigate take of covered animal species and impacts to covered plant species (refer to Section 2.5.1 of this EIR for definitions/explanations of 'take' and 'impacts' related to covered species). Implementation of this community-wide HCP, in contrast with the current project-by-project approach, would maximize the benefits of the conservation program and eliminate potentially expensive and time-consuming efforts associated with processing individual ITPs for each project in the Plan Area. However, adoption of the updated EAP, rather than adoption of the LOHCP and issuance of the ITP to the County, is the action likely to trigger lifting of the discharge moratorium and allow development to proceed in the prohibition zone.

## 2.2 Project Applicant

County of San Luis Obispo  
Planning and Building Department  
976 Osos Street  
San Luis Obispo, California 93408

## 2.3 Project Location

The unincorporated community of Los Osos is located in San Luis Obispo County along the central coastal California and is approximately nine miles west of the City of San Luis Obispo and one mile south of the City of Morro Bay. Figure 2 shows the regional location of the Plan Area and Figure 3 shows the Plan Area and vicinity on an aerial photograph. The study area for this EIR is the 3,644-acre Plan Area that generally borders the Morro Bay Estuary to the west, Morro Bay State Park to the north, Los Osos Creek to the east, and Montaña de Oro State Park to the south.

## 2.4 Existing Site Characteristics

According to the LOHCP, Los Osos is located near the center of the California Floristic Province, which has been identified as one of the world's global biodiversity hotspots due to the richness of plants. Located along the central coastline of California, the area includes a mix of species typically found in northern and southern portions of California.

The Plan Area is located on an ancient dune complex containing a variety of sandy soils with high fertility. These sandy soils, combined with the maritime climate, create conditions that support unique assemblages of plants and animals, including several narrowly endemic species that occur exclusively in the region.

Within the 3,644-acre Plan Area, 948 acres (26 percent) are protected from development (Figure 4). These lands include 925 acres within a State ecological reserve, State parks, County parks and open space, and other land owned by other government agencies and nonprofit organizations. These lands are managed, at least in part, for natural resource conservation and biodiversity protection, and exclude small parks that are largely built-up, such as the 6.8-acre Los Osos Community Park. An additional 24 acres within the Plan Area are protected by open space easements granted by landowners to the County pursuant to the California Open Space Easement Act of 1974 (Government Code Sections 51070-51097). These conservation measures restrict, in perpetuity, development and other uses, including agricultural development, grading, vegetation removal, landscaping, and hardscaping (i.e., paving). Collectively, these public and private lands are referred to as 'protected,' and therefore are not targeted for acquisition to protect habitat in the LOHCP Conservation Program. Selected protected lands would be subject to restoration and enhanced habitat management to promote recovery of covered species (County 2019a).

## 2.5 Project Characteristics

### 2.5.1 Summary

The project region's maritime climate has resulted in natural vegetation communities that support many plant and animal species, including four narrow endemic species<sup>3</sup>:

1. Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*; federally and state listed as endangered, and state fully protected)
2. Morro shoulderband snail (*Helminthoglypta walkeriana*; federally listed as endangered)
3. Indian Knob mountainbalm (*Eriodictyon altissimum*; federally and state listed as endangered)
4. Morro Manzanita (*Arctostaphylos morroensis*; federally listed as threatened)

These four species are referred to as "covered species" in the LOHCP (as discussed in Section 2.5.2.1 of this EIR). These have been listed as threatened and/or endangered under the FESA and/or California Endangered Species Act (CESA) due to the limited amount of potential habitat in a relatively small geographic range, and relatively small and declining populations. 'Take'<sup>4</sup> of the two

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<sup>3</sup> Narrow endemic species include species with very limited geographic ranges.

<sup>4</sup> Under FESA, the term 'take' means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C., §1532 (19)). Furthermore, the term 'harm' is defined as "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering" (16 U.S.C., §1532 (20); 50 C.F.R. §17.3).



Figure 2 Regional Location Map



Fig. 2 Regional Location



Figure 3 LOHCP Plan Area



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Figure 4 Existing Protected Lands within the Plan Area



Imagery provided by Esri and its licensors © 2019. Additional data provided by the County of San Luis Obispo, 2019, and Jodi McGraw Consulting, 2014.



animal species (Morro Bay kangaroo rat and Morro shoulderband snail) and/or their potential habitats within the Plan Area due to implementation of the “covered activities” (as discussed in Section 2.5.2.2 of this EIR) included in the LOHCP would require issuance of a FESA Section 10(a)(1)(B) Incidental Take Permit (ITP) by the U.S. Fish and Wildlife Service (Service). Although federal ITPs are limited to the take of federally listed animal species, the LOHCP also covers potential impacts to the two listed plant species (Indian Knob mountainbalm and Morro manzanita) in the Plan Area. Any potential for ‘take’<sup>5</sup> of the two state listed species (Morro Bay kangaroo rat and Indian Knob mountainbalm) would require issuance of a state ITP by the California Department of Fish and Wildlife (CDFW) under Fish and Game Code (FGC) Section 2080. However, the County would avoid take, as defined under CESA, of the two state listed covered species; therefore, the County is not requesting an ITP issued pursuant Section 2081 of CESA.

In addition to identifying covered activities that would be allowed under the ITP, the LOHCP discusses potential impacts to covered species and avoidance, minimization, and mitigation measures that the County and individual project applicants would be required to implement for construction and operation of covered activities.

Participation in the implementation of the LOHCP and use of the ITP are voluntary. Individual project applicants that do not want to participate in implementation of the LOHCP can ensure compliance with federal, state, and local permitting requirements on a project-by-project basis. However, the purpose of the LOHCP to streamline the permitting process, which would reduce the permitting timeline and costs to individual project applicants, while contributing to a more comprehensive conservation strategy for the covered species.

In addition to addressing impacts to covered species, the LOHCP’s conservation program (Section 5 of the LOHCP) includes measures to avoid and minimize impacts to other, but not all other, special status species in the Plan Area, including:

- California seablite (*Suaeda californica*; federally listed as endangered)
- Salt marsh bird’s beak (*Chloropyron maritimum* ssp. *maritimum*; federally and state listed as endangered)
- Marsh sandwort (*Arenaria paludicola*; federally and state listed as endangered)
- Steelhead (south-central California coast steelhead Distinct Population Segment [DPS]; *Oncorhynchus mykiss irideus*; federally listed as threatened)
- California red-legged frog (*Rana draytonii*; federally listed as threatened)
- California black rail (*Laterallus jamaicensis coturniculus*; state listed as threatened)
- Golden eagle (*Aquila chrysaetos*; federally protected through the Bald and Golden Eagle Protection Act and state fully protected)
- White-tailed kite (*Elanus leucurus*; state fully protected)

Implementation of the LOHCP would help conserve the covered species and enhance the vegetation communities that support them, as well as other special status species, while allowing compatible growth and development consistent with applicable local, state, and federal laws.

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<sup>5</sup> Under CESA, the term ‘take’ means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (FGC §86).

## 2.5.2 Project Components

Implementation of the project would include issuance of an ITP to the County by the Service for incidental take of Morro Bay kangaroo rat and Morro shoulderband snail individuals, and impacts to Indian Knob mountainbalm and Morro manzanita from covered activities included in the LOHCP. Take/impact authorization could then be extended to individual landowners and other entities with projects located in the Plan Area that meet the eligibility criteria set forth in the LOHCP through Certificates of Inclusion (COIs).

The County would select an Implementing Entity (IE) that would contract with the County to implement most components of the LOHCP. The IE must be a non-profit conservation organization approved by the Service and CDFW, and would be responsible to process take/impact coverage applications for all projects, issue COIs for covered activities, and implement the LOHCP, including the conservation program, on behalf of the County. The IE would also be responsible for ensuring that individual project applicants for COIs meet the requirements set forth in the LOHCP.

COIs would be available to applicants with projects in the Plan Area that meet the eligibility criteria set forth in the LOHCP. Signed COIs would extend the ITP's take coverage to individual landowners and other entities for incidental take of covered species as a result of development projects on their parcels during the permit term, provided the individuals meet the eligibility criteria in the LOHCP. Signed COIs would cover applicants for incidental take of Morro Bay kangaroo rat and Morro shoulderband snail, and impacts to Indian Knob mountainbalm and Morro manzanita as a result of development projects on their parcels during the 25-year permit term.

The ITP issued by the Service to the County pursuant to the proposed LOHCP would expire when either the total amount of habitat disturbance authorized under the ITP is reached (532 acres), or 25 years have elapsed since issuance of the ITP, whichever occurs first. Development projects covered under the LOHCP (covered activities) must be completed before the ITP expires. However, any FESA Section 10 permit is eligible to be renewed before the term expires if so stated in the permit. The LOHCP includes provisions for permit extension as long as take remains below the authorized amount specified in the ITP. Service regulations (50 CFR §13.22) allow a permit to remain in effect while the Service considers a renewal request, but only if the request is received at least 30 days prior to expiration.

The LOHCP is further described below. Additional detail can be found in the LOHCP, which is hereby incorporated by reference in this EIR.

### 2.5.2.1 Covered Species

The ITP issued for the LOHCP would cover the take of two animal species: the federally and state listed as endangered Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*) and the federally listed as endangered Morro shoulderband snail (*Helminthoglypta walkeriana*). The ITP would authorize take of any form, including harassment, injury, or mortality, that could result from covered activities. In addition, the LOHCP covers two plant species: the federally and state listed as endangered Indian Knob mountainbalm (*Eriodictyon altissimum*) and the federally listed as threatened Morro manzanita (*Arctostaphylos morroensis*). It is noted that the Morro shoulderband snail and Morro manzanita are not state listed as threatened or endangered, or candidate species for state listing. Avoidance and minimization measures (AMMs) incorporated into the LOHCP would help ensure that Morro Bay kangaroo rat is not present on any potential habitat for the species where ground-disturbing activities are proposed and, consequently, no take of Morro Bay kangaroo rat is anticipated.

The four covered species are briefly discussed below. Additional information regarding these species is included in Section 3.2.2 of the LOHCP:

- **Morro Bay Kangaroo Rat.** The Morro Bay kangaroo rat (federally listed as endangered; state listed as endangered and state fully protected) is a small, nocturnal, fossorial<sup>6</sup> rodent endemic to the Baywood fine sands ecosystem centered on the community of Los Osos in coastal San Luis Obispo County. Its habitat includes compacted sandy soils with slopes less than 15 degrees, supporting a range of vegetation. The Morro Bay kangaroo rat's range is estimated to be less than five square miles. Optimal habitat for the species appears to be early-successional stages of coastal sage scrub, characterized by scattered subshrubs and shrubs less than three feet tall, interspersed with herbaceous plants and bare ground. Characteristic plants within the species' habitat include sandcarpet (*Cardionema ramosissimum*), wedgeleaf ceanothus (*Ceanothus cuneatus*), western thistle (*Cirsium occidentale*), California croton (*Croton californicus*), seacliff buckwheat (*Eriogonum parvifolium*), wedgeleaf horkelia (*Horkelia cuneate*), deer weed (*Acmispon glaber*), and grasses.
- **Morro Shoulderband Snail.** The Morro shoulderband snail (federally listed as endangered) is a terrestrial mollusk endemic to the area immediately north and south of Morro Bay in coastal San Luis Obispo County. The current known range is estimated to encompass approximately 7,700 acres, mostly centered on Los Osos north of Hazard Canyon, west of Los Osos Creek, and south of Morro Bay and also includes a narrow strip of coastal dunes north of Morro Bay in Morro Strand State Park. Native habitat occupied by the species includes coastal sage scrub along the immediate coast, and coastal sage scrub and open central maritime chaparral communities on stabilized dunes further inland. Morro shoulderband snail is often observed in areas featuring dense plant cover comprised of shrubs or mat-forming species (e.g., iceplant) where plant cover, including branches, is in contact with the ground. Individuals are typically patchily dispersed and observed in clumps of coastal sage scrub or veldt grass (*Ehrharta calycina*).
- **Indian Knob Mountainbalm.** Indian Knob mountainbalm (federally and state listed as endangered; California Rare Plant Rank [CRPR] 1B.1) is a shrub in the borage family (Boraginaceae). Indian Knob mountainbalm is known from just seven occurrences in western San Luis Obispo County. Two occurrences are on Indian Knob, a rock outcrop area south of San Luis Obispo and north of Pismo Beach, approximately 13 miles east of Los Osos. Two additional occurrences represented by a total of four, disjunct stands are in Hazard Canyon within Montaña del Oro State Park to the south of the Plan Area. The remaining three occurrences are within the LOHCP Area: one within the Broderson site and two within the Bayview Unit of the Morro Dunes Ecological Reserve. A census conducted in April 2016 of the two occurrences within the Bayview Unit found a total of 45 individual plants; however, the species was not observed in the Broderson Unit. Although the population of Indian Knob mountainbalm has not been comprehensively censused throughout the species' range, it is estimated that fewer than 600 individuals remain with most (approximately 500) located in the Indian Knob occurrence. Indian Knob mountainbalm occurs on sandy soils derived from marine sandstone at Indian Knob, and Pleistocene older and partly cemented Aeolian deposits (i.e., the Baywood fine sands) in Los Osos. In both areas, the species occurs in vegetation characterized as a mosaic of chaparral and oak woodland, within which the species distribution is very limited.

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<sup>6</sup> Fossorial animals are those that are adapted for digging and typically live underground in burrows.

- **Morro manzanita.** Morro manzanita (federally listed as threatened; CRPR 1B.1) is a large, evergreen shrub in the heath family (Ericaceae) that is endemic to the Los Osos region, primarily on Baywood fine sands. Within the approximately 890 acres of its current range, Morro manzanita covers approximately 350 acres. Occurring primarily in central maritime chaparral communities, Morro manzanita is the dominant species within Morro manzanita chaparral. The species also occurs in low abundance in coast live oak woodland in the understory or canopy gaps of coast live oak (*Quercus agrifolia*). Scattered Morro manzanita may also be found in other vegetation communities, including in developed areas.

### 2.5.2.2 Covered Activities

As described in the *Habitat Conservation Planning and Incidental Take Permit Processing Handbook* (Service and National Marine Fisheries Service [NMFS] 2016), covered activities are activities within the Plan Area that: (1) are likely to result in incidental take of a covered species; (2) are reasonably certain to occur during the life of the permit; and (3) are controlled by the applicant(s) to some extent. Based on this guidance, and in consideration of the goals of the LOHCP, the following criteria were established for covered activities in the LOHCP. An activity must meet all of these criteria to be considered a covered activity under the LOHCP:

- **Location.** The activity would occur in the 3,644-acre Plan Area;
- **Timing.** The activity would occur, or is likely to occur, during the 25-year period of the ITP;
- **Entity.** The activity would be conducted by the County, subject to the County's jurisdiction as the local land use authority, or otherwise conducted under contract with the County or the IE (which would be under contract with the County);
- **Impact.** The otherwise lawful activity could have the potential to incidentally impact one or more of the covered species by causing ground disturbance, which includes any activity that would remove vegetation, or compact or displace soil not covered by existing impervious surfaces;
- **Addressed Impacts.** The effects of the taking or impacts of the activity were evaluated and addressed as part of the LOHCP; and
- **Goals.** The activity would not prevent achievement of the biological goals and objectives of the LOHCP.

### Anticipated Proponents of Covered Activities

The following entities are anticipated to conduct covered activities under the LOHCP and ITP:

- **Private property owners.** Owners of private land within the Plan Area who choose to participate in this voluntary program and plan to construct residential and/or commercial development projects that are considered covered activities under the LOHCP.
- **County of San Luis Obispo.** Three County departments are anticipated to conduct covered activities in the Plan Area:
  - **County Public Libraries.** Operates and manages the Los Osos Library
  - **Parks and Recreation Department.** Operates and manages parks, open space, and recreation facilities; develops and maintains trails; and conducts recreational programs
  - **Public Works Department.** Responsible for construction and maintenance of infrastructure, including roads and drainage systems

- **Los Osos Community Services District (LOCSO).** This local agency provides the following services to approximately 3,127 acres of the Plan Area: water, wastewater, drainage, parks, recreation, street lighting, solid waste, and fire emergency and rescue response.
- **Golden State Water Company (GSW).** This private utility company maintains water facilities used to supply water within approximately 1,569 acres of the Plan Area.
- **S&T Mutual Water Company (S&T).** This private utility company provides water within approximately 90 acres area near the Sea Pines Golf Course in Los Osos.
- **California Department of Fish and Wildlife.** This state agency manages the 279-acre Morro Dunes Ecological Reserve, which is within the Plan Area, as well as the 1,307-acre Morro Bay Wildlife Area located adjacent to the Plan Area.

Although the U.S. Bureau of Land Management owns and manages approximately 5 acres of land in the northeastern portion of the Plan Area, take resulting from any activities on this property should be covered through a Section 7 consultation with the Service, rather than under a Section 10 ITP; therefore, no BLM activities were included as part of the LOHCP. In addition, although the California Department of Parks and Recreation (Department) manages land within the Plan Area, the Department did not identify any covered activities to be included in the LOHCP. The Department also elected not to have its land considered for enrollment in the LOHCP Preserve System. As lands within the State Parks system can influence the effectiveness of the LOHCP conservation strategy, the County and IE would coordinate implementation of the LOHCP conservation strategy with the Department to maximize effectiveness of regional conservation efforts.

Additional entities may also seek coverage under the LOHCP for individual projects that meet the covered activity criteria. To receive take coverage, all project proponents must apply to the IE, which would coordinate directly with the County Department of Planning & Building to process applications for County-permitted projects.

## Covered Activities

Covered activities under the LOHCP include private development, capital projects, facilities operations and maintenance, fire hazard abatement, and conservation program implementation. Covered activities include both one-time actions occurring in discrete locations, such as capital improvements (e.g., library expansion), as well as ongoing actions that may occur repeatedly throughout the Plan Area (e.g., mowing road medians). Covered activities are described in detail below.

### *Private Development*

The ITP would authorize take of Morro Bay kangaroo rat and Morro shoulderband snail and impacts to Indian Knob mountainbalm and Morro manzanita by private development activities permitted by the County through both ministerial and discretionary permit processes. Section 15369 of the *CEQA Guidelines* defines “ministerial” as “a governmental decision involving little or no personal judgment by the public official as to the wisdom or manner of carrying out the project.” Section 15357 of the *CEQA Guidelines* defines a “discretionary project” as a project which requires the exercise of judgment and deliberation when the public agency or body decides to approve or disapprove a particular activity...”

For private development projects to be considered covered activities under the LOHCP, the projects must meet additional criteria, which are based on the following three factors:



- **Development Type.** Development projects are comprised of two types: (1) commercial and multi-family residential developments and (2) single-family residential development.
- **Parcel Size.** The parcel is within one of several size categories used for planning purposes.
- **Planning Zone.** The location of the parcel with respect to the USL.

The general types of covered activities under private development include:

- **New Construction.** New construction includes new commercial and residential construction, including associated onsite improvements (e.g., driveways, utilities, landscaping, storm water control) that are typical components of a development project. For parcels outside of the Urban Services Line (USL)<sup>7</sup>, as well as 12 unprotected (i.e., not protected by conservation easements or other legal mechanisms), privately owned parcels in the USL zoned for Recreation and Open Space, development must be contained in maximum disturbance envelopes, which have been designed to protect habitat while allowing reasonable use of the land. The disturbance envelopes include areas containing non-natural elements, such as buildings and other facilities (e.g., septic systems) and infrastructure, hardscapes (e.g., driveways and patios), and non-native plantings, including cultivated agriculture, ornamental plants, and other plant species not native to the Baywood fine sands ecosystem. Disturbance envelopes must include areas of temporary disturbance, such as corridors in which underground utilities would be installed, as well as areas that would be permanently disturbed by projects.

Table 5 shows the number of parcels and acreage of private, undeveloped land eligible for development under the LOHCP in the Plan Area. There are total of 684 vacant private parcels (682.1 acres) in the Plan Area that could potentially be developed during the 25-year permit term with the potential to affect up to approximately 258.0 acres of land within the Plan Area. Of the 684 vacant private parcels, 639 parcels (294.5 acres) are located in the USL and 45 parcels (387.6 acres) are located outside the USL.

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<sup>7</sup> The County's Coastal Zone Land Use Ordinance (CZLUO) requires area plans to delineate an Urban Services Line (USL) to outline the area of existing development and account for planned urban development and provisions of necessary services, such as water and wastewater services. The EAP delineates the USL for Los Osos.

**Table 5 Undeveloped Private Land Eligible for New Construction in Plan Area**

Land Use and Parcel Size <sup>1</sup>	Number of Vacant Private Parcels	Acres of Vacant Private Parcels	Maximum Development Envelope <sup>2</sup>	Maximum Development Acreage on Vacant Parcels <sup>3</sup>
<b>Inside the USL</b>				
Single-Family Residential Parcels less than 20,000 square feet in size	469	77.8	All parcels fully developed	77.8
Single-Family Residential Parcels between 20,000 square feet and 1 acre in size	30	18.0	20,000 square feet of development per parcel	13.8
Single-Family Residential Parcels greater than 1 acre in size	35	95.6	1 acre of development per parcel	35.0
Multi-Family Residential and Commercial Parcels	105	103.1	All parcels fully developed	103.1
<b>Subtotal</b>	<b>639</b>	<b>294.5</b>	<b>–</b>	<b>229.7</b>
<b>Outside the USL</b>				
Single-Family Residential Parcels less than 30,000 square feet in size	8	2.8	All parcels fully developed	2.8
Single-Family Residential Parcels between 30,000 square feet and 5 acres in size	24	53.6	30,000 sf of development per parcel	16.5
Single-Family Residential Parcels greater than 5 acres in size	13	331.2	30,000 sf of development per parcel	9.0
<b>Subtotal</b>	<b>45</b>	<b>387.6</b>	<b>–</b>	<b>28.3</b>
<b>Total</b>	<b>684</b>	<b>682.1</b>	<b>–</b>	<b>258.0</b>

<sup>1</sup> Single-family residential parcels include land designated Residential Rural, Residential Suburban, and Residential Single-Family, and 12 privately owned lots designated as Recreation or Open Space. The latter 12 lots can be developed as the other designations listed in this table. Multi-family residential and commercial parcels include land designated as Commercial Retail, Commercial Service, Office Professional, and Residential Multifamily.

<sup>2</sup> Maximum area that a given parcel can be disturbed permanently or temporarily during development.

<sup>3</sup> Maximum acreage that can be developed on the parcels, based on the maximum disturbance envelope and amount of vacant land.

Source: LOHCP Tables 2-6 and 4-1

- **Remodels and Reconstruction.** Remodels and reconstruction include additions or adjustments to existing commercial and residential buildings and associated onsite infrastructure and facilities that increase the development envelope of the existing development.

Table 6 shows the number of parcels and acreage of private developed land that could potentially be eligible for redevelopment, including remodeling, additions, and other construction on 5,290 developed private parcels (1,525 acres).<sup>8</sup> This activity is anticipated to affect approximately 155.7 acres within the Plan Area.

<sup>8</sup> There is a total of 5,290 parcels (1,525 acres) in the Plan Area. However, seven of these parcels (49 acres) have other land uses that do not allow for development and were therefore not included in this summary.

**Table 6 Developed Private Land Eligible for Remodeling and Reconstruction in Plan Area**

Land Use	Number of Developed Private Parcels	Acres of Developed Private Parcels	Maximum Redevelopment Envelope	Maximum Redevelopment Acreage on Parcels <sup>1</sup>
Commercial	518	162	15 percent of total parcel acreage	24.3
Other (e.g., schools, parks)	7	49	No additional development	0
Residential Inside the USL	4,558	964	10 percent of total parcel acreage	96.4
Residential Outside the USL	207	350	10 percent of total parcel acreage	35.0
<b>Total</b>	<b>5,290</b>	<b>1,525</b>	<b>–</b>	<b>155.7</b>

<sup>1</sup> Estimated acreage that could be impacted by redevelopment of developed private parcels.

Source: LOHCP Table 2-7

- **Defensible Space.** Defensible space includes selective vegetation removal in compliance with PRC 4291, which requires property owners to maintain a defensible space around structures. Defensible space is an area of reduced vegetation, which, in turn, would slow the spread of fire and enable firefighters to safely access structures. Defensible space should extend 100 feet from structures or to the property line, whichever is nearer. The first 30 feet from a structure should not contain flammable vegetation or woodpiles. Within the remaining 70 feet (or to the property line), vegetation should be reduced/minimized and spaced to reduce the speed and/or intensity of any fires.

### *Capital Improvement Projects*

The ITP would authorize take of Morro Bay kangaroo rat and Morro shoulderband snail and impacts to Indian Knob mountainbalm and Morro manzanita by eligible capital improvement projects conducted by public entities, private utility companies, and conservation organizations. Capital improvement projects include the creation, expansion, and/or maintenance of parks and recreational facilities, other public facilities, trails, roadways, and water, wastewater, and drainage infrastructure. Specific capital improvement projects that are slated to be implemented and would be considered covered activities under the LOHCP include, but are not limited to:

- **County Public Libraries.** During the 25-year permit term, the County plans to expand or relocate the main library building (or demolish the existing library and build a larger library) and add paved parking on the 0.3-acre of undeveloped land on the south and west sides of the existing building.
- **County Parks and Recreation Department.** The Parks and Recreation Department operates and manages parks, open space, trails, and recreation facilities, and conducts recreational programs. Anticipated capital projects include expansion of the Los Osos Community Park; development of a new approximately 10-acre park, a new approximately 3-acre aquatic center, a new approximately 1.5-acre boat ramp, 10 new multi-use trails (totaling approximately 7.8 miles), and 14 new coastal access points; and expansion of the boardwalk and placement of an approximately 5,000-foot-long fence in the Elfin Forest Natural Preserve. Of these projects, about half (32.8 acres) are anticipated to be constructed during the 25-year permit term.
- **County Public Works Department.** The Public Works Department is responsible for construction and maintenance of infrastructure, including roadways and drainage systems. Anticipated

capital improvement projects include extension of two roads to adjacent arterials (approximately 0.7 acre of disturbance); expansion of existing roads to create new lanes (including turn lanes and bike lanes), install signs, and realign routes (about 33.0 acres of disturbance); creation of detention basins in seven sites to improve drainage (about 11.4 acres of disturbance); and conducting drainage improvements in the County right-of-way and along road shoulders (about 7.0 acres of disturbance).

- **Los Osos Water Purveyors.** Los Osos Community Services District (LOCSD), Golden State Water Company (GSW), and S-&-T Mutual Water Company (S&T) provide water service in Los Osos. Capital improvements that could be conducted by the water purveyors include projects recommended in the Updated Basin Plan for the Los Osos Groundwater Basin (County et al. 2015) such as decommissioning, construction, and expansion of water wells; nitrate removal and groundwater blending projects; new pipeline construction, and water main upgrades. These projects could potentially disturb approximately 5.6 acres.

### *Facilities Operations and Maintenance*

Activities conducted by agencies and organizations to operate and maintain existing facilities would be considered covered activities under the LOHCP. Such activities could include repair or replacement of existing infrastructure, such as roadways, drainage systems, and water systems, as well as maintenance of parks and open space. These activities could potentially disturb approximately 27.8 acres.

### *Community Wildfire Protection Plan*

The ITP would authorize take of Morro Bay kangaroo rat and Morro shoulderband snail and impacts to Indian Knob mountainbalm and Morro manzanita associated with vegetation management and related fire hazard abatement work implemented as part of the Los Osos Community Wildfire Protection Plan (CWPP). The CWPP identifies areas that could be subject to a range of fuel reduction and fire hazard abatement treatments in and adjacent to Los Osos (California Department of Forestry and Fire Protection [CAL FIRE]/San Luis Obispo County Fire 2013; Figure 5). Anticipated treatments include removal of downed, dead, and/or diseased vegetation; creation of shaded fuel breaks; and mowing of non-native grassland.

The Service and CDFW worked with CAL FIRE to develop avoidance and minimization measures (AMMs) for the CWPP (Table 5-4 of the LOHCP). With implementation of the AMMs, activities under the CWPP would avoid take of Morro Bay kangaroo rat and impacts to Indian Knob mountainbalm, and is anticipated to result in negligible effects on Morro shoulderband snail and Morro manzanita. Accordingly, acreage associated with the CWPP is not included in the total calculation of take/impacts, which, in turn, is used to identify the compensatory mitigation. Implementation of the CWPP would not require compensatory mitigation.

### *Conservation Program*

The LOHCP conservation program includes those measures intended to avoid, minimize, and mitigate take of/impacts to covered species and habitats associated with covered activities. The LOHCP conservation program is intended to restore and manage habitat with the LOHCP Preserve System, which would be comprised of a network of protected lands that would be managed and monitored in perpetuity to mitigate the impacts of covered activities on covered species. Although the conservation program would ultimately benefit and promote recovery of covered species and their habitats, some measures or treatments of the conservation program may cause short-term

effects that may result in take of/impact to covered species and/or their habitats. Such measures and treatments could potentially include the following:

- **Species Protection Measures.** These measures include pre-project surveys, installation of temporary fencing and other barriers to limit project disturbance areas, and capture and relocation of covered species individuals to suitable habitat that is permanently protected and located away from covered activity development envelopes and adjacent areas that could be indirectly impacted.
- **Species Population Enhancement Measures.** These measures include collection of seeds and/or cuttings of covered plant species for salvage, storage in a seed bank, genetic analysis, and/or propagation for revegetation of the LOHCP Preserve System as part of restoration and enhancement projects. These measures also include capture and relocation of Morro shoulderband snail individuals to establish and/or enhance populations following successful restoration.
- **Habitat Management and Restoration.** The LOHCP Preserve System would be actively managed to maintain and enhance the natural structure and species composition of the vegetation communities and the size and persistence of covered species populations. Habitat management and restoration would be designed to address factors that are negatively impacting species populations and vegetation communities, including management of vegetation using manual and mechanical techniques and/or fire, eradication and control of exotic plants and non-native animals, erosion control in unnaturally denuded areas, demolition and removal of structures and other infrastructure, and removal of debris and hazardous material.
- **General Land Stewardship Management.** The general activities that would be required to maintain the LOHCP Preserve System include maintenance of existing facilities (e.g., fences, gates, roads, trails, irrigation systems); installation and maintenance of trails; development and maintenance of interpretive facilities (e.g., signs, kiosks, wildlife observation platforms); and creation and maintenance of parking lots, staging areas, picnic areas, and restrooms.
- **Monitoring.** Long-term management of the LOHCP Preserve System would require monitoring of covered species, which could include trapping, handling, and marking individuals, and collecting individuals for *ex situ* (e.g., laboratory) studies.

An Adaptive Management and Monitoring Plan would be prepared by the IE within the first three years of implementation of the LOHCP. The AMMP would be subject to approval by the Service, CDFW, and other agencies that have jurisdiction within the LOHCP Preserve System. The AMMP would include restoration, management, and monitoring activities necessary to achieve the goals and objectives of the LOHCP.

## **Activities Not Covered Under the LOHCP**

In developing the LOHCP, the County identified activities that would not meet the criteria needed to qualify as a covered activity. These activities were (1) not compatible with the LOHCP biological goals and objectives and/or (2) not sufficiently described to enable evaluation of their impacts.

The following activities would not be covered under the LOHCP:

- **Agricultural Land Conversion.** These activities would convert habitat to agricultural uses.
- **Construction Activities that Would Not Cause Soil Disturbance.** These activities include projects such as interior remodeling or vertical construction in which disturbance would be confined to the existing disturbance footprints.



Figure 5 Community Wildfire Protection Plan Treatment Areas





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- **Projects Impacting Riparian or Wetland Communities Unless a Separate Permit is Provided.** These activities would occur in or near, or otherwise are anticipated to adversely affect, wetlands and/or riparian areas. Project proponents of such activities would be required to obtain separate permits to cover impacts to biological resources.

## 2.6 Project Objectives

The objectives of the proposed project include the following:

- Provide a streamlined permitting process, while ensuring improved conservation
- Ensure compliance with the FESA, the CESA, and other applicable laws and regulations
- Provide permanent protection for and management of the covered species and their habitats, and achieve long-term recovery through a conservation program
- Maintain and enhance connectivity of habitat in the Plan Area in order to promote recovery and long-term viability of the covered species

## 2.7 Required Approvals

The proposed project would require the discretionary approval of the County of San Luis Obispo, acting as the CEQA lead agency with the primary approval authority. Implementation of the LOHCP would require approval from the Service, including the issuance of an ITP to allow take of/impacts to covered species. The Service is preparing a separate National Environmental Policy Act (NEPA) compliance document (an Environmental Assessment) to allow approval of the federal action of issuing an ITP for federally listed species.

## 2.8 Project Alternatives

As required by Section 15126(d) of the *CEQA Guidelines*, this EIR discusses environmental impacts associated with alternatives to the proposed project. The following two alternatives are further described and analyzed in Section 6, *Alternatives*:

1. **Alternative 1: No Project.** Under the No Action Alternative, the Service would not issue the Section 10(a)(1)(B) ITP and the LOHCP would not be implemented.
2. **Alternative 2: Reduced Take.** Under the Reduced Take Alternative, the Service would issue the Section 10(a)(1)(B) ITP and the LOHCP would be implemented; however, the maximum amount of development covered under the LOHCP and associated ITP would be 266 acres, which is 50 percent of the maximum amount under the proposed project.



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## 3 Environmental Setting

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This section describes the general environmental setting of the Plan Area. Specific descriptions of the setting for each environmental issue is included in Section 4, *Environmental Impact Analysis*.

### 3.1 Regional Setting

The Los Osos urban area is located in the western portion of the agriculturally productive Los Osos Valley. Los Osos is bounded by the Los Osos Creek riparian corridor to the east and southeast, and the older coastal dunes to the north, south, and southwest. Morro Bay Estuary, one of the largest wetland systems along the central coast of California, bounds Los Osos to the northwest. Los Osos is situated on an ancient dune complex with sandy soil known as the Baywood fine sands. The combination of the region's soil and maritime climate have resulted in a variety of natural vegetation communities, including coastal sage scrub, central maritime chaparral, and coast live oak woodland, that support unique and diverse assemblages of plants and animals.

### 3.2 Project Site Setting

The 3,644-acre Plan Area includes the contiguous Baywood fine sands ecosystem in which covered activities and the LOHCP conservation program would be implemented (Figure 3). The Plan Area boundary generally follows the Los Osos Urban Reserve Line (URL)—the boundary separating urban and rural land uses in the region—but deviates from that boundary to better meet the goals of the LOHCP. The western portion of the Plan Area extends beyond the URL to incorporate the Baywood fine sands ecosystem within the Morro Dunes Ecological Reserve and the Morro Dunes Natural Preserve (part of Montaña de Oro State Park) that is to the east of the Morro Sand Spit. The Plan Area also extends to the north to incorporate the habitat within the Elfin Forest Natural Preserve. The Plan Area excludes a small area that is outside the Baywood fine sands ecosystem in the southern portion of the URL. The Plan Area also excludes wetlands within the northeastern portion of the URL. Figure 3 (in Section 2, *Project Description*) shows the Plan Area and its immediate vicinity.

#### 3.2.1 Climate

The climate in Los Osos is characterized as Mediterranean. Due to its location along the central coastline of California, Los Osos experiences moderate temperatures with the mean high temperature of 66 degrees Fahrenheit (°F) in July and mean low temperature of 41°F in January. Dense morning fog is frequent during summers and helps reduce temperatures. Los Osos receives an average of 18 inches of precipitation, which occurs as rain primarily between November and March (County 2019a).

#### 3.2.2 Topography

Topography is flat to gently sloping throughout the majority of the Plan Area, with steep terrain limited to the south where the ancient dunes abut the Irish Hills, which is part of the Coast Range

Mountains. Elevations within the Plan Area range from just above mean sea level adjacent to the Morro Bay Estuary to 275 feet above mean sea level at the base of the Irish Hills.

### 3.2.3 Seismicity

Los Osos is within a seismically active region that includes several active earthquake faults, including the Los Osos fault zone, which traverses the Los Osos Valley.

### 3.2.4 Hydrology

The Plan Area is within the Los Osos Creek Watershed, an approximately 28-square mile area east and southeast of Morro Bay. The Plan Area contains Los Osos Creek and Eto Creek. Los Osos Creek has an approximately 0.75-mile-long estuary that extends from its confluence with another creek until it drains into Morro Bay. The Plan Area also includes three ponds: a 0.8-acre pond in the upper headwaters of Eto Creek, a 4.5-acre pond on Eto Creek just upstream of its confluence with Los Osos Creek, and a freshwater pond in the Sweet Springs Preserve.

## 3.3 Cumulative Development

Cumulative projects include past, present, and reasonably foreseeable future projects in the vicinity of a project site. As defined in Section 15355 of the *CEQA Guidelines*, a cumulative impact consists of an impact resulting from the combination of the project evaluated in the EIR along with other projects. In addition to analyzing a proposed project's direct and indirect impacts, an EIR must also determine if a project's contribution to cumulative impacts would be cumulatively considerable. A project's impacts would be cumulatively considerable if the incremental effects of a project are significant when viewed in connection with the identified cumulative projects. Potential cumulative impacts related the proposed project are evaluated in Section 4, *Environmental Impact Analysis*. The approved and pending projects in the general vicinity of the Plan Area are presented below.

### 3.3.1 Other Habitat Conservation Plans

The Service has identified other habitat conservation planning efforts within the vicinity of the Plan Area that may contribute to cumulative impacts; these plans are summarized in Table 7.

**Table 7 Other Habitat Conservation Plans in Vicinity of the Plan Area**

<b>Name</b>	<b>Location (Acreage)</b>
<b>Issued in the Last Five Years</b>	
Mammen	1254 Vista del Osos (0.35 acre)
Longworth	292 Madera Street (0.46 acre)
Jennings	460 Los Osos Valley Road (0.23 acre)
Lewis-Barnes	216 Madera Street (0.46 acre)
Kellaway	Seahorse Lane (5.08 acres) and San Leandro Court (0.45 acre with onsite conservation)
Kelley-McDonough	2285 Bay Vista Drive (0.18 acre)
Charvonja	2599 San Dominico (0.59 acre with 0.20 acre of County-required open space)
Moreno	Chumash Lane and Al Sereno (1.25 acres with 0.625 acre of habitat conservation)
Morro Coast Audubon	Sweet Springs Preserve (30.25 acres, all of which is conserved)
Kroll	Sea Horse Lane (3.08 acres with 1.1 acres of habitat conservation and 0.93 acre of County-required open space)
<b>Nearing Completion</b>	
Phillips	2049 Andre Avenue (yet unknown amount of conservation)
Rothman	212 Madera (0.46 acre)
<b>Under Review by Service</b>	
Durocher	Calle Cordoniz (0.5 acre)

### 3.3.2 Public Infrastructure Projects

As part of the LOWRF EIR (State Clearinghouse No. 2007121034), the County Public Works Department identified other public infrastructure projects in the vicinity of the Plan Area that might contribute to cumulative impacts. Table 8 lists the cumulative projects identified in the LOWRF EIR.

**Table 8 Los Osos Cumulative Projects**

Name	Description
Morro Bay Water Recycling Facility (LOWRF)	At their January 10, 2013 meeting, the California Coastal Commission (CCC) voted to deny the Coastal Development Permit (CDP) for construction of an upgraded wastewater treatment plant at its existing location. Due to the denial of the CDP, the City of Morro Bay and the Cayucos Sanitary District are currently looking at alternative locations for siting of a new water reclamation facility. Eventual construction of this facility could overlap with construction activities of individual projects associated with implementation of the LOHCP.
California Men's Colony Wastewater Treatment Plant	The wastewater treatment plant has been constructed.
Los Osos Community Service District Waterline Replacement	The waterline replacement project has been constructed.
Los Osos Valley Road Palisades Storm Drain	Storm drain project extending approximately 0.12 mile west from Bush Drive to Palisades Avenue under Los Osos Valley Road has been constructed.
AT&T Cable	The AT&T Cable project to install fiber optic cable in the right-of-way of Los Osos Valley Road has been constructed.
Diablo Canyon Nuclear Power Plant – Spent Fuel Storage Facility	The PG&E project would build a spent-fuel storage facility at Diablo Canyon Nuclear Power Plant. No major construction associated with this project is expected for several years.
Morro Bay Harbor Entrance Dredging	Ongoing U.S. Army Corps of Engineers project to dredge the harbor entrance at Morro Bay.
State Park Marina Renovation	The City of Morro Bay project would renovate the existing marina in Morro Bay. The EIR for this project was certified in 2011 and the project was approved by the State Lands Commission at that time.

### 3.3.3 Approved and Pending Los Osos Community Plans

#### 3.3.3.1 *Estero Area Plan (Currently Approved Community Plan)*

The EAP (County 2009a) was originally adopted by the County Board of Supervisors on March 1, 1988. The EAP has since been amended several times and remains the current general plan, circulation (transportation) element, and local coastal program for the communities of Los Osos, Cayucos, and surrounding rural areas in unincorporated San Luis Obispo County.

While much of the future development potential envisioned in Los Osos under the EAP is included as covered activities in the LOHCP, the Estero planning area covers a much wider area than just Los Osos. Future development projects accommodated under the land use designations across the larger Estero planning area, including in the nearby community of Cayucos, could contribute to cumulative effects.

As noted in the 2003 EAP FEIR, an EIR for an area plan is an assessment of the cumulative impacts of development within the area covered by the plan. The EAP sets forth the goals, policies, assumptions, guidelines, and implementation measures that guide development of the area through at least the year 2020; the 2003 EAP FEIR evaluates the potential impacts of such development. As noted in the 2003 EAP FEIR, the cumulative effects of growth in the EAP as a whole (not just within the community of Los Osos) include the following:

- Inducement of growth in the Estero planning area by providing guidance for growth until 2020
- An increase in population from the 2003 estimate of 18,470 (in the Los Osos, Cayucos, and Rural Area) to a buildout capacity population of 26,171
- An increase in dwelling units from the 2003 estimate of 8,971 (in the Los Osos, Cayucos, and Rural Area) to a buildout capacity of 11,210
- An increase in traffic in the Estero planning area
- An increase in demand for water resources in the Estero planning area
- An increase in air emissions in the Estero planning area
- An increase in traffic noise in the Estero planning area
- A loss of agricultural land in the Estero planning area
- Loss of native plant communities, including oak woodlands associated with wildlife habitat, in the Estero planning area

The 2003 EAP FEIR determined that most of the mitigation measures proposed and recommended to reduce significant impacts are goals, policies, programs, and planning area standards that apply to the Estero planning area. Most of the cumulative impacts associated with development of the Estero planning area would be mitigated through implementation of the goals, policies, programs, and/or planning area standards of the EAP.

These analyses from the 2003 EAP FEIR have been integrated into this EIR when considering the cumulative impacts associated with implementation of the LOHCP.

### 3.3.3.2 *Los Osos Community Plan (Pending Approval)*

On September 12, 2019, the County released the Draft EIR for the Los Osos Community Plan (County 2019b). The latest (2015) Los Osos Community Plan establishes a vision for the future of Los Osos that guides growth and development through 2035 (County 2015a) and would replace the EAP. The Los Osos Community Plan Draft EIR states that development within the LOWRF service area, including in the prohibition zone, would be connected to the LOWRF, which is anticipated to have sufficient capacity for development in the service area through 2035. Areas of development outside the LOWRF service area would utilize project-specific on-site wastewater treatment systems in compliance with the RWQCB (County 2015a). Operation of the LOWRF satisfies the requirement of the County to provide a communitywide sewer system.

With regard to water supply within Los Osos, the Draft EIR for the Los Osos Community Plan (County 2019a) determined impacts to water supply would be potentially significant, but mitigable, because development under the Community Plan would be limited to the sustainable capacity of the Groundwater Basin through the County's Growth Management Ordinance (County Municipal Code Title 26) and additional review standards tied to the Updated Basin Plan for the Los Osos Groundwater Basin (County et al. 2015). Implementation of the water supply mitigation measure from the Draft EIR for the Los Osos Community Plan would satisfy the requirement of the County to provide adequate groundwater supply to the community.

As noted in the Los Osos Community Plan, the community wishes to maintain its "small-town" atmosphere; rather than expanding the URL and USL, the community is focusing on infill development. A development constraint within Los Osos is the availability of resources. New growth must only occur when the community has sufficient capacity in its water supply and sewage disposal

systems. In addition, new development should not be allowed to create significant impacts to the community's road system, local schools, parks, or libraries.

The Draft EIR for the Los Osos Community Plan states that development under the Los Osos Community Plan could result in an additional 1,861 residential units and up to 364,000 square feet of commercial space, for a total of 8,182 residential units and 1,034,300 square feet of non-residential space (floor area) within the community within the 20-year plan horizon (by 2035).

In general, the Los Osos Community Plan envisions substantial decreases in land designated for residential and non-residential development, and corresponding increases in land designated for Open Space. Overall, the Los Osos Community Plan accommodates the potential for future residential and non-residential growth. Key findings in the Draft EIR for the Los Osos Community Plan include:

- **Substantial Decrease in Overall Residential Area.** With approval of the Los Osos Community Plan, there would be a net decrease in residential land use categories of nearly 419 acres, or about 15 percent less land area than is currently devoted to these categories.
- **Decrease in Overall Non-Residential Area.** There would be a 214-acre (or 14 percent) net decrease in non-residential (commercial and office) land use categories.
- **Substantial Increase in Open Space.** The proposed Los Osos Community Plan would include a 4,184-acre increase in Open Space within the plan area, which is over twice the amount currently designated for that purpose.

As stated in Section 3.2, *Cumulative Projects Setting*, of the Draft EIR for the Los Osos Community Plan, the CEQA Guidelines require the analysis of the cumulative effects of a project in combination with other foreseeable development in the area.

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effects are cumulatively considerable. As allowed under Section 15130 of the CEQA Guidelines, the Draft EIR for the Los Osos Community Plan uses a summary of growth projections to analyze cumulative impacts. The evaluation of buildout under the Los Osos Community Plan accounts for all of the expected growth in the Los Osos area, as it represents a growth blueprint for the entire Los Osos community in the context of the EAP. Therefore, in general, cumulative impacts evaluated in the Draft EIR for the Los Osos Community Plan are considered the same as project-specific impacts. For certain issues, such as traffic and air quality, the cumulative condition accounts for regional growth and development that may affect the Los Osos community.

## 4 Environmental Impact Analysis

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This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified through the NOP/scoping process as having the potential to experience significant effects. “Significant effect” is defined by the *CEQA Guidelines* §15382 as:

...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria that (1) have been adopted by the County and/or other agencies; (2) are universally recognized; and/or (3) have been developed specifically for this analysis to determine whether potential effects are significant. Sections 4.1 through 4.12 describe the environmental impacts of the project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, along with a discussion of the effect and its level of significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

- **Class I, Significant and Unavoidable Impact:** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per Section 15093 of the *CEQA Guidelines*.
- **Class II, Less than Significant Impact with Incorporation of Mitigation:** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires Findings to be made under Section 15091 of the *CEQA Guidelines*.
- **Class III, Less than Significant Impact:** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **Class IV, Beneficial Effect:** An effect that would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other planned and pending projects. Please also refer



to the *Executive Summary* of this EIR, which summarizes all impacts and mitigation measures that apply to the proposed project.

## 4.1 Air Quality

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### 4.1.1 Setting

#### **a. Climate**

The Plan Area is located in the South Central Coast Air Basin (Basin), which includes San Luis Obispo, Santa Barbara, and Ventura counties. San Luis Obispo County constitutes a land area of approximately 3,316 square miles with varied topography and climate. From a geographical and meteorological standpoint, the county can be divided into three general regions: the Coastal Plateau, the Upper Salinas River Valley, and the East County Plain. Air quality in each of these regions is characteristically different, although the physical features that divide them provide only limited barriers to the transport of pollutants between regions (County 2008). Los Osos is located in the Coastal Plateau region.

The Coastal Plateau region of San Luis Obispo County is characterized by a Mediterranean climate, experiencing moderate temperatures with the mean high temperature of 66°F in July and mean low temperature of 41°F in January (County 2019a). Weather patterns are dominated by the eastern Pacific High Pressure System that persists off the California coast for much of the year, diverting storms northward. Dense morning fog followed by periods of afternoon sunshine is a pattern generally repeated daily during summer months near the coast and coastal valleys.

Local and regional weather conditions, including wind speed and direction, atmospheric stability, air temperature, and the presence or absence of temperature inversions can contribute to the dispersion or concentration of air pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific High Pressure System, local and regional topography, and by circulation patterns resulting from temperature differences between the land and sea. Air pollutants can become concentrated when the mixing height is at or below the elevation of the surrounding coastal hills. Under those conditions, the inversion limits vertical mixing and the hills trap the pollutants and prevent them from horizontally dispersing (County 2008).

#### **b. Air Pollutants of Primary Concern**

The federal and state governments have been empowered by the federal and state Clean Air Acts (CAAs) to regulate the emission of airborne pollutants and have established ambient (outdoor) air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent under the California Environmental Protection Agency (CalEPA). Local control in air quality management is provided by the CARB through multi-county and county-level Air Pollution Control Districts (APCDs). The 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. The CARB has established 15 air basins statewide. The South Central Coast Air Basin is under the jurisdiction of the San Luis Obispo County Air Pollution Control District (SLOAPCD).

Under the federal CAA, the U.S. EPA has established National Ambient Air Quality Standards (NAAQS), or limits, for six air pollutants known as criteria air pollutants. These criteria air pollutants,

which are defined in more detail below, include: ozone (O<sub>3</sub>), particulate matter<sup>9</sup>, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). California, as allowed by the state CAA, has also set California Ambient Air Quality Standards (CAAQS) for certain pollutants, including particulate matter and ozone. Table 9 identifies the federal and state standards for each of these pollutants, as well as San Luis Obispo County's attainment status under each standard. The CAAQS are more restrictive than NAAQS for each of these pollutants, except lead and 8-hour carbon monoxide.

**Table 9 Current Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.075 ppm
PM <sub>10</sub>	24-Hour	150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
	Annual	–	20 µg/m <sup>3</sup>
PM <sub>2.5</sub>	24-Hour	35 µg/m <sup>3</sup>	–
	Annual	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	24-Hour	0.14 ppm	0.04 ppm
	3-Hour	0.5 ppm (secondary)	–
	1-Hour	0.075 ppm (primary)	0.25 ppm
Lead	30-Day Average	–	1.5 µg/m <sup>3</sup>
	3-Month Average	0.15 µg/m <sup>3</sup>	–

ppm = parts per million  
µg/m<sup>3</sup> = micrograms per cubic meter  
Source: CARB 2016

The SLOAPCD monitors ambient air pollutant levels to determine if the county meets air quality standards. If the county does not meet these standards, the SLOAPCD must develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the air basin is classified as being in “attainment” or “non-attainment.” There are currently 10 permanent ambient air monitoring stations in San Luis Obispo County. The SLOAPCD operates eight and the remaining two are operated by the CARB (SLOAPCD 2016, 2019). The air quality monitoring station located nearest to the Plan Area is the Morro Bay Monitoring Station, located approximately 2.5 miles north of the Plan Area. The second closest station is the San Luis Obispo - 3220 South Higuera Street Monitoring Station, located approximately 10 miles southeast of the Plan Area.

<sup>9</sup> Particulate matter includes PM<sub>10</sub> (which measures no more than 10 microns in diameter) and PM<sub>2.5</sub> (which measures no more than 2.5 microns in diameter).

Table 10 shows the number of days that each standard was exceeded during 2015, 2016, and 2017. Data presented for ozone and NO<sub>2</sub> are from the Morro Bay Monitoring Station, the closest station (located approximately 2.5 miles to the north) to the Plan Area. However, the station does not monitor PM<sub>10</sub> and PM<sub>2.5</sub> emissions; therefore, the emissions data for these pollutants were obtained from the San Luis Obispo – 3220 South Higuera Street Monitoring Station.

**Table 10 Current Federal and State Ambient Air Quality Standards**

Pollutant	2016	2017	2018
Ozone, ppm – Worst Hour <sup>a</sup>	0.060	0.071	0.057
Number of days of State exceedances (>0.09 ppm)	0	0	0
Number of days of federal exceedances (>0.12 ppm)	0	0	0
Nitrogen Dioxide, ppb – Worst Hour <sup>a</sup>	36.0	*	*
Number of days of State exceedances (>0.18 ppm)	0	*	*
Number of days of federal exceedances (>100 ppb)	0	*	*
Particulate Matter <10 microns, µg/m <sup>3</sup> – Worst 24 Hours <sup>b</sup>	42.6	67.8	45.4
Number of samples of State exceedances (>50 µg/m <sup>3</sup> )	0	5	0
Number of samples of federal exceedances (>150 µg/m <sup>3</sup> )	0	0	0
Particulate Matter <2.5 microns, µg/m <sup>3</sup> – Worst 24 Hours <sup>b</sup>	21.0	25.6	38.4
Number of samples of federal exceedances (>35 µg/m <sup>3</sup> )	0	0	1

<sup>a</sup> Data source: Morro Bay Monitoring Station

<sup>b</sup> Data source: San Luis Obispo – 3220 South Higuera Street Station

\* Insufficient data available to determine the value.

ppb = parts per billion

ppm = parts per million

> = greater than

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

Source: CARB 2019a

As shown in Table 10, the ozone concentrations did not exceed federal or state standards in 2016, 2017, or 2018. PM<sub>10</sub> concentrations exceeded state standards five times in 2017, but did not exceed the federal or state standard in 2016 or 2018. The PM<sub>2.5</sub> concentration did not exceed the federal standard in 2016 or 2017, but did exceed the federal standard in 2018. No exceedance of the federal or state standard for nitrogen dioxide has been recorded in the past three years.

As part of the state CAA, the SLOAPCD developed and adopted the Clean Air Plan to address strategies to reduce ozone precursor emissions from stationary and mobile sources. The 2001 Clean Air Plan includes control measures to bring the County into attainment of the state ozone standards. A project is considered to be compliant with the Clean Air Plan when the project does not result in growth that exceeds the Clean Air Plan projections.

## c. Regulatory Setting

### Clean Air Plan

Under state law, the SLOAPCD is required to prepare an overall plan for air quality improvement for the South Central Coast Air Basin, known as the Clean Air Plan. The most recent Clean Air Plan for

the Basin was prepared in 2001 and adopted in 2002. The 2001 Clean Air Plan is the third update to the original 1991 Clean Air Plan, adopted in 1992. The Clean Air Plan is intended to bring the County into attainment of the state ozone standard through a comprehensive set of control measures designed to reduce ozone precursor emissions from a wide variety of stationary and mobile sources.

As a means to help implement the Clean Air Plan, SLOAPCD created and maintains an Air Quality CEQA Handbook (SLOAPCD 2012) which establishes significance thresholds for various air pollutants that may occur during project construction and operations. This is intended to primarily apply to specific development and long range documents, such as the LOHCP, receive a programmatic assessment.

### **County Coastal Zone Framework for Planning and Land Use Ordinance**

The general air quality goal stated in the Coastal Framework for Planning (County 2018b) is to “Preserve, protect and improve the air quality of the county.” Furthermore, the goal specifies the following efforts be applied to new development to achieve the goal: seek to exceed or at least maintain the minimum state and federal ambient air quality standards; mitigate to the extent feasible, potential adverse air quality impacts from new development using the best available technology; promote compact, urban infill development and discourage leap-frog or rural sprawl development patterns, which can reduce travel time and distance; implement land use, circulation and infrastructure policies and programs that result in transportation alternatives to the single-passenger vehicle, that will minimize travel time, distance and trip generation and reduce vehicle miles traveled; minimize travel time and distance and trip generation by the location of land uses; and encourage the use of alternative energy sources such as solar, wind, and wave technology to reduce the use of non-renewable resources.

### **General Plan Conservation and Open Space Element (COSE)**

The COSE includes a wide range of goals for a many environmental issues, including air quality. The following identifies and generally summarizes these goals to improve the County’s air quality:

- **Goal AQ 1.** Per capita vehicle miles-traveled countywide will be reduced consistent with statewide targets.
- **Goal AQ 2.** The County will be a leader in implementing air quality programs and innovations.
- **Goal AQ 3.** State and federal ambient air quality standards will, at a minimum, be attained and maintained.
- **Goal AQ 4.** Greenhouse gas emissions from County operations and community-wide sources will be reduced from baseline levels by a minimum of 15% by 2020.
- **Goal AQ 5.** The County will adapt to adverse climate change.

Each of these goals is further developed into policies and implementation strategies.

### **d. Sensitive Receptors**

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are

therefore residences, schools, and hospitals. Residential and education land uses are both located in Los Osos.

## 4.1.2 Impact Analysis

### a. Methodology and Significance Thresholds

This analysis of air quality issues follows the guidance and methodologies recommended in SLOAPCD's *CEQA Air Quality Handbook* (updated April 2012). The following thresholds are based on the County's Initial Study checklist and Appendix G of the *CEQA Guidelines*. Impacts would be significant if the project would result in any of the following:

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

According to the SLOAPCD's *CEQA Air Quality Handbook*, significance of operational emissions associated with a project should be evaluated based on the following:

- Consistency with the most recent Clean Air Plan for San Luis Obispo County;
- Consistency with a plan for the reduction of greenhouse gas emissions that has been adopted by the jurisdiction in which the project is located and that, at a minimum, complies with State CEQA Guidelines Section 15183.5;
- Comparison of predicted ambient criteria pollutant concentrations resulting from the project to state and federal health standards, when applicable; and
- Comparison of calculated project emissions to SLOAPCD emission thresholds.

The SLOAPCD's *CEQA Air Quality Handbook* also provides numeric operational and short-term construction emissions thresholds for projects. Short-term construction emissions thresholds are presented in Table 11. Operational emissions thresholds are presented in Table 12.

**Table 11 Thresholds of Significance for Construction Operations**

Pollutant	Daily Threshold (lbs)	Quarterly (Tier 1) Threshold (tons)	Quarterly (Tier 2) Threshold (tons)
ROG + NO <sub>x</sub> (combined)	137	2.5	6.3
Diesel Particulate Matter (DPM)	7	0.13	0.32
Fugitive Particulate Matter (PM <sub>10</sub> ), Dust <sup>1</sup>	–	2.5	–
Greenhouse Gases (CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFC, CFC, F <sub>6</sub> S)	Amortized and Combined with Operational Emissions		

Daily and quarterly emission thresholds are based on the California Health & Safety Code and the CARB Carl Moyer Guidelines.

<sup>1</sup>Any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5-ton PM<sub>10</sub> quarterly threshold.

Source: SLOAPCD 2012

**Table 12 Thresholds of Significance for Operational Emissions Impacts**

<b>Pollutant</b>	<b>Daily Threshold (lbs/day)</b>	<b>Annual Threshold (tons/year)</b>
Ozone Precursors (ROG + NO <sub>x</sub> ) <sup>1</sup>	25	25
Diesel Particulate Matter (DPM) <sup>1</sup>	1.25	–
Fugitive Particulate Matter (PM <sub>10</sub> ), Dust	25	25
CO	550	–

Daily and quarterly emission thresholds are based on the California Health & Safety Code Division 26, Part 3, Chapter 10, Section 40918 and the CARB Carl Moyer Guidelines for DPM.

<sup>1</sup>CalEEmod – use winter operational emission data to compare to operational thresholds.

Source: SLOAPCD 2012

A qualitative analysis of the air quality impacts was conducted based on project activities capable of generating air pollutant emissions, as well as the project’s consistency with the most recently adopted Clean Air Plan.

## **b. Project Impacts**

<b>Threshold:</b>	Would the project conflict with or obstruct implementation of the applicable air quality plan?
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### **IMPACT AQ-1 THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE SLOAPCD 2001 CLEAN AIR PLAN. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

The project would be consistent with the 2001 Clean Air Plan, which is the most recent Clean Air Plan adopted for the County, if it would result in an increase in population that is equal to or less than the population estimates used in the plan and if the project is consistent with the transportation and land use strategies outlined in the plan. Implementation of the project could expedite development in the Plan Area. Increased construction-related emissions from streamlined residential, commercial, and public development in the Plan Area could contribute to degradation of regional air quality. However, such development would be consistent with the EAP and the Los Osos Community Plan. The EAP FEIR and the Draft EIR for the Los Osos Community Plan note that new development could lead to emissions of air pollutants, but the impact would be less than significant since buildout under the approved EAP or the pending Los Osos Community Plan would be consistent with the Clean Air Plan, which is intended to move the County toward attainment status for state and federal air quality standards. As discussed in the EAP FEIR and the Draft EIR for the Los Osos Community Plan, individual development projects would be evaluated on a project-by-project basis to determine the potential impacts to air quality, and appropriate mitigation may be required as determined by the County and the SLOAPCD.

The project would also include implementation of the LOHCP Preserve System, which would involve management or construction activities that could result in air quality emissions. Implementation of the conservation strategy would not intensify land use in the Preserve System, however. In fact, the project would result in long-term benefits to air quality because the prohibition of development in the preserved areas would reduce potential air quality impacts from construction and operations of residential or commercial uses that might otherwise be developed on Preserve System lands. As such, the project would not directly contribute to existing or projected violations of federal or state air quality standards and would not result in an increase in population or emissions that would

impede attainment of the objectives of the Clean Air Plan. Therefore, the project would be consistent with the most recently adopted Clean Air Plan, and this impact would be less than significant.

<b>Threshold:</b>	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
<b>Threshold:</b>	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

**IMPACT AQ-2      CRITERIA POLLUTANTS GENERATED BY PROJECT CONSTRUCTION WOULD NOT EXCEED ANY APPLICABLE SLOAPCD THRESHOLDS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Covered activities, including management activities within the LOHCP Preserve System, would generate air pollutants that could result in degraded air quality. Covered activities would require the use of construction equipment and result in varying levels of ground disturbance, and some covered activities would require the use of vehicles for worker commutes. The use of equipment and vehicles would generate air pollutants, including CO and ozone precursors, from exhaust and fuel combustion. Ground-disturbing activities and vehicle travel on unpaved roads would generate fugitive dust (particulate matter) as soil is disturbed. Painting and asphalt paving would generate ROG emissions. Covered activities would generate varying levels of vehicle- and equipment-related pollutants and fugitive dust depending on the type and duration of the activity.

Some, but not all, of the covered activities would require heavy earthmoving equipment (such as backhoes or bulldozers) and most covered activities would require use of a motorized vehicle to access the specific project site. However, these activities are expected to result in ground disturbance of less than 4 acres per activity and less than 1,200 cubic yards of cut and fill per day. Management activities within the LOHCP Preserve System would be minimal but would require the use of vehicles and possibly equipment for maintenance and monitoring purposes.

Estimating the types and number of vehicles/equipment, duration of use, and frequency of use associated with covered activities would require too much speculation at this time. However, implementation of the LOHCP would not result in an intensification of currently approved land uses (density or intensity), and would not add additional population beyond that currently projected to occur in the EAP or the Los Osos Community Plan, as development in the Plan Area would be consistent with the EAP or the Los Osos Community Plan (if approved). The majority of the covered activities would be similar to existing development in the Plan Area. Emissions from covered activities are expected to decline over the 25-year term of the LOHCP as project contractors replace their vehicles and construction equipment with more efficient, less polluting models to comply with CARB and SLOAPCD rules and regulations. No new permanent emission-generating facilities are anticipated under the project maintenance/management staff would inspect the Plan Area on an as-needed basis.

As discussed in the EAP FEIR and the Draft EIR for the Los Osos Community Plan, individual development projects would be evaluated on a project-by-project basis to determine the potential impacts to air quality, and appropriate mitigation may be required as determined by the County and the SLOAPCD. For all covered activities, individual project proponents (and their construction contractors) would comply with the County's land use and air quality environmental practices. Although air pollutant emissions would still be generated from covered activities, emissions from



individual projects would be minimized with implementation of standard construction Best Management Practices (BMPs) and regulations, such as fugitive dust suppression and construction equipment emissions requirements.

In addition to expedited development, air quality effects could also occur under the project from construction activities associated with the establishment of the LOHCP Preserve System. Potential construction activities related to restoration and active management could include grading, excavating, or other activities involving the use of heavy construction equipment—all of which could generate emissions of ozone precursors, fugitive dust, and diesel particulate matter. Construction activities would be spread out over the term of the LOHCP and throughout the Plan Area.

Based on the Preserve System presented in the LOHCP, approximately 90 acres of degraded habitat in existing protected lands would be restored; 107.5 acres of currently unprotected land would be protected, of which 10.7 acres would be restored and then managed (the other 96.7 acres would be actively managed); and 278.7 acres of additional habitat in existing parks and reserves would be actively managed to meet management needs and address factors that threaten long-term persistence of the covered species (see LOHCP Section 5.7.2.3.2). Therefore, up to 10.7 acres of newly protected habitat would require restoration, which is the activity most likely to require heavy construction equipment. These activities would be spread out over the 25-year term of the ITP as buildout under the EAP progresses. However, due to the unknown timing of such work and the fact that specific parcels to be acquired and actively managed are not yet known, additional quantitative analysis cannot be performed to determine the direct net change in peak annual emissions between the project and existing conditions.

Minor increases in emissions could also result from trips associated with passive recreational uses (e.g., trails) in newly established preserves. However, as discussed under Section 4.11, *Transportation/Traffic*, the types of passive recreation uses allowed in the LOHCP Preserve System are unlikely to result in a significant increase in traffic, and therefore emissions. Vehicle trips and associated emissions that would occur would be dispersed and intermittent, and would not generate a regular increase in daily emissions. Recreation use would be limited to uses compatible with the preservation and enhancement of natural communities, covered species, and biological diversity as stated in the LOHCP.

Localized emissions may also result from prescribed burns. All prescribed fires would be required to comply with applicable SLOAPCD and CAL FIRE rules and regulations, and fire management plans would be coordinated with the County to assure adequate availability of burn permits. Prescribed fire activities would be required to comply with SLOAPCD Rule 502 and the CARB Title 17 (Smoke Management Guidelines) for Prescribed Burning. No increase in prescribed fires in the county would occur as the number of fires allowed in any year would be limited by the number of burn permits available.

Furthermore, the designation and management of the LOHCP Preserve System could enhance air quality in the Plan Area by preserving large areas of open space and protecting the lands from development and other activities. The LOHCP Preserve System would consist of high-quality open space that would provide habitat for the covered species. The County would designate these lands in accordance with the conservation strategy in the LOHCP. The preservation of large expanses of vegetated lands would therefore help enhance air quality in the region and provide an overall benefit to air quality.

Given that the project would not intensify land use within the Plan Area, the dispersed nature of air quality emissions over the course of the 25-year term of the ITP, and the potential long-term benefit

to air quality associated with the LOHCP Preserve System, neither construction nor operation of the project would generate net criteria pollutant in excess of SLOAPCD thresholds. This impact would be less than significant.

<b>Threshold:</b>	Would the project expose sensitive receptors to substantial pollutant concentrations?
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**IMPACT AQ-3      THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Covered activities, including development expedited under issuance of the ITP under the project, would have the potential to generate air quality emissions associated with construction activities. Future development streamlined by the project would be required to undergo environmental review and adhere to all County and SLOAPCD air quality regulations. Appropriate mitigation may be required as determined by the County and the SLOAPCD on a project-by-project basis, and implementation of standard construction BMPs would further reduce potential air quality impacts. Establishment of the LOHCP Preserve System, including management and restoration activities, could generate air quality emissions. However, due to the small land area (10.7 acres) that would require restoration and the long-time horizon over which this intermittent activity would occur (25 years), construction emissions would not exceed SLOAPCD standards and would not expose sensitive receptors to substantial pollutant concentrations.

Some of the covered activities would involve the use of gasoline- and diesel-powered equipment that emits exhaust fumes and involve painting or asphalt paving, which have a distinctive odor during application. These activities would take place intermittently throughout the work period, and the associated odors are expected to dissipate within the immediate vicinity of the work area. People near individual project sites may find these odors objectionable. Because of the infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the activities on an individual project site, none of the covered activities are expected to result in a substantial creation of objectionable odors. This impact would be less than significant.

<b>Threshold:</b>	Would the project create objectionable odors affecting a substantial number of people?
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**IMPACT AQ-4      THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Some of the covered activities would involve the use of gasoline- and diesel-powered equipment that emits exhaust fumes and involve painting or asphalt paving, which have a distinctive odor during application. These activities would take place intermittently throughout the work period, and the associated odors are expected to dissipate within the immediate vicinity of the work area. People near individual project sites may find these odors objectionable. Because of the infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the activities on an individual project site, none of the covered activities are expected to result in a substantial creation of objectionable odors. This impact would be less than significant.

### **c. Cumulative Impacts**

Under the project, a cumulative air quality impact could occur as a result of construction activities associated with the project as well as other cumulative projects, including establishment of the LOHCP Preserve System and construction of residential, public, and commercial development as allowed under the EAP. These activities would be spread out over the 25-year permit term as buildout under the EAP progresses.

Long-term cumulative effects from the operation of the LOHCP Preserve System as well as new development in the Plan Area combined with county-wide growth occurring as a result of implementation of other adopted area plans would contribute to cumulative long-term air quality impacts in the Plan Area and greater vicinity. However, the potential long-term increase in air emissions in the Plan Area (as well as the short-term impact) would occur regardless of the implementation of the project. Furthermore, development in the Plan Area would be consistent with the EAP, which was determined to have a less than significant impact on air quality in the EAP FEIR.

New development in the County is required to undergo a project-specific analysis of potential air quality impacts, as applicable. The analysis would provide recommendations to reduce air pollutants emissions to below local standards during construction and operation of individual projects. New development would be subject to SLOAPCD standards and regulations. Because restrictions on development would be applied in the event that anticipated air pollutants emissions would exceed local standards, it is anticipated that cumulative impacts associated with air quality would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

## 4.2 Biological Resources

### 4.2.1 Setting

#### a. Existing Biological Resources

This section includes the existing conditions related to biological resources. This information comes from Sections 3.1.5 and 3.2 of the LOHCP.

#### Vegetation Communities

The Plan Area supports a fine-scale mosaic of vegetation communities (Table 13 and Figure 6). An estimated 1,894 acres (52 percent of the Plan Area) support native and exotic vegetation communities that can be classified into six main types: coastal sage scrub (866 acres or 24 percent), central maritime chaparral (503 acres or 14 percent), woodland (367 acres or 10 percent), grassland (39 acres or 1.1 percent), wetlands (43 acres or 1.2 percent), and riparian (77 acres or 2.1 percent). These general types were further divided into 20 vegetation communities that differ in plant species composition due to variability in soil conditions, time since disturbance, microclimate, and other factors. The remaining 1,750 acres (48 percent) of the Plan Area features other land cover, including primarily development, but also agricultural land. This section describes the general vegetation communities and land cover types.

**Table 13 Existing Vegetation Communities within the Plan Area**

Vegetation Community/Land Cover	Acreage	Percentage of Plan Area
<b>Coastal Sage Scrub</b>		
California Sagebrush – Black Sage	481.6	13.2%
California Sagebrush – Black Sage Disturbed	373.0	10.2%
California Sagebrush – Black Sage Heavily Disturbed	10.8	0.3%
Coyote Brush	0.7	<0.1%
<b>Total</b>	<b>866.0</b>	<b>23.8%</b>
<b>Central Maritime Chaparral</b>		
Morro Manzanita	321.2	8.8%
Morro Manzanita – Wedgeleaf Ceanothus	113.4	3.1%
Morro Manzanita – California Sagebrush	38.0	1.0%
Wedgeleaf Ceanothus – California Sagebrush	30.6	0.8%
<b>Total</b>	<b>503.3</b>	<b>13.8%</b>
<b>Woodland</b>		
Coast Live Oak	291.2	8.0%
Bishop Pine	3.4	0.1%
Eucalyptus	72.0	2.0%
<b>Total</b>	<b>366.6</b>	<b>10.1%</b>

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Vegetation Community/Land Cover	Acreage	Percentage of Plan Area
<b>Grassland</b>		
California Annual Grassland	3.5	0.1%
Non-Native Grassland	35.0	1.0%
<b>Total</b>	<b>38.5</b>	<b>1.1%</b>
<b>Wetland</b>		
Cattail	0.2	<0.1%
Pickleweed	1.3	<0.1%
Disturbed Wetlands	41.7	1.1%
<b>Total</b>	<b>43.1</b>	<b>1.2%</b>
<b>Riparian</b>		
Arroyo Willow	11.6	0.3%
Arroyo Willow – Black Cottonwood	0.8	<0.1%
Coast Live Oak – Arroyo Willow	62.3	1.7%
Black Cottonwood	1.8	<0.1%
<b>Total</b>	<b>76.6</b>	<b>2.1%</b>
<b>Other Land Cover</b>		
Ruderal Disturbed	49.9	1.4%
Landscaped Trees	131.4	3.6%
Agricultural Land	48.5	1.3%
Open Water	4.2	0.1%
Developed	1,515.8	41.6%
<b>Total</b>	<b>1,750.0</b>	<b>48.0%</b>
<b>Grand Total</b>	<b>3,643.8</b>	<b>100.0%</b>

Source: LOHCP Table 3-1







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### Coastal Sage Scrub

Approximately 866.0 acres (23.8 percent) of the Plan Area supports coastal sage scrub, a shrubland dominated by short- to medium-height, soft-woody shrubs. When compared to the shrubs dominating central maritime chaparral (the other shrubland in the Plan Area), coastal sage scrub features shrubs that are shorter in stature and less woody, and form a discontinuous canopy.

Coastal sage scrub occurs primarily on relatively flat terraces adjacent to the Pacific Ocean. Within the Plan Area, coastal sage scrub dominates the middle-aged dunes; coastal sage scrub also occurs as a mosaic with central maritime chaparral and woodlands found on the older dunes.

Coastal sage scrub is dominated by several shrubs including California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*), California goldenbush (*Ericameria ericoides*), silver lupine (*Lupinus albifrons*), dune (or sand) almond (*Prunus fasciculata* var. *punctata*), dune lupine (*Lupinus chamissonis*), deer weed (*Acmispon glaber*), and black sage (*Salvia mellifera*). Herbaceous plants occur between shrubs, with common species including California croton (*Croton californicus*), wedgeleaf horkelia (*Horkelia cuneata*), rush rose (*Helianthemum scoparium*), and common sandaster (*Corethrogyne filaginifolia*).

In the Los Osos region, many areas of coastal sage scrub have been highly modified by prior land use, including agriculture and grazing. These activities remove shrub cover and facilitate the invasion and spread of exotic plant species such as perennial veldt grass (*Ehrharta calycina*), fig marigold (*Carpobrotus edulis*), narrow leaved ice plant (*Conicosia pugioniformis*), wild oats (*Avena* spp.), rip-gut brome (*Bromus diandrus*), and red brome (*Bromus madritensis* ssp. *rubens*).

Within the Plan Area, four coastal sage scrub community types have been observed, which are distinguished by their dominant shrubs and level of invasion by exotic plants. These four coastal sage scrub community types include the following:

- **California Sagebrush – Black Sage.** An estimated 481.6 acres (13.2 percent) of the Plan Area supports this community, which features a 2- to 5-foot-tall, continuous or intermittent canopy of California sagebrush and black sage with California buckwheat (*Eriogonum fasciculatum*), deer weed, and white sage (*Salvia apiana*) often present.
- **California Sagebrush – Black Sage Disturbed.** Located on 373.0 acres (10.2 percent) of the Plan Area in areas that have been relatively recently graded or cleared, including fallowed agricultural fields, this community consists of a relatively low cover of California sagebrush and black sage that range from 1 to 4 feet tall. Herbaceous exotic plants are widespread and patchily abundant in these areas.
- **California Sagebrush – Black Sage Heavily Disturbed.** An estimated 10.8 acres (0.3 percent) of the Plan Area supports small patches of California sagebrush – black sage that have been heavily or more recently disturbed. These areas feature a relatively low abundance of native shrubs and high cover of veldt grass and other exotic plants.
- **Coyote Brush.** Observed on 0.7 acre (less than 0.1 percent) of the Plan Area, this community features a continuous or intermittent shrub canopy dominated by coyote bush that is 3 to 6 feet tall. California sagebrush, California buckwheat, poison oak, and black sage may also be present. Coyote brush occurs as small patches within disturbed portions of the Plan Area.

### Central Maritime Chaparral

Central maritime chaparral occurs on approximately 503.3 acres (13.8 percent) of the Plan Area. It is dominated by sclerophyllous (hard-leaved) shrubs and features scattered trees. Due to the low light



and deep leaf litter in the understory, herbaceous plant cover is primarily limited to gaps in the shrub canopy.

Central maritime chaparral occurs in coastal areas of central California that are within reach of the summer fog. Within the Plan Area, central maritime chaparral occurs primarily on the older dunes (i.e., farther inland), on the southern hillsides and the north-facing slopes of the marine terraces just south of Los Osos Creek in the northern portion of the Plan Area.

In the Plan Area, central maritime chaparral is dominated by Morro manzanita, a species endemic to Los Osos ecosystem. Other common species include chamise (*Adenostoma fasciculatum*), coast live oak, wedgeleaf ceanothus (*Ceanothus cuneatus*), and sticky monkeyflower (*Mimulus aurantiacus*). Canopy gaps support a variety of subshrubs, including California goldenbush and deer weed, as well as herbs such as wedgeleaf horkelia, seacliff buckwheat (*Eriogonum parvifolium*), California croton, and golden yarrow (*Eriophyllum confertiflorum*).

Central maritime chaparral forms a mosaic with coastal sage scrub and woodland communities. Though it occurs primarily on the Baywood fine sand, which dominates the Plan Area, central maritime chaparral is also supported by the Santa Lucia shaly clay loam. When compared to coastal sage scrub, central maritime chaparral occurs on the steeper slopes and predominates the portions of the Plan Area that feature more than 30 percent slopes. This may reflect the dominant shrubs' requirements for more developed soils that occur on the older dunes farther inland. Alternatively, it may result because the gentler slopes (2 to 9 percent) have been more recently cleared.

Central maritime chaparral is a fire-adapted community. Though precise aspects of the fire regime are unknown, long fire-free periods (i.e., 100 years) are thought to be necessary for the dominant Morro manzanita to accumulate a sufficient seed bank to regenerate.

Based on their variability in dominant species, four types of central maritime chaparral have been mapped within the Plan Area, including the following:

- **Morro Manzanita.** Observed on 321.2 acres (8.8 percent) of the Plan Area, the Morro manzanita community is characterized by dense cover of Morro manzanita, with coast live oak, wedgeleaf ceanothus, sticky monkeyflower, and black sage also present in a canopy, that is 4 to 12 feet tall. This vegetation community occurs primarily on the older dunes and on steeper slopes in the southern portion of the Plan Area.
- **Morro Manzanita – Wedgeleaf Ceanothus.** This community occurs on 113.4 acres (3.1 percent) of the Plan Area and features Morro manzanita and wedgeleaf ceanothus as co-dominant species creating a dense shrub canopy that is 3 to 6 feet tall. California sagebrush, black sage, and sticky monkeyflower may be present in this community, which appears transitional between coastal sage scrub and Morro manzanita in the southern portion of the Plan Area.
- **Morro Manzanita – California Sagebrush.** This community consists of Morro manzanita and California sagebrush as co-dominant species creating a sparse canopy that is 3 to 6 feet tall. California buckwheat (*Eriogonum fasciculatum*), deer weed, wedgeleaf ceanothus, sticky monkeyflower, and black sage may also be present. It occurs on 38.0 acres (1.0 percent) of the Plan Area at the transition between middle-aged dunes and older dunes and in areas that have been cleared relatively recently.
- **Wedgeleaf Ceanothus – California Sagebrush.** This community features a dense, 3- to-6-foot-tall canopy of wedgeleaf ceanothus and California sagebrush, with black sage and sticky monkeyflower often present. This community occurs in one 30.6-acre patch (0.8 percent) in the northern portion of the Plan Area.

## Woodlands

Approximately 366.6 acres (10.1 percent) of the Plan Area is covered by woodlands, which area comprised of upland communities characterized by a largely continuous canopy of trees, with variable understory featuring primarily shade-tolerant herbs and shrubs.

Within the Plan Area, there are two native woodlands—coast live oak woodland and bishop pine woodland—as well as stands of the exotic eucalyptus woodland. The native woodlands occur primarily on the older dunes on the perimeter of the Plan Area, presumably reflecting their requirement for the higher nutrient availability and water-holding capacity of the more developed soils found there. The exotic eucalyptus woodland occurs patchily throughout the Plan Area, reflecting its establishment through deliberate plantings, from which the trees subsequently spread into adjacent areas.

Woodlands within the Plan Area include the following:

- **Coast Live Oak.** Approximately 291.2 acres (8.0 percent) of the Plan Area feature an intermittent or continuous canopy dominated by coast live oaks, which typically range from 20 to 45 feet in height. The understory can feature Morro manzanita, wedgeleaf ceanothus, coffee berry, poison oak, and herbaceous species dominated by exotic annual grasses.

Within the Plan Area, coast live oak woodlands occur as two distinct phases. The area south of Morro Bay and west of Los Osos Creek support stunted, wind-pruned coast live oaks featuring multiple trunks. These ‘pygmy oaks’ are well-represented within the Elfin Forest Natural Preserve and the Los Osos Oaks State Reserve. North-facing slopes and canyons, particularly those featuring sandstone or shale-derived soils, support more typical coast live oak woodlands.

- **Bishop Pine.** The Plan Area features two stands of bishop pine (*Pinus muricata*) totaling 3.4 acres (0.1 percent of the Plan Area). This community features a continuous tree canopy of bishop pines that are 20 to 35 feet in height, and a shrub understory. Located on soils derived from older dunes in the southern portion of the Plan Area, the bishop pine woodland occurs as pockets within Morro manzanita chaparral. More widespread in the Irish Hills, the isolated stands, which are visible in aerial photographs from 1949, may be restricted by unique soil conditions or lack of fire; like other closed-cone conifers, bishop pines establish primarily following fires, which release seeds from their serotinous cones<sup>10</sup> and create an open canopy and bare-mineral soil conditions that facilitate seedling establishment.
- **Eucalyptus.** The Plan Area contains numerous, scattered patches of eucalyptus woodland, which total 72.0 acres (2.0 percent of the Plan Area). These non-native woodlands feature a continuous canopy of 20- to 75-foot-tall eucalyptus (*Eucalyptus* spp.), including primarily blue gum (*Eucalyptus globulus*), with a sparse understory of shrubs and herbs. Eucalyptus create dense canopy and litter covers that often prevent native plant species from growing in the understory. Eucalyptus woodlands in the Plan Area provide overwintering habitat for Monarch butterflies (*Danaus plexippus*), a California Special Resource. Eucalyptus woodlands are also often used by raptors for nesting and wintering habitat.

## Grasslands

Approximately 38.5 acres (1.1 percent) of the Plan Area supports grasslands—communities that lack appreciable shrub or tree cover and instead are dominated by herbaceous plants, including

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<sup>10</sup> Serotinous cones means the cones remain closed on the trees with seed dissemination delayed or occurring gradually.

primarily grasses but also other graminoids (grass-like plants) such as sedges and rushes, as well as forbs (broad-leaf herbs).

Within the Plan Area, grasslands occur primarily in areas where shrublands (coastal sage scrub or central maritime chaparral) and woodlands have been cleared for use in agriculture, grazing, or development. As a result, the grasslands occur primarily as small patches scattered throughout the Plan Area and are dominated by non-native species, including common velvet grass (*Holcus lanatus*), slender wild oats (*Avena barbata*), common wild oats (*Avena fatua*), rip-gut brome, soft chess (*Bromus hordeaceus*), red brome, Italian ryegrass (*Festuca perennis*), foxtail barley (*Hordeum murinum*), and rat-tail fescue (*Festuca myuros*). Though dominated by exotic plant species, grasslands can provide foraging habitat for raptors. In addition, in the absence of ongoing disturbance (i.e., grazing, cultivation, mowing, etc.), native shrubs and trees can re-establish in these areas, converting them to shrublands and woodlands over time.

Two grassland communities have been mapped within the Plan Area, based on their differences in plant species composition, including the following:

- **California Annual Grassland.** Approximately 3.5 acres (0.1 percent) of the Plan Area feature a mix of native and exotic annual grasses and herbs, including purple needle-grass (*Stipa pulchra*) and wildflowers such as California buttercup (*Ranunculus californicus*), blue-eyed grass (*Sisyrinchium bellum*), blue dicks (*Dichelostemma capitatum*), owl's clover (*Castilleja* spp.), larkspur (*Delphinium* spp.), and annual lupine (*Lupinus* spp.).
- **Non-Native Grassland.** Approximately 35.0 acres (1.0 percent) of the Plan Area support annual grasses and herbs dominated by introduced species and genera such as veldt grass, bromes, wild oats, ryegrass, and Harding grass (*Phalaris aquatica*). Shrubs are absent or occur only very sparsely.

### *Wetlands*

The Plan Area includes 43.1 acres (1.2 percent) of vegetation growing in permanently or seasonally-saturated soils. Such wetland vegetation occurs almost exclusively on the northern perimeter of the Plan Area on Morro Bay and the Los Osos Creek estuary. These communities are an important link between the upland ecosystem and the Morro Bay estuary.

Three types of wetlands have been mapped within the Plan Area, including the following:

- **Cattail.** Approximately 0.2 acre (less than 0.1 percent) of the Plan Area supports a continuous, intermittent, or open, 4- to 8-foot-tall community dominated by common cattail (*Typha latifolia*). Associated with permanently or seasonally-flooded fresh and brackish water wetlands near the Los Osos Creek estuary, the cattail wetland community contains bulrush (*Schoenoplectus* spp.), sedges (*Carex* spp.), rushes (*Juncus* spp.), mugwort (*Artemisia douglasiana*), and arroyo willow (*Salix lasiolepis*).
- **Pickleweed.** Approximately 1.3 acres (less than 0.1 percent) of the Plan Area feature a continuous or intermittent canopy dominated by 0.5- to 1-foot-tall pickleweed (*Salicornia* spp.). This community occurs in areas permanently or seasonally flooded by saltwater or brackish water along the Los Osos Creek estuary. Associated species include common brass buttons (*Cotula coronopifolia*), marsh jaumea (*Jaumea carnosa*), and saltgrass (*Distichlis spicata*).
- **Disturbed Wetlands.** The Plan Area includes 41.7 acres (1.1 percent of the Plan Area) of wetlands that have been degraded by human activities. Most occur along Morro Bay near Cuesta-by-the-Sea, where salt and alkali marsh have been impacted by the invasion of exotic

species, including fig marigold and eucalyptus. A small patch of degraded freshwater wetland occurs south of the intersection of South Bay Boulevard and Los Osos Valley Road. This area may contain a mixture of riparian and wetland plants, including arroyo willow, cattail, rushes, and sedges.

### *Riparian*

The Plan Area includes 76.6 acres (2.1 percent of the Plan Area) of vegetation associated with waterways, particularly Los Osos and Eto creeks. Such riparian vegetation also includes small areas that support arroyo willow along Morro Bay near Cuesta-by-the-Sea.

Riparian vegetation stabilizes stream banks, traps sediment before it reaches the stream, moderates stream temperature, and provides nesting, feeding, and cover habitat for a number of birds, mammals, and other wildlife species. Riparian areas also provide corridors that facilitate animal movement through otherwise fragmented landscapes.

Four types of riparian vegetation occur in the Plan Area, including the following:

- **Arroyo Willow.** Approximately 11.6 acres (0.3 percent) of the Plan Area feature a continuous canopy of arroyo willow, which occurs as a shrub or tree, ranging from 8 to 30 feet in height. Located in seasonally-flooded areas, including along Los Osos Creek, Eto Creek, and adjacent to Morro Bay near Cuesta-by-the-Sea, this community may also feature California sycamore (*Platanus racemosa*), black cottonwood (*Populus trichocarpa*), and coyote bush, as well as a sparse or abundant herbaceous understory layer that can include common cattail.
- **Arroyo Willow – Black Cottonwood.** Approximately 0.8 acre (less than 0.1 percent) of the Plan Area features black cottonwood, large trees (30 to 75 feet in height) that are co-dominant with arroyo willow. This community occurs in a single patch located along Los Osos Creek on the northeastern corner of the Plan Area, within Morro Bay State Park. This community features California sycamore in the overstory, with coyote bush and herbaceous species in the understory.
- **Coast Live Oak – Arroyo Willow.** Arroyo willow and coast live oak are co-dominant within woodland comprised of 20- to 50-foot-tall trees that occur on 62.3 acres (1.7 percent) of the Plan Area. Located along Los Osos and Eto creeks, where it forms a fairly-continuous corridor in the eastern portion of the Plan Area, this riparian community may contain wetland plant species in the understory and California bay (*Umbellularia californica*) in the stand.
- **Black Cottonwood.** Located on 1.8 acres (less than 0.1 percent of the Plan Area) in the southeastern portion of the Plan Area along Los Osos Creek just downstream of Clark Valley, this community features a nearly continuous canopy of 50- to 100-foot-tall black cottonwood with an understory of shrubs. Arroyo willow is also present.

### *Other Land Covers*

Land cover types in this general classification are those that are developed, highly disturbed or are sparsely or non-vegetated that are typically associated with urban and agricultural areas. However, naturally occurring non-vegetated areas such as open water would also apply. Species that occur in these areas are typically adapted to anthropogenic disturbance and/or comprised of ornamental and other non-native species.

Five types of other land covers occur in the Plan Area:

- **Ruderal Disturbed.** Approximately 49.9 acres (1.4 percent) of the Plan Area support vegetation that has been substantially disturbed by agriculture, development, land clearing, or other human activities. This vegetation primarily supports exotic plant species that are adapted to colonizing disturbed areas, including wild mustard (*Brassica* spp.), wild radish (*Raphanus sativus*), Russian thistle (*Salsola tragus*), castor bean (*Ricinus communis*), sweet fennel (*Foeniculum vulgare*), Bermuda grass (*Cynodon dactylon*), and red stem filaree (*Erodium cicutarium*). Ruderal vegetation also contains exotic annual grasses common in the grasslands, such as wild oat, red brome, and ripgut brome; however, unlike grasslands, native species occur at very low diversity and abundance in ruderal disturbed areas. The only native plant species that occurs commonly within ruderal habitat is coyote bush.
- **Landscaped Trees.** Approximately 131.4 acres (3.6 percent) of the Plan Area feature dense canopy of native and exotic trees that were planted as landscaping or wind blocks. Species include Monterey pine (*Pinus radiata*), Monterey cypress (*Hesperocyparis macrocarpa*), and eucalyptus. Trees in this land cover type range from 40 to 60 feet in height.
- **Agricultural Land.** Approximately 48.5 acres (1.3 percent) of the Plan Area is used for agricultural crops. Located primarily in areas of flat terrain with fertile soils, agricultural lands have been altered by tillage, irrigation, fertilization, and the use of pesticides and herbicides. Crops vary in terms of sizes and growing patterns, creating various canopy cover.
- **Open Water.** Covering a total of approximately 4.2 acres (0.1 percent) of the Plan Area, open water occurs within Eto Lake, Eto Creek, and Los Osos Creek. Eto Lake occurs at the confluence of Los Osos Creek and its tributary, Eto Creek, which is located east of the intersection of Los Osos Valley Road and South Bay Boulevard. Los Osos Creek flows from the Irish Hills northerly to Morro Bay, and features a small estuary extending from its confluence with Warden Creek (outside of the Plan Area) to where it flows into Morro Bay.
- **Developed.** Approximately 1,515.8 acres (41.6 percent) of the Plan Area is comprised of developed land, which is completely human-made, consisting of residential, commercial, and industrially developed areas. Plant species in urban habitats are typically ornamental in nature and comprised of non-native species although developed sites can be devoid of any vegetation as well.

## **Sensitive Natural Communities**

The California Natural Diversity Database (CNDDB; CDFW 2018) lists eight sensitive natural communities that occur in the Plan Area and/or within a 0.5-mile buffer surrounding the Plan Area (Table 14).

**Table 14 Sensitive Natural Communities within the Plan Area**

Community	Community Descriptions
Central Dune Scrub	A dense coastal scrub community of scattered shrubs, subshrubs, and herbs generally less than 1 meter tall and often developing considerable cover. Diagnostic species include <i>Ericameria ericoides</i> and <i>Lupinus chamissonis</i> .
Central Foredunes	At elevations of 5-30 meters in coastal dune systems characterized by patchy cover of <i>Abronia maritime</i> , <i>Ambrosia chamissonis</i> , <i>Cakile maritime</i> , <i>Malacothrix incana</i> , and <i>Calystegia soldanella</i> . Generally, the first congregation of plants from shoreline.
Central Maritime Chaparral	A variable sclerophyll scrub of moderate to high cover (50-100 percent) dominated by forms of <i>Arctostaphylos tomentosa</i> (or <i>A. crustacea</i> ) plus one or more other narrowly distributed manzanita.
Coastal and Valley Freshwater Marsh	Dominated by perennial, emergent monocots up to 4-5 meters tall. Often forming completely closed canopies. <i>Bolboschoenus</i> spp., <i>Schoenoplectus</i> spp., <i>Scirpus</i> spp., and <i>Typha</i> spp. dominate most types.
Coastal Brackish Marsh	Dominated by perennial, emergent, and herbaceous hydrophytes less than two meters tall with dense cover. Salinities are variable. Typically occurs at the mouths of rivers, the interior edges of coastal bays and estuaries, or in coastal lagoons.
Southern Bishop Pine forest	Dominated by closed cone bishop pine trees. Occurring on uplands on maritime terraces, headlands, rocky ridges. Soils are usually shallow, acid. One of the only stands known in San Luis Obispo County is present near the south edge of the LOHCP boundary.
Northern Coastal Salt Marsh	Dominated by herbaceous and halophytes that form moderate to dense cover up to one meter tall. Usually segregated horizontally with <i>Spartina</i> nearest to the open water and pickleweed at mid-littoral elevations. Typically occurs along sheltered inland bays, lagoons, and estuaries that are subject to regular tidal inundation for at least some portion of the year.
Valley Needlegrass Grassland	A mid-height (up to 2 feet) grassland dominated by perennial, tussock-forming <i>Stipa pulchra</i> . Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover.

Source: CDFW 2018

## Special-Status Species

### Covered Species

The LOHCP covers the four federally-listed as threatened or endangered species discussed in this section.

### MORRO SHOULDERBAND SNAIL

The federally-listed as endangered Morro shoulderband snail is a terrestrial mollusk endemic to the area immediately north and south of Morro Bay in coastal San Luis Obispo County. The known range is estimated to encompass approximately 7,700 acres, centered on Los Osos north of Hazard Canyon, west of Los Osos Creek, and south of Morro Bay. The range also includes a narrow strip of coastal dunes north of Morro Bay in Morro Strand State Park. Native habitat occupied by the species includes coastal sage scrub along the immediate coast and open maritime chaparral communities on stabilized dunes further inland. Morro shoulderband snail is often found in areas featuring dense plant cover comprising shrubs or mat-forming species where plant cover, including branches, is in contact with the ground. Individuals are typically patchily dispersed and observed in clumps of

coastal sage scrub or clumps of veldt grass. The Plan Area includes approximately 2,832.1 acres of Morro shoulderband snail habitat<sup>11</sup> and potential habitat<sup>12</sup>; refer to Figure 4-1 in the LOHCP for the locations of habitat and potential habitat of this species within the Plan Area.

Morro shoulderband snail can also occur in areas of degraded habitat, including areas invaded by dense exotic plants, such as veldt grass, sweet fennel, fig marigold, and narrow-leaved iceplant. Morro shoulderband snails also found in association with a variety of anthropogenically disturbed habitat areas, including areas where coastal sage scrub has been converted to non-native grassland due to vegetation clearing and mowing, areas covered by veldt grass, fig marigold, and narrow-leaved iceplant, landscaping and ornamental plantings, woodpiles, and other habitats in developed areas and rights-of-way. Frequent observation of Morro shoulderband snail in a range of habitat conditions found in existing developed parcels areas as well as remaining vacant parcels suggest Morro shoulderband snail has the potential to occur throughout the USL and intact habitat on the perimeter of the Plan Area.

Morro shoulderband snail is also often found in litter that accumulates on the soil surface, and under piles of rock, downed wood, or other debris. Morro shoulderband snails feed on decaying matter and fungal mycelia that grow on decaying matter and plant roots. The species is most active during periods of moist conditions, including during and after rain, as well as when there is heavy fog or morning dew. Feeding, reproduction, and growth occur primarily during the rainy season (i.e., October to April).

Morro shoulderband snail is threatened by loss of habitat due to development, degradation of habitat as a result of exotic plants, recreational activities, and senescence of dune vegetation.

### **MORRO MANZANITA**

Morro manzanita is a large, evergreen shrub in the heath family (Ericaceae) that is a federally-listed as threatened species. Though not state-listed under CESA, Morro manzanita has a California Rare Plant Rank of 1B.1, which is used for plants that are rare, threatened, or endangered in California and elsewhere.

Morro manzanita is endemic to the Los Osos region in coastal San Luis Obispo County where it occurs primarily on Baywood fine sand soils. Based on the likely historic distribution of these soils, Morro manzanita may have covered between 2,000 and 2,700 acres. The current range of Morro manzanita is approximately 890 acres and within that area, Morro manzanita covers approximately 350 acres.

Within the Plan Area, Morro manzanita primarily occurs in central maritime chaparral communities; it is the dominant species (i.e., in terms of canopy cover) in the Morro manzanita maritime chaparral alliance, and also co-dominates with wedgeleaf ceanothus and California sagebrush. Morro manzanita also occurs at low abundance in coast live oak woodland, in the understory or canopy gaps of coast live oak. Scattered Morro manzanita may also be found in other communities, including remnant individuals in the developed areas (see Section 3.1.5 of LOHCP).

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<sup>11</sup> Morro shoulderband snail habitat consists of vegetation communities or other land cover types that are suitable for the species and have high potential to be occupied by the Morro shoulderband snail.

<sup>12</sup> Morro shoulderband snail potential habitat consists of vegetation communities or other land cover types that are potentially suitable for the species and have moderate potential to be occupied by the Morro shoulderband snail.

This long-lived shrub (greater than a 50-year life span) is adapted to recurring fire, which is an important component of the disturbance region in the Baywood fine sand ecosystem. Fire kills adult Morro manzanita, which lack a burl from which to resprout; however, it also promotes seed germination and establishment, and therefore regeneration. Effective fire management will likely be essential to the species' long-term persistence. As a narrowly-endemic species, Morro manzanita persistence is also threatened by habitat loss, including land conversion; habitat degradation, including exotic plants; and incompatible recreational uses, which can cause erosion, and further impact persistence. Morro manzanita may also be impacted by vegetation management, including fuel reduction projects designed to reduce the risk of fire adjacent to developed areas. Although individual Morro manzanita are typically trimmed rather than removed during most hazard abatement activities, as noted above, the species does not resprout from a burl when cut to the ground, and in the absence of fire, seedling establishment is very limited.

### **MORRO BAY KANGAROO RAT**

The federally- and state-listed as endangered Morro Bay kangaroo rat is a small, nocturnal, fossorial rodent endemic to the Baywood fine sand ecosystem, centered on the community of Los Osos in coastal San Luis Obispo County; the species is also state listed as endangered under the CESA and fully protected under the California Fish and Game Code (FGC). Within its range, estimated at less than five square miles, habitat for the species includes compacted sandy soils with slopes of less than 15 degrees, supporting a range of vegetation types.

Optimal habitat for Morro Bay kangaroo rat appears to be early-successional stages of coastal sage scrub, which are characterized by scattered subshrubs and shrubs less than three feet tall, interspersed with herbaceous plants and bare ground. Characteristic plant species of Morro Bay kangaroo rat habitat include sandcarpet (*Cardionema ramosissimum*), wedgeleaf ceanothus, western thistle (*Cirsium occidentale*), California croton, seaciff buckwheat, wedgeleaf horkelia, deer weed, and grasses.

Morro Bay kangaroo rats are solitary, and inhabit burrow systems that they use for nesting, escape, and caching seeds, which constitute their primary food source. Predators likely include snakes, owls, bobcat (*Lynx rufus*), coyote (*Canis latrans*), domestic cat (*Felis catus*) and domestic dog (*Canis lupus familiaris*).

Listed as federally endangered in 1970, Morro bay kangaroo rat has not been observed in the wild since 1986 despite several surveys (see Section B.4.8 of LOHCP). The last observed occurrence was in habitat currently within the Bayview Unit of the Morro Dune Ecological Reserve. The species may still be present in the Plan Area below detectable levels.

Declines in the population of this species are attributed to habitat loss, degradation, and fragmentation caused primarily by development in the Los Osos and Baywood Park communities. Habitat has also been degraded and fragmented by fire exclusion, which converts early-successional coastal sage scrub habitat to later successional communities that lack the preferred food plants and perhaps other important structural components of Morro Bay kangaroo rat habitat. Declines may have also resulted from predation by domestic cats and use of rodenticides.

### **INDIAN KNOB MOUNTAINBALM**

Indian Knob mountainbalm is a shrub in the borage family (Boraginaceae) that is both federally- and state-listed as endangered. Indian Knob mountainbalm is known from just seven occurrences in western San Luis Obispo County. Two occurrences are on Indian Knob, a rock outcrop area south of



San Luis Obispo and north of Pismo Beach. Two additional occurrences, represented by a total of four disjunct stands, are in Hazard Canyon within Montaña de Oro State Park south of the Plan Area. The remaining three occurrences are located in the Plan Area: one is located in the Broderson site and the other two are in the Bayview Unit the Morro Dunes Ecological Reserve. A census of the three sites in the Plan Area in April 2016 found 22 individual plants and 23 individual plants in the two occurrences in the Bayview Unit; however, no Indian Knob mountainbalm plants were observed in the Broderson Unit. Though the populations have not been comprehensively censused throughout the species' range, they are estimated to total fewer than 600 plants, with most of those (approximately 500) occurring approximately 13 miles east of Los Osos.

Indian Knob mountainbalm occurs on sandy soils derived from marine sandstone at Indian Knob, and Pleistocene older and partly cemented aeolian deposits (i.e., the Baywood fine sand soils) in Los Osos. In both areas, the species occurs in vegetation characterized as a mosaic of chaparral and oak woodland. Within these communities, the species' distribution is very limited. While the microhabitat characteristics of the endangered shrub have not yet been examined, the stands are thought to be remnants of once larger occurrences that have contracted over time as a result of succession, which creates less favorable conditions for this early successional species that is promoted by fire.

Indian Knob mountainbalm can reproduce vegetatively by establishing clones from rhizomes. Individuals may survive fire by resprouting from belowground tissues. Fire may be required to stimulate seed germination and create open canopy, bare soil conditions conducive to seedling establishment and survival.

Most of the land supporting Indian Knob mountainbalm, including all of the stands in the Los Osos region, is now protected; however, development still threatens a portion of one of the Indian Knob occurrences, which is located in unprotected, private land. Invasive species, including veldt grass, also pose risks to the species by invading and degrading suitable habitats.

### *Non-Covered Species*

A query of the CNDDDB RareFind 5, California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants, IPaC Trust Report, and NMFS Species Table generator resulted in 61 special-status animal species and 101 special-status plant and lichen species are known to occur or have potential to occur within a seven (two quadrangles of standard search would be ocean) USGS 7.5-minute topographic quadrangle search area centered on Morro Bay South quad (Table 15 and Table 16). The remaining quadrangles searched are Morro Bay North, Atascadero, San Luis Obispo, Pismo Beach, Port San Luis, and Cayucos. Table 15 and Table 16 include the habitat requirements and the potential for occurrence of these species in the Plan Area.

In general, aquatic species could occur in aquatic habitats such as stream or marsh habitats within the Plan Area. Upland species can utilize habitats such as coastal scrub, dune scrub, chaparral, grassland, and riparian habitat within the Plan Area, and, in much of the Plan Area, suitable habitat for the covered species is also potentially suitable for other special-status species, other special animals, and other wintering and nesting birds. Both wintering and nesting birds are expected to occur in most habitat types within the LOHCP Area, with location of any given species dependent on its habitat preferences. Although not documented to roost in the Plan Area, bats are expected to be present at least to forage in the area, and roosts are possible for some species.

**Table 15 Special-Status Animal Species with Potential to Occur in or Near the Plan Area**

Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<b>Invertebrates</b>				
<i>Bombus caliginosus</i> obscure bumble bee	–/– SA	Coastal areas from Santa Barbara county to north to Washington state. Food plant genera include <i>Baccharis</i> , <i>Cirsium</i> , <i>Lupinus</i> , <i>Lotus</i> , <i>Grindelia</i> and <i>Phacelia</i> .	Present	Reported from multiple collections in and near the LOHCP Area; suitable food plants are present.
<i>Bombus crotchii</i> Crotch bumble bee	–/– SA	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	High	While the CNDDDB does not report observations of this species within the LOHCP Area, it is known from the vicinity and some of its food plants are documented in the project area.
<i>Bombus occidentalis</i> western bumble bee	–/– SA	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	High	While the CNDDDB does not report observations of this species within the LOHCP Area, the project area is within its native range and it is known from the vicinity.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT/– SA	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	While this species is known from the vicinity, the LOHCP Area lacks appropriate vernal pools and other seasonal rain-filled depressions.
<i>Cicindela hirticollis gravida</i> sandy beach tiger beetle	–/– SA	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	Moderate	This species is known from beach and dunes in the vicinity. It is typically found in dunes immediately adjacent to the water, which are primarily west of the project area, but could occur in dunes at the west edge of the LOHCP Area.
<i>Coelus globosus</i> globose dune beetle	–/– SA	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	Moderate	This species is known from beach and dunes in the vicinity. This species is known to occur along the sandspit west of the project area. It is typically found along foredunes which are primarily west of the project area, but could occur in dunes at the west edge of the LOHCP Area.
<i>Danaus plexippus</i> (pop. 1) monarch - California overwintering population	–/– SA; Local Concern	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.	Present	This species is known to occur in eucalyptus groves in the LOHCP Area. Overwintering individuals were reported in the thousands in 2014 in the Skyline Grove and Sweet Springs sites.

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Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Helminthoglypta walkeriana</i> Morro shoulderband (=banded dune) snail	FE/- SA	Restricted to the coastal strand in the immediate vicinity of Morro Bay. Inhabits the duff beneath <i>Ericameria</i> , <i>Salvia</i> , <i>Dudleya</i> , and <i>Mesembryanthemum</i> .	Present	This species is documented to occur in the LOHCP Area, and critical habitat is designated in the LOHCP Area. This is discussed in detail in the Covered Species Accounts.
<i>Linderiella occidentalis</i> California linderiella	-/- SA	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	Not Expected	While this species is known from the vicinity, the LOHCP Area lacks appropriate vernal pools and other seasonal rain-filled depressions.
<i>Plebejus icarioides moroensis</i> Morro Bay blue butterfly	-/- SA	Inhabits stabilized dunes and adjacent areas of coastal San Luis Obispo and NW Santa Barbara counties. Larval food plant thought to be <i>Lupinus chamissonis</i> .	Present	This species is documented to occur in the LOHCP Area in association with coastal dune scrub.
<i>Polyphylla nubila</i> Atascadero June beetle	-/- SA	Known only from inland sand dunes in San Luis Obispo County.	Low	Suitable sand dunes are present in the LOHCP Area, though this species has not been reported there and the species reportedly occupies an inland range.
<i>Pyrgulopsis taylori</i> San Luis Obispo pyrg	-/- SA	Freshwater habitats in San Luis Obispo County.	Moderate	Suitable freshwater habitat is present in streams within the LOHCP Area, though this species has not been reported there.
<i>Tryonia imitator</i> mimic tryonia (=California brackish water snail)	-/- SA	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	Present	Suitable habitat is present in the Morro Estuary within the north edge of the LOHCP Area, and this species has been documented to occur in the marsh associated with the mouth of Los Osos Creek.
<b>Fish</b>				
<i>Eucyclogobius newberryi</i> tidewater goby	FE/- 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.	Present	Suitable brackish water habitat is present in the LOHCP Area. Tidewater goby is reported from observations in the 1980s near the mouth of Los Osos Creek in the CNDDB. Current status of this occurrence is not known.
<i>Oncorhynchus mykiss irideus</i> (pop. 9) steelhead - south-central California coast DPS	FT/- SA	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	Moderate	Species is not reported from the LOHCP Area, but suitable habitat is available within Los Osos Creek, on the eastern perimeter of the Plan Area.

Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<b>Amphibians</b>				
<i>Batrachoseps minor</i> lesser slender salamander	–/– SSC	South Santa Lucia Mountains in tanbark oak, coast live oak, blue oak, sycamore & laurel. Shaded slopes with abundant leaf litter.	Low	Although this species is reported from the vicinity, records are all inland in forested areas of the Santa Lucia Mountains.
<i>Rana boylei</i> foothill yellow-legged frog	–/SCT SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Low	Although this species is reported from the general vicinity, the LOHCP Area does not include rocky streams with riffles and rocky substrates.
<i>Rana draytonii</i> California red-legged frog	FT/– 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.	High	Suitable habitat is present in streams and wetlands with perennial water within the LOHCP Area. While no records of this species are recorded in the LOHCP Area in the CNDDb, the species is known to occur within dispersal distance of the LOHCP Area.
<i>Taricha torosa</i> Coast Range newt	–/– SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow-moving streams.	Moderate	Suitable habitat is present in streams, ponds, and wetlands within the LOHCP Area; however, no records of the species are reported from the near vicinity.
<b>Reptiles</b>				
<i>Anniella pulchra</i> northern California legless lizard	–/– SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Present	Suitable habitat is present in the Morro Estuary within the north edge of the LOHCP Area, and this species has been documented to occur there. Note that melanistic legless lizards may occur in the project area; however, subspecies nigra previously reported in the area is now believed to occur only in the Monterey Bay region, while melanistic individuals of legless lizards in Los Osos are now believed to be most closely related to Northern California legless lizard.
<i>Emys marmorata</i> western pond turtle	–/– 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.	High	Suitable freshwater habitats are present in streams and lakes in the LOHCP Area. While no occurrences are documented in the LOHCP Area in the CNDDb, the species is thought to occur at the Sweet Springs Nature Preserve.

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Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Phrynosoma blainvillii</i> coast horned lizard	–/– 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.	Present	This species is documented to occur in coastal dune scrub, chaparral, and grasslands within the LOHCP Area.
<b>Birds</b>				
<i>Accipiter cooperii</i> Cooper's hawk	–/– WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Present	This species is known to occur within the project area. Nesting records are reported in the CNDDDB, including a documented Cooper's hawk nest is present in an oak tree within the LOHCP Area.
<i>Accipiter striatus</i> Sharp-shinned hawk	–/– WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water.	Present	This species is known to winter in the LOHCP Area. Nesting in San Luis Obispo County is not common, although the CNDDDB reports at least one documented nest site.
<i>Agelaius tricolor</i> tricolored blackbird	– /ST 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.	High	Suitable habitat is present where emergent wetland vegetation includes cattail, bulrush, and willow, associated with streams, wetlands, and lakes in the LOHCP Area, and adults have been reported from the area, though this bird has not been documented nesting in the Area.
<i>Aquila chrysaetos</i> golden eagle	–/– FP, WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Present	This species is known to utilize the project area for foraging. Suitable foraging habitat includes grasslands, chaparral, and woodlands. Potential nesting sites are also present in prominent trees in the LOHCP Area.
<i>Athene cunicularia</i> burrowing owl	–/– SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	High	This species is known to winter in coastal San Luis Obispo County, and has been reported from PGE land south of the LOHCP Area, and grasslands east of the LOHCP Area. This species could occur in the project area where suitable grasslands and low-growing shrublands are present.
<i>Buteo regalis</i> ferruginous hawk	–/– WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Present	This species has been documented wintering in the Los Osos area by local birders. Ferruginous hawks are not known to nest in coastal San Luis Obispo County, but suitable wintering habitat is present.

Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Charadrius alexandrinus nivosus</i> western snowy plover	FT/- SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	High	This species is documented to occur on beaches west and north of the LOHCP Area. Although adults could forage in the Area, nesting areas are limited to the immediate coast west of the LOHCP Area, and suitable nesting habitat is not present in the project area.
<i>Circus cyaneus</i> northern harrier	-/- SSC	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Present	This species has been documented foraging in the LOHCP Area. Additionally, this species is occasionally reported to nest in coastal San Luis Obispo County, including records from Harmony a few miles north of the LOHCP Area.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Moderate	This species has been documented on rare occasions passing through nearby Hazard Canyon at Montana de Oro State Park south of the LOHCP Area, but no recent nesting occurrences (last 20 years) are known from San Luis Obispo County and no occurrences are documented in the CNDDDB for the project area. The species may pass through during migration but is not currently known to be a resident.
<i>Elanus leucurus</i> white-tailed kite	-/- FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Present	White-tailed kites are documented to occur in the LOHCP Area, though nesting locations are not known to be present. Documented nests are known from nearby, and suitable habitat is present.
<i>Eremophila alpestris actia</i> California horned lark	-/- WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	High	Suitable habitat for nesting is present in grasslands where vegetation is short within the LOHCP Area. No nesting records are reported in the CNDDDB from the project area, but the species has been reported to nest at Camp San Luis Obispo.
<i>Falco columbarius</i> Merlin	-/- WL	Seacoast, tidal estuaries, open woodlands, savannas, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country. Merlins winter in California and typically nest in Alaska and Canada.	Present	This species has been observed wintering in Los Osos. Nesting is not expected.
<i>Falco mexicanus</i> prairie falcon	-/- WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	High	This species has been documented foraging in Montana de Oro State Park, just south of the LOHCP Area. However, cliffs and bluffs favored for nest sites are not present.

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Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Falco peregrinus anatum</i> Peregrine falcon	DL/DL 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.	Present	Documented at the Sweet Springs Reserve and other birding locations in the LOHCP Area, and suitable foraging habitat is present. However, cliffs and bluffs typically favored for nest sites are not present.
<i>Lanius ludovicianus</i> loggerhead shrike	-/- 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.	Low	Suitable nesting habitat is present in dense shrubs of maritime chaparral as well as landscaped areas. This species has not been documented nesting in the LOHCP Area but is known from the vicinity.
<i>Laterallus jamaicensis coturniculus</i> California black rail	-/ST G3G4T1 / S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Present	This species has been documented in brackish marsh along the bay and at Sweet Springs Preserve in the LOHCP Area. Reported nest sites include Sweet Springs and marsh at the mouth of Los Osos Creek.
<i>Limosa fedoa</i> Marbled godwit	-/- -	A common to abundant migrant and winter visitant from mid-August to early May in estuarine habitats the length of the state. A fairly common migrant and winter visitant at the Salton Sea, but generally rare elsewhere in the interior of the state. Small numbers of nonbreeders remain on the coast and at the Salton Sea through the summer. On the coast, most common on estuarine mudflats, but also occurs on sandy beaches, open shores, saline emergent wetlands, and adjacent wet upland fields	Present	This species has been reported wintering in the Estuary near the Elfin Forest and near Sweet Springs. This species is not known or expected to nest in this area and would be expected primarily at the immediate coast in association with the edge of the estuary.
<i>Numenius americanus</i> Long billed curlew	-/- WL	Uncommon to locally very common as a winter visitor from early July to early April along most of the California coast, and in the Central and Imperial valleys, where the largest flocks occur. Preferred winter habitats include large coastal estuaries, upland herbaceous areas, and croplands. On estuaries, feeding occurs mostly on intertidal mudflats. Small numbers of nonbreeders remain on coast in summer, and larger numbers remain in some years in the Central Valley. Breeds in upland shortgrass prairies and wet meadows in northeastern California.	Present	This species has been reported wintering in the Estuary near the Elfin Forest and near Sweet Springs. This species is not known or expected to nest in this area and would be expected primarily at the immediate coast in association with the edge of the estuary.

Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Numenius phaeopus</i> Whimbrel	–/– –	Fairly common to abundant as a spring migrant from mid-March to late May. Less common, but still numerous, in fall migration from early August to mid-October. In winter, rare to very uncommon in coastal central California, but fairly common along the southern California coast. On the coast, forages on rocky intertidal and sandy beach marine habitats, on the intertidal mudflats of estuarine habitats, and on wet meadow and pasture habitats adjacent to the immediate coast. Occasionally forages on lawns or golf courses. Nests in arctic regions in open areas on moist hummocky tundra amid grasses, cotton-grass, and low heath.	Present	This species has been reported during migration in the Estuary near the Elfin Forest and near Sweet Springs. This species is not known or expected to nest in this area.
<i>Passerculus sandwichensis</i> <i>rostratus</i> Large-billed savannah sparrow	–/– SSC	<i>P. s. rostratus</i> , the large-billed savannah sparrow, a winter visitant to saline emergent wetland at Salton Sea and southern coast, is a California Species of Special Concern. Breeds along the Colorado River delta in Mexico; winters at the Salton Sea. Saline emergent wetlands at the Salton Sea and southern coast.	High	This species has been reported from the near vicinity at the Morro Bay State Park marina and is expected to forage in the LOHCP Area as a wintering bird. While the estuary may provide suitable habitat, this subspecies is not known to nest in San Luis Obispo County.
<i>Pelecanus occidentalis</i> <i>californicus</i> California brown pelican	DL/DL FP	Brown Pelicans live year-round in estuaries and coastal marine habitats along both the east and west coasts. Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Present	This species has been reported from the near vicinity at the immediate coast near the Elfin Forest and Sweet Springs, and is expected to roost in the LOHCP Area as a wintering bird. However, suitable nesting areas are not known in the LOHCP Area.
<i>Progne subis</i> purple martin	–/– SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.	Moderate	Suitable woodlands are present in the LOHCP, although the CNDDDB does not report any known nesting sites in the LOHCP Area.
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	FE/SE FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Low Potential (Extirpated)	This species was historically known to occur in salt marsh at the Morro Bay estuary, which extends into the project area, but has not been seen in the region since 1973.



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Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Selasphorus sasin</i> Allen's hummingbird	-/- -	A common summer resident (January to July) and migrant along most of the California coast. Breeders are most common in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats, but also are common in closed-cone pine-cypress, urban, and redwood habitats. Occurs in a variety of woodland and scrub habitats as a migrant.	Present	This species is known to occur in the LOHCP Area and has been reported near Sweet Springs and the Elfin Forest. The LOHCP is within the breeding range of this species.
<i>Setophaga petechial</i> Yellow warbler	-/- 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.	Present	This species is known to occur in the LOHCP Area and has been reported near Sweet Springs and the Elfin Forest. The LOHCP is within the breeding range of this species, although the CNDDDB does not include any records of nesting yellow warbler in San Luis Obispo County.
<i>Strix occidentalis</i> <i>occidentalis</i> California spotted owl	-/- SSC	Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure >40%. Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water.	Low	The CNDDDB does not include reports of California spotted owl in the LOHCP area, and while this species is reported from wooded areas inland of the project area elsewhere in the County, available sources did not document it in the LOHCP Area.
<i>Thalasseus elegans</i> elegant tern	-/- WL	Breeds from San Diego Bay south to central Baja California. Post-breeders in summer occur regularly on the Pacific Coast from central California to Costa Rica. Only 3 known breeding colonies in California: San Diego Bay, Los Angeles Harbor and Bolsa Chica Ecological Reserve. Nests on open, sandy, undisturbed beaches and on salt-evaporating pond dikes (San Diego) in association with Caspian tern.	Present	This species is reported from the immediate coast in the LOHCP. However, the CNDDDB does not report any known nesting sites in the LOHCP Area and breeding is not expected in this area of the state.
<i>Toxostoma redivivum</i> California thrasher	-/- -	A common resident of foothills and lowlands in cismontane California. Occupies moderate to dense chaparral habitats and, less commonly, extensive thickets in young or open valley foothill riparian habitat. Requires dense cover of chaparral or riparian thicket.	Present	Documented in the Elfin Forest, at Sweet Springs Reserve and other locations in the LOHCP Area, and suitable foraging and nesting habitats are present. Breeding is expected in the LOHCP Area.

Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<b>Mammals</b>				
<i>Antrozous pallidus</i> pallid bat	–/– 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.	High	Suitable foraging habitat is present in the LOHCP Area, and suitable potential roosts are present in hills to the south. No documented roosts are reported from the LOHCP Area.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	–/– 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.	High	Suitable foraging habitat is present in the LOHCP Area, and suitable potential roosts are present in structures. No documented roosts are reported from the LOHCP Area, but the species is reported from Camp San Luis Obispo approximately 3.5 miles east.
<i>Dipodomys heermanni morroensis</i> Morro Bay kangaroo rat	FE/SE G3G4TH / SH FP	Coastal sage scrub on the south side of Morro Bay. Needs sandy soil, but not active dunes, prefers early seral stages.	High	Historically documented from the LOHCP Area, though not seen in the wild for several years. Designated critical habitat is present in the LOHCP Area. This species is discussed in more detail under Covered Species Accounts.
<i>Enhydra lutris nereis</i> southern sea otter	FT/– FP	Shallow inshore habitats supporting kelp forests. Known from Ano Nuevo, San Mateo County to Point Sal, Santa Barbara County.	High	This species is known to occur within the Pacific Ocean and Morro Bay Harbor immediately adjacent to the project area, though there are no CNDDDB records of the species in LOHCP Area.
<i>Eumops perotis californicus</i> western mastiff bat	–/– 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.	Moderate	Suitable foraging habitat is present in the LOHCP Area. No documented roosts are reported from the LOHCP Area and appropriate tunnels, cliffs, or high buildings are not known.
<i>Myotis evotis</i> Long-eared myotis	–/– SA	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	Moderate	Suitable habitat is available. The CNDDDB have no records for long-eared myotis in San Luis Obispo County; however, bats without SSC or other special status designations are not always well documented in the CNDDDB, and its range overlaps the LOHCP Area.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	–/– 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.	High	Suitable scrub habitats are present, although rock outcrops and cliffs are limited in the LOHCP Area. The CNDDDB does not report the species from the project area, but it is known from PGE property south of Montana de Oro (CNDDDB 20018).

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Scientific Name Common Name	Status Fed/State ESA CDFW; Local Status	Habitat Requirements	Potential to Occur	Rationale
<i>Nyctinomops macrotis</i> big free-tailed bat	–/– SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	High	High Potential for Foraging. Suitable roosting habitat for this species occurs in the rocky outcrops immediately north of the project area. CNDDDB reports a museum collection of this species from Morro Bay State Park. Species may use project area for foraging.
<i>Phoca vitulina</i> Harbor seal	–/– –	Found on California islands and along entire mainland coast. Prefer to remain close to shore in subtidal and intertidal habitats. Often swim into bays and estuaries, and sometimes venture into rivers in northern California. Frequently haul out in small to moderate-sized groups on emergent offshore and tidal rocks, mudflats, sandbars, and sandy beaches.	High	This species is not tracked by the CNDDDB, but harbor seals are known from Morro Bay, and could occur within the LOHCP Area immediately adjacent to the estuary.
<i>Tadarida brasiliensis</i> Mexican free-tailed bat	–/– –	Found throughout California. Overall, this species is common in California and may be locally abundant. Many habitats used, including mixed conifer forests, but open habitats such as woodlands, shrublands, and grasslands are preferred. Requires caves, mine tunnels, crevices, or buildings for roosting and hibernation. Uses mostly buildings along the coast. May use a separate night roost, particularly if foraging far from the day roost.	High	This species is not tracked by the CNDDDB, but its range overlaps the LOHCP Area. Suitable foraging habitat is present, though roosting potential in the project area is limited to structures.
<i>Taxidea taxus</i> American badger	–/– 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.	High	Suitable habitat is present in the LOHCP, particularly in grasslands on larger properties with ground squirrels present, and species is reported from Los Osos Valley east of the project area; however, this species is not documented to occur within the Area.
Habitat requirements derived from sources listed above, Jepson Manual Higher Plants of California 2 <sup>nd</sup> Edition (2012), California Lichen Society, and Service Five –year Reviews (as cited in references)				
FT = Federally Threatened      SE = State Endangered      ST = State Threatened FE = Federally Endangered      CT = Candidate Threatened      SR = State Rare DL = Delisted      SSC = CDFW Species of Special Concern FP = Fully Protected      WL = CDFW Watch List      SA = CDFW Special Animal				
Sources: CNDDDB (CDFW 2018), ECOS IPaC (Service 2018), CNPS Online Inventory (CNPS 2018), and Special Animal List (CDFW 2019a)				

**Table 16 Special-Status Plant and Lichen Species with Potential to Occur in or Near the Plan Area**

Scientific Name Common Name	Status FESA/CESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<b>Plants and Lichens</b>				
<i>Abronia maritima</i> red sand-verbena	–/– 4.2	Coastal dunes. Dune plant. 0-100 m. Perennial herb. Blooms Feb.-Nov.	Moderate	Sandy soil and some dune habitat is present along the western edge of the LOHCP Area
<i>Agrostis hooveri</i> Hoover's bent grass	–/– 1B.2	Chaparral, cismontane woodland, closed-cone coniferous forest, valley and foothill grassland. Sandy sites. 6-765 m. Perennial herb. Blooms Apr.-Jul.	Moderate	Suitable sandy soils are present within the LOHCP Area for this species
<i>Arctostaphylos cruzensis</i> Arroyo de la Cruz manzanita	–/– 1B.2	Broadleafed upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub, & valley and foothill grassland. On sandy soils in several different habitat types from chaparral to coastal scrub to woodland. 5-310 m. Perennial evergreen shrub. Blooms Dec.-Mar.	Present	Based on herbarium records, this species has been documented on State Lands within the LOHCP Area.
<i>Arctostaphylos luciana</i> Santa Lucia manzanita	–/– 1B.2	Chaparral, cismontane woodland. On shale (one site says serpentine) outcrops, on slopes, in chaparral. 105-850 m. Perennial evergreen shrub. Blooms Dec.-Mar.	Low potential	The CNDDDB reports records further inland in San Luis Obispo County, consistent with the range of this species which is not thought to extend to the immediate coast.
<i>Arctostaphylos morroensis</i> Morro manzanita	FT/– 1B.1	Chaparral, cismontane woodland, coastal dunes, coastal scrub. On Baywood sands, usually with chaparral associates. 5-205 m. Perennial evergreen shrub. Blooms Dec.-Mar.	Present	This species has been documented within the LOHCP Area. This species is discussed in more detail in the Covered Species Accounts section.
<i>Arctostaphylos obispoensis</i> Bishop manzanita	–/– 4.3	Closed-cone coniferous forest, cismontane woodland, chaparral Rocky, serpentine sites. 150-1005 m. Perennial evergreen shrub. Blooms Feb.-Jun.	Not Expected	The CNDDDB reports records further inland in San Luis Obispo County, consistent with the range of this species which is currently not thought to extend to the immediate coast.
<i>Arctostaphylos osoensis</i> Oso manzanita	–/– 1B.2	Chaparral, cismontane woodland. Usually occurs in openings within oak woodland on dacite porphyry buttes. 95-500 m. Perennial evergreen shrub. Blooms Feb.-Mar.	High	CNDDDB documents occurrences of this species in mountains North of Los Osos Valley, less than 0.5 miles north of Los Osos (mapped in the CNDDDB as overlapping the edge of the LOHCP Area). Although most of Los Osos has elevations less than 95 m, this species has moderate potential to occur within the coastal scrub, maritime chaparral, and coast live oak woodland habitats with appropriate substrates within the project area.

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Scientific Name Common Name	Status FESA/CESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Arctostaphylos pechoensis</i> Pecho manzanita	-/- 1B.2	Closed-cone coniferous forest, chaparral, coastal scrub. Grows on siliceous shale with other chaparral associates. 125-855 m. Perennial evergreen shrub. Blooms Nov.-Mar.	Moderate	This species is known to occur just outside the project area near the eastern edge. Not expected extensively in the project area due to limited abundance of appropriate substrate.
<i>Arctostaphylos pilosula</i> Santa Margarita manzanita	-/- 1B.2	Closed-cone coniferous forest, chaparral, broadleaved upland forest, cismontane woodland. Shale outcrops & slopes; reported growing on decomposed granite or sandstone. 60-1220 m. Perennial evergreen shrub. Blooms Dec.-May	Moderate	This species is known to occur just outside the project area in hills to the south. Not expected extensively in the project area due to limited abundance of appropriate substrate.
<i>Arctostaphylos rudis</i> sand mesa manzanita	-/- 1B.2	Chaparral, coastal scrub. On sandy soils in Lompoc/Nipomo area. 20-335 m. Perennial evergreen shrub. Blooms Nov.-Feb.	Not Expected	The LOHCP Area is north of the known range of this species.
<i>Arctostaphylos tomentosa</i> ssp. <i>daciticola</i> dacite manzanita	-/- 1B.1	Chaparral, cismontane woodland. Only known from one site in San Luis Obispo County on dacite porphyry buttes. 100-300 m. Perennial evergreen shrub. Blooms Mar.-May	Moderate	This species is known to occur outside the project area in hills to the east. Not expected extensively in the project area due to limited abundance of appropriate substrate.
<i>Arenaria paludicola</i> marsh sandwort	FE/SE 1B.1	Marshes and swamps. Growing up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh. Sandy soil. 3-170 m. Perennial stoloniferous herb. Blooms May-Aug.	Present	This species was reintroduced to marsh habitat within the Sweet Springs Reserve within the LOHCP Area. No other documented populations are present within the LOHCP area.
<i>Aspidotis carlotta-halliae</i> Carlotta Hall's lace fern	-/- 4.2	Chaparral, cismontane woodland. Generally serpentine slopes, crevices, or outcrops. 100-1400 m. Perennial rhizomatous herb. Blooms Jan.-Dec.	Not Expected	No CNDDDB or herbarium records report this species from the LOHCP Area, and due to the limited extent of potentially suitable substrates, this species is not expected in the project area.
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch	-/- 1B.2	Coastal scrub. Clay soils. 20-385 m. Annual herb. Blooms Mar.-Jun.	Low	The CNDDDB and herbarium records report this species from clay soils north of the LOHCP Area. Suitable coastal scrub is present within the LOHCP Area; however, suitable soils are very limited in the project area.
<i>Astragalus nuttallii</i> var. <i>nuttallii</i> ocean bluff milk-vetch	-/- 4.2	Coastal bluff scrub, coastal dunes. 3-120 m. Perennial herb. Blooms Jan.-Nov.	High	Suitable dune scrub habitat is present within the LOHCP Area and herbarium records document this species at Montana de Oro just west of the LOHCP Area.

Scientific Name Common Name	Status FESA/CESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Atriplex coulteri</i> Coulter's saltbush	-/- 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.	Moderate	Suitable coastal and dune scrub habitats are present within the LOHCP Area and the species is reported from bluffs in the vicinity.
<i>Bryoria pseudocapillaris</i> [= <i>Sulcaria spiralifera</i> ] false gray horsehair lichen	-/- 3.2 (CALS)	Coastal dunes, North Coast coniferous forest (immediate coast). Usually on conifers. 0-90 m. fruticose lichen (epiphytic).	Present	Taxonomy has been revised and this species and another, <i>B. spiralifera</i> , are treated in some references as <i>S. spiralifera</i> (see next entry).
<i>Bryoria spiralifera</i> [= <i>Sulcaria spiralifera</i> ] twisted horsehair lichen	-/- 1B.1	North coast coniferous forest. Usually on conifers. 0-30 m. fruticose lichen (epiphytic).	Present	This species has been documented within Elfin Forest and at the southern edge of the LOHCP Area. Recent taxonomic revisions place this species in <i>Sulcaria</i> .
<i>Calandrinia breweri</i> Brewer's calandrinia	-/- G4 / S4 4.2	Chaparral, coastal scrub. Sandy or loamy soils. Disturbed sites, burns. 10-1200 m. Annual herb. Blooms (Jan.)Mar.-Jun.	High	Suitable dune scrub and maritime chaparral habitat is present within the LOHCP Area and the species is reported from the near vicinity in herbarium records.
<i>Calochortus clavatus</i> var. <i>clavatus</i> club-haired mariposa-lily	-/- 4.3	Chaparral, cismontane woodland, valley and foothill grassland, coastal scrub. Generally on serpentine clay, rocky soils. 75-1300 m. Perennial bulbiferous herb. Blooms (Mar.) May-Jun.	Low	Herbarium records report this species from rocky areas south of the LOHCP Area. Suitable chaparral and coastal scrub are present within the LOHCP Area; however, suitable soils are very limited in the project area.
<i>Calochortus clavatus</i> var. <i>recurvifolius</i> Arroyo de la Cruz mariposa-lily	-/- 1B.2	Coastal bluff scrub, maritime chaparral, coastal prairie, lower montane coniferous forest. Ocean bluffs, grassy slopes, above riparian zones, and in grassland bordering chaparral. 10-170 m. Perennial bulbiferous herb. Blooms Jun.-Jul.	Not Expected	The current known range of this species is restricted to the north coast of San Luis Obispo County.
<i>Calochortus obispoensis</i> San Luis mariposa-lily	-/- 1B.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Often in serpentine grassland. 15-730 m. Perennial bulbiferous herb. Blooms May-Jul.	Not Expected	The LOHCP is outside the known range of the species.
<i>Calochortus simulans</i> La Panza mariposa-lily	-/- 1B.3	Valley and foothill grassland, cismontane woodland, chaparral, lower montane coniferous forest. Decomposed granite. 50-1160 m. Perennial bulbiferous herb. Blooms Apr.-Jun.	Not Expected	The LOHCP is outside the known range of the species.
<i>Calycadenia villosa</i> dwarf calycadenia	-/- 1B.1	Chaparral, cismontane woodland, valley and foothill grassland, meadows and seeps. Open, dry meadows, hillsides, gravelly outwashes. 240-1350 m. Annual herb. Blooms May-Oct.	Not Expected	The LOHCP is outside the known range of the species.

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<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i> Cambria morning-glory	-/- 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. 5-500 m. Perennial rhizomatous herb. Blooms (Mar.) Apr.-Jun. (Jul.)	Low	This species has moderate potential to occur in the clay rich soils within the project area. Not expected extensively in the project area due to limited abundance of appropriate substrate.
<i>Camissoniopsis hardhamiae</i> Hardham's evening-primrose	-/- 1B.2	Chaparral, cismontane woodland. Sandy, decomposed carbonate. 140-945 m. Annual herb. Blooms Mar.-May	Present	This species is reported from the LOHCP from a single herbarium specimen (RSA628488); however, all other reports of this species are substantially inland.
<i>Carex obispoensis</i> San Luis Obispo sedge	-/- 1B.2	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Usually in transition zone on sand, clay, serpentine, or gabbro. In seeps. 5-845 m. Perennial herb. Blooms Apr.-Jun.	Not Expected	Suitable habitat and soils are not present within the LOHCP Area.
<i>Castilleja densiflora</i> var. <i>obispoensis</i> San Luis Obispo owl's-clover	-/- 1B.2	Valley and foothill grassland, meadows and seeps. Sometimes on serpentine. 10-485 m. Annual herb (hemiparasitic). Blooms Mar.-May	Moderate	Suitable grassland habitat is present in the LOHCP Area; however, suitable soils are limited. This variety is documented to occur near San Bernardo Creek and near Morro Bay State Park.
<i>Ceanothus cuneatus</i> var. <i>fascicularis</i> Lompoc ceanothus	-/- 4.2	Chaparral. Sandy soils. 5-400 m. Perennial evergreen shrub. Blooms Feb.-Apr.	Present	This species has been documented within the LOHCP Area in herbarium records.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	-/- 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-230 m. Annual herb. Blooms May-Oct.(Nov.)	Not Expected	Suitable heavy clay soil is not present within the LOHCP Area.
<i>Cercocarpus betuloides</i> var. <i>blancheae</i> island mountain-mahogany	-/- 4.3	Chaparral, closed-cone coniferous forest. 30-600 m. Perennial evergreen shrub. Blooms Feb.-May	Not Expected	The site is substantially north of the known range of this species.
<i>Chenopodium littoreum</i> coastal goosefoot	-/- 1B.2	Coastal dunes. 10-30 m. Annual herb. Blooms Apr.-Aug.	Present	This species has been documented within the LOHCP Area in herbarium records and the CNDDB.
<i>Chlorogalum pomeridianum</i> var. <i>minus</i> dwarf soaproot	-/- 1B.2	Chaparral. Serpentine. 120-1220 m. Perennial bulbiferous herb. Blooms May-Aug.	Low potential	Suitable chaparral habitat is present along the southern edge of the LOHCP Area, however, not expected extensively in the project area due to limited abundance of appropriate substrate.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> salt marsh bird's-beak	FE/SE 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m. Annual herb (hemiparasitic). Blooms May-Oct.(Nov.)	Present	This species has been documented within marsh habitat within the LOHCP Area.

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<i>Chorizanthe breweri</i> Brewer's spineflower	–/– 1B.3	Chaparral, cismontane woodland, coastal scrub, closed-cone coniferous forest. Rocky or gravelly serpentine sites; usually in barren areas. 45-800 m. Annual herb. Blooms Apr.-Aug.	Not Expected	Suitable habitat and soils are not present within the LOHCP Area.
<i>Chorizanthe douglasii</i> Douglas' spineflower	–/– 4.3	Cismontane woodland, lower montane coniferous forest, chaparral, coastal scrub, valley and foothill grassland. Sand or gravel. 55-1600 m. Annual herb. Blooms Apr.-Jul.	Low potential	Suitable habitat and soils are present within the LOHCP Area, although the species is not reported from the vicinity in herbarium records.
<i>Chorizanthe leptotheca</i> Peninsular spineflower	–/– 4.2	Chaparral, coastal scrub, lower montane coniferous forest. On granitic soils, in alluvial fans. 300-1900 m. Annual herb. Blooms May-Aug.	Not Expected	This species is not confirmed to occur in San Luis Obispo County, and the LOHCP Area is substantially north of the known range of the species.
<i>Chorizanthe palmeri</i> Palmer's spineflower	–/– 4.2	Chaparral, cismontane woodland, valley and foothill grassland. Dry, rocky places and hillsides. Serpentine substrates. 55-945 m. Annual herb. Blooms Apr.-Aug.	Not Expected	Suitable habitat and soils are not present within the LOHCP Area.
<i>Chorizanthe rectispina</i> straight-awned spineflower	–/– 1B.3	Chaparral, cismontane woodland, coastal scrub. Often on granite in chaparral. 45-1040 m. Annual herb. Blooms Apr.-Jul.	Not Expected	Suitable habitat and soils are not present within the LOHCP Area. The project site is coastward of all known populations in San Luis Obispo County.
<i>Chorizanthe ventricosa</i> potbellied spineflower	–/– 4.3	Valley and foothill grassland, cismontane woodland. Serpentine. 65-1235 m. Annual herb. Blooms May-Sep.	Not Expected	The LOHCP is outside the known range of the species and suitable substrates are not present.
<i>Cirsium fontinale</i> var. <i>obispoense</i> San Luis Obispo fountain thistle	FE/SE 1B.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Serpentine seeps. 5-385 m. Perennial herb. Blooms Feb.-Jul.(Aug.-Sep.)	Not Expected	Suitable habitat and soils are not present in the LOHCP for this species.
<i>Cirsium occidentale</i> var. <i>compactum</i> compact cobwebby thistle	–/– 1B.2	Chaparral, coastal dunes, coastal prairie, coastal scrub. On dunes and on clay in chaparral; also in grassland. 5-245 m. Perennial herb. Blooms Apr.-Jun.	Moderate	Suitable coastal dune scrub habitat is present within the LOHCP Area; however, the species has not been documented within the LOHCP Area.
<i>Cirsium occidentale</i> var. <i>lucianum</i> Cuesta Ridge thistle	–/– 1B.2	Chaparral. Openings; on serpentinite. Often on steep rocky slopes and along disturbed roadsides. 485-765 m. Perennial herb. Blooms Apr.-Jun.	Not Expected	The LOHCP is outside the known range of the variety.
<i>Cirsium rhotophylum</i> surf thistle	–/ST 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.	Low Potential	Suitable coastal dune scrub habitat is present within the LOHCP Area; however, the species has not been documented with the LOHCP Area and all known occurrences are considerably south of the project area.
<i>Cirsium scariosum</i> var. <i>loncholepis</i> La Graciosa thistle	FE/ST 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	The LOHCP is outside the known range of this variety.



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<i>Cladonia firma</i> popcorn lichen	-/- 2B.1	Coastal dunes, coastal scrub. On soil and detritus on stabilized sand dunes, in pure stands or intermixed with other lichens and mosses forming biotic soil crusts, covering areas up to several meters. 30-80 m. squamulose lichen (terricolous).	Present	This species has been documented in the Elffin Forest within the LOHCP Area.
<i>Clarkia speciosa</i> ssp. <i>immaculata</i> Pismo clarkia	FE/SR 1B.1	Chaparral, cismontane woodland, valley and foothill grassland. On ancient sand dunes not far from the coast. Sandy soils; openings. 25-185 m. Annual herb. Blooms May-Jul.	Not Expected	The LOHCP Area is outside the known range of the subspecies.
<i>Clinopodium mimuloides</i> monkey-flower savory	-/- 4.2	North coast coniferous forest, chaparral Streambanks, mesic sites. 305-1800 m. Perennial herb. Blooms Jun.-Oct.	Low	Moderately suitable chaparral and streambanks are present; however, no nearby populations are reported and the species is not documented in the LOHCP Area.
<i>Deinandra paniculata</i> paniculate tarplant	-/- 4.2	Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernal mesic sites. Sometimes in vernal pools or on mima mounds near them. 25-940 m. Annual herb. Blooms (Mar.) Apr.-Nov.	Moderate	Suitable coastal scrub and grassland habitats are present in the LOHCP Area, and the species is reported nearby according to herbarium records.
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i> dune larkspur	-/- 1B.2	Chaparral, coastal dunes (maritime). On rocky areas and dunes. 0-305 m. Perennial herb. Blooms Apr.-Jun.	Moderate	Suitable coastal dune and chaparral habitat is present within the LOHCP Area.
<i>Delphinium parryi</i> ssp. <i>eastwoodiae</i> Eastwood's larkspur	-/- 1B.2	Chaparral, valley and foothill grassland. Serpentine. Openings. 60-640 m. Perennial herb. Blooms (Feb.) Mar.	Not Expected	Suitable habitat and soils are not present within the LOHCP Area.
<i>Delphinium umbraculorum</i> umbrella larkspur	-/- 1B.3	Cismontane woodland, chaparral. Moist oak forest. Mesic sites. 215-2075 m. Perennial herb. Blooms Apr.-Jun.	Not Expected	Suitable habitat and soils are not present within the LOHCP Area; species is not reported to occur at the immediate coast.
<i>Dithyrea maritima</i> beach spectaclepod	-/ST 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	Moderate potential	This species is known to occur in the sand spit dune complex and coastal strand west of the project area. Areas of active and recently stabilized dune in the project area near its west edge may be suitable.
<i>Dudleya abramsii</i> ssp. <i>bettinae</i> Betty's dudleya	-/- 1B.2	Coastal scrub, valley and foothill grassland, chaparral. On rocky, barren exposures of serpentine within scrub vegetation. 20-250 m. Perennial herb. Blooms May-Jul.	Low potential	This species is documented on hillsides near the LOHCP Area, and suitable chaparral and dune scrub habitats are present, though areas of suitable thin soil and serpentine substrates are limited in the LOHCP Area.

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<i>Dudleya abramsii</i> ssp. <i>murina</i> mouse-gray dudleya	–/– 1B.3	Chaparral, cismontane woodland, valley and foothill grassland. Serpentine outcrops. 25-535 m. Perennial leaf succulent. Blooms May-Jun.	Low potential	This species is documented on hillsides near the LOHCP Area, and suitable chaparral and dune scrub habitats are present, though areas of suitable thin soil and serpentine substrates are limited in the LOHCP Area.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya	–/– 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.	Low potential	This species is documented on hillsides near the LOHCP Area, and suitable chaparral and dune scrub habitats are present, though areas of suitable thin soil are limited in the LOHCP Area.
<i>Eriastrum luteum</i> yellow-flowered eriastrum	–/– 1B.2	Broadleafed upland forest, cismontane woodland, chaparral. On bare sandy decomposed granite slopes. 240-1000 m. Annual herb. Blooms May-Jun.	Not Expected	Suitable habitat is not present within the LOHCP Area.
<i>Erigeron blochmaniae</i> Blochman's leafy daisy	–/– 1B.2	Coastal dunes, coastal scrub. Sand dunes and hills. 0-185 m. Perennial rhizomatous herb. Blooms Jun.-Aug.	Present	This species is documented to occur in coastal dune scrub in Montana de Oro State Park as well as within the town of Los Osos, both in the LOHCP Area
<i>Erigeron sanctarum</i> Saint's daisy	–/– 4.2	Sandy sites, coastal scrub or woodland. Perennial herb. <500 m. Blooms Mar.-Jun.	Present	This species is reported from dunes in the LOHCP Area.
<i>Eriodictyon altissimum</i> Indian Knob mountainbalm	FE/SE 1B.1	Chaparral (maritime), cismontane woodland, coastal scrub. Ridges in open, disturbed areas within chaparral on Pismo sandstone. 80-270 m. Perennial evergreen shrub. Blooms Mar.-Jun.	Present	This species is documented to occur in the LOHCP Area within the Morro Dunes Ecological Reserve. This species is discussed in more detail under Covered Species Accounts.
<i>Eryngium aristulatum</i> var. <i>hooveri</i> Hoover's button-celery	–/– 1B.1	Vernal pools. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 1-50 m. Annual / perennial herb. Blooms (Jun.) Jul. (Aug.)	Moderate	Suitable habitat is present in wetlands within the LOHCP Area, although this species has not been reported there.
<i>Erysimum suffrutescens</i> suffrutescent wallflower	–/– 4.2	Coastal dunes, coastal scrub, coastal bluff scrub, chaparral. Coastal dunes and bluffs. 0-150 m. Perennial herb. Blooms Jan.-Jul.(Aug.)	Present	This species is known to occur within coastal dune scrub in the LOHCP Area based on previous studies and herbarium records.
<i>Extriplex</i> (=Atriplex) <i>joaquinana</i> San Joaquin spearscale	–/– 1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. 0-840 m. Annual herb. Blooms Apr.-Oct.	Moderate	Suitable habitat is present in brackish marsh at Sweet Springs in the northern LOHCP Area; however, the only records of this species from the vicinity is an 1899 herbarium specimen.
<i>Fritillaria agrestis</i> stinkbells	–/– 4.2	Cismontane woodland, chaparral, valley and foothill grassland, pinyon and juniper woodland. Sometimes on serpentine; mostly found in nonnative grassland or in grassy openings in clay soil. 10-1555 m. Perennial bulbiferous herb. Blooms Mar.-Jun.	Not Expected	Suitable heavy clay soil or serpentine substrates are not present within the LOHCP Area.

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<i>Fritillaria ojaiensis</i> Ojai fritillary	–/– 1B.2	Broadleaved upland forest (mesic), chaparral, lower montane coniferous forest, cismontane woodland. Usually loamy soil. Sometimes on serpentine; sometimes along roadsides. 100-1140 m. Perennial bulbiferous herb. Blooms Feb.-May.	Low	Limited suitable habitat is present within the LOHCP Area; however, however, suitable substrates are also limited.
<i>Fritillaria viridea</i> San Benito fritillary	–/– 1B.2	Chaparral, cismontane woodland. Serpentine slopes. Sometimes on rocky streambanks. 365-1525 m. Perennial bulbiferous herb. Blooms Mar.-May	Low	Limited suitable habitat is present within the LOHCP Area; however, however, suitable substrates are also limited.
<i>Grindelia hirsutula</i> var. <i>maritima</i> San Francisco gumplant	–/– 3.2	Coastal scrub, coastal bluff scrub, valley and foothill grassland. Sandy or serpentine slopes, sea bluffs. 15-400 m. Perennial herb. Blooms Jun.-Sep.	Moderate	Suitable habitat is present within the LOHCP Area and <i>G. hirsutula</i> is reported from nearby. However, note that the variety is not currently recognized by the Jepson eFlora.
<i>Horkelia cuneata</i> var. <i>puberula</i> mesa Horkelia	–/– 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m. Perennial herb. Blooms Feb.-Jul.(Sep.)	Present	This species is reported from the south edge of the LOHCP Area.
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	–/– 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.	Present	This species is documented within coastal dune scrub in the LOHCP Area.
<i>Hypogymnia mollis</i> Los Osos black and white lichen	–/– –	On bark and wood, typically on shrubs ( <i>Salvia</i> , <i>Adenostoma</i> ) and conifers ( <i>Pinus</i> ), most often in coastal chaparral scrub; infrequent. San Luis Obispo County, California, south to at least Baja California, including Channel Islands (Santa Catalina, Santa Cruz, and Santa Rosa).	Present	This species is not tracked by the CNDDb; however, the Consortium of North American Lichen Herbaria documents occurrences within the LOHCP Plan Area
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	–/– 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. 5-520 m. Perennial herb. Blooms Jan.-Nov.	Present	This species is reported to occur within the southwestern project area near Montana de Oro, based on a single collection from 1989.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	–/– 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.	Present	This species is reported from the freshwater portion of Sweet Springs Preserver in the LOHCP Area.
<i>Layia jonesii</i> Jones' layia	–/– 1B.2	Chaparral, valley and foothill grassland. Clay soils and serpentine outcrops. 5-400 m. Annual herb. Blooms Mar.-May	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.

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<i>Lomatium parvifolium</i> small-leaved lomatium	–/– 4.2	Closed-cone coniferous forest, chaparral, coastal scrub, riparian woodland. On serpentine. 20-700 m. Perennial herb. Blooms Jan.-Jun.	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Lupinus ludovicianus</i> San Luis Obispo County lupine	–/– 1B.2	Chaparral, cismontane woodland. Open areas in sandy soil, Santa Margarita formation. 50-525 m. Perennial herb. Blooms Apr.-Jul.	Low	Suitable habitat is present for this species in sandy soils that support chaparral, though it has not been documented in the LOHCP Area.
<i>Malacothamnus jonesii</i> Jones' bush-mallow	–/– 4.3	Chaparral, cismontane woodland. 160-1075 m. Perennial deciduous shrub. Blooms (Mar.) Apr.-Oct.	Not Expected	Although potentially suitable chaparral and woodland are present, this species is not known to occur at the immediate coast, and is expected inland of the LOHCP Area.
<i>Malacothamnus palmeri</i> var. <i>involutus</i> Carmel Valley bush-mallow	–/– 1B.2	Cismontane woodland, chaparral, coastal scrub. Talus hilltops and slopes, sometimes on serpentine. Fire dependent. 30-1100 m. Perennial deciduous shrub. Blooms Apr.-Oct.	Moderate	Suitable habitat is present within chaparral and coastal dune scrub, though this species has not been documented in the LOHCP Area.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> Santa Lucia bush-mallow	–/– 1B.2	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. 3-670 m. Perennial deciduous shrub. Blooms May-Jul.	Moderate	Potentially suitable chaparral and woodland are present, although this species is not known to occur in LOHCP Area.
<i>Monardella palmeri</i> Palmer's monardella	–/– 1B.2	Cismontane woodland, chaparral. On serpentine, often found associated with Sargent cypress forests. 200-800 m. Perennial rhizomatous herb. Blooms Jun-Aug.	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Monardella sinuata</i> ssp. <i>sinuata</i> southern curly-leaved monardella	–/– 1B.2	Coastal dunes, coastal scrub, chaparral, cismontane woodland. Sandy soils. 0-305 m. Annual herb. Blooms Apr.-Sep.	Present	Present. This species is known to occur within the project area at multiple locations, including the Morro Dunes Ecological Reserve.
<i>Monardella undulata</i> ssp. <i>crispa</i> Crisp monardella	–/– 1B.2	Coastal dunes, coastal scrub. Often on the borders of open, sand areas, usually adjacent to typical backdune scrub vegetation. 5-125 m.	High	This subspecies is reported from dunes immediately south of the LOHCP based on herbarium records. However, note that annual monardella taxonomy was recently revised and some herbarium records may not yet be up to date. The CNDDDB attributes this herbarium record to <i>M. sinuata</i> ssp. <i>sinuata</i> (see previous).
<i>Monardella undulata</i> ssp. <i>undulata</i> San Luis Obispo monardella	–/– 1B.2	Coastal dunes, coastal scrub. Stabilized sand of the immediate coast. 5-200 m. Perennial rhizomatous herb. Blooms May-Sep.	Present	This species was previously reported from within the project area at multiple locations, including the Morro Dunes Ecological Reserve; however, annual monardella taxonomy was recently revised and some collections previously described as this subspecies have been annotated. See also previous two entries.

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<i>Monolopia gracilens</i> woodland woollythreads	-/- 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleaved upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. 120-1200 m. Annual herb. Blooms (Feb.) Mar.-Jul.	Low	Suitable habitat is present within chaparral and woodland; however, preferred substrates are not present and though this species has not been documented in the LOHCP Area.
<i>Nemacaulis denudata</i> var. <i>denudata</i> coast woolly-heads	-/- 1B.2	Coastal dunes. 0-100 m. Annual herb. Blooms Apr.-Sep.	Present	Documented from coastal dune scrub on state land within the LOHCP Area.
<i>Orobancha parishii</i> ssp. <i>brachyloba</i> [= <i>Aphyllon parishii</i> ssp. <i>brachylobum</i> ] Short-lobed broomrape	-/- 4.2	Coastal bluff scrub, coastal dunes, coastal scrub. Sandy soil near beaches; reported to grow on <i>Isocoma menziesii</i> and other shrubs. Parasitic perennial herb. 3-305 m. Blooms Apr.-Oct.	Low	This subspecies is not reported from San Luis Obispo County in herbarium records and Jepson eFlora does not consider the current range to extend this far north.
<i>Parmotrema hypolecinum</i> Long fringed parmotrema	-/- -	Usually on trees in open habitats, rarely on rocks. Multiple collections from coastal California and western Mexico.	Present.	This species is not tracked by the CNDDDB; however, the Consortium of North American Lichen Herbaria documents occurrences within the LOHCP Plan Area
<i>Perideridia pringlei</i> adobe yampah	-/- 4.3	Chaparral, cismontane woodland, pinyon and juniper woodland, coastal scrub. Serpentine, clay soils. Grassland hillsides; seasonally wet sites. 300-1800 m. Perennial herb. Blooms Apr.-Jun.(Jul.)	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Plagiobothrys uncinatus</i> hooked popcorn flower	-/- 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Sandstone outcrops and canyon sides; often in burned or disturbed areas. 210-855 m. Annual herb. Blooms Apr.-May.	Not Expected	Although potentially suitable chaparral and woodland are present, this species is not known to occur at the immediate coast, and is expected inland of the LOHCP Area.
<i>Poa diaboli</i> Diablo Canyon blue grass	-/- 1B.2	Chaparral (mesic sites), cismontane woodland, coastal scrub, closed-cone coniferous forest. Shale, sometimes burned areas. 115-400 m. Perennial rhizomatous herb. Blooms Mar.-Apr.	Moderate	Reported from state lands south of the LOHCP. Suitable chaparral and coastal dune scrub are present in the LOHCP Area, though this species has not been documented there.
<i>Prunus fasciculata</i> var. <i>punctata</i> Sand almond	-/- 4.3	Chaparral, coastal scrub, cismontane woodland, coastal dunes. Sandy flats. 15-200 m. Perennial deciduous shrub. Blooms Mar.-Apr.	Present	Herbarium records document that this species is present in the LOHCP Area.
<i>Sanicula hoffmannii</i> Hoffmann's sanicle	-/- 4.3	Broadleaved upland forest, coastal scrub, coastal bluff scrub, chaparral, cismontane woodland, lower montane coniferous forest. Cool slopes in deep soil, often in moist shaded serpentine soils, or in clay soils. 30-300 m. Perennial herb. Blooms Mar.-May	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.

Scientific Name Common Name	Status FESA/CESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Sanicula maritima</i> adobe sanicle	-/SR 1B.1	Meadows and seeps, valley and foothill grassland, chaparral, coastal prairie. Moist clay or ultramafic soils. 15-215 m. Perennial herb. Blooms Feb.-May	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Scrophularia atrata</i> black-flowered figwort	-/- 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	Potentially suitable sandy soils are present in association with chaparral, though this species has not been reported from the LOHCP Area and all records are south of the project area.
<i>Senecio aphanactis</i> chaparral ragwort	-/- 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m. Annual herb. Blooms Jan.-Apr.(May)	Moderate	Potentially suitable chaparral habitat is present, though this species is not reported from the LOHCP Area.
<i>Senecio astephanus</i> San Gabriel ragwort	-/- 4.3	Chaparral, coastal bluff scrub. Rocky slopes. 400-1500 m. Perennial herb. Blooms May-Jul.	Not Expected	Although potentially suitable chaparral and woodland are present, the LOHCP Area is much lower in elevation than typical, and lacks rocky slopes associated with the species.
<i>Sidalcea hickmanii</i> ssp. <i>anomala</i> Cuesta Pass checkerbloom	-/SR 1B.2	Closed-cone coniferous forest, chaparral Rocky serpentine soil; associated with Sargent cypress forest. 600-800 m. Perennial herb. Blooms May-Jun.	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Solidago guiradonis</i> Guirado's goldenrod	-/- 4.3	Cismontane woodland, valley and foothill grassland. Near streams or seeps in asbestos-laden soils; serpentine. 600-1370 m. Perennial rhizomatous herb. Blooms Sep.-Oct.	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewelflower	-/- 1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Serpentine outcrops, on ridges and slopes. 90-1040 m. Annual herb. Blooms (Mar.) Apr.-Sep.(Oct.)	Not Expected	Suitable habitats, particularly appropriate substrates, are not present within the LOHCP Area.
<i>Suaeda californica</i> California seablite	FE/- 1B.1	Marshes and swamps. Margins of coastal salt marshes. 0-15 m. Perennial evergreen shrub. Blooms Jul.-Oct.	Present	Documented in coastal salt marsh within the LOHCP Area at the interface with the bay and estuary
<i>Sulcaria isidiifera</i> splitting yarn lichen	-/- 1B.1	Coastal scrub. On branches of oaks and shrubs in old growth coastal scrub. 20-55 m. fruticose lichen (epiphytic).	Present	This species is known to occur within the project area.
<i>Trifolium hydrophilum</i> saline clover	-/- 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0-335 m. Annual herb. Blooms Apr.-Jun.	Low	Although potentially suitable grasslands are present, the LOHCP Area has very little appropriate soil in combination with appropriate habitat. The CNDDDB and herbarium records do not document this species in the project area.

County of San Luis Obispo  
**Los Osos Habitat Conservation Plan**

Scientific Name	Status			
Common Name	FESA/CESA	Habitat Requirements	Potential	Rationale
	CRPR		to Occur	
FE = Federally Endangered	FT = Federally Threatened	FC = Federal Candidate Species		
SE = State Endangered	ST = State Threatened	SC = State Candidate		SR = State Rare
<b>CRPR (CNPS California Rare Plant Rank)</b>				
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				
3=Review List: Plants about which more information is needed				
4=Watch List: Plants of limited distribution				
<b>CRPR Threat Code Extension</b>				
.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)				

## Critical Habitat

Federally designated critical habitat occurs in the Plan Area (Figure 7) for two of the covered species:

- **Morro Shoulderband Snail.** Located south of the City of Morro Bay, the area designated as critical habitat for the Morro shoulderband snail consists of land contained in three disjunct units (Unit 1-Morro Spit and West Pecho, Unit 2-South Los Osos, and Unit 3-Northeast Los Osos) that total 2,576 acres. Of the total area, 2,192 acres (85 percent) is within existing protected lands. Of the total designated critical habitat for the Morro shoulderband snail, 981 acres are located within the Plan Area.
- **Morro Bay Kangaroo Rat.** Critical habitat for the Morro Bay kangaroo rat consists of a 689-acre unit in the southern portion of the Morro Bay sand spit and adjacent habitat west of Pecho Valley Road. The critical habitat is largely contained in the Morro Dunes Ecological Reserve and the northern portion of Montaña de Oro State Park, much of which is designated as part of the Morro Dunes Natural Preserve. Of the total designated critical habitat for the Morro Bay kangaroo rat, 672 acres are located within the Plan Area.

As shown on Figure 7, the Plan Area also contains critical habitat for two additional, but non-covered, special-status species:

- **South-central California Coast Steelhead Distinct Population Segment (DPS).** Critical habitat for south-central California coast steelhead DPS is located in Los Osos Creek along the eastern border of the Plan Area.
- **Western Snowy Plover (*Charadrius alexandrinus nivosus*).** The Plan Area contains a 1.5-acre strip of area designated as critical habitat for the western snowy plover. This area is at the toe of the inland slope of the Morro Sand Spit on the extreme western boundary of the Plan Area within the Morro Dunes Natural Preserve in Montaña de Oro State Park. While located in the Plan Area, this area is not to be included in the Permit Area covered by the ITP. Consequently, this area would not be affected by covered activities because take authorization would not be authorized under the LOHCP ITP for actions in this area.

## b. Regulatory Setting

Federal, state, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance is the County. The CDFW is a trustee agency for biological resources throughout the state under the CEQA and also has direct jurisdiction under the FGC, which includes, but is not limited to, resources protected by the State of California under the CESA. The Service is responsible for enforcing federal wildlife laws and administering the FESA. The Service reviews applications for ITPs and has authority to approve Habitat Conservation Plans (HCPs) pursuant to Section 10(a)(1)(B) of the FESA. As part of this process, the Service must complete NEPA analysis disclosing environmental effects of the proposed HCP. A separate EA was completed for the LOHCP to fulfill requirements under NEPA. When an HCP is approved, the Service approves an implementing agreement and issues programmatic ITPs associated with implementation.



## **Federal Regulations and Jurisdiction**

### *Federal Endangered Species Act*

The FESA (16 U.S.C. Section 153 *et seq.*) prohibits the take of animal species listed as endangered or threatened, without special exemption. The FESA is administered by the Service and the National Marine Fisheries Service (NMFS). Section 7 of the FESA requires federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species' critical habitat. For certain circumstances, under Section 10(a)(1)(B) of the FESA, the Service may issue permits to authorize "incidental take" of listed wildlife species. "Incidental take" is defined by the FESA as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. It is noted that 'take' only applies to animal species; 'take' of plant species cannot technically occur as defined by the FESA. Federally listed plants may only be 'impacted.'

### *Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (16 U.S.C. Section 668) prohibits the taking or possession of and commerce in bald and golden eagles, with some exceptions. Under this Act, it is a violation to "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines 'take' as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." 'Disturb' is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." Take can be authorized under some circumstances: the Service issues permits to take, possess, and transport bald and golden eagles for scientific, educational, and Indian religious purposes, depredation, and falconry (golden eagles). Permits are available in some circumstances to take eagles in the course of conducting other lawful activities and to take eagle nests when necessary to protect human safety or the eagles.

### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (16 U.S.C. Section 703-711) implements the United States' obligations under international treaties with Canada, Mexico and Japan. The Act makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season.

### *Executive Order 11990 – Protection of Wetlands*

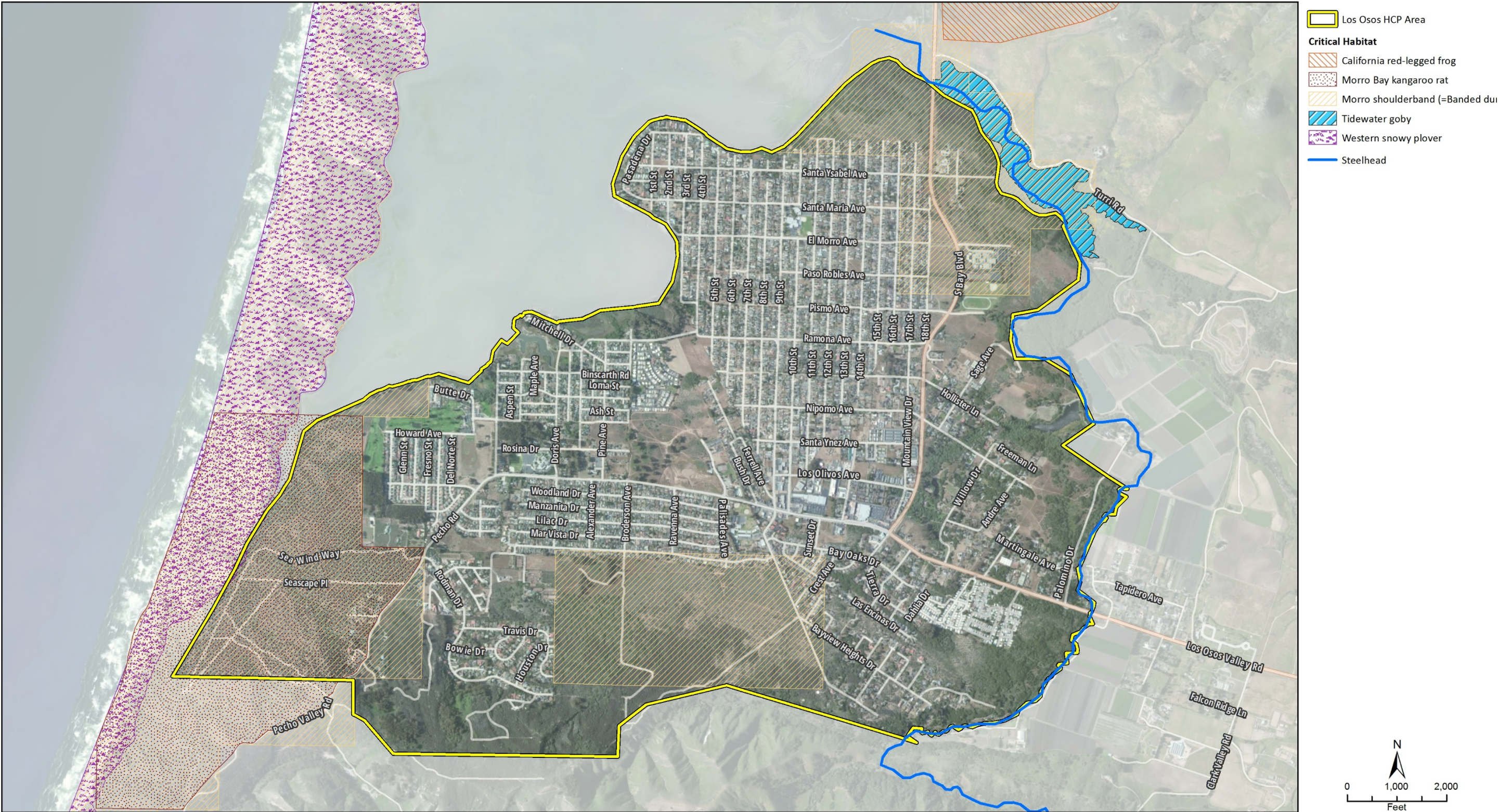
This Executive Order (EO) established a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. On federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included.

### *Federal Noxious Weed Act*

This Act (7 U.S.C. 2801 *et seq.*; 88 Stat. 2148) established a federal program to control the spread of noxious weeds. The Secretary of Agriculture was given authority to designate plants as noxious



Figure 7 Critical Habitat within the Plan Area





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weeds by regulation, and the movement of all such weeds in interstate or foreign commerce was prohibited except under permit. The Secretary was also given authority to inspect, seize and destroy products, and to quarantine areas, if necessary to prevent the spread of such weeds.

#### *Executive Order 13112 – Invasive Species*

This EO requires federal agencies to combat the introduction or spread of invasive species in the United States. The EO defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Under this EO, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

#### *Clean Water Act*

The Clean Water Act (CWA) provides guidance for restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters. Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. Through Section 404 of the CWA, the United States Army Corps of Engineers (USACE) has jurisdiction over placement of fill materials in jurisdictional water bodies and wetlands. Federal agencies must avoid impacts to wetlands whenever there is a practicable alternative. The guidelines allow the discharge of dredged or fill material into a jurisdictional aquatic system only if there is no practicable alternative that would have less adverse impacts.

Section 404 established a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the United States (including wetlands). Through Section 401 of the CWA, an applicant for a federal license or permit that allows activities resulting in a discharge to jurisdictional waters must also obtain a state certification that the discharge complies with other provisions of CWA. Regional Water Quality Control Boards (RWQCBs) administer the 401 certification program in California.

#### *United States Fish and Wildlife Service*

The Service is a bureau within the Department of the Interior that guides conservation, development, and management of fish and wildlife sources through enforcement of federal wildlife laws, protection of endangered species, management of migratory birds, restoration of fisheries, conservation and restoration of wildlife habitats, and distribution of funds to state fish and wildlife agencies. The Service implements the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The Service and the NMFS share responsibility for implementing the FESA.

#### *National Marine Fisheries Service*

The NMFS is a component of the National Oceanic and Atmospheric Administration and has jurisdiction over projects in which federally-listed marine or anadromous fish may be affected, including steelhead, as described above.

### *United States Army Corps of Engineers*

Under Section 404 of the Clean Water Act, the USACE has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other “waters of the United States.” The USACE also implements the federal policy embodied in EO 11990, which is intended to result in no net loss of wetlands. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge into wetlands or other “waters of the United States” that are hydrologically connected and/or demonstrate a significant nexus 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 wetlands is met through compensatory mitigation involving creation or enhancement of similar habitats.

## **State Regulations and Jurisdiction**

### *California Environmental Quality Act*

CEQA is discussed in detail in Section 1, *Introduction*.

### *Fish and Game Code Sec. 1600-1616*

FGC Sections 1600-1616 specify that the protection and conservation of the fish and wildlife resources of the state are of utmost public interest, and identifies the process through which lake and streambed alteration agreements are administered. Section 1602 requires notification of the CDFW prior to any project that would divert, obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake. Perennial and intermittent streams and associated riparian vegetation, when present, fall under the jurisdiction of the CDFW. Section 1600 *et seq.* of the FGC gives the CDFW regulatory authority over work within the stream zone consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

### *Fish and Game Code Sec. 2050 et seq (CESA)*

The CESA (FGC Section 2050 *et seq.*) prohibits take of state-listed as threatened or endangered species. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification. CDFW additionally prohibits take for species designated as Fully Protected under the FGC under various sections. Projects that would result in “take” of any state-listed as threatened or endangered species are required to obtain an ITP pursuant to FGC Section 2081. The issuance of an ITP is dependent upon the following: 1) the authorized take is incidental to an otherwise lawful activity; 2) the impacts of the authorized take are minimized and fully mitigated; 3) the measures required to minimize and fully mitigate the impacts of the authorized take are roughly proportional in extent to the impact of the taking on the species, maintain the applicant’s objectives to the greatest extent possible, and are capable of successful implementation; 4) adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with and the effectiveness of the measures; and 5) issuance of the permit will not jeopardize the continued existence of a state-listed as threatened or endangered species.

#### *Fish and Game Code Sec. 1900 et seq. - Native Plant Protection Act*

The Native Plant Protection Act (NPPA) requires CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare; 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA are not otherwise listed under the CESA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. When exemptions apply, under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

#### *Fish and Game Code 3503, 3503.5, and 3511*

FGC sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the FGC protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

#### *Porter-Cologne Water Quality Control Act*

State Water Resources Control Board (SWRCB), and each of nine local RWQCBs, have jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act. These “waters” are defined as any surface or groundwater, including saline waters, within the boundaries of the state.

#### *California Coastal Act*

The California Coastal Act of 1976 contains specific policies aimed at preserving biological resources, such as wetlands, riparian habitat, marine habitat and other habitats designated as Environmentally Sensitive Habitat Areas (ESHAs). The Coastal Act is implemented through Coastal Development Permits issued under Local Coastal Programs (LCPs) administered by counties and cities that lie within the coastal zone; see *Coastal Zone Land Use Ordinance* section below for more detail on California Coastal Commission (CCC) policies as administered by the County.

#### *California Coastal Commission*

The mission of the CCC is to “protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations.” The CCC oversees implementation of the California Coastal Act of 1976 through review and approval of LCPs administered by counties and cities that lie within the coastal zone.

#### *California Department of Fish and Wildlife*

CDFW (formerly the California Department of Fish and Game) derives its authority from the FGC. CDFW implements the CESA, the NPPA, and processes Lake and Streambed Alteration Agreements.

#### *Regional Water Quality Control Board*

As noted above, the SWRCB, and each of nine local RWQCBs, have jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act. The SWRCB has issued general

Waste Discharge Requirements 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 local RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction. Additionally, the RWQCB is responsible for the issuance of water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction, as described above.

## **Local Regulations and Jurisdiction**

A discussion of the various County plans and ordinances that pertain to the Plan Area in reference to protection of biological resources is presented below.

### *San Luis Obispo County General Plan*

The San Luis Obispo County General Plan (General Plan) outlines the development goals for the county and provides a basis for government decision-making, as well as for informing the public about the rules that guide development within the county.

### *Local Coastal Program*

The community of Los Osos uses the San Luis Obispo County LCP as a planning tool to guide development in the coastal zone, in partnership with the CCC. The LCP contains the ground rules for future development and the protection of coastal resources. The LCP is incorporated into existing County policies and regulations through amendment to the Land Use Element and certification of a Land Use Ordinance for the Coastal Zone (CZLUO). For the purposes of the LCP, the county is divided into four segments. Los Osos is located within the region covered by the EAP.

### *Coastal Plan Policies*

The County of San Luis Obispo Coastal Plan Policies form part of the Framework for Planning (Coastal Zone) of the San Luis Obispo County General Plan and Local Coastal Program (County 2018b). Relevant to biological resources, the Coastal Plan Policies address Environmentally Sensitive Habitats in Chapter 6 and Coastal Watersheds in Chapter 9. The Coastal Plan Policies are implemented through the County CZLUO (see below).

### *Estero Area Plan*

The EAP is the currently applicable land use plan for the Los Osos community. Information regarding biological resources is included in the EAP in Section 6, *Land Use*, Section 7, *Combining Designations*, and Section 8, *Planning Area Standards*. These sections include Area Land Use information, the Combining Designations for Sensitive Resource Areas (SRA) and ESHAs, and Development Standards.

### *Los Osos Community Plan*

The Draft EIR for the Los Osos Community Plan is currently being circulated for public review. Therefore, the Los Osos Community Plan is not an approved land use plan for the Los Osos community. Information regarding biological resources is included in the 2015 Los Osos Community Plan in Chapter 4, *Environmental Resources*. This chapter includes Biological Resources, Local Coastal Program, SRA, and Endangered Species Act and the Los Osos Habitat Conservation Plan.

### *Land Use Ordinances*

Land use ordinances contain standards for development based on what the effects of an action or project will be on specific land uses. Specific ordinances relevant to a discussion of biological resources include *Title 23 - Coastal Zone Land Use Ordinance* (revised November 2013).

### *Coastal Zone Land Use Element/Land Use Ordinance*

The County assumes permit authority in the Coastal Zone based on the adopted and certified Coastal Zone Land Use Element (CZLUE) and the CZLUO. The CZLUE, or the Land Use Plan, comprises four components as follows: Coastal Zone Framework for Planning, Coastal Plan Policies Document, Four Area Plans (North Coast, Estero, San Luis Bay and South County) and Land Use Category maps.

The CZLUO and CZLUE provide policies protecting categorical sensitive biological resources that include: SRAs and ESHAs; Wetlands, Streams, and Riparian Vegetation; Terrestrial Habitat Protection; and Mature Trees. SRAs are described in Chapter 7 of the CZLUE as “areas having high environmental quality and special ecological or educational significance.” SRAs include but are not limited to wetlands, coastal streams and riparian vegetation, terrestrial habitats that support sensitive plants or animals on land, and sensitive marine habitats that support marine fish, mammals and birds. SRAs and ESHAs are high-priority areas for preservation and developments requiring a land use permit within or adjacent to these areas and are subject to the provisions of Sections 23.07.160 through 23.07.178 of the CZLUO. The CZLUE and CZLUO combining designations for SRAs are applied as per mapping contained in the Land Use Element of the EAP Update.

ESHAs are subject to the provisions of Section 23.07.170 of the CZLUO. According to the CZLUO, an ESHA is a “type of SRA where plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and development. They include wetlands, coastal streams and riparian vegetation, terrestrial and marine habitats.” Most ESHAs are mapped as Land Use Element combining designations, however some are unmapped. Unmapped ESHAs include “known wetlands, coastal streams and riparian vegetation, terrestrial and marine habitats that may not be mapped as Land Use Element combining designations. The existence of Unmapped ESHA is determined by the County at or before the time of application acceptance and shall be based on the best available information. Habitat within the Plan Area meets the definition of ESHA due to presence of unique soils (Baywood fine sand) supporting sensitive vegetation communities, and/or rare plants and animals, including special-status wildlife, plant, and lichen species. Higher quality habitat and greatest density of special-status species generally occur on the undeveloped parcels on the perimeter of the Plan Area. However, native habitat and special-status species occur throughout the Plan Area.

Wetlands, streams, and riparian vegetation are subject to the provisions of Section 23.07.172 – Section 23.07.174 of the CZLUO. Provisions protecting wetlands are intended “to maintain the natural ecological functioning and productivity of wetlands and estuaries and where feasible, to support restoration of degraded wetlands.” Provisions protecting streams and riparian vegetation are intended “to preserve and protect the natural hydrological system and ecological functions of coastal streams.”

Terrestrial habitat containing sensitive resources is subject to the provisions of Section 23.07.176 of the CZLUO. Provisions protecting terrestrial habitats are intended “to preserve and protect rare and endangered species of terrestrial plants and animals by preserving their habitats. Emphasis for protection is on the entire ecological community rather than only the identified plant or animal.”



Tree removal is subject to the provisions of Sections 23.05.060 – 23.05.064 of the CZLUO. The purpose of tree removal standards is “to protect existing trees and other coastal vegetation from indiscriminate or unnecessary removal consistent with LCP policies and pursuant to Section 30251 of the California Coastal Act which requires protection of scenic and visual qualities of coastal trees.”

## 4.2.2 Impact Analysis

### **a. Methodology and Significance Thresholds**

This impact analysis is based on information included in the LOHCP and review of available literature regarding the existing biological resources within the project site.

CEQA, Chapter 1, Section 21001 (c) states that it is the policy of the State of California to “prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing CEQA guidelines and federal, state and local plans, regulations, and ordinances.

Significance criteria regarding individual special-status plants and sensitive natural communities concern *substantial* reductions in population numbers or occupied habitat, or substantial reduction in acreage of those communities listed as sensitive or riparian habitat. Section 15065 of the *CEQA Guidelines* also concerns actual elimination of communities or habitat, or the loss of individuals or restriction in range of plants listed under the FESA and CESA. It is noted that any reductions in plant communities or habitats are relative to the regional amount of suitable habitat for individual organisms. The following impact analyses are based on this criterion.

The following thresholds are based on the County’s Initial Study checklist and Appendix G of the *CEQA Guidelines*. Impacts would be significant if the project would result in any of the following:

- 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 CDFW or the Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or the Service;
- Have a substantial adverse effect on federally protected wetlands as defined in 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;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## b. Project Impacts

### LOHCP Avoidance and Minimization Measures

The LOHCP includes the following AMMs related to biological resources.

#### *Covered Species*

##### **ECOSYSTEM**

- **AMM E1:** Minimize habitat fragmentation and maintain connectivity between aquatic, riparian, and upland habitats by limiting the creation of barriers to species movement, maintaining corridors to connect remaining habitat for the covered species, clustering development, and minimizing length of driveways and other impervious surfaces.

##### **COMMUNITY**

- **AMM C1:** Minimize loss and degradation of the natural communities of the Baywood fine sand, including coastal sage scrub, central maritime chaparral, and oak woodlands by minimizing the area of permanent and temporary habitat disturbance and by siting projects in already developed or degraded areas.
- **AMM C2:** Restore all areas of temporary disturbance such as staging areas or areas adjacent to the project footprint, to pre-project conditions or ecologically-superior conditions for the covered species. Avoid installing plants identified as invasive by the California Invasive Plant Council and include plants native to the Baywood Fine Sand communities from local sources (i.e., the LOHCP Plan Area).
- **AMM C3:** Avoid use of herbicide and pesticides; where necessary, apply biocides as part of integrated pest management strategies, and following all local, state, and federal regulations.
- **AMM C4:** Minimize impacts of vegetation management projects conducted for fire safety, including to create and maintain defensible space, by implementing the best management practices. The list of BMPs will be maintained by the County and reviewed periodically by the Service and CDFW, and will include specific fuel-reduction prescriptions designed to minimize impacts to the covered species.
- **AMM C5:** Install temporary construction fencing to prevent disturbance outside of the designated footprint.

##### **MORRO SHOULDERBAND SNAIL**

- **AMM MSS-1:** Avoid and minimize the impacts to Morro shoulderband snail to the maximum extent practical by locating projects away from known or likely occupied habitat, as well as suitable but unoccupied habitat.
- **AMM MSS-2:** Prior to and during all ground-disturbing activities in designated parcels, a biologist approved by the Service shall capture and move all Morro shoulderband snails to suitable habitat away from the project impact area. (Refer to Section F.2 in Appendix F, *Covered Animal Avoidance and Minimization Surveys*, of the LOHCP for a more detailed description of the pre-project surveys that would be required to be conducted to minimize take of Morro shoulderband snail.)
- **AMM MSS-3:** Avoid introducing non-native snails, and the use of snail control applications, such as molluscicide, beer, or salt.

### **MORRO BAY KANGAROO RAT**

- **AMM MBKR-1:** Prior to ground-disturbing activities in habitat suitable for Morro Bay kangaroo rat, the project proponent will retain a CDFW- and Service-approved biologist to conduct a visual assessment of the site, which will be followed by a survey, as needed, to ensure the site is not occupied. (Refer to Section F.1 in Appendix F, *Covered Animal Avoidance and Minimization Surveys*, of the LOHCP for a more detailed description of the pre-project surveys that would be required to be conducted to minimize take of Morro Bay kangaroo rat.)

### **INDIAN KNOB MOUNTAINBALM**

- **AMM IKM-1:** Prior to ground-disturbing activities in habitat suitable for Indian Knob mountainbalm, the project proponent will retain a CDFW- and Service-approved biologist to conduct a survey for the species in the project area. If the species is present, the project proponent will work with the County, Service, and CDFW to develop a plan to ensure that no impacts to this species occur during project implementation. If a plan cannot be developed, the project proponent will be required to obtain a permit from CDFW.

### **MORRO MANZANITA**

- **AMM MM-1:** Avoid and minimize impacts of project activities on Morro manzanita by siting project disturbance envelopes at least 10 feet away from existing plants wherever possible.
- **AMM MM-2:** Avoid or minimize trimming or removing Morro manzanita when conducting vegetation management, including in association with required hazard abatement activities. (This AMM does not apply to projects to implement the conservation program of the LOHCP, where impacts to individuals may be needed to promote regeneration and maintain suitable habitat.)
- **AMM MM-3:** Avoid planting manzanita species (*Arctostaphylos* spp.) other than Morro manzanita.

### *Non-Covered Species*

### **ECOSYSTEMS**

- Avoid altering aquatic ecosystems, including streams, lakes, ponds, and the Morro Bay estuary.

### **COMMUNITIES**

- Avoid impacts to riparian vegetation and wetlands, including freshwater, brackish water, and saltwater wetlands.
- Conduct vegetation management activities that could affect nesting birds outside of the nesting period (September 1 to January 31).

### **CALIFORNIA SEABLITE, SALT MARSH BIRD'S BEAK, AND MARSH SANDWORT**

- Proponents of covered activities that occur within 100 feet of known or potential habitat for one of more of the listed plant species will arrange for a CDFW- and/or Service-approved biologist to conduct a survey to evaluate presence of the species within the project footprint. Surveys will be conducted within the flowering period for each of the listed species, which may change as a result of global climate change, but currently are as follows:
  - California seablite: July to October

- Salt marsh bird's beak: May to October
- Marsh sandwort: May to August
- If one or more species are present, the project will be designed and implemented to avoid impacts to the species or its habitat. The following are specific measures that will be implemented:
  - The project disturbance envelope will exclude occurrences of the species.
  - Orange construction fencing shall be placed between the occurrence and the disturbance envelope.
  - A Service-approved biologist will provide a pre-project training to all project personnel regarding the species and the measures that must be taken to avoid impacts; the biologist will monitor project implementation to ensure the measures are being implemented and are effective.
  - Erosion and sedimentation control measures will be implemented for projects that have the potential to result in the sedimentation of occupied or suitable habitat.
  - Herbicide application shall be limited to times outside of the rainy season to prevent runoff carrying the herbicide to potential or known habitat. In addition, herbicide application shall be conducted during times of low wind (i.e., less than 10 miles per hour) to prevent herbicide drift into potential or known California seablite habitat.

#### **SOUTH-CENTRAL CALIFORNIA COAST STEELHEAD**

- Proponents of covered activities that occur within or adjacent to habitat for steelhead including Los Osos Creek will implement best management practices to avoid impacts to the threatened species. The measures to be implemented will be identified during the application process, based upon aspects of the covered activity and the site it which it occurs, and may include the following:
  - All project activities shall minimize disturbance to riparian and upland vegetation.
  - A NMFS-approved biologist will provide a pre-project training to all project personnel regarding the species and the protection measures that must be taken to avoid impacts; the biologist will monitor the project to ensure the measures are being implemented and are effective.
  - Projects will be conducted between June 1 and October 15.
  - Appropriate erosion and sedimentation avoidance measures will be taken to prevent sediment runoff into flowing water.
  - Measures will be taken to ensure that petroleum products and other materials do not enter nearby streams and surface waters.

#### **CALIFORNIA RED-LEGGED FROG**

- Proponents of covered activities that occur within or adjacent to California red-legged frog breeding, dispersal, or foraging habitat will implement best management practices to avoid impacts to the threatened species. The measures to be implemented will be identified during the application process, based upon aspects of the covered activity and the site it which it occurs, and may include the following:
  - All project activities shall avoid disturbance to suitable breeding habitat, including ponds and streams, and upland dispersal habitat.

- A Service-approved biologist will provide a pre-project training to all project personnel regarding the species and the protection measures that must be taken to avoid impacts; the biologist will monitor the project to ensure the measures are being implemented and are effective.
- All construction-related features capable of entrapping wildlife will either be covered at the end of each workday or ramped in a manner that will prevent entrapment.
- Appropriate measures will be taken to ensure petroleum products and other hazardous materials do not enter nearby streams, ponds, and other aquatic habitat.

### **CALIFORNIA BLACK RAIL**

- Proponents of covered activities that occur within or adjacent to California black rail nesting or foraging habitat will implement best management practices to avoid impacts to the state-listed as threatened and California Fully Protected Species. The measures to be implemented will be identified during the application process, based upon aspects of the covered activity and the site it which it occurs, and may include the following:
  - In or adjacent to potential or known California black rail habitat, work activities shall be confined to areas outside of known or potential habitat to the extent feasible. Staging, access, and parking areas shall be located outside of salt marsh and brackish marsh habitats.
  - If woody vegetation within or immediate adjacent to salt marsh habitat must be removed as part of the project, vegetation removal should be conducted between September and January in order to avoid impacts on nesting birds. If vegetation removal must occur between February and August, a biologist approved by CDFW will conduct a pre-construction survey for nesting birds prior. If nesting California black rail are identified, protection measures shall include avoiding work activities within 300 feet of the nesting location.
  - If an active California black rail nest is located closer than 300 feet to a construction or maintenance site and there is the potential for substantial disturbance to nesting birds due to construction activities, a plan to monitor nesting birds during construction shall be prepared and submitted to the CDFW for review and approval.
  - A biological monitor approved by CDFW shall be present during all work activities in or adjacent to California black rail habitat. If California black rail is detected during work activities, work shall be stopped immediately and the CDFW shall be contacted immediately. Work shall not resume at that location until authorization is obtained from the CDFW, unless prior approval has been granted by the CDFW.

### **GOLDEN EAGLE**

- Proponents of covered activities that occur within 500 feet of a recorded golden eagle nest site will have a CDFW- and Service-approved biologist conduct a golden eagle survey to determine whether there is a nest site within 400 yards of the proposed project footprint. Projects with confirmed nesting golden eagles within 400 yards will implement best management practices to avoid impacts to this California Fully Protected Species. The measures to be implemented will be identified during the application process, based upon aspects of the covered activity and the site it which it occurs, and may include the following:
  - Avoid vegetation removal and other project activities that would disrupt nesting behavior during the primary nesting season, which is currently February to August, though may

change as a result of global climate change, or until the nesting cycle is determined by a CDFW- and Service-approved biologist to be completed.

- Avoid removing any suitable trees or other nest sites.

#### **WHITE-TAILED KITE**

- Proponents of covered activities that occur within 500 feet of a recorded or observed white-tailed kite nest site will have a CDFW-approved biologist conduct a white-tailed kite survey to determine whether there is an active nest site within 500 feet of the proposed project footprint. Projects with confirmed nesting white-tailed kite within 500 feet will implement best management practices to avoid impacts to this California Fully Protected Species. The measures to be implemented will be identified during the application process, based upon aspects of the covered activity and the site it which it occurs, and may include the following:
  - Avoid vegetation removal and other project activities that would disrupt nesting behavior during the primary nesting season (February-August), or until the nesting cycle is determined by the CDFW-approved biologist to be completed.
  - Avoid removing any suitable trees or other nest sites.

#### *Community Wildfire Protection Plan*

#### **ALL COVERED SPECIES**

- **AMM ALL-1: Procedures and Training.** Clearly-defined operational procedures will be developed and implemented by CAL FIRE. A Service-approved biologist will develop and deliver environmental awareness training sessions for all personnel involved in hazard abatement activities. The training will inform personnel regarding the identification, status, and presence of covered species likely to be present in each abatement area; those avoidance and minimization measures that must be implemented, and the legal ramifications associated with non-compliance. Training materials will include descriptions and pictures of the covered species, relevant provisions of the State and Federal Endangered Species Acts, and the project boundaries for each abatement action. CAL FIRE will ensure that all personnel who participate in hazard abatement activities within the Plan Area receive this training immediately prior to the start of any hazard abatement activities.
- **AMM ALL-2: Biological Monitor.** A Service-approved biologist will monitor all vegetation removal activities that will take place within habitat suitable for the covered species. Monitoring activities will be required daily until completion of initial disturbance at each location to ensure that avoidance and minimization measures are implemented. The monitor will be granted full authority to stop work at his or her discretion if abatement-related activities occur outside the demarcated boundaries of the treatment footprint. The monitor will stop work if any of the covered species are detected within the proposed abatement area and take the appropriate species-specific avoidance or minimization measures.

#### **MORRO SHOULDERBAND SNAIL**

- **AMM MSS-1: Pre-Project Survey and Translocation of Morro Shoulderband Snail.** Prior to the start of any abatement activities, a Service-approved biologist will conduct surveys to identify the location of any Morro shoulderband snails present in treatment areas. These surveys shall be conducted within 24 hours of the commencement of any activities associated with hazard abatement that could result in take of the species. The primary objective of the pre-activity

surveys is to locate as many Morro shoulderband snails as possible so that they can be captured and moved out of harm's way. All live Morro shoulderband snails of any life stage found during pre-activity surveys, or any phase of hazard abatement, will be captured and moved out of harm's way to a pre-determined, Service-approved receptor site by the surveying biologist.

- **AMM MSS-2: Minimize Impacts to Native Plants Important to Morro Shoulderband Snail.** Canopy thinning and limbing up of plant species of particular value to Morro shoulderband snail must be avoided or minimized to the maximum extent possible. Pre-project surveys of treatment areas should be used to identify plant species that should be avoided, which include but are not limited to mock heather (*Ericameria ericoides*), coastal busy lupine (*Lupinus arboreus*), and sand almond (*Prunus fasciculata* var. *punctata*).
- **AMM MSS-3: Monitor for Morro Shoulderband Snail.** Prior to initiating any hazard abatement activities, a Service-approved biologist will be present to ensure that the limits of work are clearly delineated. This biologist shall have the authority to order any reasonable measure necessary to avoid the take of Morro shoulderband snail and to stop any work or activity not in compliance with the conditions set forth in the LOHCP/ITP. The biologist will notify the Ventura Fish and Wildlife Office and the County Department of Planning and Building of any "stop work" order issued and this order will remain in effect until the issue has been resolved.

#### **MORRO BAY KANGAROO RAT**

- **AMM MBKR-1: Avoid Impacts to Morro Bay Kangaroo Rat.** Prior to initiating any fire hazard abatement activities in areas featuring habitat suitable for the Morro Bay kangaroo rat, a CDFW- and Service-approved biologist will conduct a visual assessment of the site, which will be followed by a survey, as needed, to ensure the site is not occupied. (Refer to Section F.1 in Appendix F, *Covered Animal Avoidance and Minimization Surveys*, of the LOHCP for a more detailed description of the pre-project surveys that would be required to be conducted to minimize take of Morro Bay kangaroo rat.)

#### **MORRO MANZANITA**

- **AMM MM-1: Minimize Impacts to Morro Manzanita.** No individual Morro manzanita plants will be removed and all canopy thinning and limbing up of lower branches of Morro Manzanita will be avoided or minimized to the extent that abatement goals can still be achieved.

#### **INDIAN KNOB MOUNTAINBALM**

- **AMM IKM-1: Avoid Impacts to Indian Knob Mountainbalm.** Prior to initiating any hazard abatement activities, a CDFW- and Service-approved biologist will survey the treatment area to assess the presence of Indian Knob mountainbalm. If the species is detected within or adjacent to the treatment area, CAL FIRE must consult with the Service and CDFW to determine how to proceed, as no impacts to individuals this species will be authorized.

#### **MIGRATORY BIRDS**

- **AMM MBA-1: Avoid Impacts to Migratory Birds.** All hazard abatement activities will be conducted outside of the bird breeding season, which is generally considered to be between March 15 and September 15, annually. This seasonal prohibition period will be adjusted, as needed, to reflect changes in the breeding bird season due to climate change or other factors. If it is necessary to conduct abatement activities during this timeframe, a Service-approved

biologist must be retained to conduct breeding bird and nest surveys; treatments may only proceed if no breeding activity or nests are detected.

<b>Threshold:</b>	Would the project have a substantial adverse impact, either directly or through habitat modifications, on any species identified as 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?
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**IMPACT BIO-1      IMPLEMENTATION OF THE PROJECT MAY RESULT IN IMPACTS TO SPECIAL-STATUS PLANT AND ANIMAL SPECIES. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.**

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The following analysis discusses impacts to the four covered species, as well as other candidate, sensitive, or special status species not covered by the LOHCP (non-covered species). Expedited development under the project would have the potential to adversely affect special-status species and their habitats in the Plan Area. However, the project would also provide benefits to such species by protecting suitable habitat of appropriate size to support existing populations. The project would create opportunities to protect and improve habitats of greater quality and extent than the small-scale restoration efforts that are feasible for individual small development projects that would otherwise occur without implementation of the LOHCP. The larger size and contiguous nature of many of the lands proposed for inclusion in the LOHCP Preserve System would be superior to preservation of small noncontiguous parcels that would occur without the LOHCP. Protected lands would become part of the LOHCP Preserve System. Conservation of high quality upland habitats, erosion control, and invasive species management in upland habitats would also provide benefits to species not covered by the LOHCP that occur in wetland and riparian habitats by reducing erosion, improving nutrient cycling, and limiting progress of invasive species recruitment into new areas. Furthermore, more contiguous habitat protection through the LOHCP Preserve System could result in greater gene flow, and thus, greater genetic diversity among populations of non-covered species.

### **Covered Species**

Authorization of covered activities, including expedited development and conservation activities associated with establishment of the LOHCP Preserve System, would impact suitable or potentially suitable habitat for the covered species in the Plan Area. Conservation activities, described in Section 5 of the LOHCP, and covered buildout activities (residential and commercial development, capital projects, facilities operation and maintenance) have the potential to result in take of/impacts to the covered species (excluding the Morro Bay kangaroo rat individuals, for which AMMs are incorporated into the LOHCP to ensure take would not occur). However, implementation of the project would result in management of protected lands through a coordinated effort as part of the LOHCP conservation program, including the LOHCP Preserve System. This would result in better tracking, management, and control of non-native invasive species than would occur on small discontinuous preserved habitats. Additionally, coordinated management would result in a more complete and centralized monitoring of covered species and their habitats in the Plan Area. Complete, consistently formatted records aide in more efficient assessment of species status in a specific area, and support science-based decision making. Creation of the LOHCP Preserve System and active management of existing protected habitat for the benefit of covered species would likely be a net beneficial impact to biological resources in the Plan Area.



Conceptual management treatments presented in the LOHCP include weed management through mechanical removal, herbicide, and grazing; fire regime management with the possible use of prescribed fire and/or simulated fire treatments; restoration of heavily eroded areas; and recreation management. Efforts to manage invasive species in the LOHCP Preserve System would benefit covered species by reducing invasion potential in LOHCP Preserve System lands and limiting spread of existing invasive species.

Anticipated impacts for each covered species are discussed in more detail below. Table 17 summarizes the existing habitat acreages, potential impacts to habitat (including potential habitat), and potential acreages of habitat to be protected, restored, and/or managed in perpetuity in the LOHCP Preserve System for each covered species.

**Table 17 Summary of Existing Habitat, Potential Impacts to Habitat, and Potential Preserved Habitat of the Covered Species**

Covered Species	Existing Habitat (acres) <sup>1</sup>	Potential Impacts to Habitat (not including Fire Hazard Abatement Treatments) (acres) <sup>1</sup>			Potential Acreage of Habitat in LOHCP Preserve System (acres) <sup>1</sup>		
		Temporary	Temporary	Total	Currently Unprotected Habitat to be Protected, Restored, and/or Managed	Existing Protected Habitat to be Protected, Restored, and/or Managed	Total
Morro shoulderband snail	2,832.1	58.6	419.4	478.0	54.7 (of which 5.5 acres would be restored)	164.9 (of which 20.7 acres would be restored)	219.6
Morro Bay kangaroo rat	1,369.3	18.3	188.6	206.9	75.6 (of which 7.5 acres would be restored)	274.4 (of which 34.5 acres would be restored)	350.0
Morro manzanita	798.0	5.0	6.1	11.1	51.7 (of which 5.2 acres would be restored)	210.9 (of which 22.3 acres would be restored)	262.6
Indian Knob mountainbalm	503.3	2.9	15.4	18.3	42.2 (of which 4.2 acres would be restored)	67.4 (of which 8.5 acres would be restored)	109.6

<sup>1</sup>Habitat includes "potential habitat" for the species.

Source: County 2019a

### *Morro Shoulderband Snail*

#### **IMPACTS TO HABITAT**

Under the project, covered activities, with the exception of the CWPP, would impact approximately 478.0 acres of habitat (including potential habitat) for the Morro shoulderband snail, which represents 16.9 percent of the total 2,832.1 acres of habitat and potential habitat for this species within the Plan Area. Temporary impacts to Morro shoulderband snail habitat and potential habitat

would include 58.6 acres and permanent impacts would include 419.4 acres. In addition, fire hazard abatement treatments implemented as part of the CWPP are anticipated to impact an additional 45.6 acres of Morro shoulderband snail habitat and 15.7 acres of potential habitat for this species.

Habitat that would be temporarily impacted by covered activities would be restored to the pre-project or better habitat condition as part of the measures to minimize impacts to the covered species. The project would be subject to compensatory mitigation for temporary and permanent impacts to sensitive vegetation communities, as detailed in Section 5.3 of the LOHCP. As stated in Section 5.7 in the LOHCP, the mitigation provided through the LOHCP conservation program is expected to more than offset the anticipated impacts of covered activities, thus exceeding the ITP issuance criterion that the mitigation be commensurate with the impacts. Specifically, implementation of the LOHCP would result in an estimated 301 acres of new and existing protected habitat (including potential habitat) for the Morro shoulderband snail that would be incorporated into the LOHCP Preserve System. Specific habitat to be included in the LOHCP and specific restoration and management activities to be implemented would be identified by the IE in conjunction with the agencies and conservation organizations responsible for the existing protected lands. Restoration and management activities would be detailed in the LOHCP Preserve System Adaptive Management Plan and may include activities such as vegetation management, exotic and non-native species eradication, erosion control, or removal of structures, infrastructure, and debris. The amount of habitat and potential habitat to be enhanced through such activities is unknown, as the location of LOHCP Preserve System lands has yet to be identified.

### **IMPACTS TO INDIVIDUALS**

Impacts could occur to individual Morro shoulderband snails that are located in the footprints of covered activities, where vegetation removal and soil disturbance can cause individuals to be trampled, crushed, buried, or otherwise injured or killed. These impacts would be reduced or eliminated through implementation of AMMs included in Table 5-2 of the LOHCP. The AMMs require pre-project surveys to capture and relocate individuals out of harm's way.

Habitat modifications caused by the covered activities, whether permanent or temporary, can also increase Morro shoulderband snail vulnerability to exposure, including predation and desiccation (dehydration). Vegetation removal can also reduce food availability for the snail by removing plant biomass.

The number of individual Morro shoulderband snails subject to take by covered activities under the project is impossible to predict due to the programmatic nature of the LOHCP, and would likely vary greatly for each covered activity depending on the nature of activity and the condition of the habitat that the activity affects. Notably, even non-native dominated habitat, including ruderal disturbed vegetation, and landscaping along County rights-of-way, can support relatively high concentrations of this species.

Morro shoulderband snail can also be impacted by habitat restoration and management activities. Specifically, this species may be impacted by herbicides used to control exotic plants including veldt grass, exotic annual grasses, and iceplants as part of the LOHCP conservation strategy. Morro shoulderband snails could be exposed to herbicides by ingestion and/or absorption while within recently treated areas. Herbicide spray or drift from spray could also contaminate soil; leaves, stems, and branches of shrubs; leaves, mold, and fungi in plant litter; and potential shelter sites for Morro shoulderband snails, including downed wood, rocks, or debris piles.

Exotic plant control and other restoration and management projects would be required to implement AMMs to avoid or reduce impacts to Morro shoulderband snail. For example, pre-project surveys and project monitoring will be used to capture and move out of harm's way any individuals observed within project footprints. Herbicide treatments would be conducted in small-scale areas, where feasible, to avoid impacting large numbers of individuals, and relocated snails would be maintained in or near treatment areas to facilitate recolonization of the affected habitat area.

In addition, some Morro shoulderband snails could potentially be killed, injured, or otherwise harmed during monitoring protocols included as part of the LOHCP. Long-term monitoring to examine the effectiveness of the LOHCP conservation program would include Morro shoulderband snail surveys to evaluate their distribution and abundance within the LOHCP Preserve System. Although monitoring protocols would be conducted by highly-qualified, Service-approved biologists following procedures designed to avoid impacts to this species, a small number of individuals could likely be taken in the form of harming, harassing, and/or killing as part of necessary monitoring.

### **ASSESSMENT OF NET IMPACTS**

The negative impacts of covered activities on the Morro shoulderband snail are expected to be offset by the beneficial impacts that would result from efforts to protect, restore, and manage habitat within the LOHCP Preserve System.

Under the project, the LOHCP Preserve System would include 219.6 acres of habitat and potential habitat for the Morro shoulderband snail (refer to Table 5-10 of the LOHCP). Specifically, the project is anticipated to protect, restore, and/or manage in perpetuity approximately 54.7 acres of Morro shoulderband snail habitat and potential habitat that is currently unprotected, and thus, is subject to development and other land uses that could degrade such habitat. Of the 54.7 acres, approximately 5.5 acres of habitat would be restored; such restoration would include repair of areas that have been severely degraded by erosion or dense exotic plant infestations). The LOHCP Preserve System would also include protection, restoration, and/or management in perpetuity of 164.9 acres of Morro shoulderband snail habitat and potential habitat within existing protected lands. Such existing protected lands feature some of the largest areas of remaining habitat, where additional restoration and management can promote species population sizes and viability. For these reasons, implementation of the LOHCP is anticipated to have an overall beneficial impact on the Morro shoulderband snail.

### *Morro Bay Kangaroo Rat*

#### **IMPACTS TO HABITAT**

Covered activities are anticipated to impact 188.6 acres of coastal sage scrub and 18.3 acres of central maritime chaparral, which provide suitable habitat for the Morro Bay kangaroo rat (Table 4-3 of the LOHCP).

Covered activities permitted under the LOHCP are not anticipated to permanently impact habitat occupied by Morro Bay kangaroo rat. In areas of suitable habitat for the species, covered activities would only be permitted under the LOHCP pending a negative visual assessment or, as needed, a negative presence/absence survey (refer to Section 5.2.1 of the LOHCP). Moreover, as part of the compensatory mitigation component of the LOHCP conservation program, the IE would work with individual landowners to protect remaining private land with suitable habitat for the Morro Bay kangaroo rat as part of the LOHCP Preserve System.

Suitable habitat for Morro Bay kangaroo rat may also be temporarily impacted by fire hazard abatement treatments as part of the CWPP. Specifically, the creation of the Los Osos fuel break would require removal of some plants on the perimeter of the County's Broderson Property and adjacent the Bayview Unit of the Morro Dunes Ecological Reserve, which is managed by the CDFW. Such treatments have the potential to enhance Morro Bay kangaroo rat habitat by removing invasive plants and dead vegetation, which can create more open habitat conditions preferred by this species.

In addition, habitat suitable for the Morro Bay kangaroo rat may be temporarily impacted by habitat management and restoration activities to be implemented in the LOHCP Preserve System as part of the LOHCP conservation program. Activities that would take place on existing protected lands, as well as new lands protected as part of the LOHCP, would include restoration of eroded areas such as old roads and trails, exotic plant control, and fire management, including vegetation management to simulate the beneficial effects of fire. These and other treatments, designed to enhance habitat for Morro Bay kangaroo rat in the long term, may have short-term negative impacts on habitat. Such temporary impacts could include soil disturbance and removal of native plants, which can temporarily reduce food availability for the Morro Bay kangaroo rat.

### **IMPACTS TO INDIVIDUALS**

Covered activities would avoid impacts to Morro Bay kangaroo rat individuals through incorporation of the AMMs included in the LOHCP. Surveys would be conducted to evaluate presence of the Morro Bay kangaroo rat (refer to Section 5.2.1 of the LOHCP) and to monitor the species (refer to Section 5.4 of the LOHCP). Prior to implementation of covered activities within potentially occupied habitat for the species, pre-project visual assessments and, if warranted, surveys would be conducted to evaluate whether the species is present (LOHCP Section 5.2.1). If the species is detected, all work would be required to stop immediately and the project proponents would need to contact the Service and CDFW to discuss project permitting. Take of individuals of Morro kangaroo rat, in any form, with the exception of habitat as part of specific restoration activities, will not be permitted under the LOHCP.

### **ASSESSMENT OF NET IMPACTS**

The short-term, negative impacts of covered activities on Morro Bay kangaroo rat habitat would be offset by the long-term benefits resulting from protection, restoration, and management of suitable habitat for this species within the LOHCP Preserve System. Under the project, the LOHCP Preserve System would benefit 240 acres of coastal sage scrub, the preferred habitat of the Morro Bay kangaroo rat, and 110 acres of central maritime chaparral communities, which the Morro Bay kangaroo rat can utilize when in an early-successional state. These habitat benefits would be accomplished through the following (refer to Table 5-10 of the LOHCP):

- Protection, restoration, and/or management of approximately 33.4 acres of coastal sage scrub and 42.2 acres of central maritime chaparral that are currently unprotected;
- Restoration of 26.0 acres of coastal sage scrub and 8.5 acres of central maritime chaparral in existing protected lands, including through vegetation management projects to promote early-successional habitat conditions; and
- Management of an additional 181.0 acres of coastal sage scrub and 58.9 acres of central maritime chaparral within parks and reserves where habitat conditions can be improved through enhanced management.

Covered activities are anticipated to impact 188.6 acres of coastal sage scrub and 18.3 acres of central maritime chaparral (Table 4-3 of the LOHCP). Therefore, the benefits to these communities through implementation of the LOHCP conservation program would offset the effects of covered activities. It is also noted that the habitat that would be benefited by the LOHCP conservation program has much higher viability than habitat to be impacted by covered activities. Specifically, of the 207 acres of coastal sage scrub and central maritime chaparral anticipated to be impacted by the covered activities, 166 acres (80 percent) is anticipated to be inside the USL (Table 4-3 of the LOHCP). Habitat within this already densely-developed portion of Los Osos has very little long-term conservation value for the Morro Bay kangaroo rat, as the species is highly sensitive to the effects of habitat fragmentation, including predation by domestic cats and dogs. In contrast, the habitat benefits resulting from protection, restoration, and/or management of 350 acres of coastal sage scrub and central maritime chaparral in the 386-acre LOHCP Preserve System (Table 5-10 of the LOHCP) would all occur in larger, contiguous habitat areas largely outside of the USL, including the Morro Dunes Ecological Reserve, where the species was last observed. Restoration and active management of this and other high-quality habitat areas are necessary to recover Morro Bay kangaroo rat.

#### *Morro Manzanita*

#### **IMPACTS TO HABITAT**

Covered activities would impact approximately 40.1 acres (5 percent) of habitat suitable for Morro manzanita (i.e., central maritime chaparral and coast live oak woodland) within the Plan Area (Tables 4-4 and 4-5 and Figure 4-2 of the LOHCP). This represents just over five percent of the species' total habitat (798 acres) in the Plan Area. Of the 798 acres of suitable habitat within the Plan Area for the Morro manzanita, 491 acres (62 percent) is within existing protected lands and 98 acres (12 percent) is anticipated to be protected through implementation of the LOHCP conservation program.

Implementation of the CWPP is anticipated to impact an additional 29 acres of Morro manzanita habitat. In these areas, fire hazard abatement treatments may benefit Morro manzanita by stimulating seed germination and creating open canopy, bare mineral soil conditions that can promote seedling establishment. Conversely, these treatments may degrade habitat for Morro manzanita if the treatments promote the invasion and/or spread of exotic plants, although these indirect negative effects can be minimized through follow-up invasive plant removal.

The estimated area of suitable habitat that would be impacted by covered activities is greater than the actual acres covered by Morro manzanita, as the species does not occupy the entire area of suitable habitat; most notably, the species likely occurs at only limited abundance within the 22.5 acres of coast live oak woodland that are anticipated to be impacted (Table 4-3 of the LOHCP). Coast live oak woodland was included as habitat for this species for purposes of this analysis, although the Morro manzanita occurs at low frequency and abundance in this community. Moreover, some covered activities occurring on parcels supporting Morro manzanita habitat can be sited so the project disturbance envelope avoids suitable habitat.

Of the 40.1 acres of habitat to be impacted, 5 acres (12 percent) is anticipated to be temporarily impacted. Temporarily impacted habitat would be restored to pre-project or better habitat conditions to minimize impacts on the covered species.

## **IMPACTS TO INDIVIDUALS**

Covered activities would impact Morro manzanita individuals that occur within the disturbance envelopes of projects that are sited in areas where the species cannot be avoided. Established individuals would be killed, as would viable dormant seed in the areas permanently covered by development, other impervious surfaces, and landscaping elements that are not conducive to the species (e.g., turf grass, weed matting etc.). Implementation of the CWPP AMMs, which precludes removal of Morro manzanita and requires that canopy thinning and limbing be minimized, would limit impacts to individuals associated the fire hazard abatement treatments (as part of the CWPP); however, some mortality may result from this covered activity. Overall, the number of individuals to be impacted under the project is impossible to predict at this time, and would likely vary greatly for each covered activity, depending on the nature of activity and the condition of the habitat that it affects.

Individual Morro manzanitas may also be impacted during implementation of the conservation program. Individuals could experience die-back (loss of biomass) or mortality due to use of herbicides to control invasive plants. The potential for this would be reduced through implementation of elements of an integrated pest management approach to exotic plant control.

Mature Morro manzanita shrubs are also anticipated to be killed by fire or fire surrogates—treatments that simulate the beneficial effects of fire, including mechanical vegetation removal. These direct, negative, short-term impacts to the individuals are expected to be offset by longer-term beneficial effects of the treatments on the species population persistence, by facilitating regeneration through germination of seeds. Other habitat management and restoration treatments, including revegetation of denuded areas, and control of exotic plants such as eucalyptus, would similarly enhance habitat for this covered species.

## **ASSESSMENT OF NET IMPACTS**

The negative impacts of covered activities on Morro manzanita would be offset by the beneficial effects of implementation of the LOHCP conservation program. Although covered activities are anticipated to impact 40.1 acres of habitat, the LOHCP Preserve System would contain 263 acres of Morro manzanita habitat. These habitat benefits would be accomplished through the following (refer to Table 5-10 of the LOHCP):

- Protection, restoration, and/or management of approximately 51.7 acres of habitat that are currently unprotected;
- Restoration of 22.3 acres of habitat within existing protected lands, including by conducting fire management to promote regeneration of the populations, as needed; and
- Management of an additional 188.6 acres of suitable habitat to address factors that can degrade suitable habitat, including removal of exotic plants.

Implementation of the LOHCP would have a net beneficial impact on Morro manzanita by funding long-term, active habitat management in an adaptive management framework, which is essential to ensure long-term persistence and recovery of this fire-adapted species. Fire or fire surrogates would be needed to maintain persisting populations of Morro manzanita; however, funds necessary to implement such intensive treatments are often not available. In addition, the LOHCP provides a mechanism for coordination among landowners and agencies that is necessary to implement such projects, which can have deleterious impacts on some species, at least in the short term. As a result,

the project is anticipated to have a positive impact for persistence of Morro manzanita, including by contributing to its recovery.

### *Indian Knob Mountainbalm*

#### **IMPACTS TO HABITAT**

Covered activities would impact approximately 18.3 acres (3.6 percent) of habitat suitable for Indian Knob mountainbalm (i.e., central maritime chaparral) within the Plan Area (Table 4-3 of the LOHCP).

Fire hazard abatement projects conducted as part of the CWPP are anticipated to impact an additional 20.9 acres of Indian Knob mountainbalm habitat. The vegetation removal projects are anticipated to largely improve habitat conditions for this early-successional species by mimicking the beneficial effects of a fire and creating more open canopy, bare mineral soil conditions that may promote plant establishment. However, the fuel reduction treatments may degrade habitat for Indian Knob mountainbalm if such treatments promote the invasion and/or spread of exotic plants, although such indirect negative effects can be prevented through follow-up exotic plant control treatments.

#### **IMPACTS TO INDIVIDUALS**

Covered activities would not directly impact Indian Knob mountainbalm individuals. A 2016 survey in Los Osos found Indian Knob mountainbalm individuals occur in only two patches within the southeastern corner of the Bayview Unit of the Morro Dunes Ecological Reserve, which is owned and managed by the CDFW; the species was not observed in the historic occurrence mapped within the County's Broderson Property.

The only covered activities anticipated to occur on the Morro Dunes Ecological Reserve are implementation of the Los Osos fuel break as part of the CWPP (Figure 2-7 of the LOHCP), establishment of other fuel breaks needed to protect preserve lands from wildfire, and implementation of habitat restoration and management as part of LOHCP conservation strategy. To prevent direct impacts to individual Indian Knob mountainbalm, which is not covered in the LOHCP or the ITP, pre-project surveys for the species would be conducted prior to implementation of the CWPP, the LOHCP conservation program, and any other projects within suitable habitat for the species. If the species is present, the individual project proponents must avoid direct effects to individual plants.

To prevent die back (loss of biomass) or mortality due to use of herbicides to control invasive plants, herbicides would be applied using techniques that would prevent contact with Indian Knob mountainbalm, such as cut stump treatment or wicking; foliar spray would only be permitted when winds are calm and would not be allowed within 50 feet of Indian Knob mountainbalm individuals.

#### **ASSESSMENT OF NET IMPACTS**

The negative impacts of covered activities on Indian Knob mountainbalm would be offset by the beneficial impacts of implementation of the LOHCP conservation program. Although covered activities are anticipated to impact 18.3 acres of habitat, the LOHCP Preserve System would contain 109.6 acres of Indian Knob mountainbalm habitat. These habitat benefits would be accomplished through the following (refer to Table 5-10 of the LOHCP):

- Protection, restoration, and/or management of approximately 42.2 acres of habitat that are currently unprotected;

- Restoration of 8.5 acres of habitat within existing protected lands; and
- Management of an additional 58.9 acres of suitable habitat to address factors that can degrade suitable habitat, including removal of exotic plants.

In addition to the anticipated habitat benefits to central maritime chaparral, the LOHCP would promote recovery of Indian Knob mountainbalm by implementing management required to promote population growth, including fire management, and conducting other experimental population enhancement trials needed to increase the species distribution and abundance, and thus promote long-term persistence. As a result, implementation of the LOHCP under the project is anticipated to have a net positive impact for persistence of Indian Knob mountainbalm, including by contributing to its recovery.

### **Non-Covered Species**

The Plan Area provides habitat for several federally and state listed as threatened or endangered species, as well as many other species also considered to be sensitive by state and local conservation organizations. Table 15 and Table 16 above include the habitat requirements and the potential for occurrence of these species in the Plan Area.

Creation of the LOHCP Preserve System and active management of existing protected habitat for the benefit of covered species would be a net positive impact to sensitive non-covered species and/or their habitats where they co-occur with preserve areas, particularly those with similar habitat requirements. The project would provide benefits to special-status plant and animal species and nesting birds by protecting habitat of suitable size to support existing populations of unique or special-status species. The project would create opportunities to protect and improve habitats of greater quality and extent than the small-scale restoration efforts that are feasible for individual small development projects. The larger size and contiguous nature of many of the lands proposed for inclusion in the Preserve System would be superior to preservation of small, noncontiguous parcels as would occur without the implementation of the programmatic LOHCP. Conservation of high quality upland habitats, erosion control, and invasive species management in upland habitats would also provide benefits to species not covered by the LOHCP that occur in wetland and riparian habitats by reducing erosion, improving nutrient cycling, and limiting progress of invasive species recruitment into new areas.

Conceptual management treatments presented in the LOHCP include weed management through mechanical removal, herbicide, and grazing; fire regime management with the possible use of prescribed fire and/or simulated fire treatments; restoration of heavily eroded areas; and recreation management. Efforts to manage invasive species in the LOHCP Preserve System would benefit non-covered special-status species by reducing invasion potential from the Preserve System and limiting spread of existing invasive species.

Nonetheless, the LOHCP acknowledges that while substantial overlap exists between some habitat needs of the covered species, not all habitat requirements are compatible among all species, and some management actions may have temporary negative effects on individuals and/or habitats of covered species and other unique or special-status species present in the Plan Area. Prescribed fire could result in death or injury of individuals of species present in the burn area. As currently proposed, prescribed fires would be small and conducted in the late fall, as feasible. Provided that fires do not burn from multiple directions blocking escape routes, most wildlife species would be able to escape a slow-moving prescribed fire. However, take of non-covered special-status species could occur. In addition, while control of invasive species would ultimately benefit sensitive plant



species, weed management and fire management activities could impact rare plants in the short term. Prescribed fire in chaparral could kill special-status lichens, which are very slow growing. Management activities that require removal or disturbance of trees and shrubs could also remove rare lichens, and creation of fire breaks and management of fuels could result in impacts to non-covered special-status plants, particularly where avoidance of covered species restricts siting of these features to areas occupied by other species. Therefore, while preservation, restoration, and active management of native habitats in the area would provide a net beneficial impact to many of the unique or special-status species and their habitats that co-occur in the Plan Area, activities such as weed management, fire treatments, and recreation management actions could also result in limited adverse effects to these plants and animals.

In addition, while adoption of the LOHCP is not a requirement for activities covered in the LOHCP to proceed, the potential for accelerated buildout as a result of adopting the LOHCP is acknowledged. Because the exact location and extent of buildout is not currently known, precise, project-level analysis of specific buildout impacts on special-status species is not possible. As future individual projects are planned and designed, site-specific environmental review would be conducted by the County to ensure compliance with CEQA. Nonetheless, some non-covered special-status species could experience substantial adverse effects at locations where the LOHCP streamlines receipt of take coverage for listed animal species. The LOHCP may provide appropriate mitigation for resources not specifically covered in the LOHCP, but the adequacy of mitigation measures would need to be determined on a case-by-case basis.

Direct impacts that could occur through buildout include mortality or injury during construction, habitat modification, and loss such that it results in mortality or otherwise alters foraging and breeding behaviors substantially enough to cause injury. Indirect impacts could be caused by the spread of invasive non-native species that 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, potentially eliminating special status plant species and reducing the availability of suitable forage and breeding sites for special status animal species. Indirect impacts could also result from increased access by humans and domestic animals. Increased human and domestic animal (especially dog and cat) presence disrupt the normal behaviors of native animal species and foster the spread of non-native invasive plant species.

## **Mitigation Measures**

The following mitigation measures are included to reduce potential impacts associated with implementation of the project on special-status species and their habitats.

### *BIO-1(a) Biological Resources Screening and Assessment*

On a project-by-project basis, a preliminary biological resource screening shall be performed as part of the environmental review process to determine whether the project has any potential to impact biological resources other than covered species. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment to document the existing biological resources within the project footprint plus a buffer and to determine the potential impacts to those resources. The biological resources assessment shall evaluate the potential for impacts to all biological resources including, but not limited to: special status species, nesting birds, wildlife movement, sensitive plant communities, and other resources judged to be sensitive by local, state and/or federal agencies. Depending on the

results of the biological resources assessment, design alterations, further technical studies (i.e., protocol surveys) and/or consultations with the Service, CDFW, and/or other local, state, and federal agencies may be required. As part of this evaluation, the biologist shall evaluate whether the LOHCP Preserve System provides suitable habitat for any non-covered impacted species. The LOHCP Preserve System may be considered for mitigation only where it provides the appropriate habitats and this approach would not result in conflicts with the needs of the covered species, the primary focus of the reserve.

*BIO-1(b) Special Status Plant Species Surveys*

If completion of the project-specific biological resources screening and assessment determines that non-covered special-status plant species have potential to occur on-site, surveys for special-status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity of each project (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific biological resources assessment. All plant surveys shall be conducted by a qualified biologist approved by County no more than one year prior to project implementation (annual grassland habitats may require yearly surveys). All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph or topographic map. Surveys shall be conducted in accordance with the most current protocols established by the Service, CDFW, and County. A report of the survey results shall be submitted to the County for review. If special status plant species are identified, MM BIO-1(c) shall apply.

*BIO-1(c) Special Status Plant Species Avoidance, Minimization and Mitigation*

If federally and/or state listed and/or CRPR 1 and 2 species are found during special status plant surveys (pursuant to mitigation measure MM BIO-1(b)), the project shall be redesigned to avoid impacting these plant species to the maximum extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special status, and if so, the same process as identified for CRPR 1 and 2 species shall apply.

If special-status plant species cannot be avoided and would be impacted by a project, the biologist must also evaluate whether population-level effects would occur, and if habitats preserved in the LOHCP Preserve System are suitable for the species and known to be occupied. Species not known to be protected in the LOHCP Preserve System or for which habitats in the LOHCP Preserve System are not suitable would require additional mitigation at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to County for approval.

*BIO-1(d) Non-Covered Listed Species Habitat Assessment and Protocol Surveys*

Specific habitat assessment and survey protocol surveys are established for several federally and/or state listed as endangered and/or threatened animal species. If the results of the biological resources assessment determine that suitable habitat may be present for any such species not covered by the LOHCP, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or Service/NMFS protocols prior to issuance of any construction permits/project approvals.

Alternatively, in lieu of conducting protocol surveys, the applicant may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable. If the target species is detected during protocol surveys,

or protocol surveys are not conducted and presence assumed based on suitable habitat, mitigation MM BIO-1(e) shall apply.

*BIO-1(e) Non-Covered Listed Species Avoidance and Compensatory Mitigation*

If habitat is occupied or presumed occupied by non-covered federal and/or state listed species that could be impacted by the project, the applicant shall redesign the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the maximum extent feasible. If occupied or presumed occupied habitat cannot be avoided, the qualified biologist shall evaluate the total acreages for habitat that would be impacted. Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project conditions. The applicant may also need to obtain separate take permits for species not covered by the HCP.

If the LOHCP Preserve System is proposed for mitigation, the project biologist shall demonstrate that habitat is suitable and mitigation would not conflict with primary reserve goals. For example, certain restoration activities such as invasive species control can benefit many different species. If on- and/or off-site mitigation sites that are not part of the LOHCP Preserve System are identified, the applicant shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federally and/or state listed species. The HMMP shall identify long-term site management needs, routine monitoring techniques, and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the County for approval.

*BIO-1(f) Non-Covered Endangered/Threatened Species Avoidance and Minimization During Construction*

The following measures shall be applied to aquatic and terrestrial species, where appropriate. The County shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence and the results of the biological resources screening and assessment (mitigation measure MM BIO-1(a)).

- Pre-construction surveys for non-covered federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the appropriate measures in the Biological Opinion or Habitat Conservation Plan/ITP issued by the Service/NMFS (relevant to federally listed species) and/or the ITP issued by the CDFW (relevant to state listed species) shall be implemented; or if such guidance is not in place for the activity, the qualified biologist shall recommend an appropriate course of action, which may include consultation with the Service, NMFS, and/or CDFW. The results of the pre-construction surveys shall be submitted to the County for review and approval prior to start of construction. As described in the LOHCP, this is not anticipated to commonly occur because the LOHCP has been designed to cover the species most likely to be impacted by project-level activities.
- Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or

adjacent to the limits of disturbance shall have Environmental Sensitive Area fencing installed between said area and the limits of disturbance.

- All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed during the dry season, typically between April 1 and October 31, to avoid impacts to sensitive aquatic species.
- All projects occurring within or adjacent to sensitive habitats that may support non-covered federally and/or state listed as endangered/threatened species shall have a qualified biologist present during all initial ground-disturbing/vegetation-clearing activities. Once initial ground-disturbing/vegetation-clearing activities have been completed, the biologist shall conduct daily pre-activity clearance surveys for endangered/threatened species. Alternatively, as outlined in project permits if applicable, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are being fully implemented.
- No non-covered endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or the Service/NMFS.
- If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- If at any time during construction of the project, a non-covered endangered/threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. At that point, a qualified biologist shall recommend an appropriate course of action, which may include consultation with the Service, NMFS, and/or CDFW. Alternatively, the appropriate measures shall be implemented in accordance with the Biological Opinion or Habitat Conservation Plan/ITP issued by the Service (relevant to federally listed species) and/or the ITP issued by the CDFW (relevant to state listed species) and work can then continue as guided by those documents and the agencies as appropriate.
- All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies.
- No equipment shall be permitted to enter wetted portions of any affected drainage channel other than equipment necessary to conduct approved dewatering activities required for project construction.
- All equipment operating within streambeds (restricted to conditions in which water is not present) shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access.
- At the end of each work day, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment.
- All trenches, pipes, culverts, or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.

*BIO-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization*

Depending on the species identified in the Plan Area, the following measures shall be selected from among the following to reduce the potential for impacts to non-listed special-status animal species:

- Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 100-foot buffer and shall identify all special-status animal species that may occur on-site. All non-listed special-status species shall be relocated from the site either through direct capture or through passive exclusion. A report of the pre-construction survey shall be submitted to the County for their review and approval prior to the start of construction.
- A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special-status animal species unearthed by construction activities.
- Upon completion of the project, a qualified biologist shall prepare a final compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.
- If special-status bat species may be present and impacted by the project, or if maternal colonies may be present, within 30 days of the start of construction a qualified biologist shall conduct presence/absence surveys for special-status bats and maternal colonies, where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. If active bat roosts or colonies are present, the biologist shall evaluate the type of roost to determine the next step.
  - If a maternity colony is present, all construction activities shall be postponed within a 250-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed or as recommended by CDFW through consultation. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.
  - If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), alternative roosts, such as bat boxes if appropriate for the species, shall be designed and installed near the project site. The number and size of alternative roosts installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW.
  - If other active roosts are located, exclusion devices such as valves, sheeting, or flap-style one-way devices that allow bats to exit but not re-enter roosts discourage bats from occupying the site.

#### *BIO-1(h) Preconstruction Surveys for Nesting Birds*

For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the FGC, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist no more than 30 days prior to vegetation removal activities.

A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles, shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively.

If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 50 to 300 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest. The objective of the buffer shall be to reduce disturbance of nesting birds. All buffers shall be marked using high-visibility

flagging or fencing, and, unless approved by the qualified biologist, no construction activities shall be allowed within the buffers until the young have fledged from the nest or the nest fails.

For bald or golden eagle nests identified during the preconstruction surveys, an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the Service and CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing, and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31, if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use.

A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the County for review and approval prior to the start of construction.

#### *BIO-1 (i) Worker Environmental Awareness Program (WEAP)*

Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers and other personnel involved with construction of the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them.

#### *BIO-2 Herbicide Guidance*

The Adaptive Management Plan shall provide specific guidance regarding use of herbicides to minimize risk of overspray and avoid incidental impacts to covered species and their habitats. Specifically, the plan shall prohibit spraying when wind speed exceeds 10 miles per hour (mph) gusts or when rain is predicted within 24 hours. Situations in which pre-construction surveys for covered species will be conducted must be specifically identified. Specific herbicides proposed for use must be identified in consultation with the County and/or the Service and CDFW prior to use in the Plan Area.

#### *BIO-3 Prescribed Fire Guidance*

The Adaptive Management Plan shall provide specific guidance on how and where prescribed fire or fire surrogate treatments will be applied. This guidance must identify management conflicts between the covered species and other resources that result from the different adaptations of the four covered species to fire (e.g., of different return intervals), and a clear plan for addressing these conflicts throughout the design and implementation of treatments (e.g., limit treated area to sites occupied by only one covered species). If used, prescribed fires or fire surrogates must be conducted in a manner that considers needs of special-status species not covered by the LOHCP. At a minimum the plan shall include the following elements:

- a) Timing shall be outside nesting bird season (after August 31), and after temperatures have cooled.

- b) To limit the potential for short-term negative impacts to have long-term repercussions on small or isolated populations of sensitive plants and animals, design and implement prescribed burns or fire surrogates in small patches and retain refugia consisting of intact habitat adjacent to the treatment areas. Connecting occupied areas to treatment areas and adjacent occupied habitat will facilitate recolonization of restored habitat the restoration treatments.
- c) The Plan shall identify appropriate periods of time between fires (i.e., return intervals) to ensure that burned areas have sufficient time for recruitment and recovery of native flora and fauna before adjacent areas are treated. All covered species and other special-status species must be considered, and where conflicts exist in fire return intervals, the plan must identify a method of prioritizing needs. The plan must work to conserve special-status species not covered by the HCP where possible.
- d) The Plan must require development of a spatial database to track fire-related treatments to avoid too frequent treatment (e.g., inappropriately short fire return intervals).
- e) Known locations of non-listed special-status plants, animals, and lichens shall be considered when planning fire treatments to avoid short-term impacts to the entirety of any known occurrence.

*BIO-4      Avoidance and Minimization Measures for Non-Listed Special-Status  
Wildlife Species*

Avoidance and minimization measures can reduce take of individuals of non-listed special-status reptiles, as well as common reptiles during prescribed treatments such as burns, mechanical weed removal, and erosion control efforts. Ecological requirements and potential for impacts is variable among these species. Projects where work is completed above ground, does not use heavy equipment (e.g., use of hand tools, weed whacking, etc.), or does not result in ground disturbance are excluded from this measure. Any project requiring use of heavy equipment (e.g., new trail construction, repair of erosion) shall have a County-approved biologist select measures from among the following, depending on the species identified in the treatment, to reduce the potential for impacts to special-status wildlife species:

- a) For special-status terrestrial reptiles, “coverboard” surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet and constructed of untreated plywood placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All special-status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transportation to relocation sites near but outside proposed restoration or management activity. All relocation sites shall consist of suitable habitat similar to the original habitat site, and as close as possible to but outside the treatment area. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by the project. Relocation shall occur on the same day as capture. All special-status species found and relocated shall be tallied and recorded in a database. CNDDDB Field Survey Forms shall be submitted to the CFDW for special-status animal species relocated for restoration and management activities on an annual basis.
- b) Pre-construction clearance surveys shall be conducted within five days of the start of work (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 200-foot buffer, if feasible, and shall identify all special-status wildlife species that may occur onsite. All special-status wildlife species shall be relocated from the site through direct capture. Relocation efforts shall be documented and reported annually.

*BIO-5 Nesting Bird Avoidance Measures*

Activities with risk to nesting birds and raptors, including weed management activities expected to occur during the nesting season, must implement the following:

- a) Minimum avoidance distances for native birds likely to occur in the Plan Area must be provided for all management and restoration actions that could occur during nesting season. If activities cannot be conducted outside nesting season, the Adaptive Management Plan must identify how nesting birds will be protected through a pre-activity survey.
- b) For activities occurring during the nesting season (generally February 1 to August 31), surveys for nesting birds covered by the FGC and the Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire disturbance area plus a 500-foot survey buffer around the site. If active nests are located, all work shall be conducted outside a nest buffer zone from the nest. Nest buffer zone size shall be determined by the qualified biologist based on species and site conditions. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. If nests are identified subsequent to the initial nest survey, the above avoidance buffer measures shall apply. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.

*BIO-6 Rare Plant and Lichen Database*

Existing records for all special-status plants and lichens known to occur in the Plan Area shall be compiled and reviewed. As special-status plants or lichens are encountered through covered activities, they shall be documented and maintained in a database. This database shall be utilized to inform management decisions regarding prescribed fire, fire surrogate treatments, and invasive species control efforts. Management activities with potential to impact individual rare plants and lichens shall be planned such that known occurrences of rare plants or lichens are never completely impacted by the activity. For example, a fire treatment or surrogate fire treatment could remove one patch of chaparral with splitting yarn lichen, but must not remove all shrubs with splitting yarn lichen from that occurrence. In this measure, separate occurrences are defined as those which are one-quarter mile apart or greater.

*BIO-7 Rare Plant Life Cycle Consideration*

Management activities with the potential to negatively impact rare plants, particularly annual plant species, should occur after seed has set, whenever possible.

*BIO-8 Pre-Construction Surveys for Badger Dens*

Any project requiring use of heavy equipment and resulting in ground disturbance (e.g., new trail construction, repair of erosion) shall complete a pre-construction survey for active badger dens not less than two weeks prior to the initiation of work. The surveys shall include a thorough walking survey of the entire site. The survey shall cover the entire area proposed for disturbance plus a 100-foot buffer.

Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 100 feet around the active den shall be demarcated by flagging or construction fencing (fencing would be installed to leave the first foot above ground open to permit movement of badgers in and out of the buffer zone). If the den must be impacted, a biologist shall then use appropriate tracking and observation methods to determine when an active



den is no longer in use. When the biologist confirms that the den is no longer in use, activity may proceed, or the den may be collapsed by the biologist if work will not proceed immediately to avoid the need for further follow-up surveys.

A qualified biologist shall conduct a training session for all construction personnel prior to the start of project activities requiring the use of heavy equipment and resulting in ground disturbance. At a minimum, the training shall include a description of the species and their habitats, the specific measures that will be implemented to conserve and protect the species, and the project boundaries defining the work limit areas. Brochures, books, and briefings may be used in the training session.

### **Significance After Mitigation**

Implementation of mitigation measures MM BIO-1 through MM BIO-8 would reduce potential impacts to biological resources to less than significant levels.

<b>Threshold:</b>	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
<b>Threshold:</b>	Would the project have a substantial adverse effect on federally protected wetlands as defined in 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?

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#### **IMPACT BIO-2      IMPLEMENTATION OF THE PROJECT WOULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON SENSITIVE HABITATS, INCLUDING RIPARIAN AREAS. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.**

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Construction and implementation of covered activities included in the LOHCP would impact up to 532.0 acres (14.6 percent) of the Plan Area (Table 18). Although the exact numbers, sizes, and locations of the individual projects to be conducted under the LOHCP are currently unknown, impacts to vegetation communities were estimated under the impact assumptions per the type of covered activity (refer to Table 4-1 in the LOHCP). As shown in Table 18, 39 percent (206.5 acres) of vegetation community impacts from covered activities would occur to developed land. Of the total 532 acres of ground disturbance, 410 acres would be associated with private residential and commercial development and redevelopment and 122 acres would be associated with capital improvements and maintenance activities associated with public and private utility projects. Of the 122 acres of ground disturbance associated with public and private utility projects, 89.4 acres of impacts would occur due to implementation of the CWPP, which would include the construction of fuel breaks at the wildlife urban interface. Some of the treatments would help achieve the goals and objectives of the LOHCP by reducing exotic plants and creating early-successional habitat conditions favorable to covered species.

The LOHCP proposes a habitat-based management strategy; thus, many of the actions proposed for the benefit of covered species would also benefit natural vegetation communities that may occur in the LOHCP Preserve System. In addition, AMMs included in the LOHCP that are designed to benefit covered species would also provide benefits to sensitive natural communities. Specifically, the project would provide opportunities to manage invasive species that impact sensitive natural communities, as well as providing opportunities to conserve new high-quality habitat for these vegetation communities.

**Table 18 Estimated Impacts to Vegetation Communities**

Vegetation Community/ Land Cover	Existing in Plan Area		Currently Protected		Inside USL	Outside USL	Permanently Impacted	Temporarily Impacted	Total	Percent of Existing
	Acres	Percent of Total	Acres	Percent of Existing						
Coastal Sage Scrub										
California Sagebrush – Black Sage	481.6	13.2%	327.5	68.0%	18.7	14.7	27.3	6.1	33.4	6.9%
California Sagebrush – Black Sage Disturbed	373.0	10.2%	54.9	14.7%	138.7	13.4	143.1	9.0	152.1	40.8%
California Sagebrush – Black Sage Heavily Disturbed	10.8	0.3%	0.1	0.9%	1.6	0.8	2.1	0.3	2.4	22.2%
Coyote Brush <sup>1</sup>	0.7	<0.1%	0	0	0.7	0.0	0.7	<0.1	0.7	100.0%
Total	866.0	23.8%	382.4	44.2%	159.7	28.9	173.2	15.4	188.6	21.8%
Central Maritime Chaparral										
Morro Manzanita	321.2	8.8%	135.1	42.0%	6.1	10.1	13.6	2.7	16.2	5.0%
Morro Manzanita – Wedgeleaf Ceanothus	113.4	3.1%	111.3	98.1%	0.1	1.2	1.1	0.2	1.3	1.1%
Morro Manzanita – California Sagebrush	38.0	1.0%	34.4	90.5%	<0.1	0.6	0.5	0.1	0.6	1.6%
Wedgeleaf Ceanothus – California Sagebrush	30.6	0.8%	28.4	92.9%	<0.1	0.2	0.2	<0.1	0.2	0.7%
Total	503.3	13.8%	309.2	61.4%	6.2	12.1	15.4	2.9	18.3	3.6%
Woodland										
Coast Live Oak	291.2	8.0%	178.3	61.2%	14.4	7.4	19.7	2.1	21.8	7.5%
Bishop Pine <sup>2</sup>	3.4	0.1%	3.4	100.0%	0.0	<0.1	<0.1	<0.1	<0.1	0.6%
Eucalyptus	72.0	2.0%	10.7	14.8%	7.1	3.6	8.8	1.8	10.7	14.9%
Total	366.6	10.1%	192.4	52.5%	21.5	11.0	28.5	3.9	32.5	8.9%
Grassland										
California Annual Grassland	3.5	0.1%	1.2	34.4%	0.1	0.1	0.1	<0.1	0.2	4.4%
Non-Native Grassland	35.0	1.0%	1.0	2.9%	20.7	0.4	20.5	0.7	21.1	60.4%
Total	38.5	1.1%	2.2	5.8%	20.8	0.5	20.6	0.7	21.3	55.3%

County of San Luis Obispo  
Los Osos Habitat Conservation Plan

Vegetation Community/ Land Cover	Existing in Plan Area		Currently Protected		Inside USL	Outside USL	Permanently Impacted	Temporarily Impacted	Total	Percent of Existing
	Acres	Percent of Total	Acres	Percent of Existing						
Wetland <sup>3</sup>										
Cattail	0.2	<0.1%	0.1	47.3%	<0.1	0	<0.1	<0.1	<0.1	<0.1%
Pickleweed	1.3	<0.1%	1.2	90.5%	<0.1	0	<0.1	<0.1	<0.1	1.5%
Disturbed Wetlands	41.7	1.1%	29.5	70.8%	2.6	0	2.5	0.1	2.9	6.8%
Total	43.1	1.2%	30.7	71.3%	2.6	0	2.5	0.1	2.9	6.7%
Riparian										
Arroyo Willow	11.6	0.3%	0.4	3.6%	3.1	0	3.1	<0.1	3.1	26.7%
Arroyo Willow – Black Cottonwood	0.8	<0.1%	0.8	100%	<0.1	0	<0.1	<0.1	<0.1	<0.1%
Coast Live Oak – Arroyo Willow	62.3	1.7%	7.7	12.3%	<0.1	0	<0.1	<0.1	<0.1	<0.1%
Black Cottonwood	1.8	<0.1%	0	0%	<0.1	0	<0.1	<0.1	<0.1	<0.1%
Total	76.6	2.1%	9.0	11.7%	3.1	0	3.1	<0.1	3.1	4.1%
Other Land Cover										
Ruderal Disturbed	49.9	1.4%	0.5	1.1%	30.9	0.6	30.1	1.4	31.5	63.0%
Landscaped Trees	131.4	3.6%	16.8	12.8%	16.3	5.3	19.2	2.4	21.6	16.4%
Agricultural Land	48.5	1.3%	0.1	0.1%	2.8	3.0	4.8	1.0	5.8	12.0%
Open Water	4.2	0.1%	0.6	15.0%	0.0	0	0.0	0.0	0.0	0.0%
Developed	1,515.8	41.6%	4.5	0.6%	197.4	9.2	169.0	37.6	206.5	13.6%
Total	1,750.0	48.0%	22.5	1.3%	247.4	18.0	223.1	42.3	265.4	15.2%
Grand Total	3,643.8	100%	948.4	26.0%	461.3	70.5	466.3	65.4	532.0	14.6%

<sup>1</sup> Impacts to coyote brush were overestimated as a result of this community primarily occurring in single family residential parcels, which as presumed to be completely impacted, as well as the community being included in the extrapolation used to estimate community-level impacts of activities without specified project footprints.

<sup>2</sup> Impacts to bishop pine community, which is only within existing protected lands, are overestimated as a result of the process of estimating impacts of activities without specified project footprints using extrapolation.

<sup>3</sup> Impacts to species in wetland and riparian communities will not be covered by the LOHCP ITP.

Source: LOHCP Table 4-3

In addition to the AMMs included in the LOHCP, the project would be subject to compensatory mitigation for temporary and permanent impacts to sensitive vegetation communities, as detailed in Section 5.3 of the LOHCP. As stated in Section 5.7 in the LOHCP, the mitigation provided through the LOHCP conservation program is expected to more than offset the anticipated impacts of covered activities, thus exceeding the ITP issuance criterion that the mitigation be commensurate with the impacts. Specifically, implementation of the LOHCP would result in an estimated 356 acres of new and existing protected habitat that would be incorporated into the LOHCP Preserve System.

Protection, restoration, and management actions conducted under the LOHCP are expected to contribute more conservation benefit acre-for-acre compared with small-scale conservation efforts conducted in compensation for projects not covered under the LOHCP.

Construction and implementation of covered activities could impact up to 2.9 acres (6.7 percent) of wetland habitat and 3.1 acres (4.1 percent) of riparian habitat in the Plan Area. Wetland, riparian, and stream habitats primarily occur in the eastern, northern, and northwestern edges of the Plan Area. Wetland, riparian, and stream habitats in the eastern portion of the Plan Area are situated outside the USL, while much of this habitat in the northern and northwestern portions of the Plan Area is currently protected as part of the Sweet Springs Nature Preserve. As a result, covered activities would be unlikely to result in adverse effects to these types of habitats. Furthermore, expedited development would not result in additional impacts or intensification of impacts to native vegetation, wetlands, or riparian habitat than those analyzed and mitigated in the 2003 EAP FEIR.

The LOHCP Preserve System could include small amounts of wetland, riparian and stream habitat if existing protected areas with riparian and wetland habitat, as well as suitable habitat for covered species, are enrolled in the program. Proposed restoration and management activities in the LOHCP Preserve System are not expected to require any actions in wetland or riparian habitats, and the LOHCP does not provide coverage for activities that could impact those listed species known to occur in aquatic habitats in the vicinity. Aside from specific management actions proposed under the LOHCP, conservation of high-quality upland habitats, erosion control, and invasive species management in upland habitats could provide benefits to wetland and riparian habitats by reducing erosion, improving nutrient cycling, and limiting progress of invasive species recruitment into new areas.

Introduction of passive recreation uses in the LOHCP Preserve System could result in potential impacts to sensitive vegetation communities through the construction of trails and generation of off-trail foot traffic, which could trample native vegetation and erode soils. Recreation management efforts focused on reducing off-trail foot traffic, maintaining trails in suitable locations, and reducing erosion would reduce this impact.

## **Mitigation Measures**

The following mitigation measure is incorporated to reduce the impact to sensitive vegetation communities associated with passive recreation use of the LOHCP Preserve System.

### *BIO-9 Sensitive Vegetation Avoidance and Monitoring*

New trails shall occur in degraded habitat and avoid the high quality suitable habitat for covered species to the maximum extent possible. Where actions must occur in high quality suitable habitat, follow-up monitoring shall be conducted every other year for five years to ensure that no adverse effects to the remaining vegetation community along the trail occur. If problems are noted, the

source of the problem shall be identified and remedial actions shall be taken to address the issue, and return the impacted area to its original condition.

### **Significance After Mitigation**

Implementation of mitigation measure MM BIO-9 would reduce potential impacts to less than significant levels.

**Threshold:** Would the project Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

**IMPACT BIO-3      IMPLEMENTATION OF THE PROJECT WOULD NOT SUBSTANTIALLY INTERFERE WITH THE MOVEMENT OF RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES OR WITH ESTABLISHED RESIDENT OR MIGRATORY WILDLIFE CORRIDORS. IMPACT WOULD BE CLASS IV, BENEFICIAL EFFECT.**

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As previously noted, the streamlined permitting process provided by participation in the LOHCP could conceivably accelerate the rate at which the residential, commercial, and capital development projects allowed under the land use designations in the EAP could occur. Increasing urbanization within the Estero planning area may result in the development of currently vacant parcels, which may currently provide value as wildlife corridors. In addition, development along riparian corridors could dissuade species from utilizing those corridors. However, covered activities would be implemented over the course of the 25-year permit term, and such activities could occur, albeit at a slower rate, without implementation of the LOHCP. Future development streamlined by implementation of the project would occur under the requirements of the EAP. An EIR has already been prepared and certified that addresses and discloses the potential environmental effects from buildout pursuant to the EAP, and the project would not result in additional impacts or intensification of impacts to wildlife corridors beyond those analyzed and mitigated in the EAP FEIR.

Implementation of the LOHCP Preserve System would result in a beneficial impact to wildlife movement corridors in the Plan Area. In many of the properties that could be managed as part of the LOHCP Preserve System, de facto trail use has resulted in an extensive network of trails which have fragmented habitat. As a result, the LOHCP Recreation Management Strategy includes a measure to create small impediments at the entrances to closed trails (e.g., fencing that would not obstruct wildlife movement). In addition, the LOHCP would provide opportunities for coordinated management of existing protected lands which would promote protection of larger continuous areas of protected habitat rather than small isolated patches as are frequently conserved under small-scale individual project ITPs. Larger contiguous areas of natural habitat are preferable for wildlife movement. Small conserved areas within larger developed areas do not provide suitable movement opportunities for larger wildlife; areas suitable for protection of small numbers of Morro manzanita or Morro shoulderband snail may not be sufficiently sized to support larger wildlife, thus the larger Preserve System provides benefits to wildlife movement corridors. Therefore, overall impacts to wildlife movement would be beneficial.

<b>Threshold:</b>	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
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**IMPACT BIO-4      IMPLEMENTATION OF THE PROJECT WOULD NOT CONFLICT WITH LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES. IMPACTS WOULD BE A CLASS III, LESS THAN SIGNIFICANT.**

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Future development within the Plan Area expedited by the streamlined permitting process provided by the programmatic ITP would be required to comply with existing policies that are in place to protect sensitive species other than the covered species, including being required to address impacts to sensitive species not covered by the LOHCP.

The LOHCP goals and objectives are potentially consistent with the California Coastal Act. The LOHCP contains AMMs that would protect the covered species and certain additional sensitive species and their habitats, or ESHA (refer to Section 5 of the LOHCP). Therefore, it is both possible and necessary for the LOHCP and the County LCP (which implements the California Coastal Act for Los Osos) to be integrated so that each complements and supports the other, to provide the highest overall level of protection for sensitive natural coastal resources within Los Osos. The LOHCP would establish a programmatic plan for the protection of covered and certain other sensitive species and their habitat within the Plan Area. As such, it would be potentially consistent with plans/policies to protect sensitive species and habitats. The Plan Area is not currently covered by any HCP or a Natural Community Conservation Plan other than the LOHCP analyzed in this EIR (CDFW 2019b). Therefore, impacts would be less than significant.

### **c. Cumulative Impacts**

New development in the County is required to undergo a project-specific analysis of potential impacts to biological resources, as applicable. The analysis would identify individual project-related impacts to biological resources and provide recommendations and mitigation measures, as appropriate, to reduce potential impacts during construction and operation of individual projects. New development associated with the covered activities, combined with county-wide growth, would incrementally impact additional biological resources. New development would be subject to federal, state, and local laws and regulations, and would be required to mitigate impacts to biological resources to reduce the overall effects. The project would include preservation, restoration, and management of habitat in the LOHCP Preserve System and installation and maintenance of new amenities in the LOHCP Preserve System, which would be overall beneficial to covered species, non-covered species, and their habitats in the Plan Area. Because restrictions and/or mitigation measures would be applied to individual development projects if such projects would adversely impact biological resources, it is anticipated that cumulative impacts to biological resources would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

Other habitat conservation efforts are expected to result in similar types of effects as restoration activities implemented under the LOHCP, most of which are temporary effects. These include past restoration and current conservation efforts associated with low-effect HCPs for projects in Los Osos, mitigation for the LOWRF Project, and restoration and habitat management efforts conducted by state and private groups on existing reserves in the Plan Area.

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## 4.3 Cultural Resources

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### 4.3.1 Setting

#### a. Regional Setting

##### Prehistory

The Plan Area lies in the Central Coast archaeological region, which has been defined as extending from south of San Francisco Bay to the northern edge of the Southern California Bight (Jones et al. 2007:125). Following Jones et al. (2007:137), the prehistoric cultural chronology for the Central Coast can be generally divided into six periods: Paleo-Indian (ca. 10000–8000 B.C.), Millingstone/Early Archaic (8000–3500 B.C.), Early (3500–600 B.C.), Middle (600 B.C.– A.D. 1000), Middle-Late Transition (A.D. 1000–A.D. 1250), and Late (A.D. 1250–contact [ca. A.D. 1769]).

Recent data from Paleo-Indian sites in southern California indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas (Jones and Ferneau 2002) and on Pleistocene lake shores in eastern California (Moratto 1984:90–92). Although few Clovis-like or Folsom-like fluted points have been found in southern California (Erlandson et al. 1987), it is generally considered that the emphasis on hunting may have been greater during the Paleo-Indian period than in later periods.

The Millingstone period, as defined by Wallace (1955, 1978) and recognized on the Central Coast by Fitzgerald and Jones (1999), is characterized by an ecological adaptation to collecting suggested by the appearance and abundance of well-made milling implements. Millingstones occur in large numbers for the first time in the region's archaeological record, and are even more numerous near the end of this period. Aside from millingstones, typical artifacts during this period include crude core and cobble-core tools, flake tools, large side-notched projectile points, and pitted stones (Jones et al. 2007).

An extensive series of shoreline midden deposits are within the Central Coast region dating to the Early period, signifying an increase in occupation of the open coast (Jones and Waugh 1995, 1997). Sites dating to this period are marked by large lithic artifact assemblages, which include Central Coast Stemmed Series and side-notched projectile points. The material culture recovered from Early period sites within the Central Coast region provides evidence for continued exploitation of inland plant and coastal marine resources. Artifacts include milling slabs and handstones, as well as mortars and pestles, which were used for processing a variety of plant resources. Bipointed bone gorges were used for fishing. Shell beads and obsidian are hallmarks of the trade and exchange networks of the central and southern California coasts. The archaeological record indicates a substantial increase in the abundance of obsidian at Early period sites in the Monterey Bay and San Luis Obispo areas (Jones and Waugh 1997:124–126).

A pronounced trend toward greater adaptation to regional or local resources occurred during the Middle period. For example, the remains of fish, land mammals, and sea mammals are increasingly abundant and diverse in archaeological deposits along the coast. Related chipped stone tools suitable for hunting were more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common during this period. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Bone tools, including awls, are more numerous than in the preceding period,



and the use of asphaltum adhesive became common. Sites from this period show a retention of stemmed points and the disappearance of the larger side-notched points (Jones and Klar 2007; Jones et al. 2007).

The Middle-Late Transition period is marked by relative instability and change, with major changes in diet, settlement patterns, and interregional exchange. The relatively ubiquitous Middle period shell midden sites found along the Central Coast were abandoned by the end of the Middle-Late Transition period, so most Transition period and Late period sites were first occupied during those periods (Jones and Ferneau 2002: 213, 219). Site SLO-239 has been tentatively dated to the Middle-Late Transition Period and contains the only residential feature, a circular house floor, dating to this time period (Jones et al. 2007; Mikkelsen et al. 2000).

Late period sites are marked by small, finely worked projectile points, such as Desert side-notched and Cottonwood points, as well as temporally diagnostic shell beads. The small projectile points are associated with bow and arrow technology and indicate influence from the Takic migration from the deserts into southern California. Common artifacts identified at Late Period sites include bifacial bead drills, bedrock mortars, hopper mortars, lipped and cupped *Olivella* shell beads, and steatite disk beads. The presence of beads and bead drills suggest that low-level bead production was widespread throughout the Central Coast region (Jones et al. 2007).

## **Ethnography**

The Plan Area was historically occupied by the Obispeño Chumash, so called after their historic period association with Mission San Luis Obispo de Tolosa (Kroeber 1925).

Groups neighboring the Chumash included the Salinan to the north, the Southern Valley Yokuts and Tataviam to the east, and the Gabrielino (Tongva) to the south. Chumash place names in the project vicinity include Pismu (Pismo Beach), Tematatimi (along Los Berros Creek), and Tilhini (near San Luis Obispo) (Greenwood 1978:520).

Only a general outline of the lifeways of the Obispeño Chumash is known based on the little ethnographic information available (Greenwood 1978). Although their language was closer to Southern Chumash groups, the material culture and lifeways of the Northern Chumash appear to have been more similar to their northern neighbors, the Salinan. Accordingly, their populations in this area are thought to have been substantially lower than in the Santa Barbara Channel area, their villages smaller, and their livelihood less based on intensive use of marine fisheries (Glassow et al. 2007; Greenwood 1978).

Permanent Chumash villages included hemispherical dwellings arranged in close groups, with the chief having the largest for social obligations (Hoover 1977). Each Chumash village had a formal cemetery marked by tall painted poles and often with a defined entrance area (Gamble et al. 2001:191). Archaeological studies have identified separate sections for elite versus commoner families within the cemetery grounds (King 1969).

The acorn was a dietary staple for the mainland Chumash, though its dominance varied by coastal or inland location. Chumash diet also included cattail roots, fruits and pads from cactus, and bulbs and tubers of plants such as amole (Gamble 2005 and Temple and Stojanowski 2019). On the coast, the wooden plank canoe (tomol) was employed in the pursuit of marine mammals and fish. The tomol not only facilitated marine resource procurement but also facilitated an active trade network maintained by frequent crossings between the mainland and the Channel Islands.

Chumash populations were decimated by the effects of European colonization and missionization (Johnson 1988). Traditional lifeways largely gave way to laborer jobs on ranches and farms in the Mexican and early American periods. Today, the Santa Ynez Band of Chumash Indians is the only federally recognized Chumash tribe, though many people of Chumash descent continue to live throughout their traditional territory.

## **History**

Post-European contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present).

The Juan Rodrigues Cabrillo Expedition reached the San Luis Obispo region in 1542, possibly landed in Morro Bay, and sailed as far north as San Francisco Bay (Chesnut 1993). For more than 200 years, Cabrillo and other Spanish, Portuguese, British, and Russian explorers sailed the Alta (upper) California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). The earliest detailed descriptions of the area come from members of Gaspar de Portolá's land expedition, which passed through the region in 1769 (Ballard 1992). Early travelers in the Central Coast region reported seeing no large Native American villages like those noted in the Santa Barbara Channel area.

Gaspar de Portolá and Franciscan Father Junípero Serra established the first Spanish settlement in Alta California at Mission San Diego de Alcalá in 1769. This was the first of 21 missions erected by the Spanish between 1769 and 1823. Portolá continued north, passing through the project vicinity and reaching San Francisco Bay in 1769. Mission San Luis Obispo de Tolosa was founded in 1772, the fifth of 21 missions established by the Spanish in Alta California (Rolle 2003).

The Mexican Period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. This period was an era of extensive interior land grant development and exploration by American fur trappers west of the Sierra Nevada Mountains. The California missions declined in power and were ultimately secularized in 1834. Governor Pío Pico and his predecessors made more than 600 rancho grants between 1833 and 1846, putting most of the state's lands into private ownership for the first time (Gumprecht 1999).

The secularization of the missions during the Mexican period resulted in approximately 500,000 acres of former mission lands being granted to Mexican citizens in San Luis Obispo County (County 2006). The project site is located partially within what was Rancho Canada de Los Osos y Pecho y Islay, formed in 1845 after Rancho Canada de Los Osos and Rancho Pecho y Islay were purchased and combined by John D. Wilson and James G. Scott (Hoover et al. 2002).

The American Period began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico \$15 million for the conquered territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of southern California continued to increase during the early American Period. Many ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns. Rancho Canada de Los Osos y Pecho y Islay was patented to John Wilson in 1869 (Hoover et al. 2002).

The County of San Luis Obispo was founded in 1850 (County 2006). Roads were constructed throughout the county in the 1870s, primarily by Chinese laborers, leading to increased mobility throughout the county. In 1872, Captain John Harford began construction on the Pacific Coast Railway.

Dumke (1944) described San Luis Obispo County during the California land boom of the 1880s as “the great butter and cheese belt of southern California,” initially with land affordably priced between \$18 and \$25 per acre. By April 1887, an estimated 3,000 to 4,000 people inhabited the region, and land prices increased dramatically. In 1894, the Southern Pacific Railroad completed a line from San Jose to San Luis Obispo encouraging trade and further settlement of the region.

In the early twentieth century Port Harford was renamed Port San Luis and oil from the Santa Maria and Taft-Coalinga fields was shipped beginning in 1907 and 1913, respectively. The California Polytechnic School was established in 1901 as a high school and eventually became California Polytechnic State University (Cal Poly). The county’s agriculture and ranching production supplied U.S. troops during World War I and helped its residents weather the Great Depression of the 1930s. At the start of World War II, the U.S. War Department transferred nearly 100,000 military personnel to bases at Morro Bay, Camp San Luis, Camp Roberts, and Cambria.

### **Known Locations of Cultural Resources**

Based on information held by the Central Coast Information Center, numerous previous cultural resource studies have been conducted in the Plan Area, though most were conducted over five years ago and are thus considered out of date. Several archaeological sites are known to be located in the Plan Area.

Archaeological sites within the Plan Area include lithic scatters, shell middens, resource processing stations, and village sites. Most archaeological sites are located adjacent to creeks and the coast. Based on the records search conducted for the project, as well as existing information available for the Plan Area and surrounding vicinity, including the County’s GIS database of archaeological studies/records, the Plan Area contains known and possibly unknown prehistoric archaeological resources and as such is considered to be culturally sensitive.

No historic period (1769 through 1964) archaeological or built-environment resources, as defined by the National Historic Preservation Act (16 U.S.C. 470), are known to exist within the Plan Area; however, this does not preclude their existence. It is possible that historic-period resources exist in areas that have not been previously surveyed or that were not old enough to have been considered historic at the time of previous studies.

### **Paleontology**

The Plan Area is located in the Coast Range geomorphic province on the west end of the Los Osos Valley adjacent to Morro Bay. The Los Osos Valley is bounded by the Santa Lucia Range to the east, Morro Bay to the west and the Irish Hills to the south. Tectonic processes formed many of the Coast Range Valleys during Pleistocene time.

The predominant structural feature in the California Coast Ranges is the San Andreas fault, which is the structural boundary between two tectonic plates; the Pacific Plate to the southwest of the fault and the North American Plate northeast of the fault. The San Andreas fault is located in the eastern portion of the County, approximately 35 miles to the east of the Plan Area. The Plan Area is predominantly in an alluvial valley with the southern portion of the Plan Area on the foothills of the Irish Hills.

The Plan Area is primarily underlain by Holocene-aged beach sand and dune sand (Qs) and minor amounts of Holocene-aged alluvial gravel, sand, etc. (Qa). Monterey Formation (Tmm) is mapped at the surface of the hills along the southern margin of the study area (California Department of Conservation, California Geological Survey 2009; see Figure 8). The Monterey Formation consists of



Figure 8 Geologic Units in the Plan Area



Imagery provided by Esri and its licensors © 2019. Additional data provided by the County of San Luis Obispo, 2019, and Jodi McGraw Consulting, 2014; Geologic Map of the Morro Bay South quadrangle, San Luis Obispo County, California- 2006. Dibblee, T.W., and Minch, J.A. :Dibblee Geological Map Foundation, Dibblee Foundation Map DF-214, scale 1:24,000. Additional data provided by the County of San Luis Obispo Planning and Building Department, 2007.



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extensive marine deposits with abundant fossils. The formation covers a large area of California and spans much of the Miocene but varies in age from region to region (Behl 1999). Fossils from the Monterey Formation include whales and dolphins, as well as large numbers of finely preserved crabs, and a collection of kelps and other large soft-bodied seaweeds, which are seldom found as fossils elsewhere (Finger 1992).

The Quaternary units mapped within the Plan Area include the Holocene-aged alluvial gravel, sand and clay of valley areas and stream channels and Holocene-aged beach sand and dune sand deposits. The Holocene sediments are generally considered to be too young to contain fossils, and disturbance of these sediments have a low potential to impact paleontological resources; however, these sediments are likely underlain by the Miocene-aged Monterey Formation at relatively shallow depths along the southern margins of the Plan Area. These units are considered to have low paleontological sensitivity.

Tertiary aged units mapped within the Plan Area include only the upper Miocene-aged deposits of the Monterey Formation. These siliceous shale deposits were originally assigned to the Miguelito Member of the Pismo Formation but were later assigned to the Monterey Formation (California Department of Conservation, California Geological Survey 2009). They occur in the Plan Area as white-weathered, thin bedded, platy, silty to porcellaneous, and locally cherty shale. Fossil occurrences from the Monterey Formation include a wide variety of vertebrates, invertebrate plants and kelp, and many localities occur along coastal or near coastal exposures of Monterey formation deposits. The Monterey Formation is considered to have high paleontological sensitivity.

In general terms, for geologic units with high sensitivity, full-time monitoring typically is recommended during any project-related ground disturbance. For geologic units with low sensitivity, protection or salvage efforts typically are not required. For geologic units with undetermined sensitivity, field surveys by a qualified paleontologist are usually recommended to specifically determine the paleontological potential of the rock units present. For geologic units with no sensitivity, a paleontological monitor is not required. In addition, any soils overlying these geologic units are unlikely to contain fossils. Therefore, paleontological monitoring or reporting would not be necessary in cases where disturbance is only within the soil layer. Table 19 shows the mapped geologic units within the Plan Area, their age and paleontological sensitivity (refer to Figure 8 for the location of these geologic units within the Plan Area).

**Table 19 Geologic Units Underlying the Plan Area**

Geologic Unit	Age	Notes	Paleontological Sensitivity
Beach sand and dune sand (Qs)	Holocene	Generally considered too young to contain fossils.	Low
Alluvial valley sediments (Qa)	Holocene	Generally considered too young to contain fossils.	Low
Monterey Formation (Tmm)	Miocene	The formation is known to contain abundant fossil localities, and includes a wide diversity of plant, invertebrate, and vertebrate fossils.	High
Source: California Department of Conservation, California Geological Survey 2009 and Society of Vertebrate Paleontology 2010			

## **b. Regulatory Setting**

### **Federal (National Historic Preservation Act of 1966)**

The National Register of Historic Places (NRHP) was established by the National Historic Preservation Act (NHPA) of 1966 as “an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of our history;
- It is associated with the lives of persons who are significant in our past;
- It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or
- It has yielded, or may be likely to yield, information important in prehistory or history.

### **State (California Environmental Quality Act)**

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (PRC Section 21084.1). If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a “unique archaeological resource” as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

A “historical resource” is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources, a resource included in a local register of historical resources or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (*CEQA Guidelines* Section 15064.5[a][1-3]).

Section 15064.5(a)(3) also states that a resource shall be considered by the lead agency to be “historically significant” if the resource meets any of the following criteria for listing on the California Register of Historical Resources:

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

## **Local**

### *County General Plan Conservation and Open Space Element*

The Conservation and Open Space Element of the San Luis Obispo County General Plan (2010) contains policies applicable to the project. Relevant policies are listed in Table 20. Proposed development that does not conform to these policies constitutes a significant impact.

### *Los Osos Community Plan*

The 2019 Draft EIR for the Los Osos Community Plan contains cultural policies applicable to the project, including:

- **Policy CR-1.** Effectively manage significant archaeological and historical resources in and around the community of Los Osos.
  - A. Identify the locations of sensitive archaeological and historical sites prior to any proposed development, and preserve them in place and avoid damaging impacts whenever feasible.
  - B. Evaluate site significance and mitigate unavoidable impacts on archaeological sites using current professional standards and best management practices, in consultation with Native American tribal representatives and other affected communities of interest.
  - C. Encourage acquisition, preservation, and management of sensitive archaeological and historical sites. Allow passive recreation where compatible with resource protection. After acquisition, change the Land Use categories of these areas to Open Space.
- **Policy CR-2.** Effectively manage significant historical buildings, structures, and districts in and around the community of Los Osos.
  - A. Identify significant historical buildings and structures prior to any proposed development.
  - B. Identify and evaluate potential historic districts and develop a plan for their preservation and enhancement.
  - C. Encourage adaptive reuse that is compatible with resource protection. Follow the Secretary of the Interior’s Standards and Guidelines to ensure preservation, rehabilitation, restoration, and/or reconstruction of significant buildings and structures.

In addition, the 2019 Draft EIR for the Los Osos Community Plan includes the following Communitywide Standards:



- **Archaeological and Historical Resource Surveys.** For any proposed development in areas of high and moderate archaeological sensitivity within the Plan area, per Figure 4.5-4, the County shall require a field inspection by a Registered Professional Archaeologist to determine the locations of archaeological resources vis-à-vis the proposed development. If archaeological resources are present, the County shall assist the applicant in designing a project that allows the archaeological resource to be preserved in place if feasible. Project applicants shall demonstrate that methods proposed for construction within the AS Area can successfully avoid impacts to known or suspected archaeological resources.

For development outside of the AS area, or if archaeological resources are not identified during a survey, the County may require archaeological surveys or monitoring during construction to ensure that unidentified resources are not inadvertently damaged by development. If archaeological or historical sites are discovered outside of the AS area, the standards and guidelines described [in the Draft EIR for the Los Osos Community Plan] shall apply.

- **Siting of Public Amenities and New Development.** New residential and commercial development shall be sited to avoid archaeological and historical resources to the greatest extent feasible. Avoidance means that ground disturbance for new development does not overlap the boundaries of identified archaeological and historical sites. In circumstances where complete avoidance is not feasible, applicants shall demonstrate that construction methods will not create direct or indirect impacts on archaeological remains.

Recreational sites such as public trails and trail corridors, parks, and related developments also shall be sited and designed to avoid or minimize impacts to archaeological or historical resources. Trails should follow existing road and trail alignments and use existing bridges to the greatest extent feasible. Where this is not possible, prior to final trail alignment, proposed trail routes shall be surveyed for archaeological and historical sites and re-routed where necessary to avoid sensitive resources. Trailhead parking shall be sited and designed to avoid archaeological and historical sites.

Careful selection and planning of coastal access points must be a priority since they are all within the zone of highest archaeological sensitivity. These shall be sited and designed to avoid or minimize impacts to archaeological or historical resources to the greatest extent feasible.

- **Previously Evaluated Resources.** As discussed above, a small number of archaeological sites in the Plan area have been evaluated formally for significance, and others may be evaluated in the future pursuant to these Guidelines and Standards. If archaeological and historical surveys identify previously evaluated sites within a proposed development area, Project applicants shall consult with the County and the Tribes to identify methods to avoid impacts to the resource. Applicants shall demonstrate that methods proposed for construction can successfully avoid impacts. If complete avoidance is not feasible, a Registered Professional Archaeologist shall assess the integrity of remains within the specific project area and the nature of proposed development to determine whether significant impacts will occur as a result of development. Such assessment may require subsurface archaeological testing, which shall be carried out according to the standards and procedures in the following section.
- **Archaeological Testing and Impact Mitigation.** If previously unevaluated archaeological remains are identified and cannot be avoided through project redesign or otherwise preserved in place, or if previously evaluated sites must be sampled to assess integrity and potential impacts per the section above, the proponent shall fund a Phase 2 study to determine the significance of the

resource and the extent of the impacts prior to issuance of any permit for development. The following requirements shall apply:

- Phase 2 testing shall include mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of samples from within the site.
  - Cultural materials collected from the site shall be processed and analyzed in the laboratory according to standard archaeological procedures.
  - The age of the remains shall be determined using radiocarbon dating and other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards; any prior archaeological collections from the site shall be included in the comparative analysis.
  - The significance of the site and the extent of impacts shall be evaluated according to the criteria of the CRHR, and the cultural resource record shall be updated to reflect the results of the investigation; such results also shall be presented in a technical report following the standards of the California Office of Historic Preservation publication Archaeological Resource Management Reports: Recommended Content and Format (<http://ohp.parks.ca.gov/pages/1054/files/armr.pdf>).
  - Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated at the San Luis Obispo County Archaeological Society or another facility approved by the County.
  - All work shall be completed by a County-approved Registered Professional Archaeologist; a Chumash tribal representative shall monitor all excavation in Native American sites.
  - All fieldwork, analysis, report production, and curation shall be fully funded by the applicant.
  - For archaeological sites that are judged to be significant historical resources, the Phase 2 report shall offer mitigation recommendations as necessary and appropriate. All feasible mitigation recommendations shall be incorporated into any permit issued for development.
- **Archaeological Site Capping.** If complete avoidance of archaeological sites cannot be accomplished, a site may be buried under a layer of clean, culturally sterile, chemically neutral fill. Site capping is not a preferred alternative and should only be employed after the Applicant has demonstrated to the County that no other preservation options are feasible. In that case, fill shall be placed on the site beginning at the edge and working in toward the center, so that equipment used to deposit the fill drives across the site only on the fill material and not on the exposed cultural deposit. It is important to note here that capping may affect preservation in place but does not constitute avoidance of impacts to the site. To mitigate the residual impacts of capping, the following requirements shall apply:
- A data collection program shall be implemented prior to placement of the fill cap, including mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of samples from within the area to be filled as well as adjacent site areas for comparative purposes.
  - Cultural materials collected from the site shall be processed and analyzed in an archaeological laboratory according to standard procedures.
  - The age of the remains shall be determined using radiocarbon dating and other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards; any prior archaeological collections from the site shall be included in the comparative analysis.

- The significance of the site shall be evaluated according to the criteria of the CRHR [CEQA Guidelines Section 15064.5(a)(3)], and the cultural resource record shall be updated to reflect the results of the investigation; such results also shall be presented in a technical report following the standards of the California Office of Historic Preservation publication Archaeological Resource Management Reports: Recommended Content and Format (<http://ohp.parks.ca.gov/pages/1054/files/armr.pdf>).
  - Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated at the San Luis Obispo County Archaeological Society or another facility approved by the County.
  - All work shall be conducted by a County-approved Registered Professional Archaeologist; a Chumash tribal representative shall monitor all excavation in Native American sites.
  - All fieldwork, analysis, report production, and curation shall be fully funded by the applicant.
- **Historical Resource Evaluation.** Prior to issuance of permits for demolition or development, the County shall ensure that buildings or structures erected prior to 1970 on the subject parcel or any adjoining parcel are documented according to professional standards and their historical significance is evaluated. No permits shall be issued for any demolition, development, or other activity that would adversely affect the integrity of an officially designated Historic Landmark, historical buildings or structures eligible for the CRHR, or identified historical districts.
  - **Historical Resource Survey.** The County should work with the History Center of San Luis Obispo County, property owners, and other local stakeholders to conduct an inventory of historical resources within the Baywood Park neighborhood to document the historical significance of buildings and structures in the neighborhood, determine whether the core area qualifies as a historic district, define the boundaries of any such district, and determine which resources contribute to its significance. Such an inventory should be initiated within five years of adoption of the LOCP.
  - **Secretary of Interior' Standards and Guidelines.** Projects that that would adversely affect the integrity of an officially designated Historic Landmark, historical buildings or structures eligible for the CRHR, or identified historical district shall be designed to comply with the Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The applicant shall retain a qualified professional architectural historian to conduct design review and ensure compliance with the Standards and Guidelines.

### *Coastal Zone Land Use Ordinance*

The CZLUO Section 23.07.104 identifies Archaeologically Sensitive Area combining designations within the County coastal zone. These areas are defined as follows:

- Any parcel within a rural area which is identified on the rural parcel number list prepared by the California Archaeological Site Survey Office on file with the County Planning Department
- Any parcel within an urban or village area which is located within an archaeologically sensitive area as delineated by the official maps (Part II) of the Land Use Element
- Any other parcel containing a known archaeological site recorded by the California Archaeological Site Survey Office
- Section 23.05.104 of the CZLUO also outlines procedures and requirements to apply to development within archaeologically sensitive areas

**Table 20 San Luis Obispo County General Plan Conservation and Open Space Element Policies for Cultural Resources**

Policy Number	Policy Text
Policy CR 2.3	Preserve historic sites and buildings and recognize cultural and archaeological resources as “living resources” that are part of a continuing culture.
Policy CR 3.1	The County will provide for the identification, protection, enhancement, perpetuation, and use of features that reflect the County’s historical, architectural, Native American, archaeological, cultural, and aesthetic heritage.
Policy CR 3.2	The County supports and encourages historic preservation activities. County agencies should cooperate and coordinate their activities with preservation activities.
Policy CR 4.1	Discourage or avoid non-development activities that could damage or destroy Native American and archaeological sites, including off-road vehicle use on or adjacent to known sites. Prohibit unauthorized collection of artifacts.
Policy CR 4.2	Ensure protection of archaeological sites that are cultural significant to Native Americans, even if they have lost their scientific or archaeological integrity through previous disturbance. Protect sites that have religious or spiritual value, even if no artifacts are present. Protect sites that contain artifacts, which may have intrinsic value, even though their archaeological context has been disturbed.
Policy CR 4.3	The County supports the concept of cultural landscapes and the protection and preservation of archaeological or historical resources as open space or parkland on public or private lands.
Policy CR 4.4	Protect archaeological and culturally sensitive sites from the effects of development by avoiding disturbance where feasible. Avoid archaeological resources as the primary method of protection.
Policy CR 4.5	Protect paleontological resources from the effects of development by avoiding disturbance where feasible.
Policy CR 4.6	Protect archaeological resources near streams, springs, and water sources, rock outcrops and significant ridgetops, as these are indicators of the presence of cultural resources.
Source: County 2010	

### 4.3.2 Impact Analysis

#### a. Methodology and Significance Thresholds

Potential impacts to cultural resources were analyzed based on the review of local planning documents and processes, the project, and standard professional practice. Although the exact location of the Preserve System within the Plan Area is unknown, the Preserve System would for the most part occur in previously undisturbed areas within the Plan Area.

In addition, the County performed outreach efforts to the local Native American community, based on a contact list provided by the California Native American Heritage Commission. Letters were sent to five Native American contacts on October 2, 2014, providing information about the Habitat Plan process and requesting information about Native American sites within and adjacent to the Plan Area. The five individuals are also on the distribution list for this EIR.

The following thresholds are based on the County’s Initial Study checklist and Appendix G of the *CEQA Guidelines*. Impacts would be significant if the project would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

## **b. Project Impacts**

### **LOHCP Avoidance and Minimization Measures**

The LOHCP includes the following AMM related to cultural resources:

- **AMM C5:** Install temporary construction fencing to prevent disturbance outside of the designated footprint.

<b>Threshold:</b>	Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?
<b>Threshold:</b>	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
<b>Threshold:</b>	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

**IMPACT CR-1      GROUND DISTURBANCE FROM IMPLEMENTATION OF THE PROJECT WOULD HAVE THE POTENTIAL TO DISTURB HISTORICAL, ARCHAEOLOGICAL, AND/OR PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.**

Approval and implementation of the LOHCP and issuance of the ITP would allow the County to confer take authorization for covered activities, including private development, capital improvement projects, roadway and bikeway operations, and maintenance activities, as well as activities associated with restoration and management of the LOHCP Preserve System. Many of the covered activities would result in ground disturbance, and the construction of covered activities could disturb or damage cultural resources on or below the ground surface. While most of the Plan Area is underlain by Quaternary geologic units with low potential to disturb paleontological resources, portions of the Plan Area are underlain by the Monterey Formation, which has high paleontological sensitivity. The use of heavy equipment during construction activities could result in exposure, damage, and/or crushing of surface and buried artifacts or fossils. Larger ground-disturbing activities have a higher potential to disturb or damage cultural or paleontological resources, particularly in previously undisturbed or less disturbed areas.

For all covered activities, individual project proponents would be required to comply with applicable laws for protecting cultural resources. The County would require site-specific cultural resource surveys prior to construction of covered activities. In addition, AMM C5 would minimize ground disturbance, which would help protect cultural and paleontological resources by reducing the potential for disturbance and damage to such resources. Nevertheless, because ground-disturbing activities associated with covered activities would have the potential to disturb and damage historical, archaeological, and/or paleontological resources in the Plan Area, this would be a potentially significant impact.

## Mitigation Measures

Mitigation measures MM CR-1 through MM CR-3 would reduce potential effects to historical, archaeological, and paleontological resources from implementation of the LOHCP.

### *CR-1 Pre-Construction Cultural Resources Survey*

Prior to the implementation of covered activities associated with development of the Preserve System and which involve ground disturbance, the County and/or Implementing Entity shall contract with a County-qualified archaeologist to perform a Phase I cultural resources assessment. In the event that cultural resources are identified during the Phase I assessment, if the resource cannot be avoided, the implementing agency shall implement a Phase II subsurface testing program to determine the resource boundaries within the impact area, assess the integrity of the resource, and evaluate the site's significance through a study of its features and artifacts.

If the site is determined significant, the County and/or Implementing Entity may choose to cap the resource area using culturally sterile and chemically neutral fill material. A qualified archaeologist shall be retained to monitor the placement of fill upon the site. If a significant site would not be capped, the results and recommendations of the Phase II study shall determine the need for a Phase III data recovery program designed to record and remove significant prehistoric or archaeological cultural materials that could otherwise be tampered with or impacted by activities covered under the LOHCP. If the site is determined to be not significant, no capping or further archaeological investigation shall be required, though archaeological monitoring may still be required. The results and recommendations of the Phase II and/or Phase III studies shall determine the need for construction monitoring and/or project redesign to minimize resource effect.

### *CR-2 Archaeological Resource Construction Monitoring*

Prior to the commencement of construction activities for each project component undertaken as part of development or management of the LOHCP Preserve System, if areas within each project component are identified by a qualified professional as sensitive for cultural resources and archaeological monitoring of construction activities is recommended, the following procedures shall be followed:

- An orientation meeting shall be conducted by an archaeologist, general contractor, subcontractor, and construction workers associated with earth disturbing activities. The orientation meeting shall describe the potential of exposing archaeological resources, the types of cultural materials that may be encountered, and directions on the steps that shall be taken if such a find is encountered.
- A qualified archaeologist shall be present during all initial earth moving activities within the culturally sensitive areas.

### *CR-3 Paleontological Resource Construction Monitoring*

Any excavations within the Preserve System mapped with Monterey Formation at the surface, or where excavations expose below ground units of the Monterey Formation (bedrock shale below Holocene alluvium) shall be monitored on a full-time basis by a qualified paleontological monitor. If no fossils are observed during the first 50 percent of excavations, paleontological monitoring may be reduced to weekly spot-checking under the discretion of the qualified paleontologist.

If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt

construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data, and maps.

### **Significance After Mitigation**

Implementation of mitigation measures MM CR-1 through MM CR-3, as well as adherence to state and local regulations in the CZLUO pertaining to ground-disturbing activities in archaeologically and/or paleontologically sensitive areas, would reduce potential impacts to historical, archaeological, and paleontological resources such that they would be less than significant with mitigation incorporated.

<b>Threshold:</b> Would the project disturb any human remains, including those interred outside of formal cemeteries?
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**IMPACT CR-2        THE PROJECT WOULD HAVE THE POTENTIAL TO DISTURB HUMAN REMAINS. HOWEVER, IF HUMAN REMAINS ARE DISCOVERED, IMPLEMENTATION OF STATE AND LOCAL LAWS WOULD AVOID SIGNIFICANT IMPACTS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Human burials outside of formal cemeteries often occur in prehistoric archaeological contexts. Excavation during construction activities in the Plan Area would have the potential to disturb these resources, including Native American burials.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment under state law. The California Health and Safety Code (Sections 7050.5, 7051, and 7054) also has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

In addition, per Section 23.05.140 of the CZLUO, the existing Land Use Ordinance measure is considered adequate to address unanticipated discovery of cultural remains. The measure requires that in the event archaeological resources are unearthed or discovered during any construction activities, the following standards apply:

- Construction activities shall cease, and the Environmental Coordinator and Planning Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.
- In the event archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Planning Department and Environmental Coordinator so that proper disposition may be accomplished.

Implementation of existing regulations would ensure that the potential impact associated with disturbance of human remains from development carried out under the LOHCP, including activities that occur outside of formal cemeteries, would be less than significant.

### **c. Cumulative Impacts**

New development in the county is required to undergo a site-specific analysis of potential impacts to known and buried cultural and paleontological resources, as applicable. The analysis would provide site-specific recommendations for development to avoid or minimize, to the extent feasible, impacts to cultural and paleontological resources. New development associated with covered activities, including preservation, restoration, and management of habitat in the LOHCP Preserve System and installation and maintenance of new amenities in the LOHCP Preserve System, combined with county-wide growth occurring as a result of implementation of other adopted area plans would incrementally result in exposure of unknown (buried) cultural and paleontological resources in the region. New development would be subject to federal, state, and local laws, standards, and policies regarding cultural and paleontological resources. Because restrictions on development would be applied in the event that cultural and/or paleontological resources are discovered on a project site, it is anticipated that cumulative impacts to cultural and paleontological resources would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.



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## 4.4 Geology and Soils

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### 4.4.1 Setting

#### **a. Regional Geologic Conditions**

##### **Geologic Setting**

The Plan Area occurs on a broad coastal terrace that is deeply buried by ancient sand dunes. Topography is flat to gently sloping throughout much of the Plan Area, with steep terrain limited to the south where the ancient dunes abut the Irish Hills, which are a part of the Coast Range Mountains. Elevations range from just above mean sea level (AMSL) adjacent to the Morro Bay Estuary to 275 feet AMSL at the base of the Irish Hills (County 2019a).

The Plan Area is located in the Los Osos Valley and in the Coast Ranges geologic and geomorphic province. This province consists of north-northwest trending sedimentary, volcanic, and igneous rocks extending from the Transverse Ranges to the south into northern California. Rocks of the Coast Ranges province are predominantly of Jurassic and Cretaceous age. However, some pre-Jurassic, along with Paleocene-age to Recent rocks are present (County 2008).

The Los Osos Valley and adjacent Irish Hills are the dominant geomorphic features in the project vicinity. The Los Osos Valley formed in response to several tectonic processes that began prior to Pliocene time (more than 5 million years ago). Prior to the Pliocene, the bedrock strata in the Los Osos area was folded into an east-west trending syncline (U-shaped fold) that has subsequently been filled with up to 1,000 feet of sediment during the Pliocene and Pleistocene periods. Concurrent with that deposition was uplift along the east-west striking Los Osos fault that forms between Los Osos Basin and adjacent Irish Hills (County 2008).

##### **Soils**

The geology and climate have combined with other factors including slope, microclimate, and vegetation, to result in the development of seven classified and mapped soil types in the region (County 2019a). Soil types in the Plan Area are shown in Figure 9. The study area itself is predominantly underlain by Baywood fine sands, with other soil types making up less than 3 percent. The relatively coarse texture of the Baywood fine sands in the study area contrasts substantially with the mix of sandy, loam, and clay soils developed on a mix of parent material further inland.

Covering 3,550 acres (approximately 98 percent) of the Plan Area, Baywood fine sands are deep, somewhat excessively drained fine sands derived from Aeolian sand deposits (i.e., sand dunes). The surface layer is slightly acidic, with soils having medium acidic or strongly acidic character with increasing depth. In the Plan Area, this soil series occurs primarily on 9 to 15 percent slopes (3,225 acres or 89 percent). In the southwestern portion of the Plan Area, 256 acres (7 percent) are on 15 to 30 percent slopes. The remaining 69 acres (2 percent) in the northeast portion of the Plan Area are on slopes of 2 to 9 percent (County 2019a).

Baywood fine sands vary in their degree of development, which increases with the age of the ancient dunes from which they are derived. Soils on the older and middle-aged dunes farther inland and at higher elevations are more developed than soils closer to the coast (County 2019a). Soil formation processes have led to a gradient of soil development. These processes include

accumulation of organic matter, clay synthesis, clay migration to lower profile position, and iron mineral transformation (County 2019a). Generally speaking, soil development results in greater organic matter and smaller soil particles (i.e., finer-texture). These factors increase soil water-holding capacity and nutrient availability. These properties have important implications for plant growth and thus influence the vegetation and other habitat conditions in the study area (LOHCP Section 3.1.5 for further detail).

The soil types located on the perimeter of the Plan Area feature characteristics that reflect their occurrence in or near the wetlands and along Los Osos Creek, as well as the different parent material (e.g., sandstone and siltstone) found adjacent to the ancient dunes. When compared with the Baywood fine sands, these soils have finer texture and are more developed. These other various soil types (making up the remaining 2 percent) and their location in the Plan Area are listed below:

- **Santa Lucia shaly clay loam** occurs on 44 acres (1.2 percent) of the Plan Area on a steep (30 to 75 percent) slope in the headwaters of Los Osos Creek.
- **Concepcion fine sandy loam** and **Corralitos loamy sand** occur on 12 acres (0.3 percent) and 2 acres (less than 0.1 percent), respectively, on the eastern portion of the Plan Area where they support coast live oak woodland.
- **Salinas silty clay loam** occurs on 12 acres (0.3 percent) along Los Osos Creek in the southeastern portion of the Plan Area.
- **Marimel silty clay loam** occurs on 7 acres (0.2 percent) in the eastern portion of the Plan Area along Los Osos Creek.
- **Dunes** occur on 3.2 acres (0.1 percent) in the western portion of the Plan Area.
- **Aquolls saline soils** cover 0.9 acre (less than 0.1 percent) of the Plan Area and primarily support wetlands located in the northern portion of the Plan Area.

## **Faulting**

The majority of the faults in the Coast Ranges province and the Sierra de Salinas belt generally trend north-northwest. The California Geological Survey considers major faulting in the vicinity of the Plan Area to include the Los Osos Fault, San Simeon Fault, and San Andreas Fault (County 2008).

## **Seismic Hazards**

The county is located in a geologically complex and seismically active region. Seismic, or earthquake-related, hazards have the potential to result in substantial public safety risks and widespread property damage (County 2014). Two of the direct effects of an earthquake include the rupture of the ground surface along the trend or location of a fault, and ground shaking resulting from fault movement. Other geologic hazards that may occur in response to an earthquake include liquefaction, seismic settlement, landslide, tsunami, and seiche. Each of these hazards is described below.

### *Fault Rupture*

Fault rupture refers to displacement of the ground surface along a fault trace. Rupture of the ground surface along a fault trace typically occurs during earthquakes of approximately magnitude 5 or greater. Fault rupture can endanger life and property if structures or lifeline facilities are constructed on or cross over a fault. Fault rupture tends to occur along or in a zone of linear traces of previous ruptures that define the fault zone, and as sympathetic movement on adjacent or intersecting faults. The three active faults in the county are currently zoned under the State of



Figure 9 Soils in the Plan Area



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Additional data provided by the County of San Luis Obispo, 2019, and Jodi McGraw Consulting, 2014.

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California Alquist-Priolo Fault Hazards Act (described further below): San Andreas, Hosgri-San Simeon, and Los Osos. At least 17 other faults considered potentially active or with uncertain fault activity are located in the county (County 2014).

### *Groundshaking*

As described in above, there are numerous faults potentially affecting the County. An earthquake of sufficient size along any of these faults could induce seismic groundshaking in the county and, depending on the size and location of the earthquake, in in the Plan Area.

### *Slope Instability and Landslides*

Landslides and slope instability can occur as a result of wet weather, weak soils, improper grading, improper drainage, steep slopes, adverse geologic structure, earthquakes, or a combination of these factors. Slope instability can occur in the form of creep, slumps, large progressive translation or rotational failures, rockfall, debris flows, or erosion.

Landslides can result in damage to property and cause buildings to become unsafe either due to distress or collapse during sudden or gradual slope movement. Structures constructed in steep terrain, possibly on stable ground, may also experience landslide hazards if they are sited in the path of potential mud flows or rockfall hazards. Several small areas in the southern portion of the Plan Area have moderate landslide potential (County 2014).

### *Liquefaction and Seismic Settlement*

Liquefaction is a temporary but substantial loss of shear strength in water-saturated sediment (such as granular solids, including sand, silt, or gravel), usually occurring during or after a major earthquake. In cohesionless, granular materials with low relative density (loose to medium dense sands, for example) the vibration that occurs as a result of an earthquake can disturb the particle framework, leading to increased compaction of the material and reduction of pore space between framework grains. If the sediment is saturated, water occupying the pore spaces resists this compaction and exerts pore pressure that reduces the contact stress between the sediment grains. With continued shaking, transfer of intergranular stress to pore water can generate pore pressures great enough to cause the sediment to lose its strength and change from a solid state to a liquefied state. This mechanical transformation, termed liquefaction, can cause various kinds of ground failure at or near the ground surface. This process typically occurs at depths less than 50 feet below the ground surface. Liquefaction can occur at deeper intervals, given the right conditions. However, ground manifestations have been found to be relatively minor.

Seismic settlement is the reduction of volume in a saturated or unsaturated soil mass due to groundshaking during a seismic event. Seismic settlement may occur simultaneously or independent of liquefaction.

As indicated in the *Safety Element Technical Background Report* (County 2014), areas most likely to be vulnerable to liquefaction and seismic settlement are underlain by younger alluvium where groundwater and granular sediments are present. Areas potentially underlain by liquefiable alluvium are low lying lands adjacent to rivers, creeks, beaches, and estuaries. The majority of the Plan Area is located in an area identified as having high risk for liquefaction and seismic settlement according to the *General Plan Safety Element* (County 2014).

## **Coastal Bluff Erosion**

Coastal bluff erosion occurs during large storms. Waves erode the coastline at varying rates, depending upon the geology. Coastal bluffs on the marine terraces are the most likely to result in hazards. Homes and other structures built near the edge would be threatened by bluff retreat. From Morro Rock extending south into Montaña de Oro State Park, large sand dunes protect the community of Los Osos from potential wave hazards. Coastal development in the area from Montaña de Oro State Park through Port San Luis is unlikely due to the current land uses. Erosion rates for shorelines of geology similar to this area range from approximately 4 to 6 inches per year (County 2014).

## **Mineral Resources**

There are a wide variety of mineral resources found in the County, although only a few minerals are presently being extracted commercially. Mining has played an important role in the county's history, including a brief gold rush at Pozo in the 1870s and the later discoveries of mercury in the Santa Lucia Range. In recent years, the mineral products of the county have included petroleum, natural gas, mercury, gypsum, sand and gravel, construction stone, and clay. The Plan Area does not include any of the formally recognized areas potentially available for resource extraction, as shown on the Estero Planning Area Rural Combining Designation Map (County 2017b).

### **b. Regulatory Setting**

#### **State**

##### *California Building Code*

The California Building Code provides standards for building construction, including design guidelines and specifications to meet earthquake standards.

##### *Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act was passed into law in 1971 following the destructive San Fernando earthquake. The Alquist-Priolo Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the Alquist-Priolo Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep.

#### **Local**

##### *County General Plan Safety Element*

Policies and standards in the Safety Element and applicable to the project are listed below.

- **Policy S-18.** Locate new development away from active and potentially active faults to reduce damage from fault rupture. Fault studies may need to include mapping and exploration beyond project limits to provide a relatively accurate assessment of a fault's activity. The County will enforce applicable regulations of the Alquist-Priolo Earthquake Fault Zoning Act pertaining to fault zones to avoid development on active faults.
- **Policy S-19.** The County will enforce applicable building codes relating to the seismic design of structures to reduce the potential for loss of life and reduce the amount of property damage.

- **Policy S-20.** The County will require design professionals to evaluate the potential for liquefaction or seismic settlement to impact structures in accordance with the currently adopted Uniform Building Code.
- **Policy S-21.** The County acknowledges that areas of known landslide activity are generally not suitable for residential development. The County will avoid development in areas of known slope instability or high landslide risk when possible, and continue to encourage developments on sloping ground use design and construction techniques appropriate for those areas.
- **Standard S-56.** For developments in areas of known slope instability, landslides, or slopes steeper than 20 percent, the stability of slopes shall be addressed by registered professionals practicing in their respective fields of expertise. For subdivisions, such studies should be performed prior to delineating lot lines and building envelopes.
- **Standard S-57.** New development will not be permitted in areas of known landslide activity unless development plans indicate that the hazard can be reduced to a less than significant level prior to beginning development.
- **Standard S-58.** Expansion will not be permitted to existing structures or developments in areas of known landslide activity except when it will reduce the potential for loss of life and property.
- **Standard S-59.** Development proposals will be required to mitigate the impacts that their projects contribute to landslides and slope instability hazards on neighboring property, and appurtenant structures, utilities, and roads; such as emergency ingress and egress to the property, and loss of water, power or other lifeline facilities.
- **Policy S-23.** Development shall not be permitted near the top of eroding coastal bluffs.

#### *County General Plan Conservation and Open Space Element*

The County's General Plan Conservation and Open Space Element (County 2010) established the Energy and Extractive Area (EX) combining designation to identify where:

- 1) Minerals or petroleum extraction occurs or is proposed to occur
- 2) The state geologist has designated a mineral resource area of statewide or regional significance

The purpose of this combining designation is to: protect significant resource extraction and energy production areas identified by the Land Use Element from encroachment by incompatible land uses that could hinder resource extraction or energy production operations, or land uses that would be adversely affected by extraction or energy production (County Land Use Ordinance Section 22.14.040). In addition to the EX designation, there is a companion EX1 designation for mineral extraction. The EX1 designation is used to identify areas of the County which the California Department of Conservation's Division of Mines and Geology has classified as containing or being highly likely to contain significant mineral deposits. The purpose of the EX1 is to protect existing resource extraction operations from encroachment by incompatible land uses that could hinder resource extraction. As stated above, there are no mineral resources located within the Plan Area.

#### *Los Osos Community Plan*

The 2015 Los Osos Community Plan and the 2019 Draft EIR for the Los Osos Community Plan do not contain any geology or soils policies applicable to the project.



## 4.4.2 Impact Analysis

### a. Methodology and Significance Thresholds

Potential geology and soils impacts were assessed on the basis of a review of data from the California Geological Survey, the local planning documents, and the LOHCP. Geologic hazard areas were overlain on maps of the Plan Area to determine potential effects.

The following thresholds are based on the County's Initial Study checklist and Appendix G of the *CEQA Guidelines*. Impacts would be significant if the project would result in any of the following:

- Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence, or other similar hazards;
- Be within a California Geological Survey "Alquist-Priolo Earthquake Fault Zone" or other known fault zones;
- Result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation, or fill;
- Include structures located on expansive soils;
- Be inconsistent with the goals and policies of the County's Safety Element relating to Geologic and Seismic Hazards; or
- Preclude the future extraction of valuable mineral resources.

Erosional effects and sedimentation in and around water bodies are discussed in the hydrology and water quality analysis (Section 4.7, *Hydrology and Water Quality*); therefore, the third threshold is not addressed in this section.

### b. Project Impacts

#### LOHCP Avoidance and Minimization Measures

The LOHCP includes the following AMMs related to geology and soils:

1. **AMM C1.** Minimize loss and degradation of the natural communities of the Baywood fine sand, including coastal sage scrub, central maritime chaparral, and oak woodlands by minimizing the area of permanent and temporary habitat disturbance and by siting projects in already developed or degraded areas.
2. **AMM C2.** Restore all areas of temporary disturbance such as staging areas or areas adjacent to the project footprint, to pre-project conditions or ecologically-superior conditions for the covered species. Avoid installing plants identified as invasive by the California Invasive Plant Council and include plants native to the Baywood Fine Sand communities from local sources (i.e., the LOHCP Plan Area).

<b>Threshold:</b>	Would the project result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards?
<b>Threshold:</b>	Would the project be within a California Geological Survey “Alquist-Priolo” Earthquake Fault Zone, or other known fault zones?

**IMPACT GEO-1      THE PLAN AREA IS SUBJECT TO VARIOUS GEOLOGICAL HAZARDS, INCLUDING SEISMIC GROUNDSHAKING AND LANDSLIDES, LIQUEFACTION, FAULT RUPTURE, AND EXPANSIVE SOILS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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### **Surface Fault Rupture, Ground Failure, and Seismic Groundshaking**

The Plan Area could be subject to surface fault rupture or seismic-induced landslides or other ground failure in the event of an earthquake, and all of the Plan Area could be subject to groundshaking as a result of seismic activity at nearby faults. Maximum ground accelerations could be sufficient to damage structures that would be built as covered activities under the project. In addition, the majority of the Plan Area is in an area that has been identified as having high risk for liquefaction and seismic settlement.

The County would require most new structures and facilities to have site-specific geotechnical studies performed by qualified personnel with appropriate expertise. Compliance with requirements for structure/facility design and geotechnical recommendations would ensure the risks to people and structures are low.

Under the project, the conservation program included in the LOHCP would be implemented. Therefore, preservation, restoration, and management of native habitat for the four covered species would occur, as well as installation and maintenance of new amenities (e.g., trails, interpretive facilities, parking lots, staging areas, picnic areas, and restrooms). Such amenities in the LOHCP Preserve System would potentially be subjected to surface fault rupture, ground failure, and seismic groundshaking, similar to the other covered activities under this alternative. Compliance with requirements for structure/facility design (including the IBC, CBC, Alquist-Priolo Act, and County General Plan Safety Element Policies S-18 and S-19) and geotechnical recommendations would ensure the risks to people and structures are low.

### **Slope Failure**

The landslide potential throughout the majority of the Plan Area is low. Several small areas in the southern portion of the Plan Area have moderate landslide potential; however, there are no areas of high or very high potential for landslides. As with seismic risks, adherence to relevant building codes and earthwork standards during design and construction of covered activities would reduce the potential for structural damage from slope failure and minimize the safety risks to people. Site-specific geotechnical studies would also provide recommendations on localized landslide risks and design criteria to minimize such risks.

Some lands within the LOHCP Preserve System may contain steep slopes or areas susceptible to landslides, but no large or dense development activities would occur in the LOHCP Preserve System. Covered activities in the LOHCP Preserve System include preservation, restoration, and management of native habitat, as well as installation and maintenance of new amenities (e.g., trails,

interpretive facilities, parking lots, staging areas, picnic areas, and restrooms). The safety risk to people and amenities in the LOHCP Preserve System is low with regard to landslides.

<b>Threshold:</b>	Would the project result in soil erosion, topographic changes, loss of topsoil, or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation, or fill?
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**IMPACT GEO-2 THE COVERED ACTIVITIES COULD POTENTIALLY RESULT IN SOIL EROSION, TOPOGRAPHIC CHANGES, LOSS OF TOPSOIL, OR UNSTABLE SOIL CONDITIONS FROM PROJECT-RELATED IMPROVEMENTS; HOWEVER, COVERED ACTIVITIES WOULD BE REQUIRED TO COMPLY WITH STATE AND LOCAL REGULATIONS TO MINIMIZE IMPACTS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Covered activities under the project that would involve vegetation removal, excavation, grading, fill placement, and other ground disturbance could accelerate soil erosion and result in the loss of topsoil. Covered activities in previously disturbed areas would have minimal effects on soil, but activities in undisturbed areas could accelerate erosion and result in a loss of topsoil. The overall extent of ground disturbance from covered activities under the project would likely be moderate. All development in the County is subject to the standards in the County's CZLUO, including the preparation of a site-specific Sedimentation and Erosion Control Plan, and compliance with NPDES General Stormwater Permits for construction. Adherence to these requirements would limit erosion from construction activities.

There would also be a risk of accelerated soil erosion and/or loss of topsoil associated with the covered activities in the LOHCP Preserve System. However, restoration activities would be implemented in the LOHCP Preserve System under the project; therefore, soil erosion would decrease in areas where vegetation is restored during implementation of the proposed project.

It is noted that erosion control itself is included as a covered activity under the LOHCP. Erosion control would be implemented, for example, after a controlled fire to reduce erosion that might result from implementation of the CWPP.

<b>Threshold:</b>	Would the project include structures located on expansive soils?
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**IMPACT GEO-3 EXPANSIVE SOIL UNITS MAY UNDERLIE PORTIONS OF THE PLAN AREA; HOWEVER, COMPLIANCE WITH COUNTY SITE-SPECIFIC GEOTECHNICAL STUDIES WOULD ADDRESS EXPANSIVE SOILS IF PRESENT AT THE SITES OF COVERED ACTIVITIES. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Because the location of covered activities is presently unknown, there is the potential for expansive soils to be present at individual project sites. Soils in the Plan Area with high clay content pose a risk to facilities and personnel from shrink-swell behavior. Proper fill selection, moisture control, and compaction during construction can prevent these soils from causing substantial damage. Compliance with County site-specific geotechnical studies would address expansive soils if present at the sites of covered activities.

Some lands within the LOHCP Preserve System may contain expansive soils. Covered activities in the LOHCP Preserve System include preservation, restoration, and management of high-quality habitat, as well as installation and maintenance of new amenities. The safety risk to people and amenities in the LOHCP Preserve System is low with regard to expansive soils. In addition, covered activities in the LOHCP Preserve System would comply with County requirements to prevent substantial damage associated with expansive soils.

<b>Threshold:</b> Would the project be inconsistent with the goals and policies of the County's Safety Element relating to the Geologic and Seismic Hazards?
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**IMPACT GEO-4 THE PROJECT WOULD BE CONSISTENT WITH THE GEOLOGIC AND SEISMIC HAZARDS GOALS AND POLICIES CONTAINED IN THE COUNTY'S GENERAL PLAN SAFETY ELEMENT. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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All covered activities would remain subject to the policies outlined in the County's General Plan Safety Element pertaining to Geologic and Seismic Hazards. Covered activities associated with implementation of the LOHCP conservation program would be consistent with these policies, since the LOHCP Preserve System would not involve substantial construction of structures and associated risk would be minimal. Future development accelerated by implementation of the LOHCP would be reviewed for consistency with applicable policies contained in the General Plan Safety Element.

Given that most new structures that would be constructed as part of covered activities would be required to conduct site-specific geotechnical studies and the fact that covered activities associated with implementation of the LOHCP Preserve System pose a low safety risk to people and amenities with respect to geological hazards, this impact would be less than significant.

<b>Threshold:</b> Would the project preclude the future extraction of valuable mineral resources?
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**IMPACT GEO-5 THE PROJECT WOULD NOT PRECLUDE THE FUTURE EXTRACTION OF VALUABLE MINERAL RESOURCES AS NO SUCH RESOURCES ARE IDENTIFIED ON OR ADJACENT TO THE PROJECT SITE. NO IMPACT WOULD OCCUR.**

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The Plan Area does not include any of the formally recognized areas potentially available for resource extraction, as shown on the Estero Planning Area Rural Combining Designation Map (County 2017b).

Based on information contained in Appendix G of the *State CEQA Guidelines* and the County's environmental checklist, the project would generate a potentially significant impact to mineral resources if it would 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 or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No valuable mineral resources have been formally recognized in the Plan Area according to the Estero Planning Area Rural Combining Designation Map (County 2017b). Therefore, there would be no impact to mineral resources.

### **c. Cumulative Impacts**

The geographic context for the analysis of impacts related to geology and soils on development is generally site-specific. New development in the County is required to undergo a site-specific analysis of the geologic and soil conditions, as applicable. The analysis would provide recommendations to prepare the site for development to avoid the hazards associated with surface fault rupture, ground failure, and seismic groundshaking; slope failure; exposure of structures to expansive soils; and accelerated soil erosion and loss of topsoil. New development associated with the covered activities, including preservation, restoration, and management of habitat in the LOHCP Preserve System and installation and maintenance of new amenities in the LOHCP Preserve System, combined with County-wide growth occurring as a result of implementation of other adopted area plans would incrementally expose additional people and property to geologic hazards inherent to

the region. New development would be subject to County Safety Element policies and goals, CZLUO, CBC, and IBC. Because restrictions on development would be applied in the event that geologic or soil conditions pose a risk to safety, it is anticipated that cumulative impacts related to geology and soils would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

## 4.5 Greenhouse Gas Emissions

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### 4.5.1 Setting

#### a. Climate Conditions

Climate change is the observed change in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record.<sup>13</sup>

The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC 2013), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (IPCC 2013).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principle contributors to human induced climate change include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO<sub>2</sub> and CH<sub>4</sub> are emitted in the greatest quantities from human activities. Emissions of CO<sub>2</sub> are largely by-products of fossil fuel combustion, whereas CH<sub>4</sub> results from off-gassing associated with agricultural practices and landfills. Observations of carbon dioxide concentrations, globally averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH<sub>4</sub> and N<sub>2</sub>O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

### Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigatonne) CO<sub>2</sub>e in 2010 (IPCC 2013). CO<sub>2</sub> emissions from fossil fuel combustion and industrial

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<sup>13</sup> Observations of the climate system are based on direct measurements and remote sensing from satellites and other platforms. Global-scale observations from the instrumental era began in the mid-19<sup>th</sup> century for temperature and other variables, with more comprehensive and diverse sets of observations available for the period 1950 onwards. Paleoclimate reconstructions extend some records back hundreds to millions of years. Together, they provide a comprehensive view of the variability and long-term changes in the atmosphere, the ocean, the cryosphere, and the land surface (IPCC 2013).

processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO<sub>2</sub> is the most abundant, accounting for 76 percent of total 2010 emissions. CH<sub>4</sub> emissions account for 16 percent of the 2010 total, while N<sub>2</sub>O and fluorinated gases account for 6 and 2 percent, respectively (IPCC 2013).

Total U.S. GHG emissions were 6,457 MMT CO<sub>2</sub>e in 2017 (U.S. EPA 2019). Total U.S. emissions have increased by 1.3 percent since 1990 (U.S. EPA 2019). In 2017, the transportation and industrial end-use sectors accounted for 37 percent and 27 percent of CO<sub>2</sub> emissions from fossil fuel combustion (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 19 percent and 17 percent of CO<sub>2</sub> emissions from fossil fuel combustion, respectively (U.S. EPA 2019).

Based upon the CARB California Greenhouse Gas Inventory for 2000-2017, California produced 424.1 MMT CO<sub>2</sub>e in 2017 (CARB 2019b). The major source of GHG in California is transportation, contributing 41 percent of the state's total GHG emissions. Industrial sources are the second-largest source of the state's GHG emissions, contributing 24 percent of the state's GHG emissions (CARB 2019b). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate.

The EnergyWise Plan 2016 Update estimated that GHG emissions in the County totaled approximately 1.78 MMT CO<sub>2</sub>e in 2013, with transportation sources accounting for approximately 79.9 percent of all emissions (County 2016).

## **Potential Effects of Climate Change**

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades on record, and the decade from 2000 through 2010 has been the warmest (IPCC 2013).

According to the California Office of Environmental Health Hazard Abatement's Indicators of Climate Change in California, impacts of climate change in the state include rising sea levels, increasingly variable precipitation patterns and snowpack, more days where energy is required to cool buildings, and more severe wildfires (CalEPA 2018).

### **b. Regulatory Setting**

#### **State**

The State of California considers GHG emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate the state's impact on climate change through the adoption of policies and legislation. The CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. Some of the major initiatives are summarized below.

### *Executive Order S-3-05*

In 2005, the Governor issued EO S-3-05, which identifies statewide GHG emission reduction targets to achieve long-term climate stabilization by meeting the following goals:

- Reduce GHG emissions to 1990 levels by 2020
- Reduce GHG emissions to 80 percent below 1990 levels by 2050

In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report. The 2006 Climate Action Team Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, landfill methane capture, and more.

### *Assembly Bill 32*

California's major initiative for reducing GHG emissions is outlined in AB 32, the California Global Warming Solutions Act of 2006, signed into law in 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; the same requirement as under S-3-05), and requires the CARB to prepare a Scoping Plan that outlines the main strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires the CARB to adopt regulations to require reporting and verification of state's largest industrial emitters.

The CARB approved the initial AB 32 Scoping Plan on December 11, 2008, which established a 2020 statewide GHG emission limit of 427 million metric tons (MMT) of carbon dioxide equivalents (CO<sub>2</sub>e). The Scoping Plan also included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

### *Senate Bill 97*

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. Specifically, Section 15183.5(b)(1)A-G of Title 14 of the California Code of Regulations was amended to state that a GHG Reduction Plan, or CAP, may be used for tiering and streamlining the analysis of GHG emissions in subsequent CEQA project evaluation provided that the CAP does the following:

- Quantifies GHG emissions both existing and projected over a specific period of time, resulting from activities within a defined geographical area
- Establishes a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable



- Identifies and analyzes the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area
- Specifies measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level
- Establishes a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels
- Be adopted in a public process following environmental review

#### *Senate Bill 375*

SB 375, signed in August 2008, directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a Sustainable Communities Strategy (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

#### *AB 32 Scoping Plan Update*

In May 2014, the CARB approved the first update to the AB 32 Scoping Plan. The first Scoping Plan update defines the CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 targets set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction targets defined in the original Scoping Plan. In 2016, SB 32 was passed by the California State Legislature. SB 32 codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels (see below for additional information). With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan. The CARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32. In November 2017, the CARB released California's 2017 Climate Change Scoping Plan (CARB 2017a). The CARB also released the 2017 Climate Change Scoping Plan Update, which evaluates how to align the state's longer-term GHG reduction strategies with other state policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2017b).

#### *Executive Order B-30-15*

EO B-30-15 established a statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030. Targets set beyond 2020 provide market certainty to foster investment and growth in industries like clean energy.

#### *Senate Bill 32*

SB 32 became effective on January 1, 2017 and requires the CARB to develop technologically feasible and cost effective regulations to achieve the targeted 40 percent GHG emission reduction set in EO B-30-15. The CARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan is expected to be completed and adopted by the CARB in 2017. The Proposed Scoping Plan calls for emissions reductions at the state level that meet or exceed the statewide GHG target, and notes that additional effort will be needed to maintain and continue GHG reductions to meet the mid- (2030) and long-term (2050) targets.

The proposed Scoping Plan recognizes the need to reach beyond statewide policy and engage local jurisdictions to develop plans to address local conditions and provide a “fair share” contribution towards the achievement of the state’s GHG reduction targets. To assist local planning efforts with developing strategies to meet these targets, the Proposed Scoping Plan includes annual community-wide goals of no more than six metric tons CO<sub>2</sub>e per capita by 2030 and no more than two metric tons CO<sub>2</sub>e per capita by 2050 (CARB 2017b); as stated in the Proposed Scoping Plan, these goals are appropriate for plan level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the state.

## **Local**

### *County Air Pollution Control District GHG Thresholds*

In March 2012, the SLOAPCD adopted CEQA thresholds for GHG emissions consistent with AB 32 in its CEQA Air Quality Handbook (2012 Handbook). The document identifies three potential thresholds that a lead agency may use to evaluate the level of significance of GHG emissions impacts. These are listed in Section 4.5.2.1, *Methodology and Significance Thresholds*, below.

### *County EnergyWise Plan*

In 2011, the County adopted the EnergyWise Plan, which was developed to be consistent with Section 15183.5 of the *State CEQA Guidelines*. The plan identifies policies and actions, which build upon the goals and policies of the Conservation and Open Space Element of the County General Plan to reduce local GHG emissions. It identifies how the County will achieve the GHG emissions reduction target of 15 percent below 2006 baseline levels by the year 2020, consistent with AB 32. The EnergyWise Plan 2016 Update provides information regarding the County’s progress toward that goal, stating that overall GHG emissions from both government operations and community-wide sources decreased by seven percent between 2006 and 2013 (County 2016a). The EnergyWise Plan also includes strategies to assist the County in a regional effort to implement land use and transportation measures to reduce regional GHG emissions from the on-road transportation sector by 2035. Measures applicable to the project are listed below.

- **GHG Mitigation Measure 18. Strategic Growth.** Continue to implement strategic growth strategies that direct the county’s future growth into existing communities and to provide complete services to meet local needs.
- **GHG Mitigation Measure 39. Sequestration.** Identify opportunities for terrestrial and aquatic sequestration in the county, including but not limited to County lands, reclaimed mining lands, agricultural lands, and other areas as appropriate.
- **Adaptation Measure 16. Sea Level Rise.** Protect areas that are directly upland from dunes, coastal marshes, and wetlands to account for shifts in habitat due to sea level rise.
- **Adaptation Measure 18. Wildfire Risks.** Reduce the risk of catastrophic wildfires through controlled burns, fuel reduction programs, improved fire access and defensible space, and the increased resiliency of buildings and structures in high fire hazard areas.
- **Adaptation Measure 19. Wildfire Risks.** Support prescribed burning programs and minimize any air quality impacts that may occur (also occurs as policy AQ 3.1.3 and BR 2.7 in the Conservation and Open Space Element of the County General Plan).

- **Adaptation Measure 23. Natural Systems.** Implement Strategic Growth Principles and direct most new growth into existing communities to protect natural ecosystems and wildlife corridors.

## 4.5.2 Impact Analysis

### a. Methodology and Significance Thresholds

Based on Appendix G of the *CEQA Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Any individual project does not generate sufficient GHG emissions to create a project-specific significant impact; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable such that it constitutes a significant cumulative impact. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (*CEQA Guidelines* Section 15355).

### SLOAPCD GHG Thresholds

The SLOAPCD 2012 Handbook provides three options for thresholds for determining the significance of, cumulatively considerable, GHG emissions. These include:

- **Qualified GHG Reductions Strategies.** A project would have a significant impact if it is not consistent with a qualified GHG reduction strategy that meets the requirements of the *CEQA Guidelines*. If a project is consistent with a qualified GHG reduction strategy, it would not have a significant impact.
- **Bright-Line Threshold.** A commercial or residential project would have a significant impact if it exceeds the "bright-line threshold" of 1,150 metric tons of CO<sub>2</sub>e/year; an industrial project would have a significant impact if it exceeds the "bright-line threshold" of 10,000 metric tons of CO<sub>2</sub>e/year.
- **"Efficiency" Threshold.** A project would have a significant impact if the efficiency threshold exceeds 4.9 metric tons of CO<sub>2</sub>e/service population/year. The service population is defined as the number of residents plus employees for a given project.

For the purposes of this programmatic analysis, the first threshold (*Qualified GHG Reduction Strategies*) would be the most appropriate threshold. This approach is considered by the Association of Environmental Professionals (2016) in its white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions. The County's EnergyWise Plan is a qualified GHG reduction plan; however, while the EnergyWise Plan includes reduction goals that are consistent with AB 32 and SB 32, it does not demonstrate that measures would be sufficient to achieve the SB 32 goal by 2030. In addition, the full implementation of the LOHCP would potentially occur over 25 years; therefore, the project's

horizon year would likely occur after 2040 and beyond the horizons analyzed in the EnergyWise Plan.<sup>14</sup> As such, tiering off a qualified GHG reduction plan is not a feasible approach for the project.

The project involves a programmatic HCP and is not a commercial, residential, or industrial project; therefore, the bright-line threshold is also not directly applicable. In addition, the project would not provide employment for a substantial number of employees; therefore, the efficiency threshold would not be appropriate to measure the Plan's impacts. However, if the project would result in a net reduction in GHG emissions in the Plan Area, then the project would be considered consistent with local and state GHG reduction goals and impacts would be considered less than significant.

For informational purposes, the impact analysis also discusses the project's consistency with the GHG reduction and climate change adaptation measures identified in the EnergyWise Plan. The impact analysis also discusses the project's consistency with the General Plan land use designations and population and employment projections, upon which the GHG emissions modeling and EnergyWise Plan is based.

## b. Project Impacts

<b>Threshold:</b>	Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
<b>Threshold:</b>	Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**IMPACT GHG-1 THE PROJECT WOULD NOT GENERATE GHG EMISSIONS IN EXCESS OF SLOAPCD THRESHOLDS SUCH THAT IT WOULD RESULT IN ADVERSE EFFECTS ON THE ENVIRONMENT. IMPLEMENTATION OF THE LOHCP PRESERVE SYSTEM WOULD RESULT IN SOME INITIAL GHG EMISSIONS, BUT SUCH EMISSIONS WOULD BE OFFSET BY THE LONG-TERM SEQUESTRATION POTENTIAL OF RESTORED AND PROTECTED HABITAT. IMPACTS WOULD BE CLASS IV, BENEFICIAL EFFECTS.**

Implementation of the conservation strategy under the project would not intensify existing land use designations or generate additional service population or additional vehicle miles traveled (VMT) beyond that which was accounted for in the GHG emissions inventory and EnergyWise Plan, which are based on existing land uses and buildout of the General Plan. As such, the project would be consistent with the growth projections (population and VMT) used in the County's GHG emissions inventory and EnergyWise Plan. The project would also help implement applicable GHG reduction and climate change adaptation measures in the EnergyWise Plan. For example, the implementation of the project would expand conservation areas (the LOHCP Preserve System) located around the perimeter of the study area, which would help protect natural ecosystems and wildlife corridors and assist in directing new growth into the urban reserve line.

The CWPP identifies areas that could be subject to a range of fuel reduction and fire hazard abatement treatments in and adjacent to Los Osos (CAL FIRE/San Luis Obispo County Fire 2013). Anticipated treatments include removal of downed, dead, and/or diseased vegetation; creation of shaded fuel breaks; and mowing of non-native grassland. Fire management under the project would result in immediate GHG emissions (carbon dioxide, methane, and nitrous oxide) as a result of potential treatments. To provide a general sense of the scale of GHG emissions that may be associated with treatment activities, the Draft Program EIR for the California Vegetation Treatment

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<sup>14</sup> The horizon year should be defined by the year in which the project is fully operational.

Program provides the rates of GHG emissions associated with treatment activity types (i.e., mechanical treatment, manual treatment, prescribed herbivory, herbicide application, and prescribed burning) in each fuel type (i.e., grass, shrub, tree), which are estimated on a per-acre basis (California Board of Forestry and Fire Protection 2019). Prescribed burning is the most GHG-intensive treatment activity on a per-acre basis because most of the carbon contained in fuels subject to prescribed burns is directly emitted into the air as either CO<sub>2</sub> or particulate matter, rather than staying in a sequestered state for an extended period after it is piled, chipped, masticated, killed with herbicide, digested by livestock, spread across the ground, and/or hauled off-site to be used as mulch, a soil amendment, or fuel at a biomass energy facility. For comparison, the prescribed burning of one acre would generate between an estimated 7.90 MT CO<sub>2</sub>e in grasslands and 63.15 MT CO<sub>2</sub>e in forested areas, whereas the other treatment methods would generate no more than 0.92 MT CO<sub>2</sub>e per acre (California Board of Forestry and Fire Protection 2019). Accordingly, the Draft Program EIR for the California Vegetation Treatment Program concludes that only prescribed burns would potentially result in a significant impact related to GHG emissions. According to the California Board of Forestry and Fire Protection, significant GHG emissions due to prescribed burns for the purpose of fire management would be reduced by implementing the following procedures:

- Reduce the total area burned by isolating and leaving large fuels (e.g., large logs, snags) unburned
- Reduce the total area burned through mosaic burning
- Burn when fuels have a higher fuel moisture content
- Reduce fuel loading by removing fuels before ignition; methods to remove fuels include mechanical treatments, manual treatments, prescribed herbivory, and biomass utilization
- Schedule burns before new fuels appear

The proposed conservation program, including establishment, restoration, management, and monitoring of the LOHCP Preserve System, includes elements designed to confer resiliency of the covered species to climate change impacts (refer to Sections 5.3 and 5.4 of the LOHCP). Specifically, the LOHCP Preserve System would protect and actively manage 386 acres of interconnected habitat areas, which would feature a mosaic of communities that reflect a variety of microhabitat conditions including variation in microclimate. By maintaining and promoting connectivity between protected habitat areas, the conservation program would enable species shifts in response to changing climatic conditions.

A major focus of the conservation program is enhancing and actively managing existing protected habitat in the LOHCP Preserve System to address the various factors that threaten persistence of the covered species populations, including exotic species, wildfires, and impacts of historic land uses (e.g., cultivation). Importantly, the LOHCP monitoring program would be designed to detect changes in covered species populations and habitats that may result directly or indirectly from climate change (refer to Section 5.4.2 of the LOHCP). Management strategies would be adjusted over time as part of an adaptive management strategy to promote resiliency of the covered species to climate change (refer to Section 5.5 of the LOHCP).

Protecting and restoring degraded habitat would increase GHG sequestration, thereby providing a net reduction to GHG emissions. Furthermore, active management of existing habitat can accelerate vegetation growth, improve ecosystem health and productivity, and avert catastrophic wildfires—all of which enhance the carbon storage potential of the landscape. The timing and location of restoration activities under the LOHCP are currently unknown. However, the LOHCP provides a

breakdown of habitat types likely to be included in the Preserve System using a scenario based on the habitat composition of the Morro Dunes Ecological Reserve (refer to Table 5-10 of the LOHCP). Table 21 shows the sequestration potential of different habitat types in the LOHCP Preserve System for which CO<sub>2</sub>e sequestration rates were available.

**Table 21 Sequestration Potential for Habitat in the LOHCP Preserve System**

Habitat <sup>1</sup>	Annual CO <sub>2</sub> e Accumulation (MT CO <sub>2</sub> /acre) <sup>2</sup>	Total Acreage Restored <sup>3</sup>	Additional Acreage Protected <sup>4</sup>	Total Annual CO <sub>2</sub> e Accumulation on Protected Land (MT CO <sub>2</sub> )
Coastal Sage Scrub <sup>5</sup>	14.3	29.3	211.1	3,438
Central Maritime Chaparral <sup>5</sup>	14.3	12.7	97.0	1,569
Woodland <sup>6</sup>	111	2.1	18.1	2,242
Grassland <sup>7</sup>	4.31	0.1	0.6	3
Riparian <sup>6</sup>	111	0.6	5.8	710
Other <sup>8</sup>	–	0.9	7.9	–
<b>Total</b>	<b>–</b>	<b>45.7</b>	<b>340.5</b>	<b>7,962</b>

<sup>1</sup> Habitats as presented in LOHCP Table 5-10.

<sup>2</sup> Annual CO<sub>2</sub>e accumulation rates obtained from the California Air Pollution Control Officers Association and based on land uses defined by the 2006 IPCC National Greenhouse Gas Inventory.

<sup>3</sup> Includes acreage on currently protected lands and lands to be protected under the LOHCP.

<sup>4</sup> Acreage managed as part of the Preserve System that would not undergo restoration.

<sup>5</sup> Uses CO<sub>2</sub>e accumulation rate for forestland (scrub) habitat.

<sup>6</sup> Uses CO<sub>2</sub>e accumulation rate for forestland (trees) habitat.

<sup>7</sup> Uses CO<sub>2</sub>e accumulation rate for grassland habitat.

<sup>8</sup> No CO<sub>2</sub>e accumulation rate applicable/readily available.

Sources: Table 5-10 of the LOHCP; California Air Pollution Control Officers Association (2010).

Based on the annual CO<sub>2</sub>e sequestration described in Table 21, restored and protected land in the LOHCP Preserve System has the potential to sequester up to 7,962 MT CO<sub>2</sub>e annually. This number does not account for potential carbon storage associated with restoration of 8.8 acres of “Other” lands since annual CO<sub>2</sub>e accumulation rates could not be defined for such habitat types. While construction activities associated with habitat restoration have the potential to emit GHGs, emissions associated with implementation of the conservation strategy would be minor given the limited acreage that may require use of heavy construction equipment during restoration activities and the short-term nature of this activity. GHG emissions generated by restoration activities would be offset by the long-term annual GHG sequestration of the areas restored and protected under the LOHCP. Therefore, implementation of the LOHCP would provide a net reduction to GHG emissions within the Plan Area. This impact would overall be beneficial.

### c. Cumulative Impacts

New development in the county is required to undergo a project-specific analysis of GHG emission effects, as applicable. The analysis would provide recommendations to reduce GHG emissions to below applicable thresholds during construction and operation of individual projects. New development associated with the covered activities combined with county-wide growth occurring as a result of implementation of other adopted area plans would incrementally result in increased GHG

emissions. However, restoration and protection of habitat associated with implementation of the LOHCP Preserve System would provide carbon sequestration benefits, resulting in a net reduction of GHG emissions in the Plan Area relative to development under the EAP without the project. New development expedited by the LOHCP would be subject to SLOAPCD standards and regulations. Because restrictions on development would be applied in the event that anticipated GHG emissions would exceed local standards, it is anticipated that cumulative impacts associated with GHG emissions would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

## 4.6 Hazards and Hazardous Materials

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### 4.6.1 Setting

#### **a. Existing Potential Hazards**

##### **Hazardous Materials**

Hazardous materials include chemicals and other substances defined as hazardous by federal and state laws and regulations. In general, these materials include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may have harmful effects on public health or the environment during their use or when released to the environment.

Hazardous materials also include waste chemicals and spilled materials.

The Plan Area does not contain any sites that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. However, the Baywood Park Training Area, a Formerly Used Defense Site, is a California Department of Toxic Substances Control (DTSC) clean-up site occupying approximately 9,296 acres of nearby portions of Montaña de Oro State Park, Morro Bay Sand Spit, and surrounding public and private property. Contamination identified at the site includes munitions and explosives of concern (MEC). Several ordnance and explosives investigations and removals have occurred on the site, with the most recent being a 1994-1995 ordnance clearance on 166 acres of Montaña de Oro State Park. Additionally, the U.S. Army Corps of Engineers issues five-year reviews of the site and protective measures currently in place. The most recent five-year review was drafted in May 2018 and published in May 2019. The report included recommendations such as closure of unauthorized trails in Montaña de Oro State Park and improved education, outreach, and training for employees and community members (U.S. Army Corps of Engineers 2018; DTSC 2019).

##### **Wildfire**

Los Osos has been identified by the State of California as a community at risk from potential wildfire. Additionally, Los Osos has been identified as a Priority Community by the CAL FIRE Fire and Resource Assessment Program (FRAP). Priority Communities are communities in which pre-fire management activities, including hazardous fuel reduction and public education, should be focused. Pre-fire planning efforts by CAL FIRE have identified Los Osos as a priority wildland-urban interface area that would benefit from fuel reduction or other pre-fire planning efforts intended to minimize ignitions and promote public and firefighter safety.

#### **b. Regulatory Setting**

##### **Hazardous Materials**

Various federal, state, and local legislation and regulations set forth criteria and specific requirements for the benefit of public health and safety from hazardous materials, including (but not limited to): the Hazardous Materials Transportation Act; Resource Conservation and Recovery Act; California Hazardous Substance Control Law; California Emergency Services Act; Hazardous Materials Management Act; California Health and Safety Code Section 25550; County Hazardous Materials Emergency Response Plan; and County General Plan Safety Element. Legislation and



regulations at the federal, state, and local levels that may be relevant to the project are described below.

### *Federal*

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly known as the Superfund Act) of 1980 (Public Law 86-510) is intended to protect the public and the environment from effects of prior hazardous waste disposal and new hazardous material spills. CERCLA provides funds to compensate victims of hazardous waste pollution and to decontaminate the environment. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

The United States Environmental Protection Agency (U.S. EPA) administers the Resource Conservation and Recovery Act (RCRA) of 1976 (Public Law 94-580), and the Hazardous and Solid Waste Amendments of 1984. These pieces of legislation provide the principle regulation for the storage, transportation, and disposal of both solid and hazardous waste, and exercise operational control over those who generate, treat, store, transport, or dispose of hazardous waste.

Other applicable federal laws and regulations include:

- The CAA of 1990 (42 U.S.C. 7401 et seq. as amended), which established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials. The CAA section on risk management plans (42 U.S.C. §112(r)), requires states to implement a comprehensive system informing local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of both SARA Title III and the CAA are reflected in the California Health and Safety Code Section 25531, et seq.
- 49 CFR 172.800 contains the U.S. Department of Transportation (DOT) requirement that suppliers of hazardous materials prepare and implement security plans. 49 CFR Part 1572, Subparts A and B require suppliers of hazardous materials to ensure that all their hazardous materials drivers are in compliance with personnel background security checks. 6 CFR Part 27 is a regulation of the U.S. Department of Homeland Security that requires facilities that use or store certain hazardous materials to submit information to the department so that a vulnerability assessment can be conducted to determine what certain specified security measures shall be implemented.
- The CWA (40 CFR 112) aims to prevent the discharge or threat of discharge of oil into navigable waters or adjoining shorelines. Requires a written spill prevention, control, and countermeasures plan to be prepared for facilities that store oil that could leak into navigable waters.

### *State*

Various California laws and regulations also govern hazardous materials and hazardous waste management. State hazardous waste regulations are primarily contained in the California Code of Regulations, Title 22, Division 4, Environmental Health. The Hazardous Waste Control Law lists hundreds of hazardous and potentially hazardous chemicals. This code also establishes criteria for identifying hazardous materials, regulates the storage, transport, and disposal of hazardous wastes and identifies hazardous wastes that cannot be disposed of on land.

DTSC is the lead agency in California that is responsible for hazardous waste management. DTSC enforces the state's hazardous waste control laws, issues permits to hazardous waste facilities, and provides mitigation for contaminated hazardous waste sites.

Other applicable California laws and regulations include:

- The California Safe Drinking Water and Toxic Enforcement Act (Proposition 65), was enacted with the goal of protecting drinking water sources from toxic substances that cause cancer and birth defects and to reduce or eliminate exposures to those chemicals generally, for example in consumer products, by requiring warnings in advance of those exposures.
- Title 8, California Code of Regulations, Section 5189 requires facility owners to develop and implement effective safety management plans that ensure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the Risk Management Plan process.

### *Local Regulations*

Most hazardous materials regulations originate with the federal and state governments. Regulation by the County within the study area is generally limited to enforcing policies and procedures set forth in their respective general plans, zoning and health codes, and other development controls, each of which is intended to ensure that the public and the environment are shielded from dangerous material and activities.

Where certain land uses require the use of hazardous materials, development standards for those land uses ensure that hazardous materials are handled in the safest manner possible. Specifically, the Uniform Fire Code and the Uniform Building Code are intended to protect humans and the environment from being harmed by exposure to hazardous materials. The County General Plan Safety Element also includes policies and standard intended to decrease the risk of hazards associated with exposure of humans and/or the environment to hazardous materials. Additionally, the County Division of Environmental Health Services regulates the use of hazardous materials by requiring new and modified businesses to complete a Hazardous Materials Business Plan and Chemical Inventory Forms prior to final plan/permit approval as well as regulating enforcement responsibility for the implementation of Title 23, Division 3, Chapter 16 and 18 of the California Code of Regulations, as it relates to hazardous material storage and petroleum underground storage tank cleanup in the area. Furthermore, Chapter 22.10 of the County Land Use Ordinance, General Property Development and Operating Standards, regulates the storage of explosives and flammable and combustible liquids in the County.

### **Wildfire**

There are various federal, state, and local plans, policies, and standards in place that are intended to protect the public from the risk of municipal fires and wildfires. Those relevant to the Plan Area are discussed below.

### *Healthy Forests Restoration Act of 2003*

The Healthy Forests Restoration Act (HFRA) provides incentives for communities to engage in comprehensive forest planning and prioritization. This legislation includes statutory incentives for the United States Forest Service and the BLM to consider the priorities of local communities as they develop and implement forest management and hazardous fuel reduction plans. The HFRA

emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects and prioritizes treatment areas identified by the communities themselves in a CWPP.

*CAL FIRE/San Luis Obispo County Fire - Draft Community Wildfire Protection Plan*

A CWPP serves as a mechanism for community input and identification of areas presenting high fire hazard risk as well as identification of fire hazards potential projects intended to mitigate such risk. A CWPP must be collaboratively developed with input from interested parties, federal, state, and local agencies managing land within the County, as well as local government representatives. The CWPP for San Luis Obispo County is currently under development and, when complete, would address fire protection planning efforts occurring in the County to minimize wildfire risk to communities, assets, firefighters, and the public. The CWPP presents the County's physical and social characteristics, identifies and evaluates landscape-scale fire hazard variables, utilizes Priority Landscape data sets for evaluating wildfire risk, identifies measures for reducing structural ignitability, and identifies potential fuel reduction projects and techniques for minimizing wildfire risk.

*Public Resources Code*

- Section 4291 and LOCSD Fire Code Title 4. Both the state and local fire codes require property owners and/or occupants to maintain 100 feet of defensible space from each side and from the front and rear of homes and buildings, but not beyond the property line.
- Section 4126 and 4127. These sections of the PRC states the following:

**PRC 4126.** The California State Board of Forestry and Fire Protection shall include within State Responsibility Areas all of the following:

- a. Lands covered wholly or in part by forests or by trees producing or capable of producing forest products.
- b. Lands covered wholly or in part by timber, brush, undergrowth, or grass, whether of commercial value or not, which protect the soil from excessive erosion, retard runoff of water or accelerate water percolation, if such lands are sources of water which is available for irrigation or for domestic or industrial use.
- c. Lands in areas which are principally used or useful for range or forage purposes, which are contiguous to the lands described in subdivisions (a) and (b).

**PRC 4127.** The board shall not include within State Responsibility Areas any of the following:

- a. Lands owned or controlled by the federal government or any agency of the federal government.
- b. Lands within the exterior boundaries of any city, except a city and county with a population of less than 25,000 if, at the time the city and county government is established, the county contains no municipal corporations.
- c. Any other lands within the State that do not come within any of the classes which are described in Section 4126.

*County General Plan Safety Element*

Goal S-4 of the Safety Element calls for a reduction in the threat to life, structures and the environment caused by fire. Policies and standards intended to achieve this goal and protect the public from fire and wildfire, as applicable to the project, are listed in Table 22.

**Table 22 Safety Element Policies/Implementation Measures: Fire Risk Reduction**

Policy	Implementation Measures
<p><b>Policy S-13 – Pre-Fire Management.</b> New development should be carefully located, with special attention given to fuel management in higher fire risk areas. Large, undeveloped areas should be preserved so they can be fuel-managed. New development in fire hazard areas should be configured to minimize the potential for added danger.</p>	<ul style="list-style-type: none"> <li>▪ <b>Standard S-29.</b> Identify high value and high risk areas, including urban/wildland interface areas, and develop and implement mitigation efforts to reduce the threat of fire.</li> <li>▪ <b>Standard S-30.</b> Site homes near one another to the extent practicable to reduce the need for multiple response teams during fires. Require that the subdivision design be reviewed by fire safety personnel. Require the clustering of lots or buildings in high and very high fire hazard areas as appropriate. New developments in high and very high fire hazard areas should maintain open areas large enough to allow for control burns and other vegetation management programs.</li> <li>▪ <b>Program S-31.</b> Encourage applicants for subdivisions in fire hazard areas to cluster development to allow for a wild fire protection zone. Consider the voluntary use of transfer of development credits to bring development out of high and very high fire hazard areas.</li> <li>▪ <b>Standard S-32.</b> Require fire resistant material to be used for building construction in fire hazard areas.</li> <li>▪ <b>Program S-33.</b> Work with homeowners to improve fire safety and defensibility on developed parcels. Defensible space should be required around all structures in high and very high fire hazard areas.</li> </ul>
<p><b>Policy S-14 – Facilities, Equipment and Personnel.</b> Ensure that adequate facilities, equipment and personnel are available to meet the demands of fire fighting in San Luis Obispo County based on the level of service set forth in the fire agency's master plan.</p>	<ul style="list-style-type: none"> <li>▪ <b>Program S-34.</b> The CDF/County Fire Department and County Planning shall evaluate population and settlement patterns, incident trends and values at risk every five years to determine where new fire stations and staff are needed, and where existing facilities need augmentation, so that the agency's master plan can be updated as needed.</li> <li>▪ <b>Program S-35.</b> Continue to plan for future equipment, communication systems, station and personnel requirements. The County Fire Department will be responsible for communicating its needs to the Board of Supervisors and the County Administrative office. The CDF/County Fire Department and other fire agencies will be responsible for fleet management, ensuring that future vehicle needs are identified; replacement schedules and funding mechanisms are established; maintenance and rotation schedules are developed and met.</li> <li>▪ <b>Program S-36.</b> Use information generated during the update of the various area plans of the County General Plan to improve fire suppression capabilities. The County Planning Department will coordinate with the CDF/County Fire Department and other fire agencies as new information is developed.</li> </ul>

Policy	Implementation Measures
<b>Policy S-15 – Readiness and Response.</b> The CDF/County Fire Department will maintain and improve its ability to respond and suppress fires throughout the County.	<ul style="list-style-type: none"> <li>▪ <b>Program S-37.</b> Each fire agency should prepare and work to achieve their response time goal. This response time will be based upon density of development, and the value at risk contrasted with an acceptable level of risk.</li> <li>▪ <b>Program S-38.</b> The CDF/County Fire Department will be responsible for training fire fighters to a level appropriate to their position and responsibilities, provide emergency medical care training, job-required specialized training, maintain and enhance training materials and instruction techniques, and provide educational incentives for all personnel.</li> <li>▪ <b>Program S-39.</b> Work to continually improve information resources about the location of fire hazard areas and the structural resources and other values at risk within them.</li> <li>▪ <b>Program S-40.</b> Maintain a fire-related GIS data base. This information will also be used to assist decision-makers with analyzing development proposals. Update the database when the pending re-evaluation of the fire hazard severity maps by CDF/County Fire Department becomes available.</li> </ul>
<b>Policy S-16 – Loss Prevention.</b> Improve structures and other values at risk to reduce the impact of fire. Regulations should be developed to improve the defensible area surrounding habitation.	<ul style="list-style-type: none"> <li>▪ <b>Program S-41.</b> Inform homeowners of the dangers and appropriate responses to fire and ways to prevent loss. Mail a bulletin to rural homeowners describing methods for fire protection. Explore whether this can be inserted with general mailings. Continue to promote the efforts of the Fire Safe Council.</li> <li>▪ <b>Program S-42.</b> Train firefighting personnel to educate property owners and the public.</li> <li>▪ <b>Standard S-43.</b> Require a “defensible space” around structures and values at risk. The area need not be cleared of all vegetation, but be able to provide fire fighters with enough room to defend structures and maneuver. Each situation will differ, so the permit granting authority will need flexibility in reviewing fire safety plans.</li> </ul>

CDF = California Department of Forestry and Fire Protection (CAL FIRE)

## 4.6.2 Impact Analysis

### a. Methodology and Significance Thresholds

The potential for presence of hazardous materials is analyzed herein based on historical use in the Plan Area and likely future uses under the project. Potential changes in risk from wildfire were estimated by comparing expected development activities with areas with natural land cover types (most of which are prone to wildfire risk). The analysis compares the expected LOHCP Preserve System area with the location of existing land uses as they relate to the area’s fire potential and the available level of fire service to the area.

The following criteria are based on Appendix G of the *CEQA Guidelines*. A significant impact related to hazards and hazardous materials would occur if the project would:

1. Create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. Create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
4. Be located on, or adjacent to, a site which is included on a list of hazardous material/waste sites compiled pursuant to Gov’t Code 65962.5 (“Cortese List”), and result in an adverse public health condition;

5. Impair implementation or physically interfere with an adopted emergency response or evacuation plan
6. If within the Airport Review designation, or near a private airstrip, result in a safety hazard for people residing or working in the project area;
7. Increase fire hazard risk or expose people or structures to high wildland fire hazard conditions;
8. Be within a “very high” fire hazard severity zone; and
9. Be within an area classified as a “state responsibility” area as defined by CAL FIRE.

There are no airports or private air strips located in the Plan Area. The nearest airport is San Luis Obispo County Regional Airport, located approximately 10 miles southeast of the Plan Area. Therefore, the project is not located within an Airport Review designation or near a private airstrip, and thresholds 5 and 6 are not addressed further in this EIR.

## **b. Project Impacts**

<b>Threshold:</b>	Would the project create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
<b>Threshold:</b>	Would the project create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
<b>Threshold:</b>	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

**IMPACT HAZ-1      CONSTRUCTION OF COVERED ACTIVITIES COULD POTENTIALLY ENCOUNTER UNKNOWN HAZARDOUS MATERIALS DURING GROUND DISTURBANCE. INDIVIDUAL PROJECTS WOULD BE REQUIRED TO UNDERGO PROJECT-SPECIFIC REVIEW TO DETERMINE POTENTIAL RISKS ASSOCIATED WITH KNOWN OR UNKNOWN EXISTING HAZARDOUS MATERIALS. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.**

No hazardous materials sites are known to be present in the Plan Area. The Plan Area contains one active cleanup site listed on the State Water Resources Control Board’s GeoTracker database, a Leaking Underground Storage Tank site, Rosie’s Exxon (T0607914299) at 995 Los Osos Valley Road (SWRCB 2015). The site is already developed and, therefore, would not be subject to covered activities associated with implementation of the LOHCP conservation program. As the location of other covered activities, such as expedited development under the LOHCP, is not yet known, it is not possible to know whether such activities would occur on or adjacent to an existing hazardous materials/waste site in the Plan Area. Other covered activities proposed in the Plan Area would undergo project-specific review to assess potential impacts with respect to existing hazardous materials/waste sites.

Ground disturbance could occur during covered activities associated with accelerated development under the ITP, including implementation of the LOHCP conservation program. If previously unidentified hazards or hazardous materials are encountered during ground-disturbing activities, soil, water, air, and/or vegetation could potentially be adversely affected and/or these activities may expose project construction workers to hazardous materials.

Covered activities associated with expedited residential, commercial, or public facilities development in the Plan Area would undergo the appropriate level of project-specific environmental review. Mitigation measures would be implemented, as necessary, to prevent accidental upset or release of hazardous materials, or if handling of hazardous materials or wastes within 0.25 mile of an existing or proposed school were proposed in conjunction with a covered activity. All covered activities would be subject to controls and regulations relating to the handling, use, storage, and disposal of hazardous materials.

The LOHCP recognizes the potential for contaminated soils and hazards to be encountered during habitat management and restoration activities and has included removal of debris and hazardous material, including soil remediation, closure of underground storage tanks, and removal of dumped materials, as covered activities. In addition, in the case of acquisition of fee title or conservation easements from owners of unprotected land, the LOHCP requires that prior to acquisition the IE shall determine if the property features hazardous materials and that, if present, these shall be excluded from the LOHCP Preserve System unless such incompatibilities can be resolved (refer to Section 6.2.2.1 of the LOHCP). For conservation easements, the LOHCP requires that a Phase I environmental assessment be conducted prior to acquisition, as the presence of known or potential hazardous materials could influence the IE's decision to acquire and ability to conduct effective management (refer to Section 6.2.2.2 of the LOHCP). These provisions for identification of hazardous materials, substances, or wastes, as well as the inclusion of remediation activities as covered activities, would reduce the potential for exposure of persons to hazardous materials during LOHCP Preserve System activities. Nevertheless, given the presence of existing contamination in the vicinity of the Plan Area, as well as the historical use of the nearby Montaña de Oro area for military training purposes, the LOHCP may result in an impact associated with hazardous materials.

Additionally, eradication of exotic plants through chemical means has the potential to create the unintended release of a hazardous material. Baywood Middle School is located adjacent to a PCA on the northwestern boundary of the Plan Area. The use of pesticides in this area has the potential to impact students and staff present at the school during application. Application of chemicals would be required to follow all local, state, and federal regulations to reduce the potential for creation of hazardous conditions and would be administered per manufacturer's specifications by a person certified for application. The placement of fuel tanks or other hazardous material storage units in the LOHCP Preserve System as part of the conservation strategy would also be required to follow all existing federal, state, and local regulations as implemented by the applicable local agency (e.g., County Environmental Health Services).

Materials that are classified as hazardous are expected to be used during implementation of the conservation program, particularly management of the LOHCP Preserve System. All hazardous materials would be stored, handled, and disposed of according to manufacturers' recommendations, and any spills would be cleaned up in accordance with existing regulations.

## **Mitigation Measures**

Mitigation measure MM HAZ-1 would reduce impacts associated with existing contamination in the vicinity of the Plan Area. MM HAZ-1 would be required for all conservation program activities associated with management of the LOHCP Preserve System.

### HAZ-1 Contingency Plan

Prior to construction or site restoration, a Contingency Plan shall be prepared to address actions that would be taken during construction in the event that unexpected ordnance and/or contaminated soil or groundwater is discovered. The Contingency Plan shall include health and safety considerations, handling and disposal of wastes, reporting requirements, and emergency procedures. The Contingency Plan shall include a requirement that if evidence of contaminated materials is encountered during construction, construction would cease immediately and applicable requirements of the Comprehensive Environmental Release Compensation and Liability Act and the California Code of Regulations Title 22 regarding the disposal of waste would be implemented.

### Significance After Mitigation

Implementation of mitigation measure MM HAZ-1 would reduce potential impacts associated with hazardous materials to a less than significant level.

<b>Threshold:</b>	Would the project be located on, or adjacent to, a site which is included on a list of hazardous material/waste sites compiled pursuant to Gov't Code 65962.5 ("Cortese List"), and result in an adverse public health condition?
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**IMPACT HAZ-2 NO SITES ON THE CORTESE LIST ARE LOCATED ON THE PLAN AREA. THEREFORE, NO RELATED IMPACTS WOULD OCCUR.**

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A search of the Plan Area on the State Water Resources Control Board's GeoTracker database did not identify any hazardous sites on the Cortese List. Therefore, no related impacts would occur.

<b>Threshold:</b>	Would the project impair implementation or physically interfere with an adopted emergency response or evacuation plan?
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**IMPACT HAZ-3 THE PROJECT WOULD NOT DIRECTLY CONTRIBUTE TO CONGESTION OF EVACUATION ROUTES. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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The Plan Area is located approximately six miles north of the Diablo Canyon nuclear power plant, owned and operated by Pacific Gas & Electric (PG&E). Areas surrounding the nuclear plant are divided into Protective Action Zones (PAZs) and covered by federal and state oversight, depending on their proximity to the plant. The Plan Area is located in PAZ-5, within the 10-nautical-mile safety zone and under the primary oversight of the Federal Emergency Management Agency (FEMA) (County 2019d). Primary evacuation routes in the Plan Area include South Bay Boulevard, Los Osos Valley Road, and Santa Ysabel Avenue.

Covered activities under the LOHCP, including expedited residential and commercial development in the Plan Area, would be subject to the designations and requirements of the EAP. Buildout under the EAP would result in congestion of area roadways, including South Bay Boulevard and Los Osos Valley Road. Congestion of these roadways would impair evacuation in the event of an emergency associated with the Diablo Canyon Power Plant during the evening peak hour. While the EAP FEIR notes that such an event would be unlikely, this impact was identified as significant and unavoidable.

Since certification of the EAP FEIR in 2003, the Diablo Canyon Power Plant has been slated for decommissioning. PG&E announced plans to close the plant under a legal agreement in 2016. In



January 2018, the California Public Utilities Commission approved a six-year plan to shut down plant operations, with Unit 1 closing by 2024 and Unit 2 closing in 2025 (Nikolewski 2018).

Buildout under the LOHCP would not occur all at once, but incrementally as covered activities are approved by the County. Projects would undergo the appropriate level of project-specific environmental review during the County approval process, with mitigation measures required to reduce potential traffic congestion impacts as necessary. Emergency plans and evacuation routes associated with operation of the Diablo Canyon Power Plant would only be applicable during the first part of the project's 25-year ITP permit term, after which the plant would be decommissioned. The project would not intensify development in the Plan Area beyond that envisioned by the EAP. Furthermore, implementation of the LOHCP conservation program would not result in a substantial congestion of evacuation routes or otherwise impair implementation of an emergency plan, and may reduce congestion by reducing the development potential of lands enrolled in the LOHCP that could otherwise be developed.

Therefore, because the project would not directly contribute to congestion of evacuation routes, project-specific restrictions and mitigation would be applied as necessary for covered activities undergoing County review, and the Diablo Canyon Power Plant would be decommissioned shortly into the LOHCP ITP permit term, this impact would be less than significant.

<b>Threshold:</b>	Would the project increase fire hazard risk or expose people or structures to high wildland fire hazard conditions?
<b>Threshold:</b>	Would the project be within a "very high" fire hazard severity zone?
<b>Threshold:</b>	Would the project be within an area classified as a "state responsibility" area as defined by CAL FIRE?

**IMPACT HAZ-4 THE PROJECT WOULD INCLUDE WILDFIRE MANAGEMENT AS A CONSERVATION STRATEGY BUT WOULD ALSO PRESERVE VEGETATED LAND THAT CAN ACT AS FUEL FOR WILDFIRE. THE PROJECT WOULD ALLOW COVERED ACTIVITIES TO OCCUR IN "HIGH" AND "VERY HIGH" FIRE HAZARD SEVERITY ZONE AND STATE RESPONSIBILITY AREAS. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.**

Portions of the Plan Area are located in "high" and "very high" Fire Hazard Severity Zones, as designated by CAL FIRE. These areas are classified as State Responsibility Areas as defined by CAL FIRE. The remaining portion of the Plan Area is considered to be a Local Responsibility Area. Los Osos is located in an area considered to be a community at risk from potential wildfire and a priority wildland-urban interface area. The LOHCP would not directly place any habitable structures in these areas. However, covered activities that could be expedited by a streamlined permitting process that would result from adoption of the project could be at risk of wildfire due to increased encroachment of development on wildlands and corresponding increases in wildfire ignitions.

Per the requirements of PRC 4291, structures are required to maintain defensible space intended to reduce potential risks from fire hazard. The project includes defensible space as a covered activity for covered private and public development activities. Fire suppression, fuel reduction, and fire planning efforts would continue to be implemented by CAL FIRE in areas where there would not be likely take of federally or state listed species. In addition, individual projects covered under the LOHCP would be reviewed in an independent permitting process on a case-by-case basis that would ensure consistency with all applicable standards, including PRC 4291.

The establishment of the LOHCP Preserve System would preserve vegetation in the Plan Area that could act as fuel for wildfire, including in areas where existing development potential is retired. However, where development potential is retired, these areas could help to maintain a buffer from urban development by directing development toward the USL. High fire hazards are generally more prominent in the Plan Area than in the USL. This reduction in development potential in the LOHCP Preserve System would reduce risk or injury to people and structures from wildfire in the wildland-urban interface.

Implementation of the CWPP is a covered activity under the LOHCP. The CWPP would involve wildfire protection measures, including fuel removal, installation of fuel breaks, and mowing of non-native grasses, on 89.4 acres of the Plan Area in the wildland-urban interface (refer to Section 2.2.7 of the LOHCP). Such activities would result in long-term risk reduction associated with wildfire for the Plan Area.

Additionally, the LOHCP outlines the benefits and disadvantages of prescribed wildfire as a management tool for the LOHCP Preserve System. The LOHCP recognizes the importance of fire in ecosystem processes, especially in natural communities such as chaparral and coastal dune scrub, where fire is demonstrated to be important for regeneration, especially for covered plant species. The LOHCP states that effective fire management in the LOHCP Preserve System would require implementation of a carefully planned, cautious fire management program that would use a scientifically rigorous approach to attain the conservation goals of the LOHCP. Any controlled burns would be directed by CAL FIRE. The LOHCP sets goals for fire management to reduce the risk of wildfire, which can degrade habitat, imperil the covered species, and threaten human communities.

Nevertheless, because the project would include wildfire management as a conservation strategy, would preserve vegetated land that can act as fuel for wildfire, and is located in an area of “high” and “very high” fire hazards and a State Responsibility Area, the project’s impact with respect to wildfire would be potentially significant.

## **Mitigation Measures**

Mitigation measure MM HAZ-2 would reduce impacts associated with risk of wildfire. MM HAZ-2 would be required for all conservation program activities that involve wildfire management, would preserve vegetated land that can act as fuel for wildfire, and would be located in areas of “high” and “very high” fire hazards.

### *HAZ-2 Fire Management Plan*

A fire management plan shall be prepared for all lands included in the Preserve System by the Implementing Entity, which addresses fire management and suppression based onsite-specific conditions. Each fire management plan is required to include the following:

- A map of fire access roads and gates
- Identification of fuel load management methods, such as mowing, livestock grazing, and maintenance of unvegetated buffers, and criteria for their application
- Criteria and procedures for prescribed fire for management purposes (burn plan)
- A description of fire-suppression criteria, procedures, resources, and responsibilities, including criteria for selecting fire-fighting water sources
- A discussion of restoration/rehabilitation of vegetation following a fire

Individual fire management plans would be developed with input from CAL FIRE/County Fire Department, the Service, and the landowner/manager. In addition, the Implementing Entity would negotiate a local operating agreement (required within four years of permit issuance) with CAL FIRE/County Fire Department, intended to ensure fire management plans are followed (e.g., use of minimum impact suppression techniques).

### **Significance After Mitigation**

Implementation of mitigation measure MM HAZ-2 would reduce potential impacts associated with wildfires to a less than significant level.

### **c. Cumulative Impacts**

Impacts associated with hazards and hazardous materials are generally site-specific. Accordingly, as required under applicable laws and regulations, potential impacts associated with cumulative development would be addressed on a case-by-case basis and appropriate mitigation would be designed to mitigate impacts resulting from individual projects, depending upon the type and severity of hazards present. Enforcement of federal, state, and local laws and regulations would ensure that hazards to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would remain less than significant. As such, the cumulative effect of the project in combination with other cumulative projects to the potential hazardous materials impact in the Plan Area, including from habitat conservation and management, permitting/implementation of proposed activities, and county-wide growth occurring as a result of buildout of other area plans, would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

Although all of the other preserves in the Plan Area and surrounding vicinity are likely to be under CAL FIRE jurisdiction for wildfire suppression, it is not expected that there would be a coordinated fire prevention and response plan for all wildlands in the area. Overall, however, other preserves are expected to use fire management approaches similar to those described above for the project. The project would also include implementation of fuel management strategies outlined in the CWPP as covered activities. In this manner, the project and these other projects are expected, over time, to reduce the likelihood of large wildfires in the study area by implementing a suite of similar management actions (e.g., mowing, grazing, fire breaks, prescribed burns). In addition, future development projects would be required to comply with requirements for defensible space and other requirements of the Fire Code. Therefore, it is anticipated that cumulative impacts associated with wildfires would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

## 4.7 Hydrology and Water Quality

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### 4.7.1 Setting

#### a. Existing Hydrology and Water Quality

##### **Groundwater**

According to the Updated Basin Plan for the Los Osos Groundwater Basin (County 2015), the Los Osos Valley Groundwater Basin (Basin) covers approximately 10 square miles with approximately 6.7 square miles underlying the communities of Los Osos, Baywood Park, and Cuesta-by-the-Sea.

There are three water purveyors in the Basin: Los Osos Community Services District (LOCSD), Golden State Water Company, and S&T Mutual Water Company. The Basin is the sole source of water for residential, commercial, institutional, and agricultural development in Los Osos. The main challenges the Basin currently faces include water quality degradation of the Upper Aquifer, primarily by nitrate, and seawater intrusion into the Lower Aquifer.

The Basin Yield Metric compares the total amount of groundwater production in a given year with the maximum sustainable yield of the Basin under conditions of the given year. A Basin Yield Metric under 100 indicates that current production is sustainable, while a value over 100 indicates that the Los Osos community is extracting too much groundwater from the Basin. Groundwater production from the Basin has been unsustainable from the 1970s through the publication of the Basin Plan in 2015.

##### **Surface Water Resources**

The most significant sources of recharge for the Basin are direct percolation of precipitation and percolation of surface runoff. The primary stream overlying the Basin is Los Osos Creek and its tributaries, including Willow Creek and Warden Creek. Los Osos Creek originates in the Irish Hills to the south of the Basin, flows through Clark Valley into the Basin area, and then northeast and then northwest into Morro Bay. Water flow in Los Osos Creek is highly variable by season, due to topographic features and soils that do not hold significant quantities of water.

##### **Flooding**

Areas subject to flooding during 100-year events are limited to those immediately adjacent to creek channels, as well as the Morro Bay estuary. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps identify those regions adjacent to Los Osos and Warden Creeks in and adjacent to the community of Los Osos as being subject to inundation during a 100-year storm event (FEMA 2017).

Additionally, numerous intersections and roadway segments in the community of Los Osos experience flooding during storm events. These include, but are not limited to, 8<sup>th</sup> Street at El Moro Avenue, 17<sup>th</sup> Street at Paso Robles Avenue, Los Olivos Avenue at Fairchild Way, Ferrell Avenue, Don Avenue at Mitchell Drive, Los Osos Valley Road at Palisades Avenue, and Ramona Avenue at 11<sup>th</sup> Street (County 2014).

## Water Quality

Water quality standards for surface waterbodies in the vicinity of Los Osos are developed by the Central Coast RWQCB in order to fulfill designated beneficial uses. Waterbodies which fail to meet these standards supporting their beneficial uses are listed as impaired, and a Total Maximum Daily Load (TMDL) may be required to allocate the maximum pollutant load the waterbody may receive while still meeting its water quality standards. Los Osos Creek and other surface waterbodies near the Plan Area are listed on the 2014/2016 California 303(d) list as impaired with an Integrated Report category of 5, indicating water quality standards are not met and a TMDL is required but not yet completed for at least one of the pollutants being listed for the segment (SWRCB 2018). Table 23 summarizes existing impairments and TMDLs for reaches of Los Osos Creek in the vicinity of the Plan Area, as well as Warden Creek and Morro Bay.

**Table 23 Surface Water Quality Impairments near the Plan Area**

Pollutant	Status
<b>Los Osos Creek (Los Osos to Estuary)</b>	
Fecal Coliform	TMDL Approved by U.S. EPA in 2004
Nitrate	TMDL Approved by U.S. EPA in 2005
Dissolved Oxygen	No TMDL Completed
Sedimentation/Siltation	No TMDL Completed
<b>Warden Creek</b>	
Fecal Coliform	TMDL Approved by U.S. EPA in 2004
Nitrate	TMDL Approved by U.S. EPA in 2005
<i>Escherichia coli</i> ( <i>E. coli</i> )	No TMDL Completed
Dissolved Oxygen	No TMDL Completed
<b>Los Osos Creek Estuary</b>	
Fecal Coliform	TMDL Approved by U.S. EPA in 2004
Nitrate	TMDL Approved by U.S. EPA in 2005
Dissolved Oxygen	No TMDL Completed
Turbidity	No TMDL Completed
<b>Morro Bay</b>	
Sedimentation/Siltation	TMDL Approved by U.S. EPA in 2004
Indicator Bacteria	TMDL Approved by U.S. EPA in 2004
Dissolved Oxygen	No TMDL Completed
Arsenic	No TMDL Completed
Source: SWRCB 2018	

### b. Regulatory Setting

In addition to complying with the requirements of CEQA, as applicable, projects in the Plan Area would be required to comply with the following regulations related to hydrology (e.g., drainage, flooding, erosion, sedimentation) and water quality.

## Federal

### *Clean Water Act*

The CWA was enacted by Congress in 1972. The goal of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA prohibits the discharge of pollutants to navigable waters from point and nonpoint sources unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The U.S. EPA has delegated to the State of California authority in administering and enforcing the provisions of the CWA and NPDES. NPDES is the primary federal program that regulates point-source discharges to waters of the United States.

The state of California has adopted water quality standards to protect beneficial uses of state waters as required by Section 303 of CWA and the Porter-Cologne Water Quality Act of 1969 (described below).

Placement of clean fill materials into waters of the United States is regulated by Section 404 of the CWA, administered by the USACE. Under the CWA, the SWRCB or the RWQCBs, on behalf of the SWRCB, must issue Section 401 Water Quality Certification for a project to be permitted under Section 404.

## State

### *Porter-Cologne Act*

Enacted by the California Legislature in 1969, the Porter-Cologne Water Quality Control Act established the SWRCB. The SWRCB is the primary state agency responsible for protecting the quality of the state’s surface water and groundwater supplies and enforcing the CWA. The Porter-Cologne Act also divided the state into nine regional basins, each with a Regional Water Quality Control Board that administers the Porter-Cologne Act.

The Porter-Cologne Act authorizes the SWRCB to prepare comprehensive Water Quality Control Plans or “basin plans” for major watersheds in California. For each waterbody, the plan identifies beneficial uses of water to be protected, establishes ambient water quality standards (i.e., objectives) necessary to support the beneficial uses, and outlines the actions needed to bring waterbodies into compliance with water quality objectives.

The Central Coast RWQCB regulates water quality in the County, implements the policies of the SWRCB, and issues permits to improve water quality within its jurisdictional boundaries. Policy recommendations are made in the basin plan for the Central Coast Region (Basin 3). The most recent update of the Water Quality Control Plan for the Central Coast Region was adopted by the Central Coast RWQCB in September 2017. The Water Quality Control Plan establishes beneficial uses and water quality objectives for surface and ground water sources within the basin.

The SWRCB and RWQCB regulate discharges to water resources through the issuance of a variety of permits, including Wastewater Permits that cover the discharges of treated wastewaters to surface water bodies, Municipal Stormwater Permits that cover municipal processes for stormwater quality control, and General NPDES Stormwater Permits for construction and industrial activities. The statewide General NPDES Permit for construction activities requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP), including detailed best management practices for erosion control, for all construction activities that would disturb more than one acre of land.

### *California Fish and Game Code Sections 1600 and 1602*

Pursuant to Sections 1600 and 1602 of the FGC, CDFW will assert jurisdiction over ephemeral, intermittent, and perennial watercourses to the outer drip-line of riparian habitat. CDFW will also assert jurisdiction over adjacent wetlands, streambeds, and associated riparian communities. Before any impacts to such jurisdictional features occur, FGC section 1602 requires an entity to notify CDFW, who will then determine if a Streambed Alteration Agreement must be obtained.

## **Local**

### *Los Osos Community Services District Storm Water Management Program and NPDES Phase II Small MS4 Permit*

The SWRCB has determined that the community of Los Osos and five other unincorporated areas are subject to U.S. EPA NPDES Phase II requirements under the Municipal Separate Storm Sewer Systems (MS4) General Permit. This permit is known as Waste Discharge Requirements for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (or SWRCB Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004). In order to comply with mandatory requirements of the U.S. EPA NPDES Phase II Final Rule, as well as the MS4 General Permit, a Stormwater Management Program (SWMP) was prepared by the County and approved by the RWQCB in 2007, with a NPDES Phase II Small MS4 Permit approved in 2008 and revised in 2009. The SWMP covers County-owned or operated municipal separate storm sewer systems for unincorporated areas that have been designated and are within the jurisdiction of the County. SWMPs are required to reduce stormwater pollutants to receiving waters to the maximum extent practicable through the application of BMPs. The County SWMP provides a suite of best management practices to reduce stormwater pollutants, defines the method for selecting and prioritizing BMPs, and provides a description, timetable, and set of measurable goals for each BMP.

Water quality issues identified in the SWMP for the Los Osos area include leaching from septic systems, proximity to the Morro Bay National Estuary, flooding and sumping in low-lying areas, and commercial runoff. The Morro Bay National Estuary is listed on the state's CWA Section 303(d) list of impaired waterbodies within the County's SWMP coverage area.

### *Draft Basin Plan for the Los Osos Groundwater Basin*

An Updated Basin Plan for the Los Osos Groundwater Basin (Basin Plan) was completed in January 2015 and adopted by the three water purveyors in the area (LOCSD, Golden State Water Company, and S&T Mutual Water Company) and the County.

The Basin Plan establishes immediate and continuing goals for management of the water resources within the Los Osos Groundwater Basin. The most important goals are to halt seawater intrusion into the Basin and to provide sustainable water supplies for existing and future residential, commercial, institutional and agricultural development within the community of Los Osos.

### *Estero Area Plan*

The following are the applicable programs identified in the EAP (County 2009a) that are related to groundwater in Los Osos:

## A. Water – Los Osos

1. **Water Management.** Based on community initiation, the County Public Works Department should work with communities, property owners and the RWQCB to develop and implement a basin-wide water management program for Los Osos that addresses population levels in relation to water availability, groundwater quality, and the need for alternative liquid waste disposal plans.
2. **Alternative Water Sources.** Supplementary water, such as reclaimed sewage effluent and water from existing impoundments, should be used to prevent overdraft of groundwater. New impoundments for recharging underground basins should be carefully considered along with other alternatives.
3. **Well Sites.** Locate and reserve future well sites in the Los Osos area to optimize safe withdrawals from the Basin before development fills in the most favorable sites.

### *Los Osos Community Plan*

The 2015 Los Osos Community Plan contains a water quality policy applicable to the project, as follows:

- **Policy EN-2.** Manage urban runoff to reduce discharge of pollutants from the community of Los Osos into Morro Bay.

### *County LCP Policy Document – Coastal Plan Policies*

The County LCP Policies document states the policy commitment of the County to implement the mandates of the Coastal Act. This policy document is part of the LCP and the Land Use Element of the County General Plan. The groundwater policy applicable to projects in Los Osos, included under the Policies for Coastal Watersheds, is as follows:

- **Policy 1: Preservation of Groundwater Basins.** The long-term integrity of groundwater basins within the coastal zone shall be protected. The safe yield of the groundwater basin, including return and retained water, shall not be exceeded except as part of a conjunctive (i.e., connected) use or resource management program that assures the biological productivity of aquatic habitats is not significantly adversely impacted.

### *Land Use Ordinances*

Land use ordinances contain standards for development based on what the effects of an action or project would be on specific land uses. Title 23 of the County Code, the CZLUO (revised in December 2014), contains a specific discussion of surface water quality and drainage in Sections 23.05.040 through 23.05.050:

- Section 23.05.042 of the CZLUO requires that a drainage plan be prepared for the project before a land use or construction permit is issued if:
  - More than 40,000 square feet of land disturbance; or
  - Activities are located in a flood hazard designation.
- Section 23.05.036 requires that a Sedimentation and Erosion Control Plan be prepared and submitted for review and approval by the County Engineer when the following conditions exist:
  - Grading is proposed to be conducted, or left in an unfinished state, during the period from October 15 through April 15; or



- Land disturbance activities would occur within 100 feet of any watercourse shown on the most recent 7.5-minute U.S. Geologic Survey quadrangle map; and
- If construction materials may be carried into a watercourse by rainfall or runoff in quantities that may be deleterious to fish, wildlife, or other beneficial uses.

Section 23.06.100 of the CZLUO addresses water quality issues and requirements for new development to be designed and located to avoid significant adverse impacts to wetlands, streams, tidepools, sensitive plants, riparian vegetation, agricultural lands, and other environmentally sensitive habitat areas from surface water runoff and wastewater. This section also requires new development be consistent with the water quality objectives identified in the Water Quality Control Plan for the Central Coast Region.

Section 23.07.060 of the CZLUO contains development standards for areas with the Flood Hazard combining designation.

### *County Resource Management System*

The County's RMS focuses on collecting data in order to avoid and correct resource deficiencies with regard to five essential resources: water supply, sewage disposal, schools, roads, and air quality.

The current RMS 2016-2018 Resources Summary Report recommends that the Los Osos Valley Groundwater Basin be identified as having a "Level of Severity III" ranking, which indicates that water demand projected over 15 years would equal or exceed the estimated dependable supply (County 2019c). Relative to water supply in all areas, the Resource Summary Report makes the following general recommendations:

- Continue to support efforts to complete the Basin Management Plan.
- Implement the water management strategies of the Los Osos Community Plan following adoption.
- To the extent necessary pending the California Department of Water Resources' consideration of boundary changes, continue to support efforts of the Groundwater Sustainability Agency to actively and cooperatively meet Sustainable Groundwater Management Act requirements.
- The 2014-2016 Level of Severity III is to remain in place regarding water supply.

## 4.7.2 Impact Analysis

### **a. Methodology and Significance Thresholds**

Hydrology and surface and groundwater quality and quantity in the Plan Area are managed, in accordance with the regulatory framework described above, to meet various objectives. These objectives include preventing property damage due to flooding, providing storm drainage utilities, protecting surface and groundwater quality, and determining a sustainable groundwater pumping regime. The project was evaluated for consistency with these objectives and whether meeting those objectives could be achieved by the project.

Appendix G of the *CEQA Guidelines* and the County's environmental checklist were considered to generate the significance criteria for water quantity and quality. Under the County's environmental checklist, the project would result in a potentially significant impact to hydrology and water quality if it would:

1. Violate any water quality standards;
2. Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, sediment, temperature, dissolved oxygen, etc.);
3. Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.);
4. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff;
5. Change rates of soil absorption, or amount or direction of surface runoff;
6. Change the drainage patterns where substantial on- or off-site sedimentation/erosion or flooding may occur;
7. Involve activities within the 100-year flood zone;
8. Change the quantity or movement of available surface or groundwater;
9. Adversely affect community water service providers; or
10. Expose people to a risk of loss, injury, or death involving flooding (e.g., dam failure, etc.), or inundation by seiche, tsunami, or mudflow.

## b. Project Impacts

<b>Threshold:</b>	Would the project violate any water quality standards?
<b>Threshold:</b>	Would the project discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, sediment, temperature, dissolved oxygen, etc.)?
<b>Threshold:</b>	Would the project change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?

### **IMPACT HWQ-1 THE PROJECT IS NOT EXPECTED TO ADVERSELY AFFECT WATER QUALITY. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Approval and implementation of the LOHCP and issuance of the programmatic ITP would allow the County to authorize take coverage for covered activities, including new development and remodels, capital improvement projects, and facilities operations and maintenance activities, which may accelerate the rate at which the covered activities could occur.

Covered activities, including expedited residential, commercial, and infrastructure development, would have the potential to impact surface water and groundwater quality. Activities that disturb soil or require the use of fuel or other hazardous materials at work sites could introduce pollutants to the environment that could be carried in stormwater runoff to surface waters or percolate through to groundwater. Ground disturbance can result in accelerated soil erosion, which can increase sediment delivery to surface waters and degrade water quality. Activities in or near streams and other water features could loosen and mobilize bed and bank materials, which could result in suspended sediment in the receiving waters. Construction activities could require vehicle fuels, lubricants, adhesives, waterproofing compounds, and hydraulic fluid for vehicles and equipment and could also require concrete, epoxy, paints, and/or asphalt paving. Specific hazardous material use at individual project sites would vary and would depend upon the type, size, and location of the project. The discharge of pollutants into waterbodies could degrade water quality and affect beneficial uses of the downstream waterbodies.

Covered activities accelerated under implementation of the project represent already planned activities per the County's existing EAP and Capital Improvement Program. The EAP provides

policies, programs, and standards that address drainage, erosion, sedimentation, and stormwater runoff issues generated from development of urban uses in the Estero planning area. In addition, the EAP FEIR requires implementation of mitigation measures DWQ-1 and DWQ-2 to address water quality impacts from ongoing development in the Los Osos area, which would continue to apply even under an expedited development scenario. DWQ-1 requires all new development in or near existing drainage systems and associated tributaries to be consistent with applicable existing (and proposed) drainage, grading, erosion control, and water quality-related policies, standards, and programs to the extent feasible. DWQ-2 requires that new development implement measures to eliminate pollutants from stormwater runoff prior to its drainage offsite, with smaller developments (individual houses, home additions) being potentially exempt at the discretion of County Public Works. Furthermore, any individual development projects with a proposed disturbance area exceeding one acre would be required to prepare and implement a SWPPP pursuant to the NPDES Statewide Construction General Permit, reducing potential temporary impacts associated with construction-related runoff and non-point source pollution. These measures would reduce water quality impacts during ongoing development in the Los Osos area, and would be required for covered activities, including development expedited under implementation of the project.

Covered activities in the LOHCP also include drainage infrastructure installation and improvements, including drainage improvements in the County right-of-way and road shoulders along with ongoing maintenance by County Public Works. Installation and maintenance of drainage infrastructure would reduce potential for erosion and sedimentation as a result of storm and non-stormwater flows. Other covered activities that would improve groundwater quality are the nitrate removal and blending projects proposed by LOCSD, in partnership with Golden State Water Company. These would involve removal of high nitrates in the upper aquifer wells by blending with water from the lower aquifer.

Conservation activities included as part of the LOHCP, including the creation of the LOHCP Preserve System, would generally be consistent with and would reinforce the existing regulatory framework for maintenance of existing hydrology and surface and groundwater quality in the Plan Area. Where development potential is retired in favor of habitat conservation, a beneficial impact on water quality and drainage would occur. Potential water quality impacts resulting from implementation of the LOHCP Preserve System would primarily occur during habitat restoration or during minor construction projects for LOHCP Preserve System facilities (trails, signage, restrooms, parking, etc.). Implementation of development standards in the County's CZLUO and adherence to the NPDES Construction General Permit would avoid potentially significant temporary construction impacts. In addition, the conservation strategy includes erosion control as a covered activity under the LOHCP, which would be implemented after a controlled fire to prevent accelerated erosion in burn areas.

Covered activities that could affect the bed or bank of waters of the state or waters of the United States would be subject to compliance with FGC Section 1602 and the permitting requirements of Sections 401 and 404 of the CWA. Additionally, AMMs contained in the LOHCP aimed at reducing impacts to ecosystems, communities, and covered and non-covered species would help reduce potential impacts to water quality, such as avoiding alterations to aquatic ecosystems or avoiding the use of herbicide and pesticides (refer to Tables 5-2 and 5-3 of the LOHCP). Compliance with applicable federal, state, and local laws, as well as the AMMs included in the LOHCP, would minimize potential impacts to water quality. This impact would be less than significant.

**Threshold:** Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff?

**IMPACT HWQ-2 THE PROJECT WOULD CREATE A SLIGHT INCREASE IN RUNOFF BUT WOULD NOT EXCEED THE CAPACITY OF STORMWATER SYSTEMS OR CAUSE SUBSTANTIAL POLLUTION. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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The Los Osos Community Services District provides stormwater drainage services in the Plan. Individual private development projects allowed under the LOHCP would result in new impervious surfaces. Development in the Plan Area would likely require the construction of new stormwater facilities; however, impacts associated with the construction of such facilities would be analyzed on a project-by-project basis. The Preserve System established consistent with the LOHCP would be maintained as open space. Please refer to Impact HWQ-1 for impacts related to water quality. Land within the Preserve System would remain mostly pervious. Therefore, overall impacts would be less than significant.

**Threshold:** Would the project change rates of soil absorption, or amount or direction of surface runoff?

**IMPACT HWQ-3 THE PROJECT WOULD NOT SUBSTANTIALLY AFFECT SOIL ABSORPTION OR SUBSTANTIALLY AFFECT THE AMOUNT OR DIRECTION OF SURFACE RUNOFF. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Development of the project would involve the construction of covered activities, which would include new impervious surfaces. Therefore, the project would reduce the soil absorption in the Plan Area, but conservation within the Preserve System would ensure very little development of impervious surfaces. Individual projects would be designed to include features to retain and infiltrate stormwater runoff within the project site, which would minimize the effects on surface runoff. Impacts would be less than significant.

**Threshold:** Would the project change the drainage patterns where substantial on- or off-site sedimentation/erosion or flooding may occur?

**IMPACT HWQ-4 THE PROJECT WOULD NOT SUBSTANTIALLY CHANGE DRAINAGE PATTERNS OR EFFECT ON- OR OFF-SITE SEDIMENTATION/EROSION OR FLOODING. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Covered activities under the LOHCP that would involve vegetation removal, excavation, grading, fill placement, and other ground disturbance could accelerate soil erosion and result in the loss of topsoil. Covered activities in previously disturbed areas would have minimal effects on soil, but activities in undisturbed areas could accelerate erosion and result in a loss of topsoil. The overall extent of ground disturbance from covered activities under the Proposed Action would likely be moderate. All development in the county is subject to the standards in the County's CZLUO, including the preparation of a site-specific Sedimentation and Erosion Control Plan, and compliance with NPDES General Stormwater Permits for construction. Adherence to these requirements would limit erosion from construction activities.

There would also be a risk of accelerated soil erosion and/or loss of topsoil associated with the covered activities in the LOHCP Preserve System. However, restoration activities would be

implemented in the LOHCP Preserve System under the project; therefore, soil erosion would decrease in areas where vegetation is restored during implementation of the proposed project.

It is noted that erosion control itself is included as a covered activity under the LOHCP. Erosion control would be implemented, for example, after a controlled fire to reduce erosion that might result from implementation of the CWPP.

<b>Threshold:</b> Would the project involve activities within the 100-year flood zone?
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**IMPACT HWQ-5 THE PROJECT WOULD NOT INVOLVE ANY ACTIVITIES WITHIN THE 100-YEAR FLOOD ZONE. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

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Implementation of the LOHCP could result in activities in the 100-year flood zone. Small sections of the Plan Area are located in the 100-year flood zone along Los Osos Creek at the eastern boundary. These areas are designated Residential Rural and Residential Suburban. Expedited residential and commercial development, as covered activities under the project could result in activities, including the placement of people and structures, in a 100-year flood zone. Adequate mitigation for potential impacts from flooding would be provided by development standards for areas with a Flood Hazard designation (CZLUO Section 23.07.066), required setbacks for development along Streams and Riparian Vegetation (CZLUO Section 23.07.174), and mitigation measure DWQ-1 from the EAP FEIR. The development standards are also intended to minimize the effects of development on drainage ways and watercourses and include additional standards for development located in a “Coastal High Hazard area” that could be subject to high velocity waters including coastal and tidal inundation or tsunamis.

In addition, as noted in the County General Plan Safety Element (County 2014), several small tsunami events have been recorded in San Luis Obispo County. However, previous studies have predicted a maximum tsunami wave “runup” of approximately 9.5 feet above sea level for a 100-year event. Safety Element Policy S-11 (access information to increase the understanding and response to tsunamis) along with its accompanying implementation measures as well as compliance with CZLUO Section 23.07.066<sup>15</sup>, would reduce tsunami risk impacts associated with expediting of development in the Plan Area.

Alternatively, since portions of the 100-year flood hazard zone are included in the PCA, they may be incorporated into the LOHCP Preserve System. Development of the LOHCP Preserve System would involve development of passive recreation facilities (parking lots, benches, picnic tables, restrooms, etc.), but would not directly result in the development of housing or other structures for human occupancy. Therefore, no housing would be placed inside the boundaries of the 100-year flood zone as a result of development of the LOHCP Preserve System. Implementation of development standards in Section 23.07.066 of the CZLUO for areas inside a Flood Hazard designation would reduce potential impacts from flooding for restroom facilities and other infrastructure provided as part of the LOHCP Preserve System.

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<sup>15</sup> Section 23.07.066e states, “Where feasible, development shall be sited outside of potential tsunami inundation zones, even if not currently designated Flood Hazard. A Registered Civil Engineer with coastal experience shall make a determination, through examination of the most current tsunami inundation and run-up maps or a wave run-up analysis, whether the site is subject to inundation during a tsunami, pursuant to the criteria of Section 23.07.064b. If it is not feasible to site development outside of tsunami inundation zone, new development shall be in conformance with all provisions set forth in Section 23.07.066(c)”.

A number of drainage improvements would be covered activities under the LOHCP and its streamlined permitting process. Therefore, the project would likely improve the capacity and functioning of the stormwater drainage system in the Plan Area.

Covered activities that must be located in floodplains would be designed and constructed to meet or exceed flood-resistant construction standards. These standards ensure that flood conveyance capacities are maintained and that structures/facilities do not result in additional safety hazards or increased risk through impedance or redirection of flood flows. Therefore, this impact would be less than significant.

<b>Threshold:</b>	Would the project change the quantity or movement of available surface or ground water?
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<b>Threshold:</b>	Would the project adversely affect community water service provider?
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**IMPACT HWQ-6 THE PROJECT MAY AFFECT THE QUANTITY OF AVAILABLE SURFACE OR GROUNDWATER. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.**

The Los Osos Groundwater Basin is the sole source of water supply for the Los Osos area and the LOHCP would result in impacts to groundwater supplies. A number of the covered activities listed in the LOHCP (e.g., residential and commercial development, parks, libraries, aquatic center) would increase water demand in the Plan Area. As a result, groundwater resources for the Los Osos area may not be sufficient to meet future demand as currently planned by the EAP. According to the Basin Plan for the Los Osos Groundwater Basin, the Basin has been found to be in a state of overdraft and is at a Level of Severity III (i.e., the amount of consumption has reached the dependable water supply) (County et al. 2015).

The LOHCP and its streamlined permitting process could expedite permitting for some development in the Plan Area, as per the land use designations in the EAP. The demand for water would be based on the land uses allowed under the EAP and would not be altered by the project. Furthermore, future development in Los Osos cannot occur until funding and implementation of the Updated Basin Management Plan for the Los Osos Groundwater Basin, which includes demand management and supply-side improvements to ensure adequate water supplies to meet demand under future buildout of the Basin.

Covered activities, such as residential or commercial development on currently undeveloped parcels, may result in an increase in impervious surface cover, which could reduce groundwater recharge and result in localized reductions in groundwater elevations in the Plan Area. However, covered activities in the LOHCP would also include drainage infrastructure installation and improvements, including creation of detention basins in the USL by County Public Works. Installation of these features would increase stormwater infiltration and recharge groundwater, providing an increase in groundwater supplies. The amount of increase is unknown at this time and would be based on timing of infrastructure installation and variability of precipitation rates.

Implementation of the LOHCP conservation program would require the temporary use of water to establish plants in areas where habitat restoration would occur. While the precise configuration of the LOHCP Preserve System is unknown at this time, based on the scenario presented in the LOHCP, approximately 35.0 acres of degraded habitat in existing protected lands would be restored to increase the ability to support the covered species, and 10.7 acres of currently unprotected land would be restored and then managed (refer to Table 5-10 of the LOHCP). The amount of water that would be needed to restore this habitat is unknown at this time. Water use rates are highly variable

and depend on each water year and its characteristics (e.g., date of first and last rain event, total precipitation, etc.) as well as the plant species present, the density of planting, and the microclimate of the area (University of California Cooperative Extension and California Department of Water Resources 2000). Water use for habitat restoration would be temporary and would cease over time as plants are established. Water use would also occur during construction activities (e.g., dust control) and for use in passive recreation facilities (restrooms or drinking fountains). While such use would generally be minimal, given the severity of water shortage in the Plan Area, this impact would be potentially significant.

## **Mitigation Measures**

Mitigation measures MM HWQ-1 through MM HWQ-3 would reduce impacts to water quantity.

### *HWQ-1 Reduce Water Supply Demands*

For covered activities, one or a combination of the following options shall be implemented to reduce use of water supplies:

- Irrigation shall use utilize recycled water supplies.
- Retrofit offsite landscaped areas to utilize recycled water supplies.
- Retrofit offsite public facilities (e.g., County offices, schools, libraries, etc.) that are in the same water service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the County in consultation with the applicable water service provider(s).
- Retrofit other facilities in the water service area, as determined appropriate by the County, as well as including consent from the property owner affected.

### *HWQ-2 Dust Control Watering*

For construction activities, dust control shall be conducted using recycled water supplies or other dust suppressant substance/methodology to reduce use of water supplies. Also, for smaller projects, when appropriate and not near water bodies/creeks, consider scheduling construction during the rainy season, or after smaller rain events.

### *HWQ-3 New Restrooms for Recreational Use*

Restrooms installed in the Preserve System as part of implementation of the LOHCP shall reduce demand for water through one of the following options:

- Retrofit offsite facilities that are in the service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the County and applicable water service provider(s).
- Omit development of any proposed restroom facility that cannot meet this requirement.

## **Significance After Mitigation**

Implementation of mitigation measures MM HWQ-1 through MM HWQ-3 would reduce potential impacts associated with water quantity to less than significant levels.

<b>Threshold:</b> Would the project expose people to a risk of loss, injury, or death involving flooding (e.g., dam failure, etc.), or inundation by seiche, tsunami, or mudflow?
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**IMPACT HWQ-7 THE PROJECT WOULD NOT EXPOSE PEOPLE TO RISK OF LOSS, INJURY, OR DEATH INVOLVING FLOODING, OR INUNDATION BY SEICHE, TSUNAMI, OR MUDFLOW. IMPACTS BE CLASS III, LESS THAN SIGNIFICANT.**

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Although faults are located near several of the reservoirs in the county, the General Plan Safety Element (County 2014) states that seiches are not considered a significant risk in San Luis Obispo County. Additionally, Whale Rock Reservoir is the only dammed waterbody in proximity to Los Osos, located approximately 10 miles to the north of the Plan Area. As discussed in the EAP FEIR, the inundation hazard area for that dam does not extend to the community of Los Osos. Implementation of the Geologic Study Area Standards of Section 23.07.080 of the CZLUO would reduce potential impacts from mudflows.

As noted in the County General Plan Safety Element (County 2014), several small tsunami events have been recorded in San Luis Obispo County. However, previous studies have predicted a maximum tsunami wave “runup” of approximately 9.5 feet above mean sea level for a 100-year event. Safety Element Policy S-11 (access information to increase the understanding and response to tsunamis) along with its accompanying implementation measures, as well as compliance with CZLUO Section 23.07.066, would reduce tsunami risk impacts associated with expediting of development in the Plan Area.

As a result, people would not be exposed to risk from flooding, tsunami, or mudflow as a result of implementation of the LOHCP Preserve System, nor would development of the LOHCP Preserve System result in a drainage patterns that cause flooding.

### **c. Cumulative Impacts**

New development associated with the covered activities, including preservation, restoration, and management of habitat in the LOHCP Preserve System and installation and maintenance of new amenities in the LOHCP Preserve System, combined with county-wide growth occurring as a result of implementation of other adopted area plans would incrementally expose additional people and property to hydrology- and water quality-related hazards inherent to the region. The EAP FEIR determined that implementation of the EAP would result in a potentially significant impact to water supplies in Los Osos. Any development or project completed in the Los Osos area that generates a demand for water would, therefore, contribute to a significant cumulative impact on water supply.

The project could expedite increased demand for water through the streamlined permitting process. New development in the county is required to undergo a site-specific analysis of the hydrology and water quality conditions, as applicable. The analysis would provide recommendations to prepare the site for development to avoid impacts to surface water and groundwater. Additionally, future development in Los Osos is contingent upon funding and implementation of the Updated Basin Plan for the Los Osos Groundwater Basin, which includes strategies to achieve a sustainable basin under future buildout conditions. Development would only be approved if the associated water demand is within the Basin’s safe yield. Outside of the short-term water needed for initial construction activities, establishment of vegetation, and potential longer term use for passive recreation facilities, the project would not affect the volume of water demand generated by development in the Plan Area. Instead that demand is driven by the land use designations in the EAP. For this reason, with implementation of mitigation measures MM HWQ-1 through MM HWQ-3, which



require a net zero increase in water demand associated with conservation activities, the project's contribution to this impact would not be cumulatively considerable.

A potentially cumulative impact to water quality from erosion and sedimentation would occur as a result of construction activities and operation of future development in the Plan Area and county-wide growth associated with buildout of other area plans. In addition, as described in the EAP FEIR, the indirect cumulative impact from the placement of people or structures in areas with flood hazards would be potentially significant as the implementation of the EAP progresses. Project-specific review would identify potential impacts associated with placement of people or structures in a flood hazard zone or potential sedimentation or erosion, and restrictions on development would be applied in the event that hydrologic or water quality conditions pose a safety risk. Compliance with the policies in the EAP, mitigation measures from the EAP FEIR, and the requirements of the CZLUO would reduce these cumulative impacts such that they would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

## 4.8 Land Use and Planning

### 4.8.1 Setting

#### a. Plan Area Vicinity Setting

Los Osos is an unincorporated community of nearly 15,000 residents. The Plan Area features a mix of land uses that, generally speaking, include relatively dense residential and commercial development in the central and northern portions of the Plan Area, with sparse residential development, limited agricultural use, and conservation lands on the perimeter of the Plan Area.

The 3,644-acre Plan Area contains 6,032 existing legal parcels. These parcels have been categorized for the purposes of the LOHCP as having one of the following statuses:

- **Developed.** Partially or entirely developed for residential and commercial uses and public facilities
- **Undeveloped.** Undeveloped or largely undeveloped. However, may include limited improvements, such as parcels in cultivation
- **Protected.** Lands located in parks, reserve, or other open space or conservation areas managed, at least in part, for natural resource protection

Table 24 summarizes the amount of each type of parcel in the Plan Area. Figure 10 depicts the location of developed, undeveloped, and protected parcels in the Plan Area.

**Table 24 Parcel Status**

Type	Acreages <sup>1</sup>	No. of Parcels <sup>2</sup>	Percent Cover of Plan Area
Developed	1,525	5,290	48.3
Undeveloped	705	701	22.3
Protected	925	41	29.3
Total	3,155	6,032	100.0%

<sup>1</sup> Acres based on GIS and County of San Luis Obispo Official Maps of 2016. 490 acres in Plan Area are located outside assessor's parcels in the County right-of-way. Total acreage in Plan Area is 3,644 acres.

<sup>2</sup> Number of mapped parcels in assessor's parcel database.

Some totals do not add up due to rounding.

Source: Table 2-1 of the LOHCP

Land use patterns vary in the Plan Area. The Los Osos URL is the boundary separating urban/suburban land uses and rural land uses. As shown on Figure 11, land use designations in the URL typically concentrate future commercial and residential development largely inside the USL. The USL demarks the Urban-Rural boundary in the LCP (County 2018b). More specifically, the USL encompasses areas where urban services are now provided or where such services are expected to be extended during the next 5 to 10 years as the community develops towards build-out (County 2018b). As shown in Table 25, the area inside of the USL contains approximately 95 percent of the Plan Area parcels (5,744), although it represents approximately 48 percent (1,509 acres) of the area of land contained in the Plan Area. Parcels in the USL average 0.26 acre in size and the majority (88 percent) are already developed, mostly as residences.

**Table 25 Distribution of Land in the Plan Area**

Boundary	No. of Parcels	Percent of Parcels	Acreage <sup>1</sup>	Percent of Acreage
Inside USL	5,744	95.2	1,509	47.8
Outside USL	285	4.7	1,646	52.2

<sup>1</sup> Acres based on GIS. 490 acres in Plan Area are located outside Assessor's parcels in the County right-of-way. Total acreage in the Plan Area is 3,644 acres.

Source: Table 2-1 of the LOHCP

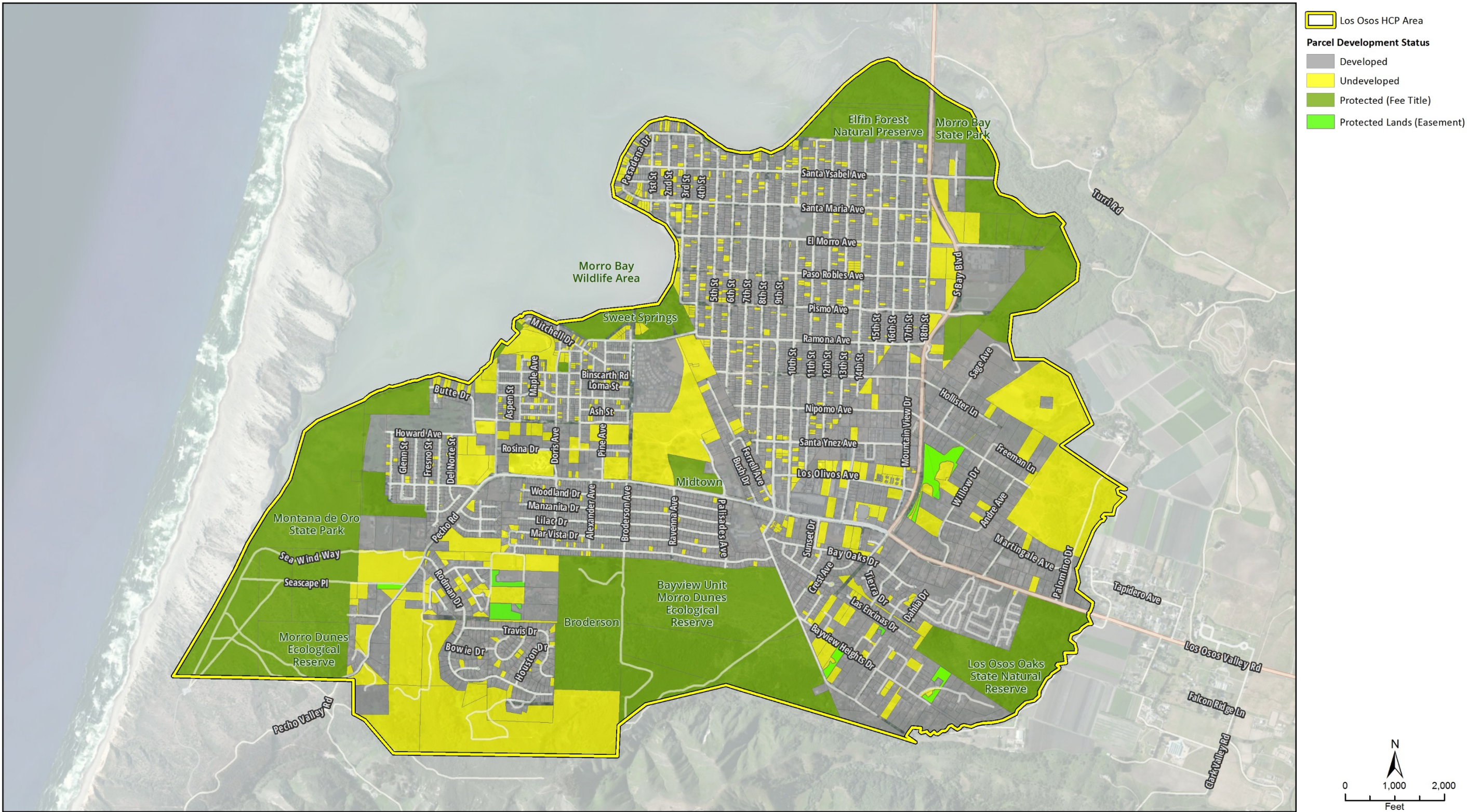
While the majority of the parcels in the USL are developed in some fashion, this area also contains 104 acres of vacant, undeveloped parcels that are larger than 5 acres each, see Figure 10. These parcels generally feature stands of non-native trees (e.g., eucalyptus) or coastal sage scrub habitat that has been degraded by land use including vegetation clearing (e.g., mowing).

In contrast, half of the Plan Area located outside of the USL is already permanently protected from development (e.g., parks, reserve, or other open space or conservation areas managed, at least in part, for natural resource protection), with an additional 388 acres (12.3 percent) in 45 undeveloped, unprotected private parcels (Figure 10). Of these, 14 parcels are larger than 5 acres and total 343 acres. Much of this acreage is adjacent to existing protected lands. Many of these undeveloped parcels support coastal dune scrub, central maritime chaparral, and/or coast live oak woodlands that are relatively intact and contiguous with similar native communities outside of the Plan Area, to the west south, and east. Notable exceptions are a few large parcels currently being used for row crop agriculture at the eastern edge of the Plan Area. The remaining development parcels outside of the USL are residential.

Figure 11 depicts existing land use designations in the Plan Area per the approved EAP. As shown in Table 26, of the approximately 3,150 acres located in parcels in the Plan Area, 229 acres (7.3 percent) are zoned for commercial and multi-family residential uses. These areas are focused in the central portion of the Plan Area. A total of 2,318 acres (73.6 percent) are zoned for single-family residential development, 16.4 percent is zoned for recreation (328 acres), open space (122 acres), or public facilities (66 acres). The Plan Area includes 87 acres (2.8 percent) that are not certified as part of the EAP and have no designation. These areas include the Elfin Forest Natural Preserve and the Sweet Springs area, depicted in Figure 11. Figure 12 depicts proposed land use designations in the Plan Area per the draft Los Osos Community Plan.



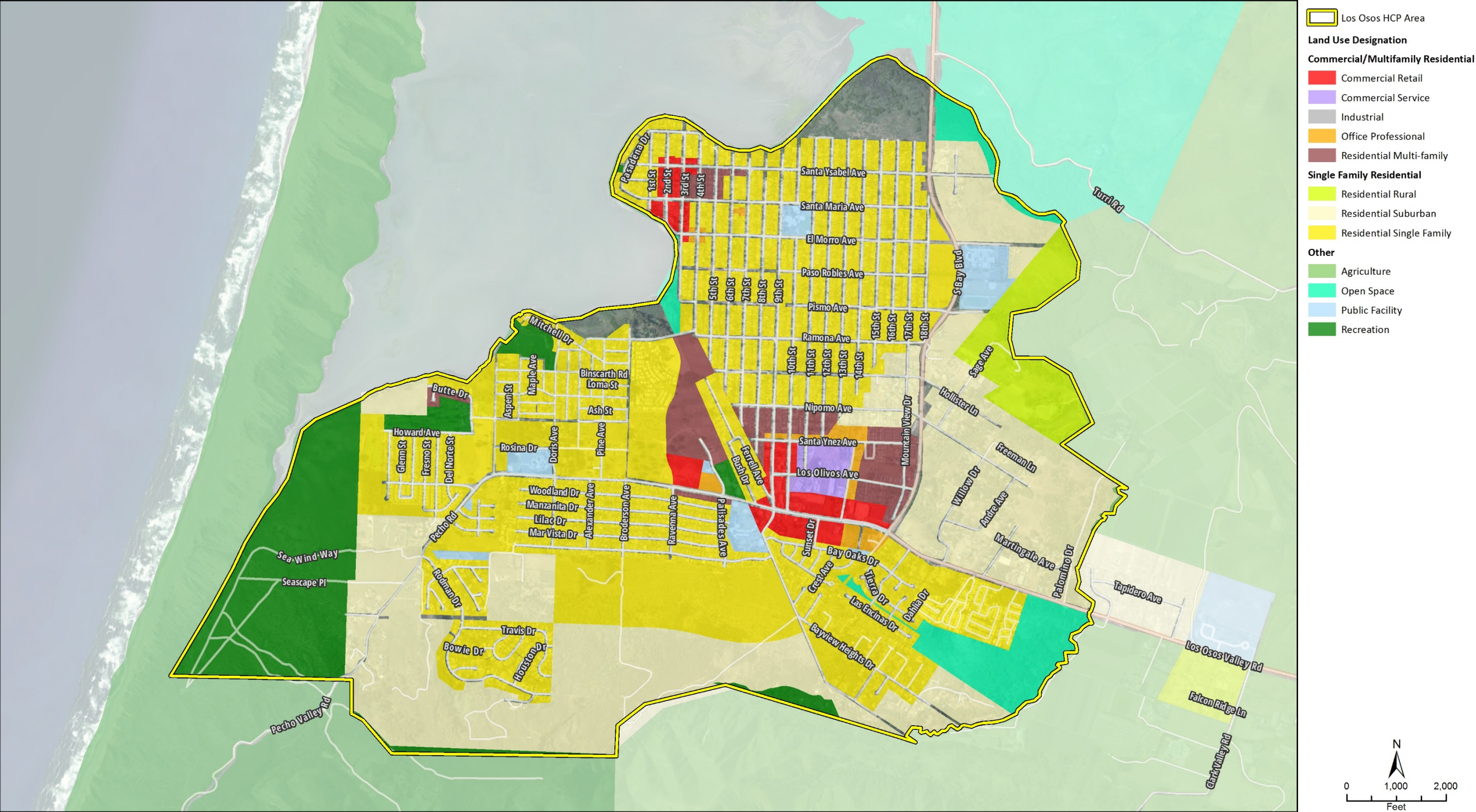
Figure 10 Parcel Development Status in the Plan Area



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Additional data provided by the County of San Luis Obispo, 2019, and Jodi McGraw Consulting, 2014.



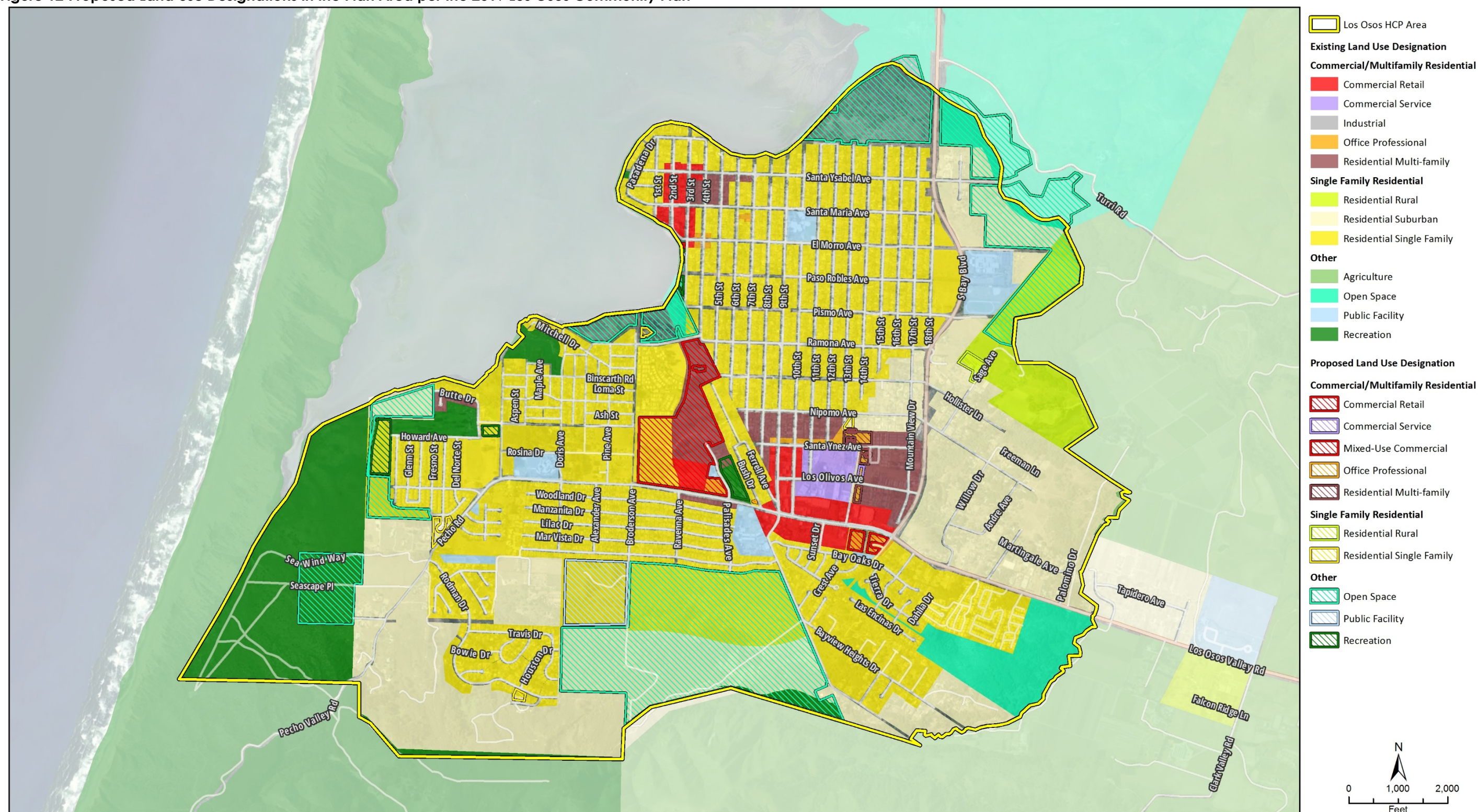
Figure 11 Existing Land Use Designations in the Plan Area



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Additional data provided by the County of San Luis Obispo, 2019, and Jodi McGraw Consulting, 2014.



Figure 12 Proposed Land Use Designations in the Plan Area per the 2019 Los Osos Community Plan



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Additional data provided by the County of San Luis Obispo, 2019, and Jodi McGraw Consulting, 2014.



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**Table 26 Land Use Designations within the Plan Area**

Status	Urban Services Line <sup>1</sup>				Total	
	Inside		Outside			
	Acres	Percent	Acres	Percent	Acres	Percent
Commercial/Multi-Family Residential	229	15.1	0	0.0	229	7.3
Single-Family Residential	1,175	77.4	1,143	70.0	2,318	73.6
Open Space	13	0.9	109	6.7	122	3.9
Recreation	38	2.5	290	17.8	328	10.4
Public Facilities	40	2.6	26	1.6	66	2.1
White Holed <sup>2</sup>	23	1.5	64	3.9	87	2.8
Total <sup>3</sup>	1,518	100.0	1,632	100.0	3,150	100.0

<sup>1</sup> Acres and percent of land inside and outside of the Los Osos Urban Services Line in the land use categories in the approved EAP. Acres based on GIS and County of San Luis Obispo Official Maps of 2016. A total of 490 acres in Plan Area are located outside Assessor's parcels in the County right-of-way. Total acreage in the Plan Area is 3,644 acres.

<sup>2</sup> No land use category designation.

<sup>3</sup> Total acreage equals 3,150 acres, as opposed to 3,155 acres, due to small gaps in the land use category map used to compile this data.

Source: Table 2-2 of the LOHCP

## **b. Regulatory Setting**

Land use plans, policies, and ordinances relevant to the Plan Area are outlined and discussed below. The discussion is limited to applicable plans, policies, and regulations relevant to land use. Other applicable General Plan goals and policies, as well as applicable regional plans are discussed in other portions of Section 4 of this EIR. An analysis of the potential for the project to be inconsistent with any applicable habitat conservation plans or natural community conservation plans is provided in Section 4.2, *Biological Resources*, of this EIR, and is therefore not addressed further below.

## **County General Plan Land Use Element and Local Coastal Program – Estero Area Plan**

In San Luis Obispo County, the individual general plan elements provide broad policy guidance for land use decisions throughout the unincorporated County. To provide policies and programs for specific geographic sub-areas, the County has adopted 15 Area Plans, which serve as the General Plan Land Use Element for the given area. The Community of Los Osos is governed by the goals and policies set forth in the EAP. The EAP was adopted in 1980 and updated as the Local Coastal Program in 1988. The Elfin Forest Natural Preserve and Sweet Springs area were “whiteholed” in the California Coastal Commission process. These areas of Los Osos will remain with no land use designation until the County submits revisions to the LCP. The EAP was last updated in January 2009. The update focused on amendments to the Cayucos and rural portions of the planning area.

The EAP encompasses approximately 71.5 square miles, and the Estero planning area is consistent with the California Coastal Zone Boundary established by the California Coastal Act of 1976. In general, the Estero planning area extends from Point Estero to the north (approximately 16.5 miles north of Los Osos) to Point Buchon to the south (approximately 3.3 miles south of Los Osos).

A key objective of the EAP is to protect agriculture, open space, and sensitive resources, including ground water supplies, in part by focusing future development within the Los Osos, Morro Bay, and Cayucos urban reserve lines. The EAP identifies numerous SRAs within the Los Osos URL including:



Los Osos Dune Sands Habitat, Morro Bay kangaroo rat habitat, Los Osos Oaks State Reserve, Hazard Canyon and vicinity, and the pygmy oaks within the 86-acre Los Osos Oaks State Natural Reserve. The Sensitive Habitat program in the EAP calls for protection and management of sensitive habitat, including areas that support threatened and endangered species. Strategies for protecting land include encouraging acquisition of fee title or conservation easements by public agencies or conservation organizations and obtaining easements in connection with development projects.

#### *4.8.1.1 Los Osos Community Plan (Pending Approval)*

On September 12, 2019, the County released the Draft EIR for the Los Osos Community Plan (County 2019b). The latest (2015) Los Osos Community Plan establishes a vision for the future of Los Osos that guides growth and development through 2035 (County 2015a) and would replace the EAP. The Los Osos Community Plan Draft EIR states that development within the LOWRF service area, including in the prohibition zone, would be connected to the LOWRF, which is anticipated to have sufficient capacity for development in the service area through 2035. Areas of development outside the LOWRF service area would utilize project-specific on-site wastewater treatment systems in compliance with the RWQCB (County 2015a). Operation of the LOWRF satisfies the requirement of the County to provide a communitywide sewer system.

With regard to water supply within Los Osos, the Draft EIR for the Los Osos Community Plan (County 2019a) determined impacts to water supply would be potentially significant, but mitigable, because development under the Community Plan would be limited to the sustainable capacity of the Groundwater Basin through the County's Growth Management Ordinance (County Municipal Code Title 26) and additional review standards tied to the Updated Basin Plan for the Los Osos Groundwater Basin (County et al. 2015). Implementation of the water supply mitigation measure from the Draft EIR for the Los Osos Community Plan would satisfy the requirement of the County to provide adequate groundwater supply to the community.

As noted in the Los Osos Community Plan, the community wishes to maintain its "small-town" atmosphere; rather than expanding the URL and USL, the community is focusing on infill development. A development constraint within Los Osos is the availability of resources. New growth must only occur when the community has sufficient capacity in its water supply and sewage disposal systems. In addition, new development should not be allowed to create significant impacts to the community's road system, local schools, parks, or libraries.

Per the Draft EIR for the Los Osos Community Plan states that development under the Los Osos Community Plan could result in an additional 1,861 residential units and up to 364,000 square feet of commercial space, for a total of 8,182 residential units and 1,034,300 square feet of non-residential space (floor area) within the community within the 20-year plan horizon (by 2035).

In general, the Los Osos Community Plan envisions substantial decreases in land designated for residential and non-residential development, and corresponding increases in land designated for Open Space. Overall, the Los Osos Community Plan accommodates the potential for future residential and non-residential growth. Key findings in the Draft EIR for the Los Osos Community Plan include:

- **Substantial Decrease in Overall Residential Area.** With approval of the Los Osos Community Plan, there would be a net decrease in residential land use categories of nearly 419 acres, or about 15 percent less land area than is currently devoted to these categories.
- **Decrease in Overall Non-Residential Area.** There would be a 214-acre (or 14 percent) net decrease in non-residential (commercial and office) land use categories.

- **Substantial Increase in Open Space.** The proposed Los Osos Community Plan would include a 4,184-acre increase in Open Space within the plan area, which is over twice the amount currently designated for that purpose.

## **County Local Coastal Program Policy Document – Coastal Plan Policies**

The County has tools available to implement the LCP. The County adopted a Land Use Element and Land Use Ordinance system that has replaced typical general plan designations and zoning districts. The Coastal Plan Policies document states the policy commitment of the County to implement the mandates of the Coastal Act. This policy document is part of the LCP and the Land Use Element of the County General Plan.

### **4.8.2 Impact Analysis**

#### **a. Methodology and Significance Thresholds**

The assessment of potential land use impacts is based on the anticipated changes in land cover associated with implementation of the LOHCP. Changes in land cover were assessed by comparing existing land use types to those that would occur either directly or indirectly as a result of implementation of the LOHCP. Potential land use impacts also were considered in terms of how activities would be consistent with applicable land use plans and policies. Land use impacts for the project are assessed below based on existing and predicted future conditions.

The following criteria are based on Appendix G of the *CEQA Guidelines*. The effects of the project on land use are considered to be significant if the project would:

1. Be potentially inconsistent with a land use policy/regulation (e.g., general plan [County Land Use Element and Ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects;
2. Be potentially inconsistent with any habitat or community conservation plan;
3. Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project; and/or
4. Be potentially incompatible with surrounding land uses.

Please refer to Section 4.2, *Biological Resources*, for a discussion of the project's consistency with applicable HCPs and/or natural community conservation plans. This threshold is not discussed further in this section of the EIR.

## b. Project Impacts

<b>Threshold:</b>	Would the project be potentially inconsistent with a land use policy/regulation (e.g., general plan [County Land Use Element and Ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects?
<b>Threshold:</b>	Would the project be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project?

### IMPACT LU-1 THE PROJECT WOULD BE CONSISTENT WITH THE POLICIES AND REGULATIONS IN APPLICABLE LAND USE PLANS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Table 27 provides an analysis of potential consistency of the project, including development of the proposed LOHCP Preserve System, with applicable policies from the EAP and Coastal Plan Policies in the LCP.

**Table 27 Land Use Consistency Analysis**

Policy	LOHCP Consistency Analysis
<b>EAP Policies</b>	
<b>I. Area-wide Land Use, and Marine Resources Policy</b>	
<b>B. Development within Resource Capacities</b>	
1. Adequate public or private resource capacities shall be available to serve proposed development. Within urban areas, adequate water supply and sewage disposal capacities shall be available to serve both existing and potential development within the community before approval of new land divisions using those services. Land divisions requiring urban service extensions beyond the USL/URL shall be prohibited.	<b>Consistent.</b> The LOHCP Preserve System itself would not require any public services. ITP issuance would provide a streamlined permitting mechanism for covered activities within the Plan Area. Some of those covered activities (e.g., residential and commercial development) would receive wastewater services from the newly developed LOWRF, which provides new wastewater capacity for the area. However, future development projects requiring additional water supply cannot be approved until the adoption of the Basin Plan for the Los Osos Groundwater Basin which illustrates adequate water supply for project growth.
<b>II. Rural Land Use Policies</b>	
1. Maintain agriculture and the rural character of the area.	<b>Consistent.</b> The Plan Area does not include any lands zoned for agriculture. However, the Plan Area does contain parcels in agricultural use. These parcels are located in the PCA and could potentially be included in the LOHCP Preserve System. If included in the Preserve System, the rural character of these lands would be maintained.
2. Protect agriculture, open space, and sensitive resources.	<b>Consistent.</b> The LOHCP would preserve additional open space and preserve those species covered by the LOHCP. The Plan Area contains parcels in agricultural use that are currently zoned for residential use. These parcels could be restored to natural conditions and incorporated into the LOHCP Preserve System. Inclusion of these lands in the LOHCP Preserve System would maintain their open space quality and protect sensitive resources.

Policy	LOHCP Consistency Analysis
3. Maintain existing land use categories and agricultural uses in rural areas.	<b>Consistent.</b> The LOHCP does not designate any new land use categories in rural areas. Additionally, the LOHCP could result in the dedication of open space areas on the urban-rural boundary which could otherwise be developed. The Plan Area contains parcels in agricultural use that could be incorporated into the LOHCP Preserve System. However, this area is currently zoned for residential development; incorporation into the LOHCP Preserve System would maintain its rural character.
4. Avoid “leapfrog” development.	<b>Consistent.</b> The LOHCP would not result in any changes in zoning which would allow additional development beyond that already envisioned by the EAP or result in any direct development; therefore no leapfrog development would result from its implementation.
5. Protect ground water supplies for agriculture. Reject proposed general plan amendments that increase density or expand urban areas if resulting development would adversely affect ground water supplies, quality or recharge capability needed for agricultural uses.	<b>Consistent.</b> The LOHCP does not propose any amendments to the General Plan. As discussed under Section 4.7, <i>Hydrology and Water Quality</i> , mitigation measures have been incorporated to address potential direct impacts to groundwater resources from implementation of the LOHCP Preserve System. Development expedited by covered activities would undergo the appropriate level of project-specific environmental review, where impacts to water quality and/or quantity would be mitigated, as necessary. In addition, retirement of development potential on some currently undeveloped lands in the PCA could reduce future water consumption compared to what would occur if the properties were developed.
<b>A. Open Space</b>	
1. Work closely with other agencies to protect and manage sensitive plants and animals, sensitive habitat and other open space features, with emphasis on entire ecosystems.	<b>Consistent.</b> The LOHCP has been developed in coordination with the Service and CDFW. The LOHCP would protect the four covered species, provide habitat benefits, and result in the development of the LOHCP Preserve System, which would establish additional open space areas.
<b>B. Agriculture</b>	
1. Provide incentives for landowners to maintain land in productive agricultural use; require affirmative agricultural easements where appropriate.	<b>Consistent.</b> The Plan Area contains parcels currently being used for agriculture. These parcels are located along the eastern boundary of the Plan Area. However, these parcels are zoned for residential uses under the Los Osos URL Land Use Map and could be converted to residential use.
2. Maintain existing Agriculture land use categories in order to protect agricultural resources; do not convert agricultural land to other land use categories or revise planning area standards so as to enable more intensive non-agricultural development; assure that residential development is necessary to or maintains Agricultural land uses to the maximum extent feasible.	With regards to open space and greenbelt (an open area of land around a city where building is prohibited) creation, the LOHCP would contribute to the creation of a greenbelt system adjacent to the URL through the creation of the proposed LOHCP Preserve System. This would protect unique and sensitive habitat and provide corridors for wildlife movement.
3. (Los Osos Valley) Support creation of a greenbelt adjacent to the urban reserve line to clearly define the urban edge of Los Osos, prevent urban sprawl, discourage conversion of agricultural land, and protect unique and sensitive habitat, including wildlife corridors.	The Irish Hills are located outside of the Plan Area; views of these would not be impacted by the proposed LOHCP Preserve System. Because the LOHCP Preserve System would prevent development on Preserve lands, the system would not interfere with or block other scenic views. Other covered activities, such as residential, commercial, or other development expedited by the
4. (Los Osos Valley) Promote uses such as high value crop and animal specialties on existing small parcels to help maintain the agricultural integrity of the area.	

Policy	LOHCP Consistency Analysis
5. (Los Osos Valley) Protect scenic views, especially those of the hillsides and ridges of the Irish Hills as seen from Los Osos Valley Road without interfering with agricultural production.	LOHCP would undergo the appropriate level of environmental review, including analysis and mitigation of impacts to scenic views, as necessary.
<b>D. Recreation</b> 1. Promote development of recreational and visitor-serving uses, especially lower-cost opportunities, consistent with protection of agriculture and sensitive resources. 2. Locate new intensive recreational facilities and major visitor-serving commercial development within or immediately adjacent to urban areas on sites that do not contain prime agricultural land or significant sensitive habitat. 3. Limit uses to open space, recreation and visitor-serving-related uses.	<b>Consistent.</b> The LOHCP would provide opportunities for passive recreation as outlined in Section 2.2.8.4 of the LOHCP.
<b>E. Residential Suburban</b> 1. Do not move urban reserve lines to encompass existing Residential Suburban categories outside existing urban reserve lines. 2. Retain the existing land use categories, but do not expand them or increase allowable densities. 3. Direct suburban development to areas within the Los Osos urban reserve line that are suitable for development.	<b>Consistent.</b> The LOHCP would not alter the location of the URL or increase allowable development densities. Additionally, creation of the LOHCP Preserve System would direct future development away from the areas outside the URL because it is proposed that much of the new lands the LOHCP Preserve System would be established in this area.
County LCP Policy Document – Coastal Plan Policies	
Policies for Shoreline Access	
<b>Policy 1: Protection of Existing Access.</b> Public prescriptive rights may exist in certain areas of the county. Development shall not interfere with the public's right of access to the sea where acquired through historic use or legislative authorization. These rights shall be protected through public acquisition measures or through permit conditions which incorporate access measures into new development.	<b>Consistent.</b> Implementation of the LOHCP would not interfere with the public's right of access to the sea. The LOHCP would provide limited opportunities for passive recreation. One of the proposed covered activities of the LOHCP is the creation of 14 coastal access points in Los Osos by the County Parks and Recreation Division. In this instance, the LOHCP could expedite the provision of additional public access to the sea.
<b>Policy 4: Provision of Support Facilities and Improvements.</b> Facilities necessary for public access shall be provided. This may include parking areas, restroom facilities, picnic tables or other such improvements. The level of these facilities and improvements should be consistent with the existing and proposed intensity and level of access use and provisions for on-going maintenance. Requirements for coastal access and improvements are identified in the specific Planning Area Standards and the Land Use Ordinance for the coastal zone.	<b>Consistent.</b> The LOHCP would provide limited opportunities for passive recreation under the category of General Land Stewardship Management (Section 2.2.8.4 of the Plan). Included in this would be installation of limited recreation and support facilities, such as trails, signage, and restrooms. These would be installed and maintained where compatible with the LOHCP goals and objectives.

Policy	LOHCP Consistency Analysis
<b>Policies for Recreation and Visitor-Serving Facilities</b>	
<p><b>Policy 1: Recreation Opportunities.</b> Coastal recreational and visitor-serving facilities, especially lower-cost facilities, shall be protected, encouraged and where feasible provided by both public and private means. Removal or conversion of existing lower cost facilities and opportunities in areas designated with the “V” Visitor Serving Overlay in the Land Use Element shall be prohibited unless the use will be replaced by a facility offering comparable visitor serving or recreational opportunities. Visitor serving facilities include all lodging establishments included in the definition of Hotels, Motels in Chapter 7 of Framework for Planning of the Land Use Element and Local Coastal Program; provided that hotels and motels which are condominium or planned development projects may be approved only where specifically identified as an allowable use by planning area standards of the Land Use Element and Local Coastal Program. The new construction of non-visitor-serving or non-principally permitted uses shall only be permitted if it can be found that they would not prejudice the provision of adequate visitor-serving facilities to meet the foreseeable demand over the next 20 years.</p>	<p><b>Consistent.</b> As stated previously, the LOHCP would provide limited opportunities for passive recreation and includes installation of recreation facilities where consistent with the LOHCP goals and objectives.</p>
<b>Policies for Environmentally Sensitive Habitats</b>	
<p><b>Policy 1: Land Uses Within or Adjacent to Environmentally Sensitive Habitats.</b> New development within or adjacent to locations of environmentally sensitive habitats (within 100 feet unless sites further removed would significantly disrupt the habitat) shall not significantly disrupt the resource. Within an existing resource, only those uses dependent on such resources shall be allowed within the area.</p>	<p><b>Consistent.</b> The LOHCP would protect, maintain and restore habitat for the covered species. The LOHCP would result in the development of the LOHCP Preserve System which would protect sensitive habitats. As discussed in Section 4.2, <i>Biological Resources</i>, the LOHCP is consistent with the Coastal Act as it contains avoidance, minimization, and mitigation measures that protect the covered species and certain additional sensitive species and their habitats, or Environmentally Sensitive Habitat Areas.</p>
<p><b>Policy 5: Supporting Greenbelt Formation and Maintenance.</b> The County shall continue programs and policies that support greenbelt and open space areas on the urban fringe of coastal communities. In conjunction with the development of Habitat Conservation Plans (HCPs), certain greenbelt areas may be suitable as habitat mitigation banks to help offset impacts from development in adjacent urban areas. Other areas may be best utilized for open space, agriculture, or public recreation. Mitigation banking shall be further evaluated as a potential implementation mechanism.</p>	<p><b>Consistent.</b> The LOHCP would result in the development of the LOHCP Preserve System which would contribute to the formation of the greenbelt and open spaces areas surrounding the community of Los Osos.</p>
<p><b>Policy 6: Off-Site Mitigation Bank for Urban Development.</b> The County shall participate in creating a program (e.g., through the update of area plans) that would allow development to occur on sites in urban areas that contain sensitive species habitat but do not represent long-term viable habitat in exchange for participation in an off-site mitigation program.</p>	<p><b>Consistent.</b> The LOHCP is a programmatic plan to protect, conserve, and restore the covered species. Implementation of the LOHCP would allow for development to occur in urban areas through off-site mitigation via creation of the LOHCP Preserve System, which would provide long-term viable habitat to sensitive species.</p>

Policy	LOHCP Consistency Analysis
<p><b>Policy 10: Open Space Easements and Williamson Act Contracts.</b> San Luis Obispo County shall continue to encourage the use of open space easements or Williamson Act contracts to ensure preservation of coastal wetlands. The County will develop guidelines to facilitate use of open space easements to include requirements for length of dedication (i.e., perpetuity or 10 years), appropriate management responsibility, etc.</p>	<p><b>Consistent.</b> The LOHCP would result in the creation of the LOHCP Preserve System for preservation of the covered species listed in the LOHCP. The 386-acre LOHCP Preserve System would be established in the 1,510-acre PCA (see Figure 13) and could include areas with coastal wetlands. More information on the design of the LOHCP Preserve System can be found in Section 2, <i>Project Description</i>. No lands in the Plan Area are currently under Williamson Act contract.</p>
<p><b>Policy 20: Coastal Streams and Riparian Vegetation.</b> Coastal streams and adjoining riparian vegetation are environmentally sensitive habitat areas and the natural hydrological system and ecological function of coastal streams shall be protected and preserved.</p>	<p><b>Consistent.</b> The LOHCP would result in ongoing maintenance and operation of the 386-acre LOHCP Preserve System, 107.5 acres of which would be comprised of newly protected land in the PCA for preservation of the covered species listed in the LOHCP. As noted previously, the exact configuration of the LOHCP Preserve System is not known at this time, as it would depend on cooperation with owners and managers of existing protected lands and availability of properties to be newly protected.</p>
<p><b>Policy 29: Protection of Terrestrial Habitats.</b> Designated plant and wildlife habitats are environmentally sensitive habitat areas and emphasis for protection should be placed on the entire ecological community. Only uses dependent on the resource shall be permitted within the identified sensitive habitat portion of the site.</p> <p>Development adjacent to environmentally sensitive habitat areas and holdings of the state Department of Parks and Recreation shall be sited and designed to prevent impacts that would significantly degrade such areas and shall be compatible with the continuance of such habitat areas.</p>	<p><b>Consistent.</b> The LOHCP would result in the ongoing maintenance and operation of the LOHCP Preserve System, some of which would be comprised of newly protected land, for preservation of the covered species and their habitats.</p>
<p><b>Policy 30: Protection of Native Vegetation.</b> Native trees and plant cover shall be protected wherever possible. Native plants shall be used where vegetation is removed.</p>	<p><b>Consistent.</b> The LOHCP would result in the protection of two native plant species in the Plan Area, the Morro manzanita and Indian Knob mountainbalm, which are covered species under the LOHCP. Additionally, restoration of the 90 acres of degraded habitat proposed under the LOHCP would result in the establishment of other locally native plant species in the Plan Area.</p>
<p><b>Policy 32: Public Acquisition.</b> The California Department of Parks and Recreation, Department of Fish and Game and other public and private organizations should continue to acquire or accept offers-to-dedicate for sensitive resource areas wherever possible.</p>	<p><b>Consistent.</b> The LOHCP would result in up to 107.5 acres of newly dedicated land in the LOHCP Preserve System designed to support the covered species.</p>
<p><b>Policy 33: Agriculture and Open Space Preserves.</b> The County should encourage the uses of Agriculture Preserves or Open Space Preserves to protect sensitive habitat areas where public acquisition is not feasible.</p>	<p><b>Consistent.</b> The LOHCP would result in the creation of the LOHCP Preserve System, which would support the covered species. The LOHCP Preserve System would include existing protected lands such as state parks and ecological reserves.</p>

Policy	LOHCP Consistency Analysis
<p><b>Policy 35: Protection of Vegetation.</b> Vegetation which is rare or endangered or serves as cover for endangered wildlife shall be protected against any significant disruption of habitat value. All development shall be designed to disturb the minimum amount possible of wildlife or plant habitat.</p>	<p><b>Consistent.</b> The LOHCP would result in the creation of the LOHCP Preserve System for preservation of the covered species, which include the federally listed as endangered Indian Knob mountainbalm and the federally listed as threatened Morro manzanita.</p>
<b>Policies for Agriculture</b>	
<p><b>Policy 1: Maintaining Agricultural Lands.</b> Prime agricultural land shall be maintained, in or available for, agricultural production unless: 1) agricultural use is already severely limited by conflicts with urban uses; or 2) adequate public services are available to serve the expanded urban uses, and the conversion would preserve prime agricultural land or would complete a logical and viable neighborhood, thus contributing to the establishment of a stable urban/rural boundary; and 3) development on converted agricultural land will not diminish the productivity of adjacent prime agricultural land.</p> <p>Other lands (non-prime) suitable for agriculture shall be maintained in or available for agricultural production unless: 1) continued or renewed agricultural use is not feasible; or 2) conversion would preserve prime agricultural land or concentrate urban development within or contiguous to existing urban areas which have adequate public services to serve additional development; and 3) the permitted conversion will not adversely affect surrounding agricultural uses.</p> <p>All prime agricultural lands and other (non-prime) lands suitable for agriculture are designated in the land use element as Agriculture unless agricultural use is already limited by conflicts with urban uses.</p>	<p><b>Consistent.</b> The Plan Area includes parcels which are classified as Grazing Lands and Farmland of Local Potential by the California Department of Conservation, Division of Land Resource Protection (see Figure 13). However, the Plan Area does not include any lands classified as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, nor does it include lands zoned for agricultural use.</p> <p>Many of the areas classified as Grazing Lands or Farmland of Local Potential are not currently in agricultural use, as they are already part of the Morro Bay State Park and Los Osos Oaks State Natural Reserve. However, the LOHCP Preserve System could incorporate lands which are not already protected and classified as Grazing Land into the LOHCP Preserve System. These lands are generally located on the eastern boundary of the Plan Area, north of Los Osos Valley Road and outside the USL. Portions of this area were actively cultivated in the last 10 years.</p> <p>Conversion of this Grazing Land for habitat conservation would not adversely impact the adjacent Prime Farmland, Farmland of Statewide Importance or Unique Farmland and would provide a buffer between urban development and classified agricultural soils.</p> <p>In addition, any lands acquired to be placed in the LOHCP Preserve System that are adjacent to active agricultural lands outside of the Plan Area would minimize the potential for conflict by minimizing the addition and/or conflicting location of new permanent sensitive receptors (i.e., residences).</p>
<b>Policies for Visual And Scenic Resources</b>	
<p><b>Policy 1: Protection of Visual and Scenic Resources.</b> Unique and attractive features of the landscape, including but not limited to unusual landforms, scenic vistas and sensitive habitats are to be preserved protected, and in visually degraded areas restored where feasible.</p>	<p><b>Consistent.</b> The LOHCP would preserve/restore sensitive habitats, and in some instances may change the visual character of lands in the LOHCP Preserve System if restoration activities require removal of certain types of vegetation. This could alter the existing visual character of scenic vistas in the area, through the change in vegetation type, but is unlikely to degrade them substantially as creation of the LOHCP Preserve System would limit development in those areas.</p> <p>Increased development in the Plan Area could result in a visual change of developed and redeveloped areas. However, all development and redevelopment would be required to comply with all land use and development policies included in the Municipal Code and the EAP. However, as all existing height and development restrictions would continue to apply, development would be unlikely to greatly alter views.</p>



Covered activities could be expedited by the LOHCP through the streamlined FESA permitting process. Covered activities range from residential and commercial development to capital improvement projects that include, but are not limited to, bridge projects and utilities projects. These projects would be analyzed for consistency with all applicable land use plans, policies, and regulations. In addition, the ITP itself would not facilitate or result in any changes to land use or zoning designations, although implementation of the LOHCP Preserve System could result in ineligibility for development on some parcels in the Plan Area. Impacts would be less than significant.

<b>Threshold:</b> Would the project be potentially incompatible with surrounding land uses?
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**IMPACT LU-2 THE PROJECT WOULD NOT BE INCOMPATIBLE WITH SURROUNDING LAND USES. NO IMPACTS WOULD OCCUR.**

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Implementation of the LOHCP conservation program would result in protection, restoration, management, and monitoring of habitat in the LOHCP Preserve System. To provide the greatest long-term benefit for the covered species, the future preserve would include 1,520 acres of land in the Plan Area. Located on the perimeter of the Plan Area in an area known locally as the “greenbelt,” these areas feature large blocks of relatively intact habitat that have been identified as important to the recovery of three of the covered species (Service 1998, 1999). The exact location of the parcels that would comprise the LOHCP Preserve System is not currently known, as much depends upon cooperation with owners and managers of existing protected lands and properties that could be acquired for inclusion in the preserve. It is estimated, however, that the LOHCP Preserve System would be comprised of approximately 386 acres, all of which would be located in the Plan Area.

Certain parcels with residential zoning have the potential to be included in the LOHCP Preserve System. The primary areas outside the USL that have some level of existing single-family residential development include: parcels located on the southern border of the Plan Area adjacent to Montaña de Oro State Park and outside the USL, and undeveloped parcels outside the USL Located north of Los Osos Valley Road. These areas are primarily designated as Residential Suburban in the current EAP.

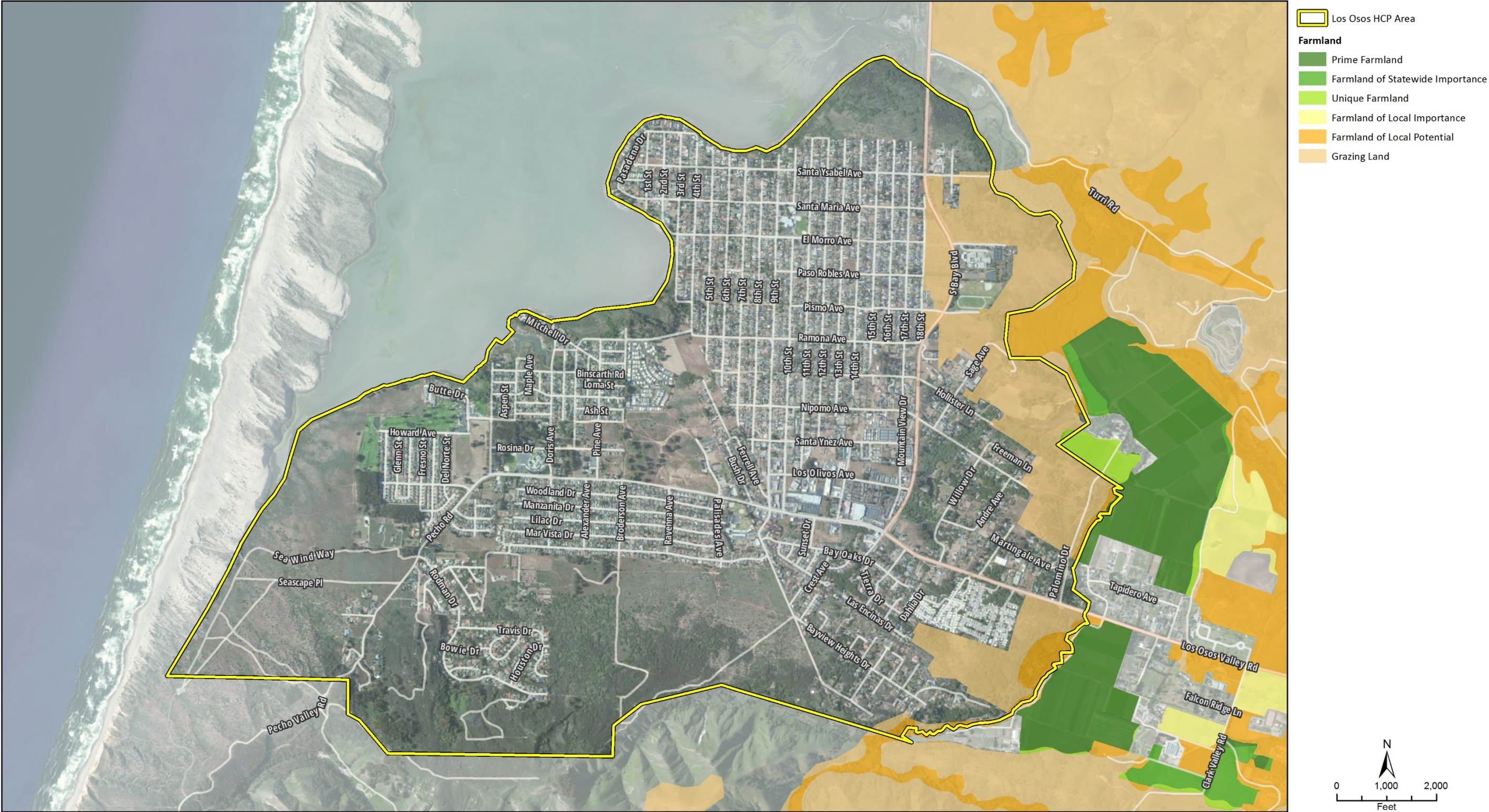
As indicated in Table 27, implementation of the project would be consistent with currently adopted land use policies in the EAP and the Coastal Plan Policies in the LCP. The LOHCP itself would not directly generate any new development that would be inconsistent with adopted plans, policies, regulations, or surrounding land uses. Covered activities expedited by the LOHCP would be required to comply with applicable local plans, policies, and regulations. Additionally, the LOHCP provides for the protection of and habitat improvements for two covered animal species and two covered plant species, which is consistent with numerous policies identified in Table 27. Covered activities, as well as establishment and management of the LOHCP Preserve System, would be compatible with surrounding land uses. The LOHCP would not potentially result in the division of an established community because future development expedited as covered activities under the LOHCP would remain consistent with the EAP. Therefore, no impact would occur.

### **c. Cumulative Impact**

A cumulative impact would occur if covered activities expedited by the project, including conservation activities and residential, commercial, and public projects proposed for development in and around the Plan Area, in conjunction with County-wide growth, would result in development



Figure 13 Farmland in the Plan Area and its Vicinity



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which is inconsistent with applicable plans and policies or that would divide an established community. As discussed above, the project would be consistent with the existing land use and policy framework established by the EAP and the LCP Policy Document. The LOHCP and the LOHCP Preserve System are potentially compatible with surrounding land uses because they would direct future development into the USL by maintaining the existing buffer between agricultural uses and residential/commercial development while protecting open space and sensitive resources.

The project would provide a streamlined permitting process for residential, commercial and capital development projects, infrastructure, and facilities maintenance activities (i.e., the covered activities) but would not increase the development potential on any property beyond that currently envisioned in the EAP. Therefore, it is anticipated that cumulative impacts associated with land use and planning would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

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## 4.9 Noise

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### 4.9.1 Setting

#### a. Overview of Sound Measurement

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, Leq is summed over a one-hour period.

Sound pressure is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1 to 2 dBA changes generally are not perceived. For reference, quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while noise levels along arterial streets are generally in the 50 to 60+ dBA range. Normal conversational levels are in the 60 to 65 dBA range, and ambient noise levels greater than that can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed (Ldn). Ldn is the time average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 p.m. and 7:00 a.m. to account for the general increased sensitivity of people to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is identical to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 p.m. to 10:00 p.m.). Thus, both the Ldn and CNEL noise measures represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

#### b. Groundborne Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as

particle velocity in inches per second and is commonly expressed as vibration decibels (VdB). This definition and more background information regarding groundborne vibration are in the Federal Transit Authority report *Transit Noise and Vibration Impact Assessment* (FTA 2018).

The background vibration velocity level in residential areas is typically around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest for groundborne vibration is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings (FTA 2018).

### **c. Existing Conditions**

The EAP FEIR was certified in December 2003. Since the EAP land use designations for the community of Los Osos were adopted by the Board of Supervisors in 2004, development in Los Osos has been limited due to the discharge moratorium prohibiting any new net increase in wastewater discharge. The moratorium limited the County from issuing permits for new sources of onsite sewage discharge or increases in the volume from existing sources in a 1,584-acre service area in the center of Los Osos and in the Plan Area. As a result, it halted most new construction or major expansion of existing development until 2017, when the new wastewater system (sewer) became operational. Therefore, information from the EAP FEIR continues to be accurate and informs the environmental setting and analysis herein.

As described in the EAP FEIR, roadways are the primary noise sources in the largely rural and suburban area of Los Osos. Stationary noise sources include construction and commercial/industrial activity. These noise sources are described in more detail below. In the EAP FEIR, existing roadway sources of noise in the community of Los Osos and surrounding vicinity were determined based on information in the County General Plan Noise Element (County 1992). The County has not issued any updates to the Noise Element since 1992.

### **Highway and Roadway Noise**

Roadway noise levels, as reported in the General Plan Noise Element, for the Plan Area and the immediate vicinity are shown in Table 28.

**Table 28 Distances from Roadways to Different Noise Contours**

Description	Sub-Area	Existing Decibel Contour Line from Centerline of Road (feet)		
		60 dB	65 dB	70 dB
Los Osos Valley Road San Luis Obispo Planning Boundary to Sombrero Drive	Rural Estero	293	136	63
Los Osos Valley Road Sombrero Drive to South Bay Boulevard	Rural Estero	252	117	54
Los Osos Valley Road South Bay Boulevard to 9 <sup>th</sup> Street	Los Osos	158	74	34
Los Osos Valley Road 9 <sup>th</sup> Street to Pecho Road	Los Osos	106	49	23
Santa Ysabel Avenue Second Street to South Bay Boulevard	Los Osos	95	44	20
South Bay Boulevard Los Osos Valley Road to Urban Reserves Line	Los Osos	223	104	48
El Morro Avenue 3 <sup>rd</sup> Street to 11 <sup>th</sup> Street	Los Osos	36	17	8
7 <sup>th</sup> Street Ramona Avenue to Santa Ysabel Avenue	Los Osos	52	24	11
Ramona Avenue Pine Street to 11 <sup>th</sup> Street	Los Osos	46	21	10
Pine Avenue Ramona Avenue to Los Osos Valley Road	Los Osos	47	22	10
9 <sup>th</sup> Street Ramona Avenue to Los Osos Valley Road	Los Osos	56	26	12
Santa Inez Avenue 9 <sup>th</sup> Street to 11 <sup>th</sup> Street	Los Osos	59	27	13
10 <sup>th</sup> Street Los Osos Valley Road to Nipomo Avenue	Los Osos	59	27	19
Source: County 1992, as cited in Table 5.3-1 of the EAP FEIR (County 2003)				

## Construction Noise

Due to the temporary and intermittent nature of construction noise it is not possible to characterize construction noise either by location or intensity. However, construction noise typically ranges from 70 to 95 dBA at 50 feet from the noise source, depending on the amount and types of equipment used (Federal Transit Administration 2006).

## Commercial Noise

The Noise Element of the County General Plan (County 1992) does not identify any stationary commercial or industrial noise sources in the Plan Area that exceed adopted thresholds.

## Sensitive Noise Receptors

The Noise Element of the County General Plan (County 1992) identifies various land use types that are considered noise sensitive, including residences, schools, health care services, churches, public



assembly facilities, libraries, museums, hotels and motels, outdoor recreation areas, and offices. The Plan Area contains all of these uses in various locations.

#### **d. Regulatory Setting**

##### **County General Plan Noise Element, Part I**

The County's General Plan Noise Element contains goals, policies, and implementation measures for the compatibility of sensitive land uses with noise. The purpose of these goals, policies and implementation measures is to reduce the various potential effects of noise on people. Relevant policies are listed below.

##### *Transportation Noise Sources*

- **Policy 3.3.2.** New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or future levels of noise from transportation noise sources which exceed 60 dBA Ldn or CNEL (70 dBA Ldn or CNEL for outdoor sports and recreation) unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to or below the levels specific for the given land uses in (Table 29).
- **Policy 3.3.3.** Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in (Table 29) within the outdoor activity areas and interior spaces of existing noise-sensitive land uses.

##### *Stationary Noise Sources*

- **Policy 3.3.4.** New development of noise-sensitive land uses shall not be permitted where the noise level due to existing stationary noise sources will exceed (a daytime Leq of 50 dBA and a nighttime Leq of 45 dBA). This policy applies unless effective noise mitigation measures have been incorporated into the design of the development to reduce noise exposure to or below the level specified in (Table 30).
- **Policy 3.3.5.** Noise created by new proposed stationary noise sources or existing stationary noise sources which undergo modifications that may increase noise levels shall be mitigated as follows and shall be the responsibility of the developer of the stationary noise source.
  - a. Noise from agricultural operations conducted in accordance with accepted standards and practices is not required to be mitigated.
  - b. Noise levels shall be reduced to or below the noise level standards in (Table 30) where the stationary noise source will expose an existing noise-sensitive land use (which is listed in the Land Use Element as an allowable use within its existing land use category) to noise levels which exceed the standards in (Table 30). When the affected noise-sensitive land use is Outdoor Sports and Recreation, the noise level standards in (Table 30) shall be increased by 10 dB.

Where the noise source is one of the following electrical substations which is not modified so as to increase noise levels, the noise standards shall instead be 50 dB between 10 p.m. and 7 a.m. and 55 dB between 7 a.m. and 10 p.m., determined at the property line of the receiving land use: the Cholame, San Miguel, Templeton, Cambria, Perry, Cayucos, Baywood, Highway 1 between Morro Bay and the California Men's Colony, Goldtree, Foothill, San Luis Obispo, Oceano, Mesa, Union Oil, Callender, and Mustang electrical substations.

- c. Noise levels shall be reduced to or below [a daytime Leq of 50 dBA and nighttime Leq of 45 dBA] where the stationary noise source will expose vacant land in the Agriculture, Rural Lands, Residential Rural, Residential Suburban, Residential Single-Family, Residential Multi-Family, Recreation, Office and Professional and Commercial Retail land use categories to noise levels in excess of [these standards]... This policy may be waived when the Director of Planning and Building determines that such vacant land is not likely to be developed with a noise-sensitive land use.”

The County’s General Plan Noise Element also contains guidance about compatible land uses. Figure 14 shows the ranges of noise exposure from transportation noise sources which are considered acceptable, conditionally acceptable, or unacceptable for the development of different land uses. The County uses this table to determine whether mitigation is needed for development of land uses near major transportation noise sources.

**Figure 14 Acceptable Noise Levels Based on Land Use**

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE – Ldn or CNEL (dB)							
	50	55	60	65	70	75	80	
Residential (except temp. dwellings & Res acc. Uses), Pub Assembly & Entertainment (except meeting halls)	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Bed and Breakfast Facilities, Hotels and Motels	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Schools – Preschool to Secondary, College and University, Specialized Education and Training; Libraries and Museums, Hospitals, Nursing and Personal Care, Meeting Halls, Churches	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Outdoor Sports and Recreation	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Offices	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

Acceptable	(no mitigation required). Specified land use is satisfactory.
Conditionally Acceptable	(mitigation required). Use should be permitted only after careful study and inclusion of mitigation measures as needed to satisfy policies of the Noise Element.
Unacceptable	(mitigation may not be feasible). Development is usually not feasible in accordance with the goals of the Noise Element.

Source: San Luis Obispo County  
General Plan (1992) - Figure 3-1

In addition to the policies listed above, maximum allowable noise levels in areas where sensitive noise receptors exist are restricted by the Noise Element to below 70 dBA Ldn for outdoor sports and recreation areas and 60 dBA Ldn outdoors for all other land use types (Table 29).

**Table 29 Maximum Allowable Noise Exposure: Transportation Noise Sources**

Land Use	Outdoor Activity Areas <sup>1</sup>	Interior Spaces	
	Ldn/CNEL dB	Ldn/CNEL dB	Leq dB <sup>2</sup>
Residences, Hotels and Motels, Hospitals, and Nursing and Personal Care	60 <sup>3</sup>	45	–
Public Assembly and Entertainment	–	–	35
Offices	60 <sup>3</sup>	–	45
Churches, Meeting Halls, Schools, Libraries, and Museums	–	–	45
Outdoor Sport and Recreation	70	–	–

<sup>1</sup> Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

<sup>2</sup> As determined for a typical worst-case hour during periods of use.

<sup>3</sup> For other than residential uses, where an outdoor activity area is not proposed, the standard shall not apply. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL, or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 60 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: Table 3-1, County of San Luis Obispo General Plan Noise Element, Part I, 1992

The Noise Element also identifies maximum allowable noise levels from stationary noise sources for existing noise-sensitive receptors, as shown in Table 30.

**Table 30 Maximum Allowable Noise Exposure: Stationary Noise Sources<sup>1</sup>**

	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime <sup>2</sup> (10:00 p.m. to 7:00 a.m.)
Hourly Leq, dBA <sup>3</sup>	50	45
Maximum Level, dBA <sup>3</sup>	70	65
Maximum Level, dBA – Impulsive Noise <sup>4</sup>	65	60

<sup>1</sup> As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.

<sup>2</sup> Applies only where the receiving land use operates or is occupied during nighttime hours.

<sup>3</sup> Sound level measurements shall be made with slow meter response.

<sup>4</sup> Sound level measurements shall be made with fast meter response.

Source: Table 3-2, County of San Luis Obispo General Plan Noise Element, Part I, 1992

## **County Coastal Zone Land Use Ordinance, Title 23 of the County Code**

The noise standards specified in Section 23.06.044 of the County Code (Title 23, Coastal Zone Land Use Ordinance, 2014) limit exterior noise levels affecting noise-sensitive land uses to the same limits specified in Figure 14. However, Section 23.06.042 of this ordinance exempts noise sources associated with construction, provided such activities do not take place before 7:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday. In addition, traffic on public roadways, railroad line operations, aircraft in flight, and any other activity to the extent regulation thereof has been preempted by state or federal law is also exempt.

Title 23 of the County Code also provides vibration standards. Per Section 23.06.060, any land use conducted in or within one-half mile of an urban or village reserve shall be operated to not produce detrimental earth-borne vibrations perceptible at or beyond the boundary of the industrial land use producing the vibration source. Exceptions to this standard include operations from construction, the demolition of structures, surface mining activities or geologic exploration between 7:00 a.m. and 9:00 p.m. and vibrations from moving sources such as trucks and railroads.

### **4.9.2 Impact Analysis**

#### **a. Methodology and Significance Thresholds**

Existing noise levels in the study area are assumed to be similar to those identified in the County General Plan Noise Element, Part I (County 1992) noise contours (Table 28), since new development in the study area has been minimal since the contours were developed in 1992. Future predicted noise levels in the study area are based on information in the EAP FEIR. Noise impacts for the project are assessed based on existing and predicted future conditions and comparison with the regulatory framework for noise which applies to the study area.

Review of projects as part of the County permitting process ensures implementation of the aforementioned policies. A significant increase is defined as an audible increase, or three or more decibels.

Based on the issue identification in the County of San Luis Obispo Initial Study Environmental Checklist, a project may have a significant environmental effect if it would:

1. Expose people to noise levels that exceed the County Noise Element thresholds;
2. Generate permanent increases in the ambient noise levels in the project vicinity;
3. Cause a temporary or periodic increase in ambient noise in the project vicinity;
4. Expose people to severe noise or vibration; and
5. If located within the Airport Review designation or adjacent to a private airstrip, expose people residing or working in the project area to severe noise levels.

Noise impacts of any development project are considered significant if noise resulting from construction or operation occurs beyond the specified level and/or time frame set by the County, as described in Section 4.9.1.2.

The Plan Area is not located within an Airport Review designation or the vicinity of a private airstrip. Therefore, the associated checklist item is not applicable to the project and is not discussed further in this document.

## b. Project Impacts

<b>Threshold:</b>	Would the project expose people to noise levels that exceed the County Noise Element Thresholds?
<b>Threshold:</b>	Would the project generate permanent increases in the ambient noise levels in the project vicinity?
<b>Threshold:</b>	Would the project cause a temporary or periodic increase in ambient noise in the project vicinity?

**IMPACT N-1 CONSTRUCTION OF COVERED ACTIVITIES WOULD RESULT IN A TEMPORARY INCREASE IN AMBIENT NOISE LEVELS. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.**

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### Construction-Related Noise

The project would result in temporary noise impacts on sensitive receptors resulting from the use of heavy equipment during construction of covered activities, including expedited development in the Plan Area. The noise impacts associated with a specific covered activity would depend on the type of activity, the types and number of pieces of equipment in use, the noise level generated by the various pieces of equipment, the duration of construction, the distance between the construction activities and any noise-sensitive receivers, and possible shielding effects that might result from local topography, vegetation, or buildings. Information regarding the range of covered activities is known, but individual project-specific information is not known at this time. However, noise levels for the construction of covered activities are expected to be similar to noise levels for other similar construction projects. Construction noise generation would be intermittent and short-term in nature.

Construction activities associated with implementation of the LOHCP conservation program (i.e., protection, restoration, management, and monitoring activities) would also generate temporary construction noise, as such activities are covered activities under the LOHCP. These activities would generally be confined in the LOHCP Preserve System. As with other covered activities, the potential for temporary noise impacts on sensitive receptors to occur would depend on the location of heavy equipment use (i.e., proximity to identified sensitive receptors), and specific impacts cannot be determined at this time. However, for the purposes of this analysis, it is assumed that the conservation program activities could occur at any location in the identified PCA. In many parts of the Plan Area, residential and other sensitive receptors are located in proximity to the areas identified for development. As a result, it is likely that sensitive receptors located along the boundary of the Plan Area could be temporarily exposed to noise levels exceeding the County's daytime and nighttime stationary noise standards (50 dBA and 45 dBA, respectively) should heavy duty equipment be used for conservation program activities.

Construction activities are required to comply with the County Coastal Zone Land Use Ordinance (Title 23 of the County Code), which requires that construction occur only between 7:00 a.m. and 9:00 p.m. Monday through Friday and 8:00 a.m. and 5:00 p.m. Saturday and Sunday. Compliance with local noise standards would ensure that most covered activities under the LOHCP would not substantially expose noise-sensitive receptors to noise levels in excess of standards established by the County. However, some construction activities (in particular, those that require multiple pieces of heavy equipment, those that take place outside of approved construction hours, or those that

occur in close proximity to sensitive residential, school, hospital, or recreational land uses would have the potential to generate noise in excess of local standards, which could result in a potentially significant impact.

## **Operational Noise**

The project identifies various conservation actions and conditions associated with long-term management and monitoring of the Preserve System that have the potential to generate what could be characterized as intermittent noise. For example, pedestrian and/or vehicle travel throughout the LOHCP Preserve System would occur during implementation of various monitoring requirements and performance of ongoing management. Given the nature and extent of habitat monitoring and management activities, it is expected that such impacts would be dispersed throughout the 386-acre LOHCP Preserve System and over the 25-year permit term and would not result in a substantial temporary increase in ambient noise levels. Limited recreation is currently allowed in the existing protected lands that would be included in the LOHCP Preserve System. Limited passive recreation on any new preserves could result in additional periodic noise in the LOHCP Preserve System, but such activities are not inherently large generators of noise. Increased recreational activity in the LOHCP Preserve System would not result in a substantial source of new noise or vibration given the type of recreation that could be allowed in some areas (i.e., hiking, walking, etc.). Because no lighting of these trails is proposed in the LOHCP, use of these trails would primarily be confined to daylight hours. While it is unlikely that trail users would be present on the trail system during nighttime hours, recreational trail users have the potential to generate noise in the LOHCP Preserve System at these times.

## **Mitigation Measures**

Mitigation measure MM N-1 would reduce potential temporary noise impacts associated with construction of covered activities, and mitigation measure MM N-2 would reduce noise impacts associated with nighttime use of passive recreational amenities in the LOHCP Preserve System.

### *N-1 Project-Specific Noise Studies*

All construction work proposed outside of the County's construction noise exemption period (7:00 a.m. to 9:00 p.m. Monday through Friday and 8:00 a.m. and 5:00 p.m. on Saturday or Sunday) shall be accompanied by a noise study that includes measures to achieve the daytime and/or nighttime threshold for stationary equipment (50 dBA Leq during the day and 45 dBA Leq at night). Measures used to achieve the daytime and nighttime thresholds could include, but are not limited to, the following:

- Stationary construction equipment that generates noise that exceeds the thresholds at the boundaries of adjacent sensitive receptors shall be baffled to reduce noise and vibration levels
- Construction equipment powered by internal combustion engines shall be properly muffled and maintained
- Unnecessary idling of internal combustion engines shall be prohibited
- Placement of stationary construction equipment such that emitted noise is directed away from sensitive noise receivers
- Use of sound blankets on noise generating equipment
- Construction of temporary sound barriers between the construction site and nearby sensitive receptors

- Maximize the distance between construction equipment staging and parking areas and occupied residential areas
- Use of electric air compressors and similar power tools, rather than diesel equipment
- Placement of staging areas onsite to minimize offsite transportation of heavy construction equipment
- Siting of staging areas to maximize the distance between activity and sensitive receptors (neighboring residences)

The required noise study shall include, to the satisfaction of the County Department of Planning and Development, a Noise Mitigation and Monitoring Program, and demonstrating how the required thresholds would be achieved.

#### *N-2 Trail Gates and Signage*

Where trails cross through fences or barriers to remain, install a gate at these points in the Preserve System. The IE shall be responsible for ensuring that the gates are closed and locked during nighttime hours. In addition, all-weather signage shall be installed at trailheads to alert the user when trails are closed.

### **Significance After Mitigation**

Implementation of mitigation measures MM N-1 and MM N-2 would reduce potential impacts associated with noise to less than significant levels.

<b>Threshold:</b> Would the project expose people to severe noise or vibration?
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**IMPACT N-2 CONSTRUCTION ACTIVITIES ARE NOT EXPECTED TO CAUSE SUBSTANTIAL NOISE OR VIBRATION EFFECTS OUTSIDE OF THE PLAN AREA. IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

No equipment resulting in substantial vibration (e.g., pile driving) is anticipated to be required during conservation program activities. Other covered activities, such as development projects expedited by the LOHCP, would be subject to the appropriate level of environmental review, and project-specific mitigation measures would be applied to minimize potential groundborne vibration impacts, as necessary. Therefore, the project would result in less than significant impacts.

### **c. Cumulative Impacts**

A cumulative noise impact would occur as a result of conservation activities in the Plan Area, as well as activities associated with construction of residential, public, and commercial development as allowed under the EAP and other County-wide growth. New development in the County is required to undergo a project-specific analysis of potential noise effects, as applicable. The analysis would provide recommendations to reduce noise impacts to below local noise standards during construction and operation of individual projects. New development associated with the covered activities, including preservation, restoration, and management of habitat in the LOHCP Preserve System and installation and maintenance of new amenities in the LOHCP Preserve System, combined with county-wide growth occurring as a result of implementation of other adopted area plans, would incrementally expose additional people to increased noise levels. New development would be subject to County noise standards.

The potential long-term increase in noise in the Plan Area (as well as the short-term impact) would be similar to those assessed in the EAP FEIR. The EAP FEIR determined that noise impacts associated with buildout under the EAP would be less than significant with mitigation incorporated. In the Los Osos area more specifically, the EAP FEIR analyzed potential traffic-related noise increases associated with buildout and determined impacts to be less than significant. Given that development under the EAP would not result in a significant noise impact and restrictions on development would be applied in the event that anticipated noise levels would exceed local standards, it is anticipated that cumulative impacts associated with noise would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.



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## 4.10 Public Services

### 4.10.1 Setting

#### a. Existing Public Services

##### Fire Protection

CAL FIRE, a state agency, functions as the County Fire Department under contract with the San Luis Obispo County Fire Department. This arrangement has been in place since 1930. The Plan Area is included in CAL FIRE/County Fire Department's Planning Area 1 and is served by Battalion 1 of CAL FIRE. Station 15, South Bay is located in the Plan Area at 2315 Bayview Heights Drive, with a permanent staff including one battalion chief, three fire captain paramedics, and four engineers/paramedics (County 2019a).

##### Police Protection

Police protection services in the Los Osos area are provided by the San Luis Obispo County Sheriff's Department. The Department includes three patrol stations: a North Station, South Station, and Coast Station. Los Osos is served by the Coast Station, which patrols from San Simeon south to Avila Beach. The station is centrally located in Los Osos at 2099 10<sup>th</sup> Street.

##### Schools

Public school services in the project area are provided by the San Luis Coastal Unified School District (SLCUSD). Schools serving the Plan Area include Baywood Elementary School, Monarch Grove Elementary School, and Los Osos Middle School in Los Osos, as well as Morro Bay High School in nearby Morro Bay. The 2014-2016 Resource Summary Report notes that middle school enrollment in the San Luis Coastal Unified School District has trended slightly upward, while high school enrollment has trended slightly downward over the last 10 years. Neither middle schools nor high schools in the district are expected to exceed capacity within the next seven years. Elementary schools received a Level of Severity (LOS) II designation in the report, suggesting enrollment could exceed capacity within the next five years (County 2019c). However, while elementary school enrollment in the district has trended upward over the last decade, it remains below capacity.

Table 28 presents the latest available enrollment and capacity numbers for the SLCUSD (SLCUSD 2016).

**Table 31 SLCUSD Coastal Area School Enrollments and Capacities**

Grade Level	2015/16 Enrollment	2015/16 Capacity	2015/16	Available Projected Capacity
			School Utilization Percentage	
Kindergarten – 5 <sup>th</sup> /6 <sup>th</sup>	1,235	1,715	72.0%	480
6 <sup>th</sup> /7 <sup>th</sup> – 8 <sup>th</sup>	610	1,035	58.9%	425
9 <sup>th</sup> – 12 <sup>th</sup>	860	1,269	67.8%	409
Total (K-12)	2,705	4,019	67.3%	1,314

Source: SLCUSD 2016

## b. Regulatory Setting

### County General Plan

The San Luis Obispo County General Plan (General Plan) outlines the development goals for the County and provides a basis for government decision-making, as well as for informing the public about the rules that guide development within the County. The General Plan includes policies aimed at ensuring adequate public facilities are provided to support the community.

### 4.10.2 Impact Analysis

#### Methodology and Significance Thresholds

Potential impacts to public services were analyzed based on review of expected changes in land use and population resulting from covered activities under the LOHCP.

Appendix G of the *CEQA Guidelines* and the County's environmental checklist were considered to generate the significance criteria for public services. For the purposes of this evaluation, pursuant to the County's environmental checklist, a potentially significant public service impacts could occur if the project would:

1. Have an effect upon, or result in the need for new or altered public services in any of the following areas:
  - Fire protection;
  - Police protection;
  - Schools;
  - Roads;
  - Solid wastes; or
  - Other public facilities.

Potential impacts to roads are discussed in detail in Section 4.11, *Transportation/Traffic*, while potential impacts to solid waste facilities are included as part of the utilities and service systems discussion under Section 4.12, *Impacts Found to be Less than Significant*. As such, impacts to these public services are not discussed further in this section.

## c. Project Impacts

<b>Threshold:</b>	Would the project have an effect upon, or result in the need for new or altered public services in any of the following areas fire protection, police protection, schools, or other public facilities?
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**IMPACT PS-1      COVERED ACTIVITIES UNDER THE LOHCP WOULD INCREASE DEMAND FOR POLICE PROTECTION, FIRE PROTECTION, AND SCHOOL SERVICES IN THE PLAN AREA. DEVELOPMENT EXPEDITED BY THE PROJECT WOULD BE SUBJECT TO PROJECT-SPECIFIC ENVIRONMENTAL REVIEW, PAYMENT OF APPLICABLE FEES, AND COMPLIANCE WITH FIRE SAFETY REQUIREMENTS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Covered activities could be expedited by the LOHCP through the streamlined FESA permitting process. Covered activities range from residential and commercial development to municipal projects, such as bridge projects or the creation of parks, as well as activities associated with implementation of the LOHCP Preserve System. Such projects would remain subject to the land use

designations and requirements of the EAP. The EAP FEIR and Draft EIR for the Los Osos Community Plan both concluded that implementation of the approved EAP or the pending Los Osos Community Plan would be unlikely to require construction of significant new police protection facilities. Development allowed throughout the Estero planning area, including covered activities under the LOHCP, could require a new fire protection facility. The EAP FEIR projected that a new 4,000-square-foot fire facility would be necessary in the Estero planning area within 13 years of approval of the EAP, although the specific location and potential environmental impacts are currently unknown. However, as stated in the EAP FEIR, any fire protection facilities proposed in response to growth under the EAP would be subject to environmental review. Additionally, the EAP FEIR stated that enforcement of existing Uniform Fire Codes, Uniform Building Codes, California Health and Safety Codes, and other fire prevention regulations would reduce impacts related to demand for fire protection associated with buildout under the EAP. Future development projects would be required to comply with fire code requirements; and submit a Fire Safety Plan to the CAL FIRE/County Fire Prevention Bureau for review and approval. Compliance would include establishing 100 feet of defensible space around structures per PRC 4291 and LOCSD Fire Code Title 4.

All future projects would be required to pay Public Facility Fees, which include fees for fire protection and Sheriff protection services, as adopted in Title 18 of the San Luis Obispo County Municipal Code. Such fees would offset impacts resulting from the expediting of development already allowed under the EAP and addressed as part of the EAP FEIR. Additionally, future projects accelerated by implementation of the LOHCP would be subject to the appropriate level of project-specific environmental review by the County, and project approval would be subject to conditions of approval, such as mitigation fees for schools.

Implementation of the LOHCP Preserve System could result in increased demands for police and fire protection services due to increased public access on newly acquired private lands or increased fire management activities. The limited amount of recreational and educational use envisioned in the LOHCP Preserve System indicates that increased demands for public safety services would be very small. The incremental increased demand for police protection would be met by patrols from IE field staff and current patrols provided by the Sheriff's Department South Coast Station. The small increment of new demand resulting from public access would not result in the need to provide new or expanded police stations or staffing. Similarly, a limited amount of fire protection services would be needed for prescribed fire management envisioned in the LOHCP Preserve System and the incremental increase in demand would be met through current service levels. Furthermore, controlled burns reduce hazardous fuels thereby protecting human communities from extreme fire events (U.S. Forest Service 2019).

While funding the establishment and management of the LOHCP Preserve System in the early years of plan implementation as well as funding the IE would introduce an additional tax on County finances, it is not anticipated to require additional staff such that a new government facility would be required. No additional impacts to other public facilities would be anticipated under the project.

Any increase in demand for public services associated with implementation of the LOHCP Preserve System and conservation program would be covered by existing facilities. Given that future projects expedited by the proposed project would undergo project-specific County review, required to pay applicable Public Facility Fees and school mitigation fees, and adhere to necessary fire safety building regulations, the project would result in a less than significant impact to public services.

#### **d. Cumulative Impacts**

A cumulative impact to public services would occur as a result of conservation activities and other residential, commercial, and public projects proposed for development in and around the Plan Area. The EAP FEIR determined that development within and outside the Estero planning area would increase demand for police, fire, and school services, potentially resulting in the need for new or expanded facilities. However, any facilities proposed in response to growth under the EAP would be subject to environmental review by the County. The EAP FEIR notes that statutory development fees for the construction or reconstruction of school facilities would mitigate impacts to a less than significant level, and EAP buildout is not anticipated to result in a need for expanded police protection facilities in the Estero planning area. Additionally, enforcement of Uniform Fire Codes, Uniform Building Codes, California Health and Safety Codes, and other fire prevention regulations would reduce impacts on demand for fire protection associated with buildout under the EAP, such that this impact would be less than significant. Given the findings in the EAP FEIR and that conservation and restoration activities associated with the LOHCP conservation program would have a minimal impact to public services, it is anticipated that cumulative impacts related to public services would be less than significant and the proposed project's contribution to such impacts would not be cumulatively considerable.

## 4.11 Transportation/Traffic

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### 4.11.1 Setting

#### a. Existing Traffic Conditions

Regional access to the Plan Area is provided by South Bay Boulevard and Los Osos Valley Road. Local access in the Plan Area is provided by a system made up of collector and local streets including, but not limited to, Santa Ysabel Avenue, Pine Avenue, 9<sup>th</sup> Street, and Broderson Avenue.

Existing roadway and intersection conditions were obtained from the most recent comprehensive Los Osos Circulation Study (County 2009b)<sup>16</sup> and the County's 2016-2018 Resource Summary Report (County 2019c). All of the roadway segment study locations operate at or above the acceptable County standard of Level of Service (LOS) D under existing conditions, with the exception of Los Osos Valley Road east of Los Osos Creek and South Bay Boulevard north of Santa Ysabel Avenue, which both operate at LOS E.

In addition, all intersections in Los Osos operate at or above the acceptable County standard of LOS D, with the exception of Los Osos Valley Road at Palisades Avenue, which operates at LOS F. However, a traffic signal has since been installed at the intersection of Los Osos Valley Road and Palisades Avenue and a westbound right-turn lane was installed along Los Osos Valley Road at Palisades Avenue to relieve delays at this intersection (County 2018a).

The EAP (County 2009a) identifies three additional roadway segment/intersection deficiencies, including the following:

- **Los Osos Valley Road between 9<sup>th</sup> Street and Pine Avenue.** Capacity deficiencies exist along this segment of Los Osos Valley Road.
- **Ramona Avenue.** Roadway alignments and intersections at 4<sup>th</sup> Street and 9<sup>th</sup> Street are no longer efficient for the traffic volume.
- **Doris Avenue between Rosina Drive and South Court.** The unimproved segment of this roadway prevents a direct connection between the residential area of Cuesta-by-the-Sea and Monarch Grove Elementary School. A project to complete this connection is being planned.

#### b. Regulatory Setting

The County maintains public roadways within the Plan Area. This section identifies County transportation, traffic, and circulation regulations and policy documents relevant to the project.

#### County Code of Ordinances

Title 13 of the County Code sets forth regulations pertaining to streets and sidewalks, including standards of construction, safety requirements, and Road Improvement Fees. Road Improvement Fees are assessed for new development in order to implement the goals and objectives of the

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<sup>16</sup> Subsequent annual Los Osos Circulation Study updates (through the most recent update in 2016) have not included a comprehensive Level of Service analysis update because building activity since July 1, 2009 has been minimal (permits were issued for one diagnostic facility, one non-residential commercial building, and three single-family residential units from July 1, 2009 to June 30, 2013). Based on this limited development activity, roadway and intersection operations reported in the 2009 Los Osos Circulation Study are overall considered to be representative of existing conditions.

County General Plan and to mitigate the additional traffic generated by new development in the County. Road improvement fees are used to finance public road facilities and improvements and to pay for the new development's fair share of the construction costs of the facilities and improvements.

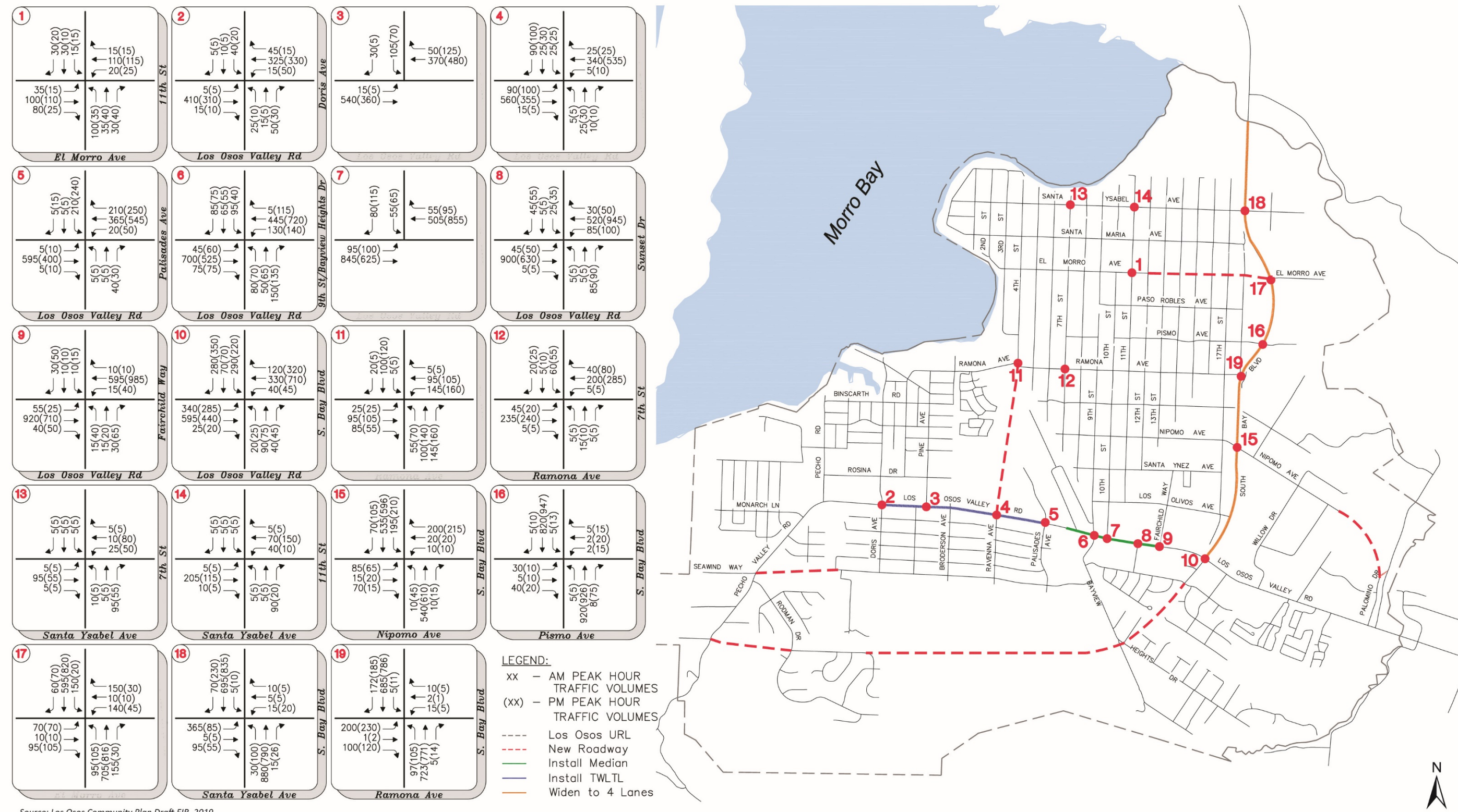
### **Estero Area Plan**

The adopted EAP (County 2009a) contains a Circulation Element, which establishes goals and policies to meet transportation needs associated with buildout of the Estero planning area, including within the Plan Area. Figure 15 shows the adopted EAP buildout peak hour traffic volumes at intersections in Plan Area and Figure 16 shows the adopted EAP buildout peak ADT along roadways in Plan Area.

### **Los Osos Community Plan**

The 2015 Los Osos Community Plan contains a Circulation Element, which establishes goals and policies to meet transportation needs associated with buildout of the Los Osos community, including within the Plan Area. Figure 17 shows the proposed Community Plan buildout peak hour traffic volumes at intersections in the Plan Area and Figure 18 shows the proposed Community Plan buildout peak ADT along roadways in the Plan Area.

Figure 15 Adopted Community Plan Buildout Peak Hour Traffic Volumes at Intersections in Plan Area



Source: Los Osos Community Plan Draft EIR, 2019.



**Figure 16 Adopted Community Plan Buildout Peak ADT along Roadways in Plan Area**

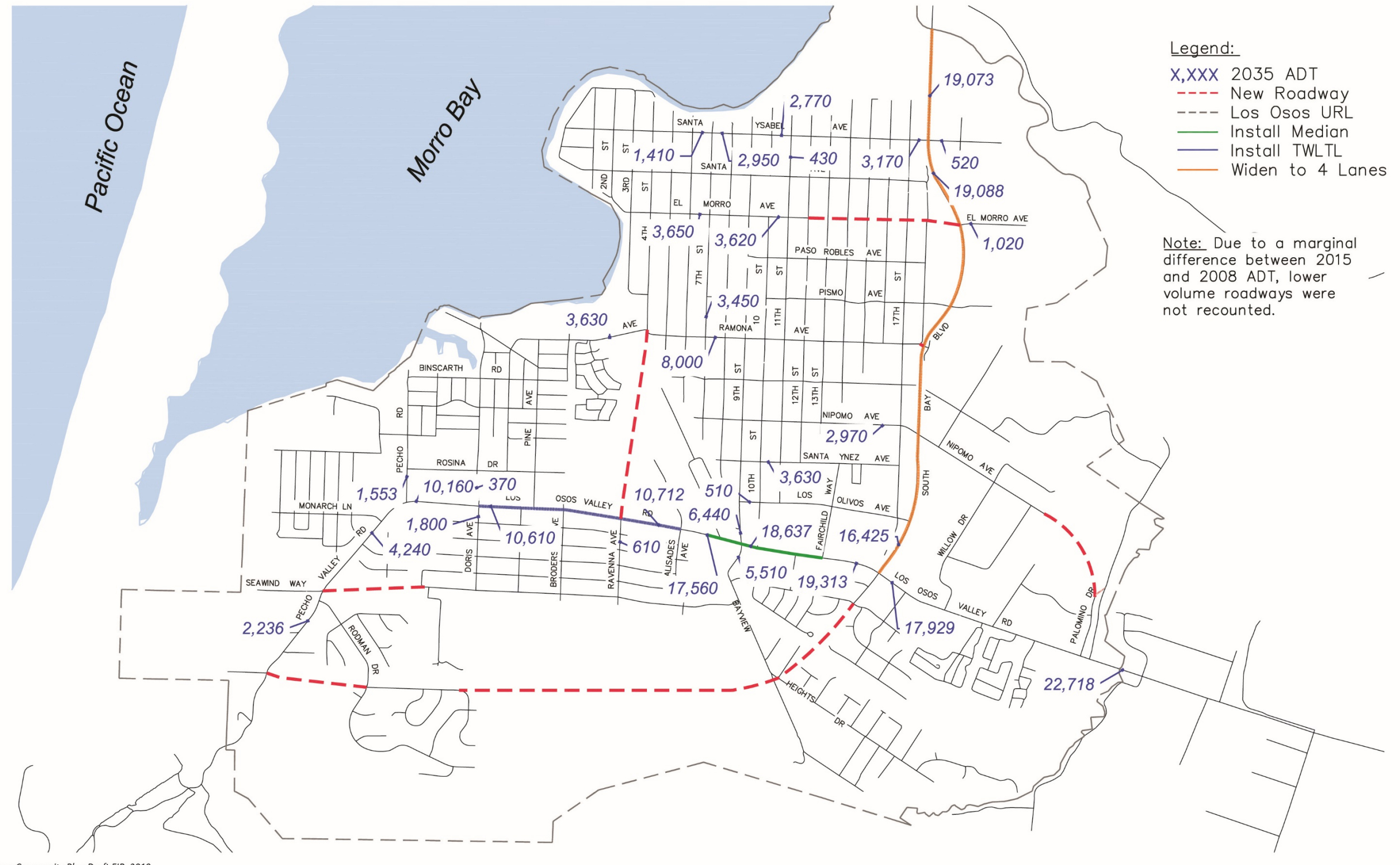
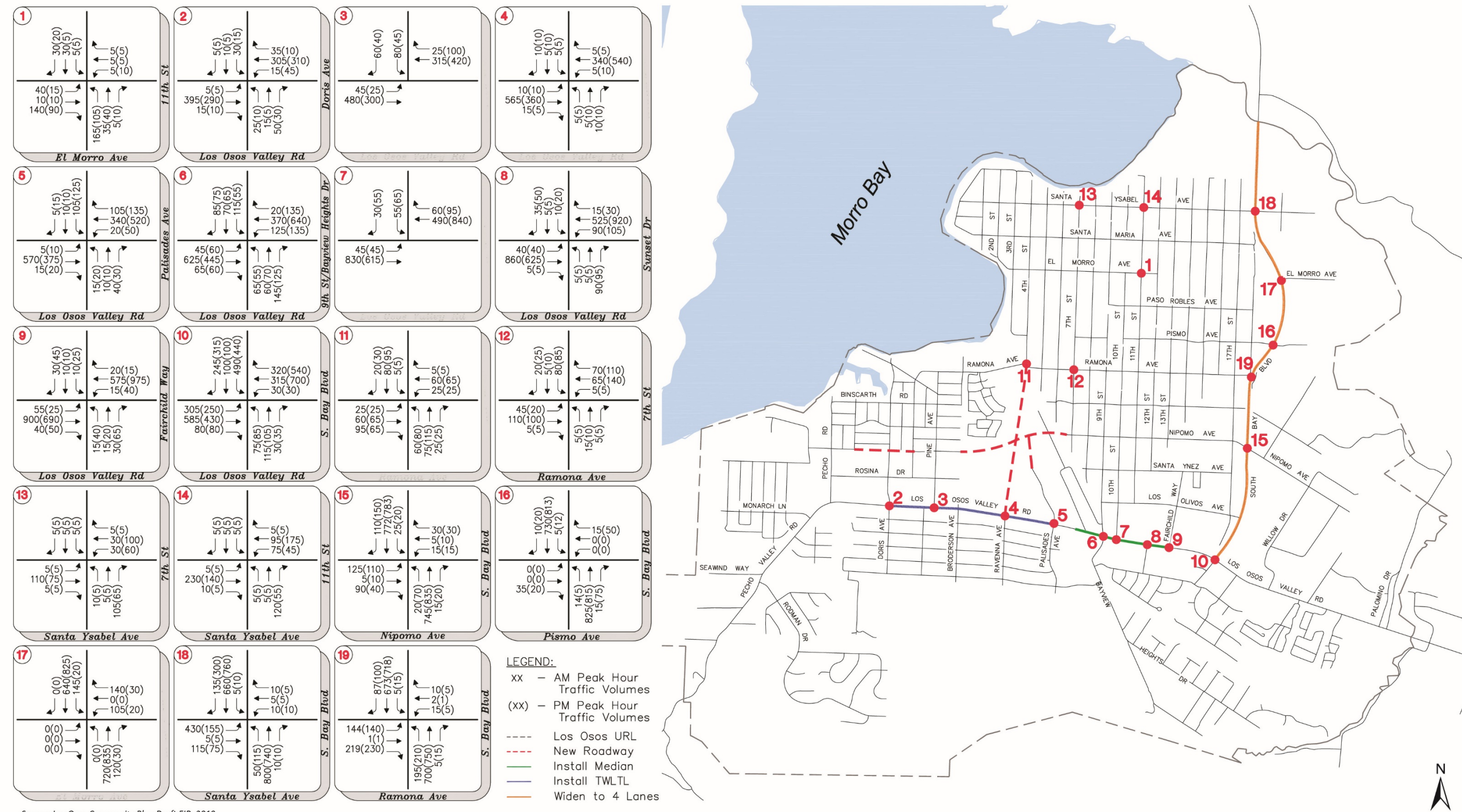


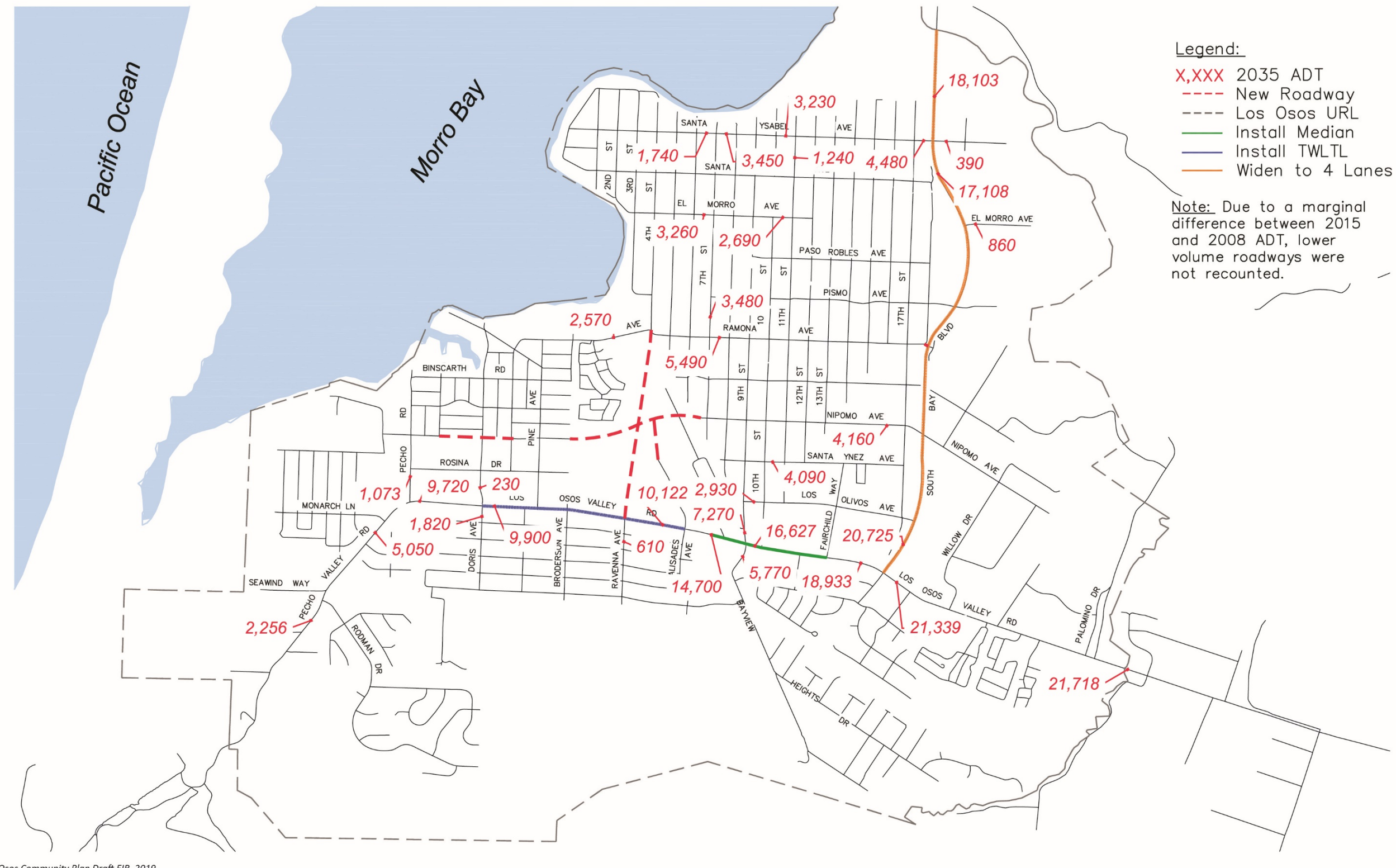
Figure 17 Proposed Community Plan Buildout Peak Hour Traffic Volumes at Intersections in Plan Area



Source: Los Osos Community Plan Draft EIR, 2019.



Figure 18 Proposed Community Plan Buildout Peak ADT along Roadways in Plan Area



Source: Los Osos Community Plan Draft EIR, 2019.

## 4.11.2 Impact Analysis

### a. Methodology and Significance Thresholds

Appendix G of the *CEQA Guidelines* and the County's environmental checklist were considered to generate the significance criteria for transportation. The project would result in a potentially significant impact if the project would:

1. Increase vehicle trips to local or areawide circulation system;
2. Reduce existing "Level of Service" (LOS) on public roadway(s);
3. Create unsafe conditions on public roadways (e.g., limited access, design features, slight distance, slow vehicles);
4. Provide for adequate emergency access;
5. Conflict with an established measure of effectiveness for the performance of the circulation system considering all modes of transportation (e.g., LOS, mass transit, etc.);
6. Conflict with an applicable congestion management program;
7. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities; or
8. Result in a change in air traffic patterns that may result in substantial safety risks.

The Plan Area is not located within an airport land use plan and, as such, would not result in development near an airport or airstrip. The project would not result in changes to roadways in or around the Plan Area such that design hazards would be created or exacerbated or emergency access would become inadequate. Therefore, no related impacts would occur and these thresholds are not discussed further in this document.

In addition, the project's impacts to emergency access is discussed in Section 4.6, *Hazards and Hazardous Materials*, and therefore, Threshold 4 is not further discussed in this section.

The County uses LOS A through LOS F performance standards to determine whether traffic generated by a proposed project is substantial and therefore significant. LOS A represents no traffic issues while LOS F represents the worst traffic conditions. A traffic impact would be considered significant if implementation of the project would:

- Generate a significant number of new trips that would decrease level of service of a roadway or intersection to LOS E or worse within the urban reserve line; or
- Generate a significant number of new trips that would decrease level of service of a roadway or intersection to LOS D or worse for rural areas outside the urban reserve line.

An impact to pedestrians and bicyclists would be considered significant if implementation of the project would conflict with existing or planned bicycle facilities or would generate pedestrian and bicycle demand without providing adequate and appropriate facilities for safe non-motorized mobility.

Impacts to transit would be considered significant if the project would conflict with existing or planned transit facilities or would generate potential transit trips and would not provide adequate facilities for pedestrians and bicyclists to access transit routes and stops.

It is important to note that such impacts or deficiencies would need to be caused, either directly or indirectly, by implementation of the project for it to be considered an impact. Deficiencies that exist without implementation of the project are not a result of the project and, therefore, would not be considered a significant impact.

## **b. Project Impacts**

<b>Threshold:</b>	Would the project increase vehicle trips to local or areawide circulation system?
<b>Threshold:</b>	Would the project reduce existing “Level of Service” on public roadway(s)?
<b>Threshold:</b>	Would the project conflict with an established measure of effectiveness for the performance of the circulation system considering all modes of transportation (e.g., LOS, mass transit, etc.)?
<b>Threshold:</b>	Would the project conflict with an applicable congestion management program?

**IMPACT T-1                      PROJECT-GENERATED TRAFFIC WOULD INCREASE TRAFFIC VOLUMES ON AREA ROADWAYS AND AT INTERSECTIONS IN AND NEAR THE PLAN AREA. THIS INCREASE WOULD NOT EXCEED TRAFFIC PROJECTIONS ANALYZED UNDER BUILDOUT OF THE EAP, AND COVERED ACTIVITIES WOULD ALSO INCLUDE ROADWAY IMPROVEMENTS AND MAINTENANCE THAT COULD BENEFIT ROADWAY OPERATIONS AND LOS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Approval and implementation of the proposed LOHCP and issuance of the ITP would allow the County to authorize take coverage for covered activities in the Plan Area, resulting in expedited development that would increase traffic in the Plan Area. The project would not result in an intensification of currently approved land uses (density or intensity) that would result in trip generation greater than was projected to occur in the EAP. The County would require site-specific traffic impact analyses prior to construction of covered activities. Such analyses would ensure that appropriate measures are taken to avoid or reduce potential traffic impacts in the Plan Area, including payment of Road Improvement Fees, as necessary. In addition, the proposed covered activities (including roadway improvements and maintenance activities) would result in improvements to existing roadways that could improve roadway operations and LOS.

Long-term increases in traffic could occur as a result of additional passive recreation opportunities in the Preserve System (e.g., hiking, nature study). However, passive recreation would not result in a substantial increase in vehicular traffic because passive recreation areas, as defined by the EAP, would have limited or no access and are intended for protection of their natural biotic and scenic resources. Overall traffic impacts associated with implementation of the LOHCP would be less than significant.

<b>Threshold:</b>	Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?
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**IMPACT T-2                      THE PROJECT WOULD NOT RESULT IN INCREASED DEMAND FOR ALTERNATIVE TRANSPORTATION BEYOND THAT PROJECTED UNDER BUILDOUT OF THE EAP. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

The project would not result in an intensification of currently approved land uses (e.g., density) that would result in increased demand for alternative transportation beyond that currently projected to

occur and analyzed in the EAP FEIR. The EAP includes a number of policies and programs to facilitate the provision of bicycles and pedestrian facilities and/or require such facilities as part of new development. Based on the inclusion of these policies and programs, impacts associated with plans, policies, and programs supporting alternative transportation would be less than significant.

During the 25-year permit term, covered activities would include expansion of existing roads to create new lanes, including turn lanes and bike lanes, install signs, and realign the routes by County Public Works. Therefore, while the project could expedite growth that could result in increased demand for alternative transportation facilities, projects that would implement the policies and programs contained within the EAP Circulation Element are covered activities under the LOHCP. As such, the implementation of proposed alternative transportation improvements would also be expedited by the streamlined permitting process provided by this alternative.

Implementation of the LOHCP conservation program would not directly create any new development that would result in substantial demand for pedestrian, bicycle or transit facilities. In addition, the LOHCP itself does not propose any physical changes to the roadway network that would directly conflict with existing or planned pedestrian, bicycle, transit facilities or result in inadequate access to them. Therefore, this impact would be less than significant.

### **c. Cumulative Impacts**

Covered activities, including those associated with implementation of the LOHCP conservation program, combined with County-wide growth occurring as a result of implementation of other adopted area plans could potentially result in a substantial increase in traffic and demand for alternative transportation. This impact is primarily associated with the land uses of the EAP and was evaluated in the EAP FEIR. In the Los Osos area, impacts to roadways and intersections resulting from buildout were determined to be less than significant with mitigation incorporated. However, the EAP FEIR also determined there would be an adverse impact related to congestion of an emergency evacuation route in the Los Osos area. While the document acknowledges that the need for such an evacuation is unlikely, the impact was determined to be significant and unavoidable. In light of this impact identified in the EAP FEIR, the cumulative impact to transportation associated with the project and other development in the Plan Area could be significant.

The Circulation Element of the EAP includes policies and programs to establish a transportation system that would accommodate the travel demands of cumulative development projected by the EAP (including covered activities under the LOHCP), reduce traffic congestion, and be within the County's ability to finance and operate. Additionally, new development expedited by implementation of the project would be subject to local standards and policies regarding traffic. In 1988, the County adopted Ordinance No. 2379 that requires new development to mitigate its impacts on transportation and roadside facilities through the payment of Road Impact Fees, which fund identified system improvements. The fees are regularly updated such that they reflect the reasonable cost of mitigating the impacts of new development on transportation-related facilities. Because implementation of the LOHCP conservation program would result in minimal trip generation, and because Road Impact Fees and other restrictions would be applied as necessary on new development with the potential to decrease LOS of a roadway segment or intersection to unacceptable levels, the project's contribution to a cumulative transportation impact would not be cumulatively considerable.

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## 4.12 Impacts Found to be Less than Significant During the Scoping Process

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Based on input received from the public and other stakeholders during the scoping process, it was determined that the following issue areas were not likely to be significantly affected by the project or alternatives: aesthetics, agriculture and forestry resources, mineral resources, population and housing, recreation, utilities and service systems, and tribal cultural resources. As such, these resource issues are not discussed in detail in the EIR for the reasons described below.

### 4.12.1 Aesthetics

Implementation of the project would result in preservation of lands and would not substantially affect aesthetics. Habitat restoration may have short-term effects on the visual landscape but would provide long-term visual benefits in Los Osos by preserving and enhancing open space within area viewsheds. Infrastructure improvements associated with the conservation activities and LOHCP Preserve System development would be small in scale (e.g., restrooms, passive trail facilities) and would not be expected to significantly alter the visual landscape or substantially affect any visual resources. Potential aesthetic impacts from new land development projects were generally considered in the 2003 EAP FEIR, and would be evaluated by the County during project-specific review during the County land use permit process.

### 4.12.2 Agriculture and Forestry Resources

The Plan Area includes land that is designated as Farmland of Local Potential or Grazing Land in the Farmland Mapping and Monitoring Program along the eastern boundary (California Department of Conservation, Division of Land Resource Protection 2018). However, because such lands are not classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland or Farmland of Local Importance, incorporation of these areas into the Preserve System would not constitute a significant impact per County thresholds. In addition, no lands in the Plan Area are under Williamson Act contract, or zoned for agricultural use. Creation of the Preserve System would not impair agricultural uses located adjacent to the Plan Area and in fact would provide a buffer between future residential/ commercial development and agricultural uses adjacent to the Plan Area, which is a potentially beneficial impact of the project. Additionally, project consistency with applicable plans and policies pertaining to agricultural lands is analyzed in Section 4.8, *Land Use and Planning*.

No forest land is located within the Plan Area. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland or timberland zoned Timberland Production, nor would the project result in the loss of forest land or conversion of forest land to non-forest use. As a result, no impact to forest resources or timberland would occur.

### 4.12.3 Population and Housing

Issuance of the programmatic ITP would not directly or indirectly result in population growth trends that would displace a substantial number of people. The conservation strategy is focused on undeveloped land and relies on acquisition of property from willing sellers; no relocation of existing homes from acquired parcels is anticipated under the project or alternatives. Urban growth would be expected to occur in accordance with the adopted EAP and would therefore occur in a manner that balances local needs for population and housing.



In addition, a cost burden analysis is provided in Appendix H of the LOHCP that provides a planning-level evaluation of the effects of the LOHCP habitat mitigation fee on the feasibility of new development in Los Osos and concluded that the overall fee burden was unlikely to pose feasibility challenges due to fees for single family, commercial retail, and commercial office development.

Urban development would also be subject to local land use agency approvals, including the appropriate level of project-specific CEQA review. No significant effects on population, growth trends or urban displacement would result from the project.

#### 4.12.4 Recreation

The LOHCP would both create additional passive recreation opportunities in the Plan Area and would expedite County projects aimed at providing additional parks/recreation facilities. The project would not directly result in development of new residential space, and therefore would not directly result in population growth or additional demand for parks and recreational opportunities. Development of the LOHCP Preserve System would provide for new, limited passive recreation uses. The EAP FEIR identified the need for an additional 118 acres of neighborhood and community parks. These additional recreational opportunities would contribute to the needed park supply and would be a beneficial impact of the project.

Residential development or redevelopment projects expedited by implementation of the LOHCP would increase demand for parks and other recreational activities. Specific development projects could be required to develop additional park and recreational space or pay in-lieu fees to contribute to the development of parks and recreational space. In addition, the creation of parks is a covered activity under the LOHCP. As such, the development of these facilities would also be expedited by the streamlined permitting process provided by the project.

#### 4.12.5 Utilities and Service Systems

The project would be expected to create minimal additional demands, both direct and indirect, on existing utilities and services in the Plan Area. The Preserve System established consistent with the LOHCP would be maintained as open space and would not place any substantial new demands on utilities. As noted above, the LOHCP would require staff to administer the plan and manage the associated Preserve System, and as such there is potential for a small number of people to relocate to Los Osos who would place additional demand on utilities in the area, if new housing is required. However, land development projects requiring new utility infrastructure would be subject to County approval, including the appropriate level of project-specific CEQA review.

The project prohibits development and any uses within the LOHCP Preserve System that would be incompatible with the biological goals and objectives identified in the LOHCP. Although installation of utilities would likely be incompatible with the preservation objectives, the LOHCP includes maintenance of utilities (i.e., existing Golden State Water Company facilities) as a covered activity which could occur in a small number of discrete locations in the LOHCP Preserve System, depending on which lands are acquired.

The project would have minimal direct or indirect impacts on the capacity of local landfills. Solid waste collected in Los Osos is taken to Cold Canyon Landfill, which is located south of San Luis Obispo. An expansion for this landfill was approved November 2012, providing capacity for an additional 25 years. Demand for solid waste disposal in landfill is tied to the number of employees associated with operation of the LOHCP Preserve System, as well as the potential for activities on the LOHCP Preserve System to generate solid waste. The LOHCP would require IE staff to administer

**Impacts Found to be Less than Significant During the Scoping Process**

the plan and manage the associated LOHCP Preserve System, and as such there is potential for a small number of people to relocate to Los Osos. This increase in residents would not exceed the population estimate used in the EAP FEIR. The incremental amount of waste that would be generated in the area as a result of this limited growth would not exceed local landfill capacity. In addition, given the types of activities that would occur in the LOHCP Preserve System (e.g., passive recreation, habitat restoration and management) solid waste generation would also be limited.

#### 4.12.6 Tribal Cultural Resources

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted, expanding CEQA by defining a new resource category, "tribal cultural resources." AB 52 requires an assessment of a project's potential impacts to tribal cultural resources and establishes a formal consultation process for California tribes regarding those resources. However, AB 52 applies only to projects with a NOP filed on or after the date of enactment. The NOP for the LOHCP EIR was filed on September 20, 2013, thus AB 52 does not apply to this project.

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## 5 Other CEQA-Required Discussions

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This section discusses significant unavoidable effects, growth-inducing impacts, irreversible environmental impacts, and energy and conservation impacts that would be caused by the project.

### 5.1 Significant Unavoidable Effects

The *CEQA Guidelines* Section 15126(b) requires that an EIR identify those significant impacts that cannot be reduced to a less than significant level with the application of mitigation measures. The implications and reasons why the project is being proposed, notwithstanding, must be described.

Implementation of the project would not result in any significant and unavoidable impacts.

### 5.2 Growth-Inducing Effects

The *CEQA Guidelines* require the analysis of a project's potential to induce growth. Specifically, Section 15126.2(d) requires that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..." Growth inducing impacts can occur if a project would induce growth either directly or indirectly in the surrounding environment. Furthermore, Section 15126.2(d) states that "[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The project would not have any direct growth-inducing impacts because no development would be specifically authorized in the Plan Area by solely the LOHCP. The LOHCP would not directly cause growth to occur, but rather would accommodate growth that is already planned in the local urban growth boundaries and by the EAP.

The project would provide a streamlined mechanism for compliance with the FESA by specific projects. An improved permitting process would not remove a barrier to growth, but would accommodate and streamline the approval of future development already anticipated. This is an indirect growth-inducing effect.

### 5.3 Significant Irreversible Environmental Effects

The *CEQA Guidelines* Section 15126.2(c) requires a discussion of any significant irreversible environmental changes which would be caused by the project should it be implemented. Such significant irreversible environmental changes may include the following:

- Use of non-renewable resources during the initial and continued phases of the project which would be irreversible because a large commitment of such resources makes removal or non-use unlikely;
- Primary impacts and, particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area) which generally commit future generations to similar uses; or

- Irreversible damage which may result from environmental accidents associated with the project.

Project development would require building materials and energy, some of which are non-renewable resources. Consumption of these resources would occur with any development in the region and are not unique to the project. The addition of new residential units would irreversibly increase local demand for non-renewable energy resources such as petroleum and natural gas. Increasingly efficient building fixtures and automobile engines, as well as implementation of policies included in the County's EnergyWise Plan, are expected to offset the demand to some degree. It is not anticipated that growth accommodated under the project would significantly affect local or regional energy supplies. The project's energy use and energy conservation components are discussed further in Section 5.4, *Energy Use and Conservation*.

Growth accommodated under the project would require an irreversible commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. In addition, the vehicle trips associated with the project would incrementally contribute local traffic and noise levels and regional air pollutant emissions.

## 5.4 Energy Use and Conservation

Public Resources Code Section 21100(b)(2) and Appendix F of the *CEQA Guidelines* require that EIRs include a discussion of the potential energy consumption and/or conservation impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful or unnecessary consumption of energy.

The project would have a minor impact on energy resources. Demand for energy would be tied to the number of employees associated with operation and maintenance of the Preserve System. Energy use from land development projects would be evaluated by the County during the building and land use permitting process. Anticipated activities conducted under the proposed LOHCP, such as wildlife surveys, habitat enhancement and restoration, and construction and maintenance of minor support facilities would require use of petroleum products and electricity. These activities would be of very small scale and intensity, and the corresponding demand for energy resources would be minor. The minor demand for these services would not measurably affect existing supplies.

The project would streamline development and redevelopment in the Plan Area. However, individual projects would undergo the appropriate level of project-specific environmental review and would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6, of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations), and the County Green Building Ordinance (Chapter 8 of Title 19 of the County Code). The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California as well as guidance on construction techniques to maximize energy conservation. The California Green Building Standards Code sets the targets for energy efficiency including: water consumption; dual plumbing systems for potable and recyclable water; diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The County's Green Building Ordinance applies to all construction or development projects defined by the County as a "Covered Project" and includes standards to increase energy efficiency in buildings,

encourage water and resources conservation, reduce waste generated by construction projects, reduce long-term building operation and maintenance costs, improve indoor air quality and occupant health, and contribute to meeting the state and local commitments to reduce GHG gas production and emissions. Future development streamlined by the project would be required to comply with Title 24 standards and the County's Green Building Ordinance. Meeting Title 24 energy conservation requirements and abiding to the standards in the Green Building Ordinance would ensure that energy is not used in an inefficient, wasteful, or unnecessary manner per Public Resources Code Section 21100(b)(2).

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## 6 Alternatives

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As required by Section 15126.6 of the *State CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the project that would attain most of the basic project objectives but would avoid or substantially lessen the significant adverse impacts.

As discussed in Section 2, *Project Description*, the objectives for the project are:

- Provide a streamlined permitting process, while ensuring improved conservation
- Ensure compliance with the FESA, the CESA, and other applicable laws and regulations
- Provide permanent protection for and management of the covered species and their habitats, and achieve long-term recovery through a conservation program
- Maintain and enhance connectivity of habitat in the Plan Area in order to promote recovery and long-term viability of the covered species

Included in this analysis are two alternatives, including the CEQA-required “no project” alternative, that involve changes to the project that may reduce the project-related environmental impacts as identified in this EIR. Alternatives have been developed to provide a reasonable range of options to consider that would help decision makers and the public understand the general implications of revising or eliminating certain components of the project.

The following alternatives are evaluated in this EIR:

- Alternative 1: No Project
- Alternative 2: Reduced Take

Table 32 provides a summary comparison of characteristics of the project and Alternative 2, Reduced Take Project Alternative. Alternative 1, No Project, is not included in the table because the number of acres that would be impacted by covered activities or benefited by conservation activities is unknown. These acreages would be determined on a project-by-project basis because there would be no LOHCP, and instead projects would be individually permitted based on individual ITPs obtained for these projects. Descriptions of the alternatives and their associated impacts are provided below.



**Table 32 Comparison of the Project and Reduced Take Alternative<sup>1</sup>**

	Plan Area (acres) <sup>2</sup>		Project (acres)		Reduced Take (acres) <sup>5</sup>	
	Total	Protected	Impacted <sup>3</sup>	Benefited <sup>4</sup>	Impacted	Benefited
<b>General Vegetation/Land Cover</b>						
Coastal Sage Scrub	866	382	189	320	94	160
Central Maritime Chaparral	503	309	18	156	9	78
Woodland	367	192	33	32	16	16
Grassland	39	2.2	21	1	11	1
Wetland	43	31	2.6	0	1	0
Riparian	77	9	3.1	11	2	5
Other (Primarily Developed)	1,750	23	265	14	133	7
<b>Total</b>	<b>3,644</b>	<b>948</b>	<b>532</b>	<b>533</b>	<b>266</b>	<b>267</b>
<b>Covered Species and Habitats</b>						
Morro Manzanita Habitat	798	491	41	354	21	177
<b>Morro Shoulderband Snail<sup>6</sup></b>						
Habitat	935	445	189	191	95	96
Potential Habitat	1,898	135	289	110	145	55

<sup>1</sup> Under the No Project Alternative, there would be no programmatic HCP, and instead projects would be individually permitted based on individual ITPs obtained for these projects. Therefore, affected acreages are unknown.

<sup>2</sup> Total and protected acres of vegetation and other land cover, and covered species habitat in the Plan Area.

<sup>3</sup> Total proposed acres of vegetation and other land cover, and covered species habitat to be impacted in the Plan Area.

<sup>4</sup> Total acre credits through the acquisition of new protected lands, and restoration and management of existing protected lands.

<sup>5</sup> Take reduced by 50 percent relative to the project (266 acres rather than 532 acres).

<sup>6</sup> These ratios are below 1, because “potential habitat” includes developed areas where the species can be found, and where many covered activities (redevelopment, infill development, etc.) would occur. Such areas lack the long-term conservation value of the intact habitat, which would be protected at a higher ratio (1:2).

## 6.1 Alternative 1: No Project

### 6.1.1 Description

Under the No Project Alternative, the Service would not issue the Section 10(a)(1)(B) ITP and the LOHCP would not be implemented. Operation and maintenance of existing infrastructure facilities (e.g., roads, drainage systems, and water systems) would continue, as long as take of Morro shoulderband snail and Morro Bay kangaroo rat is not likely to result from these activities. Any new development, including private development and capital improvement projects, with the potential to result in take of either animal species would need to seek authorization on an individual basis. When accounting for the 701 presently undeveloped parcels in the Plan Area (refer to LOHCP Section 2.1.1), as well as future improvements to existing developed parcels and utility capital

improvement projects, full buildout of the Plan Area under the No Project Alternative could require hundreds of individual HCPs and compliance documents, including compliance with CEQA. Given the resources required to draft and process HCPs and compliance documents, individual review, permitting, and completion of new projects would occur at a slower rate and would not be streamlined as it would be under the proposed project.

Under this alternative, the implementation of the conservation program provided in the LOHCP (which would involve the restoration and enhanced management of existing protected lands and preservation of an estimated 387 acres of habitat for the four covered species and other biological resources) would not occur in a comprehensive, coordinated manner. In addition, the Los Osos Community Wildfire Protection Plan (CWPP) would need to seek separate authorization to complete fuel reduction and fire hazard abatement in those areas where take of listed animal species is likely to occur.

## 6.1.2 Impact Analysis

### a. Air Quality

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the proposed project, this alternative would be consistent with the most recently adopted Clean Air Plan because development under the No Project Alternative would be consistent with the EAP.

Individual projects under the No Project Alternative would generate air pollutants that could result in degraded air quality. However, similar to the proposed project, given that this alternative would not intensify land use within the Plan Area, the dispersed nature of air quality emissions over the course of 25 years (the time period for which the ITP under the proposed project would be valid), this alternative is not anticipated to generate criteria pollutant in excess of SLOCAPCD thresholds.

Nonetheless, the potential long-term benefit to air quality associated with the LOHCP Preserve System under the proposed project would not be realized under this alternative.

### b. Biological Resources

Under the No Project Alternative, development would not be expedited in the Plan Area. In addition, this alternative would also not facilitate coordinated habitat restoration, management, and protection efforts through implementation of the LOHCP Preserve System. It is assumed that operation and maintenance of existing infrastructure facilities (e.g., roads, drainage systems, and water systems) would continue as long as take of Morro shoulderband snail and Morro Bay kangaroo rat is not likely to result from these activities. However, new development with the potential to result in take of these species would be required to seek authorization on a case-by-case basis.

Similar to the proposed project, most new structures and facilities constructed under this alternative would require project-specific biological resources studies performed by qualified personnel with appropriate expertise. Design and construction would conform to the appropriate expert recommendations and mitigation measures associated with the project-specific biological resources studies. Compliance with appropriate recommendations and mitigation measures would ensure the significant impacts to biological resources are avoided/reduced to the extent feasible.

For all covered activities, individual project proponents (and their construction contractors) would implement BMPs and comply with applicable federal, state, and local laws and regulations. Although

significant impacts to biological resources would likely still occur under the No Project Alternative, impacts from individual projects would be minimized with implementation of the BMPs, regulations, and project-specific mitigation measures.

### **c. Cultural Resources**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Under the No Project Alternative, many of the individual projects would result in ground disturbance, and the construction of these projects could disturb or damage cultural and/or paleontological resources on or below the ground surface. The use of heavy equipment during construction activities could result in exposure, damage, and/or crushing of surface and buried resources. Larger ground-disturbing activities have a higher potential to disturb or damage cultural and/or paleontological resources, particularly in previously undisturbed or less disturbed areas.

For all projects under the No Project Alternative, individual project proponents would be required to comply with applicable laws for protecting cultural and paleontological resources. The County would require site-specific cultural resource surveys prior to construction of projects. In addition, AMMs from the LOHCP and BMPs would minimize ground disturbance and require construction activities to stop if resources are discovered. Such requirements would help protect cultural and paleontological resources and reduce the potential for disturbance or damage to such resources. Although significant impacts to cultural and/or paleontological resources would likely still occur under the No Project Alternative, impacts from individual projects would be minimized with implementation of the BMPs, regulations, and project-specific mitigation measures.

### **d. Geology and Soils**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the proposed project, new structures and facilities constructed under the No Project Alternative would be required to comply with County requirements for structure/facility design (including the IBC, CBC, Alquist-Priolo Act, and County General Plan Safety Element Policies S-18 and S-19) and geotechnical recommendations. Compliance with such requirements would ensure potential impacts related to geology would be less than significant.

Covered activities in previously disturbed areas would have minimal effects on soil, but activities in undisturbed areas could accelerate erosion and result in a loss of topsoil. Similar to the Proposed Action, the overall extent of ground disturbance from covered activities under the No Project Alternative would likely be moderate. Adherence to the standards in the County's CZLUO, including the preparation of a site-specific Sedimentation and Erosion Control Plan, and compliance with NPDES General Stormwater Permits for construction would reduce related impacts to less than significant levels.

### **e. Greenhouse Gas Emissions**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the proposed project, this alternative would not generate GHG emissions in excess of SLOAPCD thresholds such that it would result in adverse effects on the environment because the No Project Alternative would not exceed growth projections used in the County's GHG emissions inventory and EnergyWise Plan. Nonetheless, the potential long-term benefit to climate change associated with the LOHCP Preserve

System under the proposed project would not be realized under this alternative. Therefore, whereas the proposed project's effects would be overall beneficial, impacts related to GHG emissions under the No Project Alternative would be less than significant.

#### **f. Hazards and Hazardous Materials**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Ground disturbance could occur during construction of individual projects under this alternative. Similar to the proposed project, individual projects under this alternative would undergo the appropriate level of project-specific environmental review. Measures would be implemented, as necessary, to prevent accidental upset or release of hazardous materials. All individual projects would be subject to controls and regulations relating to the handling, use, storage, and disposal of hazardous materials. Potential impacts associated with hazards and hazardous materials under the No Project Alternative would be less than significant.

Similar to the proposed project, this alternative would allow individual projects to occur in "high" and "very high" Fire Hazard Severity Zone and State Responsibility Areas. Unlike the proposed project, the No Project Alternative would not include establishment of the LOHCP Preserve System; therefore, this alternative would not preserve large areas of vegetated land that can act as fuel for wildfire. Potential impacts related to wildfires would be less than significant under the No Project Alternative, whereas the proposed project would require mitigation to achieve less than significant impacts.

#### **g. Hydrology and Water Quality**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the proposed project, implementation of the No Project Alternative could affect drainage patterns in the Plan Area and/or degrade water quality. Activities that disturb soil or require the use of fuel or other hazardous materials at work sites could introduce pollutants to the environment that could be carried in stormwater runoff to surface waters or percolate through to groundwater. Individual projects in or near streams and other water features could loosen and mobilize bed and bank materials, which could result in suspended sediment in the receiving waters. Construction activities could require vehicle fuels, lubricants, adhesives, waterproofing compounds, and hydraulic fluid for vehicles and equipment and could also require concrete, epoxy, paints, and/or asphalt paving. Specific hazardous material use at individual project sites would vary and would depend upon the type, size, and location of the project. The discharge of pollutants into water bodies could degrade water quality and affect beneficial uses of the downstream water bodies.

The EAP provides policies, programs, and standards that address drainage, erosion, sedimentation, and stormwater runoff issues generated from development of urban uses in the Estero planning area. Implementation of Mitigation Measures DWQ-1 and DWQ-2 in the EAP FEIR would reduce water quality impacts during ongoing development in the Plan Area, and, similar to the proposed project, all individual projects under the No Project Alternative would be required to implement these mitigation measures. In addition, installation and maintenance of drainage infrastructure would likely continue under the No Project Alternative, which would reduce potential for erosion and sedimentation as a result of stormwater flows.

Similar to the proposed project, compliance with applicable federal, state, and local laws would minimize potential impacts to hydrology and water quality under the No Project Alternative. Impacts would be less than significant under the proposed project and this alternative.

#### **h. Land Use and Planning**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the proposed project, individual projects under this alternative would be analyzed for consistency with all applicable land use plans, policies, and regulations. It is noted that the ITP itself (under the proposed project) would not facilitate or result in any changes to land use or zoning designations. Similar to the proposed project, individual projects under the No Project Alternative would be compatible with surrounding land uses nor would projects potentially result in the division of an established community because future development under this alternative would remain consistent with the EAP. Impacts to land use would be less than significant under the proposed project and the No Project Alternative.

#### **i. Noise**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the Proposed Action, the No Project Alternative would result in temporary noise impacts to noise-sensitive receptors resulting from the use of heavy equipment during construction of individual projects, as well as increases in noise due to long-term effects associated with traffic and intensified land uses. Information regarding the range of projects is known, but individual project-specific information is not known at this time. However, noise levels during the construction and operation of projects are expected to be similar to noise levels for other similar projects. Nonetheless, similar to the proposed project, with implementation of mitigation (project-specific noise studies), noise impacts under the No Project Alternative would be less than significant.

#### **j. Public Services**

The LOHCP would not be implemented under this alternative. Activities in the Plan Area would continue in a manner consistent with current practices. Similar to the proposed project, individual projects under this alternative would remain subject to the land use designations and requirements of the EAP. Therefore, any increase in demand for public services associated with implementation of the No Project Alternative has been addressed in the EAP and associated environmental impacts have been assessed in the EAP FEIR. In addition, given that individual projects would undergo project-specific County review, be required to pay applicable Public Facility Fees and school mitigation fees, and adhere to necessary fire safety building regulations, this alternative would result in a less than significant impact to public services.

#### **k. Transportation/Traffic**

Similar to the proposed project, the No Project Alternative would not result in an increased intensification of currently approved land uses; therefore, this alternative would not cause an increase in the amount of traffic projected to occur under the EAP. The County would require site-specific traffic impact analyses prior to construction of individual projects. Such analyses would ensure that appropriate measures are taken to avoid or reduce potential traffic impacts in the Plan Area. Similar to the proposed project, with implementation of appropriate measures, impacts to

traffic would be avoided or reduced, and impacts related to traffic would be less than significant under the Reduced Take Alternative.

## 6.2 Alternative 2: Reduced Take

### 6.2.1 Description

Under the Reduced Take Alternative, the Service would approve the Section 10(a)(1)(B) ITP application and the LOHCP would be implemented; however, the maximum amount of development covered under the LOHCP and the associated ITP would be 266 acres, which is 50 percent of the maximum amount under the proposed project. Upon the development of 266 acres in the Plan Area, no additional building permits would be issued and individual project proponents would need to prepare their own ITP applications, including HCPs, for submittal to the Service in order to receive take coverage. This alternative would not reduce the size of the Plan Area itself, but rather, would limit the total allowed development within the Plan Area to 266 acres. The precise locations of the 266 acres that would be developed under this alternative are currently unknown because individual land owners within the Plan Area would determine if and when they wish to develop under this alternative.

### 6.2.2 Impact Analysis

#### **a. Air Quality**

Similar to the proposed project, this alternative would be consistent with the most recently adopted Clean Air Plan because development under the Reduced Take Alternative would be consistent with the EAP. Individual projects under the Reduced Take Alternative would generate air pollutants that could result in degraded air quality. However, similar to the proposed project, given that this alternative would not intensify land use within the Plan Area, the dispersed nature of air quality emissions over the course of the 25-year ITP term, this alternative is not anticipated to generate criteria pollutant in excess of SLOCAPCD thresholds. In addition, the potential long-term benefit to air quality associated with the LOHCP Preserve System under the proposed project would also occur under this alternative.

#### **b. Biological Resources**

The Reduced Take Alternative would expedite development in the Plan Area, which would result in impacts to sensitive biological resources. However, this alternative would also facilitate coordinated habitat restoration, management, and protection efforts through implementation of the LOHCP Preserve System, albeit the total acreage of such would be less under this alternative than the proposed project.

Under the Reduced Take Alternative, the total acres of habitat impacted by covered activities would be limited to 266 acres, which is 50 percent of the maximum amount expected to be impacted under the proposed project. Once 266 acres have been impacted, no additional development would be allowed under the LOHCP and associated ITP, and individual project proponents would be required to prepare individual ITP applications, potentially including HCPs, to receive additional take coverage.

Similar to the proposed project, most new structures and facilities constructed under this alternative would require project-specific biological resources studies performed by qualified

personnel with appropriate expertise. Design and construction would conform to the appropriate expert recommendations and mitigation measures associated with the project-specific biological resources studies. Compliance with appropriate recommendations and mitigation measures would ensure the significant impacts to biological resources are avoided/reduced to the extent feasible.

For all covered activities, individual project proponents (and their construction contractors) would implement BMPs and comply with applicable federal, state, and local laws and regulations. Although significant impacts to biological resources would likely still occur from covered activities, impacts from individual projects would be minimized with implementation of the BMPs, regulations, and project-specific mitigation measures.

### **c. Cultural Resources**

Similar to the proposed project, many of the individual projects under the Reduced Take Alternative would result in ground disturbance, and the construction of these projects could disturb or damage cultural and/or paleontological resources on or below the ground surface. The use of heavy equipment during construction activities could result in exposure, damage, and/or crushing of surface and buried resources. Larger ground-disturbing activities have a higher potential to disturb or damage cultural and/or paleontological resources, particularly in previously undisturbed or less disturbed areas.

For all projects under the Reduced Take Alternative, individual project proponents would be required to comply with applicable laws for protecting cultural and paleontological resources. The County would require site-specific cultural resource surveys prior to construction of projects. In addition, AMMs from the LOHCP and BMPs would minimize ground disturbance and require construction activities to stop if resources are discovered. Such requirements would help protect cultural and paleontological resources and reduce the potential for disturbance or damage to such resources. Although significant impacts to cultural and/or paleontological resources would likely still occur under the Reduced Take Alternative, impacts from individual projects would be minimized with implementation of the BMPs, regulations, and project-specific mitigation measures.

### **d. Geology and Soils**

Similar to the proposed project, new structures and facilities constructed under the Reduced Take Alternative would be required to comply with County requirements for structure/facility design (including the IBC, CBC, Alquist-Priolo Act, and County General Plan Safety Element Policies S-18 and S-19) and geotechnical recommendations. Compliance with such requirements would ensure potential impacts related to geology would be less than significant.

Covered activities in previously disturbed areas would have minimal effects on soil, but activities in undisturbed areas could accelerate erosion and result in a loss of topsoil. Similar to the Proposed Action, the overall extent of ground disturbance from covered activities under the Reduced Take Alternative would likely be moderate. Adherence to the standards in the County's CZLUO, including the preparation of a site-specific Sedimentation and Erosion Control Plan, and compliance with NPDES General Stormwater Permits for construction would reduce related impacts to less than significant levels.

It is noted that erosion control itself is included as a covered activity under the LOHCP. Erosion control would be implemented, for example, after a controlled fire to reduce erosion that might result from implementation of the CWPP.

### **e. Greenhouse Gas Emissions**

Similar to the proposed project, this alternative would not generate GHG emissions in excess of SLOAPCD thresholds such that it would result in adverse effects on the environment because the Reduced Take Alternative would not exceed growth projections used in the County's GHG emissions inventory and EnergyWise Plan. In addition, similar to the proposed project, implementation of the LOHCP Preserve System would result in some initial GHG emissions, but such emissions would be offset by the long-term sequestration potential of restored and protected habitat. Therefore, like the proposed project, this alternative's effects on GHG emissions would be overall beneficial.

### **f. Hazards and Hazardous Materials**

Ground disturbance could occur during construction of individual projects under this alternative. If previously unidentified hazards or hazardous materials are encountered during ground-disturbing activities, soil, water, air, and/or vegetation could potentially be adversely affected and/or these activities may expose project construction workers to hazardous materials.

Similar to the proposed project, individual projects under this alternative would undergo the appropriate level of project-specific environmental review. Measures would be implemented, as necessary, to prevent accidental upset or release of hazardous materials. All individual projects would be subject to controls and regulations relating to the handling, use, storage, and disposal of hazardous materials. Nevertheless, given the presence of existing contamination in the vicinity of the LOHCP Preserve System, as well as the historical use of the nearby Montaña de Oro area for military training purposes, establishment and management of the LOHCP Preserve System could result in an impact associated with hazardous materials. Similar to the proposed project, potential impacts associated with hazardous materials under the Reduced Take Alternative would be mitigated to less than significant levels.

Implementation of the LOHCP would include wildfire management as a conservation strategy but would also preserve vegetated land that can act as fuel for wildfire. Similar to the proposed project, this alternative would allow covered activities to occur in "high" and "very high" Fire Hazard Severity Zone and State Responsibility Areas. However, with implementation of mitigation, potential impacts related to wildfires would be less than significant under the proposed project and the Reduced Take Alternative.

### **g. Hydrology and Water Quality**

Similar to the proposed project, covered activities under the Reduced Take Alternative could affect drainage patterns in the Plan Area and/or degrade water quality. Activities that disturb soil or require the use of fuel or other hazardous materials at work sites could introduce pollutants to the environment that could be carried in stormwater runoff to surface waters or percolate through to groundwater. Individual projects in or near streams and other water features could loosen and mobilize bed and bank materials, which could result in suspended sediment in the receiving waters. Construction activities could require vehicle fuels, lubricants, adhesives, waterproofing compounds, and hydraulic fluid for vehicles and equipment and could also require concrete, epoxy, paints, and/or asphalt paving. Specific hazardous material use at individual project sites would vary and would depend upon the type, size, and location of the project. The discharge of pollutants into water bodies could degrade water quality and affect beneficial uses of the downstream water bodies.



The EAP provides policies, programs, and standards that address drainage, erosion, sedimentation, and stormwater runoff issues generated from development of urban uses in the Estero planning area. Implementation of Mitigation Measures DWQ-1 and DWQ-2 in the EAP FEIR would reduce water quality impacts during ongoing development in the Plan Area, and, similar to the proposed project, all covered activities under the Reduced Take Alternative would be required to implement these mitigation measures. In addition, installation and maintenance of drainage infrastructure in association with covered activities under the LOHCP would reduce potential for erosion and sedimentation as a result of stormwater flows.

Similar to the proposed project, compliance with applicable federal, state, and local laws and the AMMs included in the LOHCP would minimize potential impacts to hydrology and water quality under the Reduced Take Alternative. Impacts would be less than significant under the proposed project and this alternative.

#### **h. Land Use and Planning**

Similar to the proposed project, covered activities under this alternative could be expedited by the LOHCP through the streamlined FESA permitting process. Individual projects under this alternative would be analyzed for consistency with all applicable land use plans, policies, and regulations. In addition, the ITP itself would not facilitate or result in any changes to land use or zoning designations, although implementation of the LOHCP Preserve System could result in ineligibility for development on some parcels in the Plan Area. Similar to the proposed project, covered activities, as well as establishment and management of the LOHCP Preserve System, under this alternative would be compatible with surrounding land uses because future development expedited as covered activities under the LOHCP would remain consistent with the EAP. The LOHCP also would not potentially result in the division of an established community. Impacts to land use would be less than significant under the proposed project and the Reduced Take Alternative.

#### **i. Noise**

Similar to the Proposed Action, the Reduced Take Alternative would result in temporary noise impacts to noise-sensitive receptors resulting from the use of heavy equipment during construction of covered activities, as well as increases in noise due to long-term effects associated with traffic and intensified land uses. Information regarding the range of covered activities is known, but individual project-specific information is not known at this time. However, noise levels during the construction and operation of covered activities are expected to be similar to noise levels for other similar projects. Nonetheless, similar to the proposed project, with implementation of mitigation (project-specific noise studies), noise impacts under the Reduced Take Alternative would be less than significant.

#### **j. Public Services**

Similar to the proposed project, covered activities under this alternative would remain subject to the land use designations and requirements of the EAP. Therefore, any increase in demand for public services associated with implementation of the Reduced Take Alternative has been addressed in the EAP and associated environmental impacts have been assessed in the EAP FEIR. Also similar to the proposed project, the LOHCP Preserve System and conservation program under this alternative would be covered by existing facilities. In addition, given that individual projects would undergo project-specific County review, be required to pay applicable Public Facility Fees and school

mitigation fees, and adhere to necessary fire safety building regulations, this alternative would result in a less than significant impact to public services.

#### **k. Transportation/Traffic**

Similar to the proposed project, the Reduced Take Alternative would not result in an increased intensification of currently approved land uses; therefore, this alternative would not cause an increase in the amount of traffic projected to occur under the EAP. The County would require site-specific traffic impact analyses prior to construction of covered activities. Such analyses would ensure that appropriate measures are taken to avoid or reduce potential traffic impacts in the Plan Area. Similar to the proposed project, with implementation of appropriate measures, impacts to traffic would be avoided or reduced, and impacts related to traffic would be less than significant under the Reduced Take Alternative.

### **6.3 Alternatives Considered But Rejected**

One additional alternative was considered and rejected: the Greater Mitigation Requirement Alternative. Evaluation of this alternative indicated that it was not feasible. The alternative is briefly described below but is not evaluated in detail in this document.

Under this alternative, the total acreage of habitat impacted by the covered activities would be similar to the project (532 acres). However, individual project proponents would be required to mitigate the take of/impacts to covered species at a ratio of 2:1, rather than a 1:1, meaning that for every acre of habitat disturbed, two acres of habitat would need to benefit through habitat protection, restoration, and/or management. As a result, impacts from covered activities would be offset by 1,066 acres of mitigation activities in the Preserve System, double that which would occur under the proposed project. However, this alternative is considered infeasible because there is not enough suitable habitat available, either within existing protected lands in the Plan Area or through protection of additional habitat (see LOHCP Section 8.3 for further detail).

Doubling the mitigation ratio would be unlikely to double the benefits for the covered species, as might be intended in such an alternative, because the additional habitat protected, restored, and managed, would be of lower long-term conservation value for the covered species. Including habitat within parcels that are smaller, partially developed, and/or located outside of the Plan Area, would result in a more fragmented reserve design that has lower habitat connectivity and is more challenging to cohesively manage.

Increasing the mitigation ratio from 1:1 to 2:1 would also likely more than double the mitigation fees for LOHCP participants. The habitat protection fee required to protect the additional habitat would be expected to increase, because the additional land would likely need to be acquired through a larger number of smaller parcels, thus resulting in higher per-acre land costs and greater transactional costs (i.e., administration). The restoration/management/administration fee would increase as a result of the 100 percent increase in the amount of habitat to be restored, managed, and monitored. In addition, it is likely that additional funds would be required to manage/oversee the ongoing status of smaller parcels on private land holdings located outside of the Plan Area. In some cases, more intensive management and possible ongoing restoration may be required because the County would not be directly overseeing these mitigation areas, thereby reducing the amount available to acquire and restore habitat within the larger parcels outside the Urban Services Line.

More than doubling the mitigation fees for plan participants would also increase the cost burden associated with habitat mitigation as well as the overall cost burden associated with infrastructure, capital facilities, and mitigation fees collectively. The cost burden analysis conducted for the LOHCP indicated that the total cost burden for certain covered activities (i.e., multi-family residential development, office and retail development) either exceed or are close to the accepted threshold beyond which fees present feasibility challenges for development under general circumstances. See LOHCP Appendix H for further detail.

## 6.4 Environmentally Superior Alternative

This section evaluates the impact conclusions for the major issue areas for the project and the two alternatives under consideration. It then identifies the environmentally superior alternative. In accordance with the *CEQA Guidelines*, if the No Project Alternative is identified as the environmentally superior alternative, an alternative among the remaining scenarios which is environmentally superior must also be identified.

Based on the comparison of project alternatives to the project, the proposed project would have the least environmental impacts, and would represent the environmentally superior alternative. The proposed project would provide the most comprehensive approach to habitat conservation among the alternatives, with the greatest potential to provide long-term benefits to the covered species.

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